# A G E N D A

*This meeting today is being held on Whadjuk Noongar boodja and we would like to acknowledge and pay respects to Elders past, present and future. We thank all past and present members of the community that have supported the City to better understand and value Noongar culture within the City of Wanneroo.*

**Item 1 Attendances**

**Item 2 Apologies and Leave of Absence**

Cr Berry *(Leave of Absence 13 to 23 November 2026)*
Cr Coeztee *(Leave of Absence 4 to 24 December 2026)*

**Item 3 Deputations**

**Item 4 Reports**

**Declarations of Interest by Council Members, including the nature and extent of the interest. Declaration of Interest forms to be completed and handed to the Chief Executive Officer.**

**Planning & Sustainability**

**Planning & Development Services**

## 4.1 Draft Wanneroo Town Centre Precinct Plan

File Ref: 2948V002 □ 26/384468
Responsible Officer: Director Planning & Sustainability
Attachments: 7

### Changes to Report and Additional Information Arising from Agenda Briefing

Any changes or additional information following Agenda Briefing will be shown here.

### Issue

The purpose of this report is to seek Council endorsement of the draft Wanneroo Town Centre Precinct Plan (**WTCPP**), included as **Attachment 1**, for public consultation.

### Background

The Wanneroo Town Centre (**WTC**) is identified as a □Secondary Activity Centre□ under *State Planning Policy 4.2 - Activity Centres for Perth and Peel* (**SPP 4.2**) and continues to function as the historic, civic and community heart of the City of Wanneroo (**the City**). The WTC plays an important role in providing services, employment, civic and community facilities to its immediate and surrounding catchment.

The existing planning framework for the WTC includes *Wanneroo Town Centre Agreed Structure Plan No. 23* (**ASP 23**), adopted in 2001, and *Local Planning Policy 5.2 - Wanneroo Town Centre* (**LPP 5.2**). Having been prepared over two decades ago, the planning framework is no longer aligned to contemporary planning practice and current State policy framework.

In response to the need to modernise the planning framework, the City undertook a review of planning for the WTC in 2017 to 2018, resulting in the preparation of draft Activity Centre Structure Plan No. 90 (**ACSP 90**). ACSP 90 was informed by extensive community and stakeholder engagement, which contributed to the development of a clear vision for the WTC and helped identify key opportunities for revitalisation and intensification.

ACSP 90 was endorsed by Council for public advertising in December 2018, advertised between January and February 2019, and subsequently endorsed by Council for submission to the WAPC in July 2019.

Progression of the updated planning framework was delayed by environmental approval requirements affecting Lot 9000 Wanneroo Road, Sinagra (**Lot 9000**), which comprises a substantial portion of undeveloped land within the northern part of the WTC. In 2020, the WAPC advised that assessment of ACSP 90 could not proceed until the relevant Environmental Protection Authority (**EPA**) approval process had been completed.

As these matters remain unresolved and continue to constrain progression of ACSP 90, the City sought an alternative mechanism to progress an updated planning framework for the WTC.

Following legal review, the Department of Planning, Lands and Heritage (**DPLH**) advised in July 2025 that a new Precinct Plan could be prepared and progressed without the inclusion of Lot 9000, consistent with the applicable statutory planning framework.

Since the preparation of draft ACSP 90, several important changes to the State Planning framework and broader project context have occurred. Most notably, *State Planning Policy 7.2 - Precinct Design* (**SPP 7.2**) has been introduced and promotes a design-led, place-based approach to activity centre planning, with greater emphasis on built form, public realm, movement and the coordinated delivery of place-based outcomes.

The need for an updated planning framework is reinforced by the significant population growth anticipated across the WTC catchment over the coming decades, particularly through the future development of East Wanneroo. The WTC is expected to play an increasingly important role as a destination for employment, services, community facilities and civic activity, both for existing communities and emerging areas prior to the establishment of future activity centres. The draft WTCPP is intended to provide a long term framework to accommodate this growth while strengthening the WTC's established role as the City's principal civic and community destination.

The draft WTCPP has therefore been prepared to provide a contemporary planning framework for the WTC and now excludes Lot 9000. Subject to progression through the statutory planning process, the WTCPP is intended to replace the existing planning framework comprising ASP 23, LPP 5.2 and the unfinished ACSP 90. The City anticipates that planning for Lot 9000 will be considered separately once the relevant environmental approvals and associated statutory requirements have been resolved.

## Detail

The draft WTCPP establishes a contemporary strategic and statutory planning framework to guide the future evolution of the WTC over the medium to long term (10 to 20+ years). Consistent with the principles of SPP 7.2, it proposes an integrated approach to land use, built form, movement, public realm and urban ecology to support future planning, development and investment decisions across the centre.

The draft WTCPP is structured in two interconnected parts, consistent with the WAPC's *Manner and Form* requirements for Precinct Plans:

- Part 1 proposes the statutory planning framework and development provisions that will guide future subdivision, development assessment and planning decision making within the WTC, including planning controls, built form requirements, land use directions and sub-precinct provisions.
- Part 2 provides supporting explanatory content, including the strategic rationale, site analysis and design outcomes that underpin the statutory provisions. It establishes the long term vision for the town centre and identifies key infrastructure, public realm and place-based opportunities to inform future planning, investment, advocacy and decision making across the WTC.

The draft WTCPP is supported by a comprehensive suite of technical investigations that have been undertaken to inform its preparation, including:

- Bushfire Management Plan (**Attachment 2**);
- Local Water Management Plan (**Attachment 3**);
- Employment, Economic and Retail Analysis (**Attachement 4**);
- Environmental Assessment and Management Strategy (**Attachment 5**);
- Transport and Traffic Strategy  draft will be updated to final for advertising (**Attachment 6**); and
- WTC Parking study (**Attachment 7**).

The preparation of the draft WTCPP builds upon the substantial community and stakeholder engagement undertaken through the ACSP 90 process. Feedback from that engagement identified the need to strengthen the WTC's role as a civic, community and activity hub, improve walkability and pedestrian connections, enhance the quality and activation of public spaces, and encourage a broader mix of land uses and activity within the centre. These themes continue to underpin the draft WTCPP and have directly informed its vision and strategic direction.

The draft WTCPP is guided by the following proposed vision:

*The Wanneroo Town Centre will evolve as a vibrant, connected and welcoming destination that integrates contemporary design with its historic character, providing a diverse mix of land uses and high-quality public spaces as the civic heart of the City.*

The draft WTCPP does not seek to create a new identity for the WTC. Instead, it builds upon the centre's established civic, community and cultural role while supporting its evolution as a vibrant mixed-use Secondary Activity Centre. While the WTCPP identifies a range of potential projects, initiatives and opportunity sites, it does not commit the City or other stakeholders to their delivery or funding beyond those already approved or committed to. Rather, it provides a strategic framework to guide future planning, investment, advocacy, master planning and decision-making across the WTC.

The key elements of the draft WTCPP are summarised below.

**Urban Structure**

The draft WTCPP proposes a framework for how the WTC should develop over time. A foundational element of the Plan is the establishment of six sub-precincts, each with a clearly defined role, character, land use focus and development vision. Together, the sub-precincts provide a structure for coordinating future land uses, built form, public spaces and transport connections, supporting the creation of a well-connected and vibrant town centre.

The sub-precincts establish a spatial framework that directs higher intensity mixed-use development and activity towards the WTC core and are summarised as follows:

- Sub-precinct 1 - Rocca Way: the primary activity core of the WTC, functioning as a pedestrian oriented main street focused on retail, hospitality and mixed-use development. Development is to be characterised by podium-style built form and active street frontages, with building heights determined through site specific design outcomes rather than prescribed height limits;
- Sub-precinct 2 □Dundebar: a community focused sub-precinct that reinforces the WTC's role as a centre for civic, community and commercial activity. Development is generally limited to a maximum of seven storeys and provides a transition between the activity core and future residential areas;
- Sub-precinct 3 - Wanneroo Road: a gateway sub-precinct supporting commercial development, landmark built form and an enhanced pedestrian environment along Wanneroo Road. Development is generally limited to a maximum of seven storeys and facilitates a transition to adjoining residential areas;
- Sub-precinct 4 - Memorial Park: an open space interface sub-precinct integrating with Memorial Park and supporting mixed-use and residential development. Development is generally limited to a maximum of three storeys and provides a transition between the WTC core and surrounding neighbourhoods;
- Sub-precinct 5 - Frame: a transitional sub-precinct supporting mixed-use and medium-density residential development. Development is generally limited to a maximum of three storeys and provides a lower scale interface with adjoining residential neighbourhoods; and
- Sub-precinct 6 - Showgrounds: a community, recreation and event precinct that retains the cultural role, openness and low rise landscape character of the Showgrounds.

Key Urban Structure strategies include:

- Identifying a clear sub-precinct structure, to define the role, function and development intent of different areas and guide future land use, built form, public realm and movement outcomes;
- Concentrating higher density mixed-use development within the WTC core, focused around Rocca Way, Wanneroo Central and key opportunity sites to reinforce the primary activity spine and support highest activity in the centre; and
- Providing a coherent transition in scale and intensity across the centre, ensuring higher intensity development within the core is balanced with appropriate interfaces to surrounding residential areas and sensitive uses.

**Built Form**

The draft WTCPP proposes a built form framework to guide the scale, intensity and character of future development within the WTC. The framework supports growth and redevelopment while ensuring appropriate transitions to surrounding residential areas and other sensitive interfaces. Developed through 3D SketchUp modelling and informed by local context and the intended role of each sub-precinct, it establishes clear expectations for future built form and contributes to the creation of a cohesive and well designed town centre.

Key Built Form strategies will include:

- Aligning the built form framework with the role and function of each sub-precinct, guiding the scale, intensity and character of development in a manner that supports the broader structure and vision of the WTC;
- Supporting a recognisable and active main street environment supported by development that reinforces Rocca Way as the centre's primary main street and contributes to a vibrant and pedestrian oriented public realm;

- Strengthening street interface and activation outcomes, supported by active frontages, ground floor commercial and community uses in appropriate locations, defined street edges and built form responses that positively engage with streets, public spaces and key civic destinations;
- Guiding the redevelopment of key opportunity sites, including Wanneroo Central Shopping Centre, the Wanneroo Tavern and surrounding lots, and the DBCA site, to support investment intensification and ensure outcomes contribute to the long term revitalisation of the WTC; and
- Responding to local context, incorporating appropriate transitions in height, scale and massing to respond to surrounding residential areas, public open spaces and other sensitive interfaces.

**Public Realm**

The draft WTCPP establishes a high level strategic public realm framework to support the long term evolution of a more connected, attractive and vibrant town centre. The framework identifies key streets, public spaces and place-making opportunities that may inform future planning, investment and design initiatives, while remaining sufficiently flexible to respond to changing priorities, opportunities and funding availability. Informed by related City projects, including the Public Realm and Interpretation Study, Aboriginal Cultural Narrative Project and transport investigations, the framework is intended to guide future public realm planning and provide a strategic foundation for the preparation of a more detailed WTC Public Realm Masterplan.

Key Public Realm strategies will include:

- Reinforcing Rocca Way as the WTC's primary main street and activity spine, through a more pedestrian oriented environment, active frontages, streetscape enhancements and potential changes to vehicle access, subject to future Council consideration;
- Creating a more connected and integrated network of public spaces, supporting improved accessibility, activation, amenity and connections throughout the WTC; and
- Delivering a greener and more attractive Town Centre, supported by expanded tree canopy, landscaping and urban greening initiatives; and
- Promoting a coordinated approach to public realm investment, helping align future capital works, streetscape improvements and redevelopment opportunities to support the staged revitalisation of the WTC.

**Rocca Way**

A key matter arising from the draft WTCPP is the future role and function of Rocca Way as the primary main street and activity focus of the WTC. Consistent with the vision for a more walkable, active and people focused town centre, the draft WTCPP establishes a built form framework that supports future private redevelopment and investment along Rocca Way, including active ground floor uses, improved street activation and a vibrant mixed-use environment.

The draft WTCPP also identifies, at a strategic level, opportunities to enhance the public realm and pedestrian experience within Rocca Way over time. These opportunities are intended to inform the longer term evolution of the town centre and do not represent a commitment by Council to undertake specific works or implement particular changes to the street network. Administration is continuing to investigate potential public realm, access and movement improvements for Rocca Way. Any future initiatives will be subject to separate Council consideration, detailed design, stakeholder engagement and funding processes.

Accordingly, while the draft WTCPP establishes the built form provisions necessary to support increased activity, investment and activation along Rocca Way, the detailed design and implementation of future public realm and access improvements remain subject to further investigation and Council consideration.

**Movement and Connectivity**

The draft WTCPP establishes a high-level strategic movement and connectivity framework to support the long term growth and evolution of the WTC through improved accessibility, connectivity and transport networks. The framework has been informed by traffic and transport investigations and identifies a range of strategic opportunities and desired outcomes to guide future planning and decision making.

The movement framework is strategic and conceptual in nature, providing a basis for future investigations, planning, design and advocacy activities as the WTC continues to evolve. It is intended to support the coordinated integration of transport, land use and movement outcomes over time while remaining responsive to changing community needs, transport trends and funding opportunities.

A related parking study has also identified the potential need for a future multi-storey public car park on Council owned land to support long term growth within the centre. This concept remains subject to further investigation, funding availability and future Council consideration.

Key Movement and connectivity strategies will include:

- Supporting a more connected and walkable town centre, through an enhanced pedestrian network comprising key walking routes, crossings, mid-block connections and stronger links between retail, community, civic destinations and public spaces;
- Supporting active and public transport accessibility, through improved pedestrian and cycling connections, better integration of land use and transport planning, and advocacy for future public transport improvements that enhance access to and within the WTC, including across key barriers such as Wanneroo Road; and
- Promoting a more efficient and coordinated access and parking network, through improved parking integration within redevelopment sites, investigation of a potential future multi-storey public car park on Council-owned land, and a coordinated approach to access and vehicle movement throughout the centre.

**Land Use**

The draft WTCPP proposes a strategic land use framework to support diversity, activation and long term resilience, consistent with the WTC's role as a "Secondary Activity Centre" under SPP 4.2. While the WTCPP does not alter land use permissibility under District Planning Scheme No. 2 (**DPS2**), it provides guidance on preferred land use outcomes and the intended role and function of each sub-precinct. The framework focuses on identifying preferred land use outcomes rather than prescribing all potential land uses, with those not specifically addressed continuing to be considered under DPS2 and other applicable planning requirements.

The land use framework has been developed to support the long term growth and evolution of the WTC as a "Secondary Activity Centre". Based on current investigations, the draft WTCPP has the potential to facilitate approximately 1,850 dwellings, supporting an estimated resident population of around 4,625 people within the centre. The framework also provides capacity for approximately 98,500m² to 116,200m² of non-residential floorspace, including 27,000m² to 33,300m² of retail floorspace, supporting increased employment opportunities and strengthening the WTC's role as a key destination for business, retail, hospitality, community and civic activities. Collectively, these outcomes will contribute to a more active, vibrant and resilient town centre while supporting broader strategic planning objectives relating to housing supply, employment growth and activity centre development.

Key Land Use strategies will include:

- Providing a clear and coordinated land use framework aligned with DPS 2, guiding preferred land use outcomes within each sub-precinct and supporting consistent planning and development decision-making;
- Supporting a diverse and integrated mix of land uses, including residential, commercial, retail, hospitality, community and civic activities, with mixed-use development encouraged in accessible and well connected locations;
- Establishing sub-precincts with clearly defined roles and functions, reinforcing the distinct civic, commercial, retail, community and residential focus of different parts of the town centre; and
- Maintaining a flexible and responsive planning framework, supporting centre vitality, market-led redevelopment and changing community needs over time.

### Urban Ecology

The draft WTCPP seeks to support the evolution of the WTC as a green civic centre, where urban greening, landscape character, public open space and cultural identity contribute to the amenity, liveability and distinctiveness of the town centre. The framework identifies strategic opportunities to integrate environmental, landscape and cultural considerations into future development and public realm outcomes.

Key strategies will include:

- Retaining and celebrating key landscape, cultural and historic values, ensuring important landscape assets, heritage places and cultural narratives are recognised and reflected in future development, public realm initiatives and place-making opportunities; and
- Supporting a greener and more climate-responsive WTC, by identifying opportunities for expanded urban greening, increased tree canopy, deep soil provision, water sensitive urban design (**WSUD**) and other landscape initiatives to be considered through future development and public realm planning.

## Consultation

Development of the draft WTCPP has been informed by the following engagement:

### Visioning Engagement

While no specific visioning engagement was undertaken during preparation of the draft WTCPP, the document builds upon the outcomes of extensive community and stakeholder engagement undertaken as part of the 2018 ACSP 90 process. That engagement involved more than 100 participants across a range of initiatives, including visioning workshops, advisory group discussions, Council Forums and community information sessions. Feedback from this process helped establish the vision and strategic directions for the WTC, many of which remain relevant today and have directly informed the preparation of the draft WTCPP. As the WTCPP seeks to implement and refine this established vision and strategic direction, further visioning engagement was not undertaken during its preparation. Further information on the ACSP 90 engagement process and the manner in which it has informed the draft WTCPP is provided in Part 2 of the Plan.

### Technical and Stakeholder Review

The draft WTCPP has been informed through ongoing collaboration across relevant City service units ensuring statutory compliance and alignment with broader studies, projects and initiatives occurring within the WTC.

The draft WTCPP was also presented to the City's Design Review Panel in August 2026.

The Panel expressed general support for the vision, strategic direction and built form framework, recognising the opportunities it provides to strengthen the identity, walkability and long term evolution of the WTC. Feedback focused primarily on opportunities to further refine aspects of the built form and has informed ongoing refinement of the document.

In addition, the draft WTCPP was presented to a Council Forum on 29 September 2026. Council Members provided generally positive feedback on the proposed planning framework and strategic direction for the WTC. Discussion focused on a range of implementation and town centre planning matters, with feedback informing minor refinements to the draft WTCPP prior to Council's consideration of the document for public advertising.

**Public Advertising**
Subject to Council endorsement, the draft WTCPP will be publicly advertised in accordance with the City's Community Engagement framework as follows:

| | |
|---|---|
| **Engagement Approach** | Consult |
| **Timeframe for Engagement** | 42 days - minimum timeframe under the Planning Regulations.<br><br>In accordance with the Planning Regulations, engagement will occur within 28 days following Council endorsement to advertise, concluding in February 2027. Consultation will run for an extended period to account for the period when Council is in recess for the Christmas/New Year holidays. |
| **Engagement Methods** | • Correspondence to relevant State Government agencies (such as Main Roads WA, PTA and other relevant agencies);<br>• Correspondence to landowners within approximately 800m of the Town Centre;<br>• Correspondence to key developers within the study area, who may wish to promote the consultation through their own communication channels;<br>• Correspondence to relevant local community groups (eg Hello Wanneroo), business stakeholders and Advisory Groups including Ni Kadadjiny Koort and the Multicultural Advisory Group, where appropriate;<br>• Publication of the draft WTCPP on the City's Your Say page;<br>• Notices via the City's media and social media channels;<br>• Notice in the local community newspaper;<br>• Targeted stakeholder meetings and/or information sessions where appropriate, particularly with key landowners and agencies such as Charter Hall and Main Roads WA; and<br>• Posters/feedback forms available through the City's Libraries where appropriate. |

Following the advertising period, all submissions will be reviewed and considered by Administration. Any recommended amendments arising from the consultation process will be incorporated where appropriate before the WTCPP is reported back to Council for consideration and subsequently submitted to the Western Australian Planning Commission for determination.

## Comment

The draft WTCPP establishes a comprehensive and integrated framework to guide the future growth and evolution of the WTC as a 'Secondary Activity Centre'.

The Plan has been informed by extensive technical investigations, previous community and stakeholder engagement, Design Review Panel feedback and Council Forum discussion, and provides a contemporary planning framework that responds to the opportunities and challenges facing the WTC over the medium to long term.

Administration considers the draft WTCPP to be sufficiently developed and supported to proceed to public advertising in accordance with the Planning Regulations. Public advertising will provide an opportunity to obtain feedback from landowners, businesses, government agencies, community groups and the broader community on the proposed vision, planning framework and development provisions before the document is returned to Council for further consideration and submission to the Western Australian Planning Commission for determination.

## Statutory Compliance

The WTCPP has been prepared in accordance with:

- *Planning and Development Act 2005*;
- *Planning and Development (Local Planning Schemes) Regulations 2015*;
- *SPP 4.2 - Activity Centres for Perth and Peel*;
- *SPP 7.2 - Precinct Design*; and
- *SPP 7.0 - Design of the Built Environment*.

Following completion and Council consideration, the WTCPP will be progressed through the statutory planning process, including referral to the WAPC for determination.

## Strategic Implications

The proposal aligns with the following objective within the Council Plan 2025 □2035:

*4 ~ A Connected and Liveable City*

*4.1 - Create welcoming community spaces*

## Risk Appetite Statement

In pursuit of Strategic Goal 4, the City adopts an Opportunistic risk position. The City accepts considered risk in infrastructure, community spaces and service delivery where investment supports connected, resilient places for people and nature, consistent with the City's Risk Appetite Administration Guidance.

## Risk Management Considerations

| RISK TITLE | | RISK RATING |
|---|---|---|
| **Level 1 Strategic Risk** | 2.0 Assets & Infrastructure | Medium |
| **Level 2 Corporate Risk** | 2.1 Infrastructure Planning | Medium |
| **ACCOUNTABILITY** | | **ACTION PLANNING OPTION** |
| Director Assets & Director Planning Sustainability | | Manage |

| RISK TITLE | | RISK RATING |
|---|---|---|
| **Level 1 Strategic Risk** | 3.0 Community Engagement & Stakeholder Relationships | Medium |
| **Level 2 Corporate Risk** | 3.2 Stakeholder Relationships | Medium |
| **ACCOUNTABILITY** | | **ACTION PLANNING OPTION** |
| Chief Executive Officer | | Manage |

| RISK TITLE | | RISK RATING |
|---|---|---|
| **Level 1 Strategic Risk** | 6.0 Environmental Management & Climate Change | Medium |
| **Level 2 Corporate Risk** | 6.2 Environmental Management | Medium |
| **ACCOUNTABILITY** | | **ACTION PLANNING OPTION** |
| Director Planning Sustainability | | Manage |

## Policy Implications

Upon approval, the Precinct Plan is intended to:

- Replace ASP 23 and LPP 5.2; and
- Provide the strategic framework to guide future statutory planning controls and decision making within the WTC.

## Financial Implications

The draft WTCPP has been prepared internally by the City and is being progressed within existing operational budgets. This includes costs associated with the refinement of the document and future public advertising.

The WTCPP is a strategic planning framework and does not commit the City to the delivery or funding of specific projects, infrastructure works or initiatives beyond those already approved or committed to. While the Plan identifies a range of potential future opportunities, including public realm improvements, transport initiatives, parking infrastructure and other town centre projects, the progression of any such initiatives will be subject to separate investigations, planning processes, funding considerations and future Council decision-making.

## Voting Requirements

Simple Majority

## Recommendation

**That Council ENDORSES the draft Wanneroo Town Centre Precinct Plan, as contained in Attachment 1, for the purpose of public advertising for a minimum period of 42 days in accordance with Clause 18(3) of Schedule 2 (Deemed Provisions) of the Planning Regulations.**

*Attachments:*

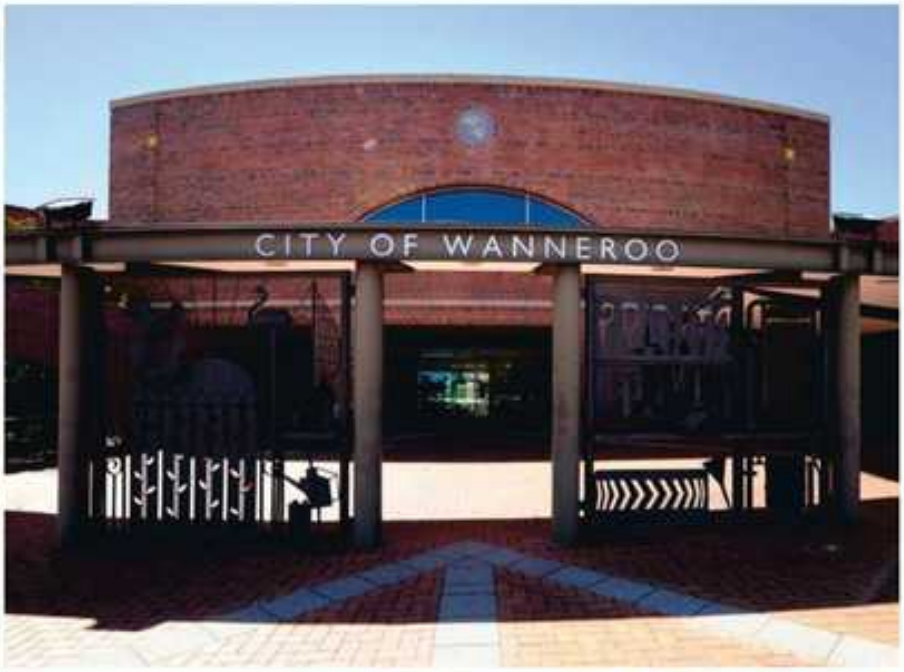
| | | | |
|---|---|---|---|
| *1⇨.* | *Attachment 1 - Draft Wanneroo Town Centre Precinct Plan* | *26/349592* | *Excluded* |
| *2⇨.* | *Attachment 2 - WTC Bushfire Management Plan - Final report* | *26/338091* | *Excluded* |
| *3⇨.* | *Attachment 3 - WTC Local Water Management - Final report* | *26/338096* | *Excluded* |
| *4⇨.* | *Attachment 4 - WTC Economic, Employment and Retail Strategy - Final report* | *26/338040* | *Excluded* |
| *5⇨.* | *Attachment 5 - WTC Environmental Assessment and Management Strategy - Final Report* | *26/338107* | *Excluded* |
| *6⇨.* | *Attachment 6 - WTC Traffic and Transport Management Strategy - DRAFT* | *26/410116* | *Excluded* |
| *7⇨.* | *Attachment 7 - WTC Parking Study - Final report* | *26/345100* | *Excluded* |

City of Wanneroo

# DRAFT

# Wanneroo Town Centre Precinct Plan











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## Acknowledgement of Country

The City of Wanneroo acknowledges the Traditional Custodians of the land we are working on, the Whadjuk people. We pay respect to the Elders of the Noongar nation past, present and emerging, who have walked and cared for the land. And we acknowledge and respect the continuing culture and the contributions made to the life of this City and this region.






# EXECUTIVE SUMMARY

The Wanneroo Town Centre Precinct Plan (WTCPP) has been prepared to guide future subdivision and development of land within the Wanneroo Town Centre (WTC), as shown on P1 - Figure 1.

Designated as a Secondary Centre under *State Planning Policy 4.2 - Activity Centres* (SPP 4.2), the WTC is located within the City of Wanneroo, approximately 23 kilometres north of the Perth CBD. Established in the early 1900s, the WTC has evolved to meet the needs of a growing community while retaining its local heritage. The WTCPP responds to the need for revitalisation to support economic, employment, service and housing demands.

The vision for the revitalisation of the WTC is the result of collaboration between Council, stakeholders and the community, and reflects feedback gathered through engagement initiatives.

The WTCPP has been prepared in accordance with the *Planning and Development (Local Planning Schemes) Regulations 2015* (Regulations) and relevant State Planning Policies, including *State Planning Policy 7.2 - Precinct Design* (SPP 7.2) and its associated guidelines, SPP 4.2 and *State Planning Policy 7.0 - Design of the Built Environment* (SPP 7.0)

The Precinct Plan comprises:

- **Part One:** Implementation Section - includes the precinct area map, general subdivision and development standards, and six sub-precincts with character statements and development requirements.
- **Part Two:** Explanatory Section - provides background, rationale, and strategic guidance supporting implementation.
- **Technical Appendices:** Contain the evidence base informing the plan's preparation.

# ADOPTION & AMENDMENTS

This Precinct Plan is prepared under the provisions of the City of Wanneroo District Planning Scheme No. 2.

IT IS CERTIFIED THAT THIS STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON:

Signed for and on behalf of the Western Australian Planning Commission

_____

an officer of the Commission duly authorised by the Commission pursuant to Section 16 of the *Planning and Development Act 2005* for that purpose, in the presence of:

_____

Witness

_____

Date

_____

Date of Expiry

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| Amendment No. | Summary of Amendment | Date approved by the WAPC |
|---|---|---|
| | | |
| | | |
| | | |
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# PRECINCT PLAN SUMMARY

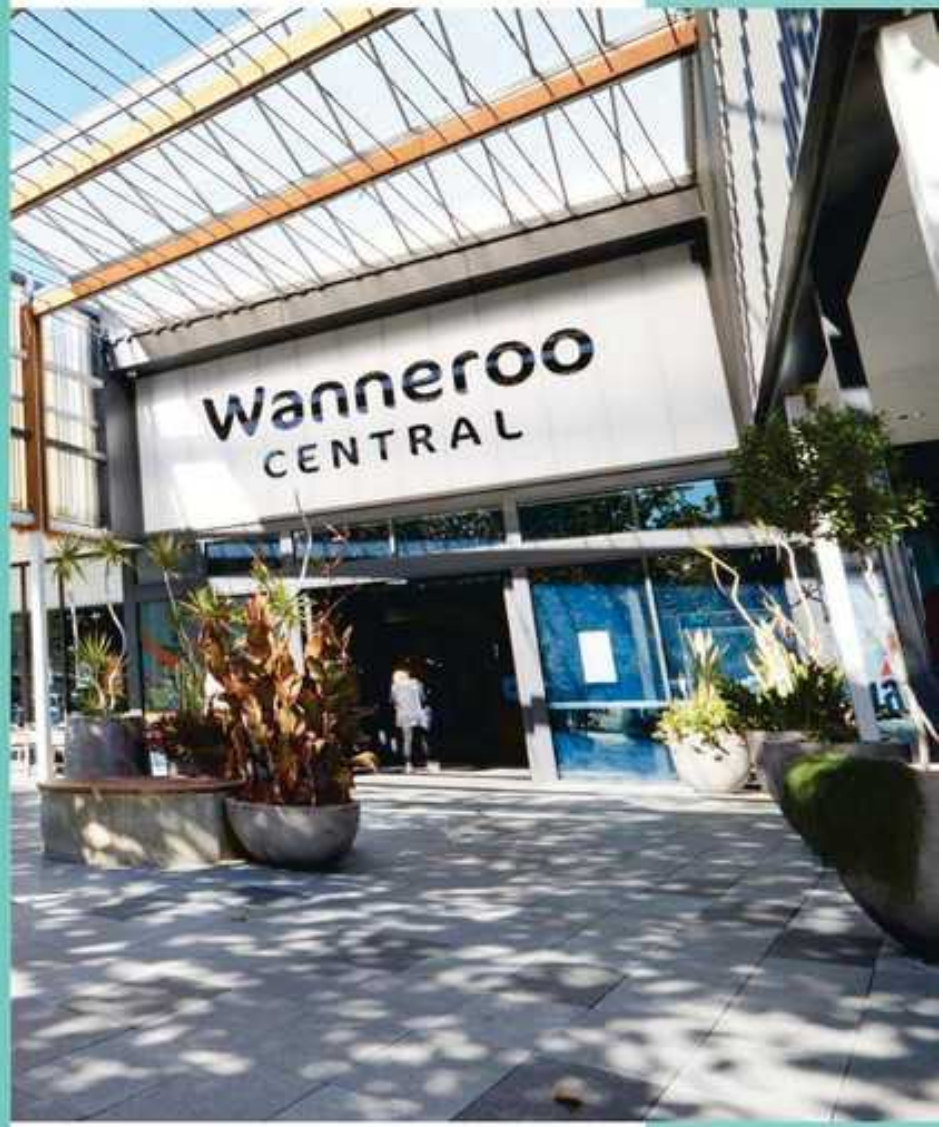
**P1 - Table 1**- Precinct Plan Summary

| Item | Data |
|---|---|
| Total area covered by the precinct structure plan | 57.3 hectares |
| Area of each land use proposed:<br><br>Land Use<br>• Residential R60<br>• Commercial<br>• Mixed Use<br>• Private Community Purposes<br><br>Reserve<br>• Public Open Space<br>• Civic and Community<br>• Public Purpose - Education<br>• Primary Regional Roads<br>• Other roads | <br><br><br>1.55 hectares<br>18.2 hectares<br>2.2 hectares<br>3.9 hectares<br><br><br>16.15 hectares<br>3.43 hectares<br>4.49 hectares<br>2.98 hectares<br>4.3 hectares |
| Estimated number of dwellings | 1,480 - 2,220 dwellings (1,850 target scenario) |
| Estimated residential gross density | 32 dwellings per gross hectare (target scenario) |
| Estimated population | 4,625 residents (target scenario)<br>Note: based on average household size of 2.5 people |
| Number of high schools | Nil |
| Number of primary schools | 2 existing (including one private) |
| Estimated non-residential floorspace | 98,500 - 116,200 $m^2$ net lettable area (NLA) (by 2046) |
| Estimated area and percentage of public open space given over to:<br><br>• District POS<br>• Local POS | 16.15 hectares - 8.5%<br><br><br>12.9 hectares<br>3.25 hectares |



Part One

# Implementation





1.0

# Precinct Plan Area and Operation



## 1.1 OPERATION

The WTCPP has been prepared in accordance with *State Planning Policy 4.2 - Activity Centres for Perth and Peel* (SPP 4.2), and *State Planning Policy 7.2 - Precinct Design* (SPP 7.2). The WTCPP shall apply to the land contained within the inner edge of the line denoting the WTC boundary as shown on P1 - Figure 1. The WTCPP has a total area of 57.27 hectares.

### 1.1.1 DATE OF EFFECT

The WTCPP shall come into effect on the date it is approved by the Western Australian Planning Commission (WAPC) pursuant to Clause 22(1)(a) of the Deemed Provisions, and shall be valid for 10 years from the date of approval.

### 1.1.2 SCHEME RELATIONSHIP

The WTCPP has been prepared under the City of Wanneroo approved Local Planning Scheme (the Scheme) and is to be read in conjunction with the Scheme and any relevant State and Local Planning Policies.

In the event of any inconsistency between the WTCPP and the Scheme, the provisions of the Scheme shall prevail.

### 1.1.3 RESIDENTIAL DESIGN CODES

All residential development within the WTCPP area shall be in accordance with the Residential Design Codes (R-Codes) as amended from time to time, except where varied by this Precinct Plan.

Any dwellings in a mixed use development are considered to be multiple dwellings and the relevant volume of the R-Codes applies.

### 1.1.4 INTERPRETING THIS PRECINCT PLAN

All proposals for development and/or subdivision of land within the WTCPP area are required to adhere to the General Development Requirements in Section 4.2 and the Sub-Precinct Development Requirements in Section 5.0, for the relevant Sub-Precinct in which the proposal is located. Where variations are proposed, development and subdivision applications are to outline the variation and demonstrate how the proposal satisfies the objectives of the WTCPP and the relevant Sub-Precinct.

### 1.1.5 DEFINITIONS

The WTCPP applies the same definitions as set out in the Regulations, the Scheme, the R-Codes and any relevant state or local planning policy. Unique definitions for the WTCPP are set out as follows:

**"Interface"** refers to the various public realm interface types set out in Section 4.3. These interface types are used as an organising tool for the built form control to ensure desired streetscape outcomes can be met.

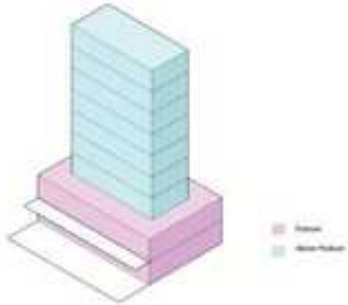
**"Pedestrian Links"** refers to areas of privately owned land required to comprise a publicly accessible pedestrian connection integrated into the privately owned urban environment.

**"Sensitive Land Use"** means a land use where people typically live or regularly spend extended periods of time, such as but not limited to: caravan parks, child care premises, independent living complex, residential aged care facilities and residential development. Some commercial, institutional and industrial land uses which require high levels of amenity or are sensitive to particular emissions may also be considered "sensitive land uses". Examples include, but not limited to, some retail outlets (shops), offices, educational establishments, hospitals, hotels and tourist and visitor accommodation, and some types of storage and manufacturing.

**"Privately Owned Public Space"** means a space on private land that is permanently accessible to the public, designed and maintained to a standard equivalent to the public realm, and secured through legal mechanisms (e.g. easements, management plans or covenants) to ensure ongoing public access.

**"Urban Space"** means a designated open space designed for community interaction and pedestrian activity, featuring amenities such as seating, landscaping, space for events or alfresco dining and artistic or historical elements.

**"Podium"** refers to the lower levels of a building that define the street edge and interface with the public realm, providing a consistent, human-scale built form, with upper levels set back above.





2.0

# Vision and Objectives



## 2.1 WANNEROO TOWN CENTRE VISION

***"The Wanneroo Town Centre will evolve as a vibrant, connected and welcoming destination that integrates contemporary design with its historic character, providing a diverse mix of land uses and high-quality public spaces as the civic heart of the City."***




## 2.2 PRECINCT PLAN PURPOSE

The purpose of the WTCPP is to establish a comprehensive planning framework that respects and responds to stakeholder input, meets community needs and aligns with the shared vision for the Wanneroo Town Centre. The framework provides clear direction for coordinated development and investment, ensuring the WTC evolves as a vibrant, connected and sustainable Secondary Activity Centre consistent with the State planning framework, including SPP 4.2 and SPP 7.2.

The WTCPP provides the foundation for achieving this vision by promoting a compact, mixed-use urban form that supports economic growth, provides diverse employment and housing opportunities and creates high-quality public spaces that foster a strong sense of place. It prioritises walkability, active transport and transit integration, ensuring accessibility while responding to community needs and environmental sustainability.

The rationale for the planning and design of the WTCPP is underpinned by objectives that focus on creating strong connections to place, enhancing social and economic wellbeing, and delivering a high quality natural and built environment.

Through this framework, the WTCPP enables coordinated redevelopment and encourages investment that realises this shared vision and meets the needs of the community now and into the future.

## 2.3 PRECINCT PLAN INTENT

The WTCPP has been prepared to guide the coordinated transformation of the WTC into a vibrant and connected activity centre by:

- Articulating a vision of the future in accordance with key planning strategies and stakeholder aspirations.
- Providing a strategy for coordinating upgrades and development of new infrastructure.
- Delivering a coordinated, resilient, and adaptable urban structure that supports long-term growth and investment.
- Promoting high-quality architectural and urban design outcomes that enhance character, functionality, and sustainability.
- Supporting diverse land uses that generate employment and meet daily needs.
- Preserve, enhance and celebrate the cultural and historical identity of the Town Centre.
- Creating inclusive and vibrant public spaces that encourage community interaction.
- Establishing a safe, connected, and legible movement network that prioritises walking, cycling, and public transport.
- Facilitating housing diversity and integration with commercial uses to support a liveable, mixed-use centre.
- Encouraging environmentally sustainable development, urban ecology, and climate resilience.

## 2.4 OBJECTIVES

The following objectives apply to all areas within the WTCPP. Planning and development in the WTC shall have due regard to the following objectives:

### URBAN ECOLOGY

- Deliver urban greening outcomes that increase tree canopy, retain mature trees where feasible, and establish native, climate-resilient landscapes that support biodiversity, amenity, local character and urban heat mitigation.
- Integrate water sensitive urban design and fit-for-purpose water use to support sustainable, resilient and climateresponsive landscapes and public realm outcomes.
- Encourage sustainable and energy-efficient buildings through passive design, adaptive reuse, smart technologies, renewable energy and other measures that support comfortable and resilient urban environments.
- Integrate design, materials, public art and interpretation to reflect Wanneroo's Indigenous cultural identity and local heritage within the built and public realm.

### URBAN STRUCTURE

- Strengthen physical and visual links between Wanneroo Road, Rocca Way main street, and surrounding mixed-use and residential areas to support integrated activity.
- Provide a consolidated WTC core focused around Wanneroo Central Shopping Centre and Rocca Way/ Conlan Avenue, creating a vibrant and compact urban environment.
- Deliver a resilient and adaptable urban structure that supports long-term growth, efficient land use and opportunities for redevelopment and consolidation.
- Encourage landmark built form at key corner sites and entry points, particularly along Wanneroo Road and at key strategic intersections.

### PUBLIC REALM

- Deliver high-quality, inclusive and vibrant public spaces that support social connection, community interaction and everyday use.
- Provide comfortable and climate responsive public spaces through shade, weather protection, urban tree canopy and water sensitive urban design.
- Support activation through ground-floor uses, community event spaces and evolving place-making initiatives that enhance public realm quality, strengthen local identity and support a vibrant, safe and people-focused WTC.
- Integrate native and climate resilient planting with a connected green network to support amenity, environmental performance and legible movement throughout the WTC.
- Incorporate interpretive and artistic elements that reflect local culture, stories and identity within the public realm.

### MOVEMENT

- Establish a clear and legible movement network that prioritises walking, cycling, and universal accessibility while accommodating vehicles.
- Support consolidated and well designed car parking that supports local access without compromising a pedestrian friendly environment.
- Support access to public transport and active transport modes through end-of-trip facilities, shared paths, wayfinding, and integration with regional transport connections.
- Ensure streets and public spaces are designed for safety and comfort, with active frontages and passive surveillance.
- Integrate connections with regional transport networks and ensure safe crossings and wayfinding throughout the precinct.

### LAND USE

- Support local job creation with a target of approximately 2,000 new jobs by 2043, contributing to the City's 60% employment self-sufficiency goal.
- Encourage a mix of retail, commercial, and residential uses to service the catchment and align with the Secondary Centre role.
- Facilitate housing that integrates with commercial land uses to increase the number of people supporting local businesses.
- Encourage housing options for aged care, aged related accommodation, and short stay accommodation to support visitors and residents.
- Incorporate flexible spaces for emerging industries and community facilities.

### BUILT FORM

- Support a fine grain, street oriented built form that frames and activates public spaces through minimal setbacks and transparent frontages.
- Promote passive surveillance by designing buildings to overlook streets, parks, and other public areas to enhance safety and comfort.
- Encourage adaptable and climate responsive building design that supports sustainable living and future reuse.
- Ensure built form interfaces respond sensitively to heritage sites, open spaces, and adjacent residential areas.
- Apply design excellence criteria to deliver high quality architecture and urban design outcomes.



# 3.0 Staging Plan



## 3.1 STAGING PLAN

Given the fragmented land ownership pattern and the mix of public and private land within the WTC, development will occur incrementally and in response to market demand, infrastructure delivery and landowner readiness. As such, a traditional linear staging model is not appropriate. Instead, the staging framework focuses on early catalyst actions, enabling infrastructure, and coordinated public realm investment that will support redevelopment over time and ensure development aligns with the vision and objectives of this Precinct Plan.

The table below identifies key staging actions that are critical to implementation, grouped into short (0-5 years), medium (5-10 years) and long-term (10+ years) timeframes. Actions may be delivered by the City, private landowners or in partnership with State agencies, and many will occur progressively or on an ongoing basis as redevelopment occurs.

**P1 - Table 2** - Staging Plan

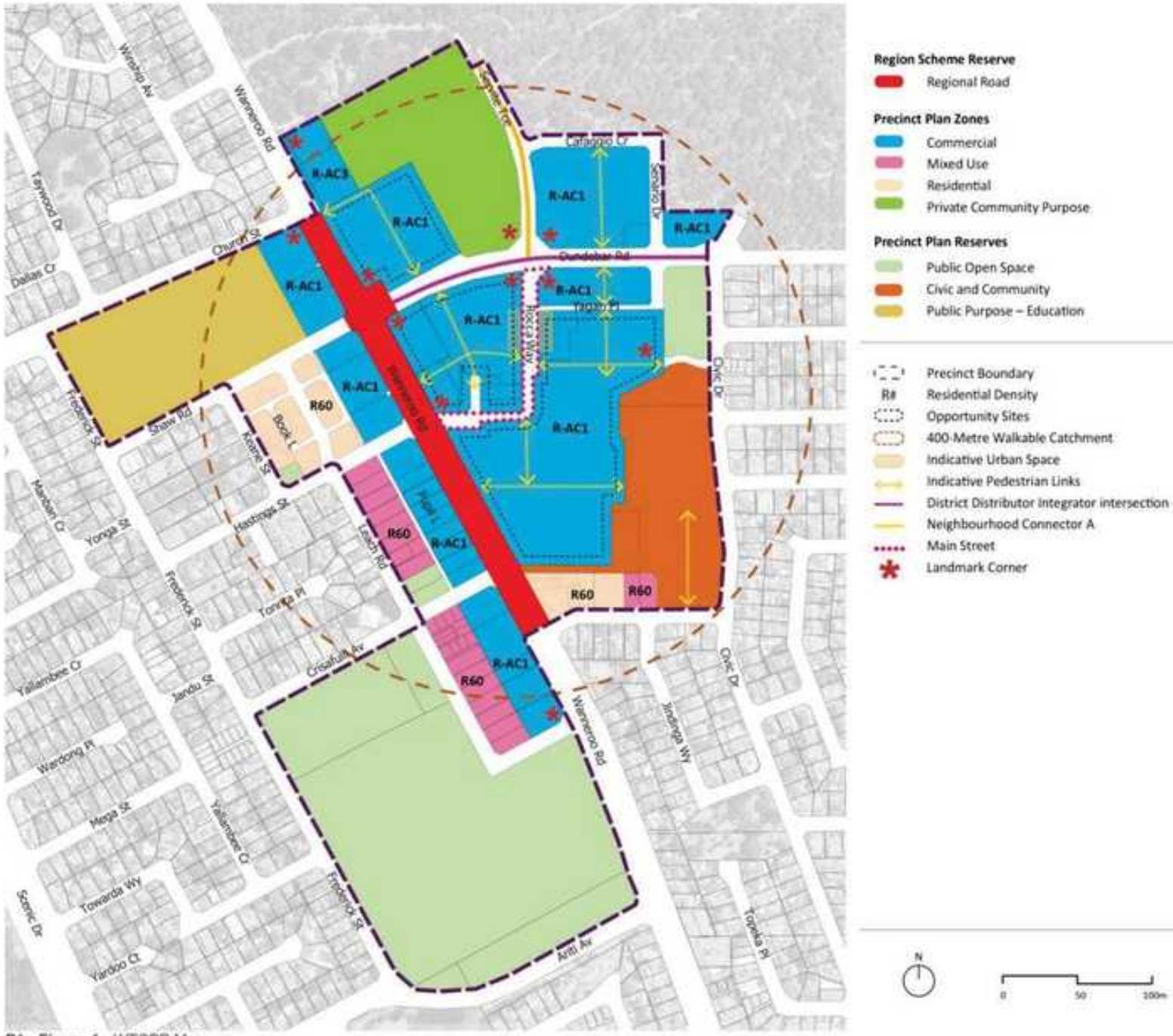
| Priority | Action | Responsibility | Stakeholders |
|---|---|---|---|
| Short term (0-5 years) | Prepare and adopt a coordinated WTC Master Plan to guide a cohesive and integrated public realm across the WTC, bringing together public realm projects, initiatives and supporting studies to inform the prioritisation, staging and delivery of future public realm improvements, including the outcomes of the Aboriginal Cultural Narrative Report and Interpretation Study. | City of Wanneroo | Landowners, Business Owners, Community |
| | Plan early pedestrian connection improvements within Council/State owned land (north-south and east-west) to improve permeability and signal change, identified in the Traffic and Transport Strategy. | City of Wanneroo, Landowners, Developers | Landowners, MRWA |
| | Support lot amalgamation and land assembly for identified catalyst and opportunity sites through pre-lodgement guidance and flexible subdivision outcomes. | Developers, Landowners, Developers | City of Wanneroo |
| | Undertake upgrades of Rocca Way as the primary main street spine, including public realm upgrades, traffic and infrastructure upgrades - Subject to Council decision making. | City of Wanneroo | Landowners, Business Owners |
| | Implement construction of four zebra crossings at Rocca / Dundebar roundabout (anticipated 2026/27) | City of Wanneroo | Landowners, EPA, MRWA, PTA |
| | Progress the investigation of a multi-storey car parking facility identified in the WTC Car Parking Study to meet projected demand and support redevelopment and intensification of the WTC - Subject to Council decision making. | City of Wanneroo | Landowners, Business Owners Community |
| Medium term (5-10 years) | Investigate the Servite Terrace upgrade and extension, including associated green pedestrian connections to support northern growth areas - Subject to Lot 9000 environmental approvals. | Landowners Developers | City of Wanneroo EPA, MRWA, PTA |
| | Investigate and implement local street and movement network improvements identified in the Traffic and Transport Management Strategy, including upgrades to Cafaggio Crescent, Scenario Drive, Yagan Place and Pupil Lane where required to support improved connectivity, pedestrian amenity and public realm outcomes. | City of Wanneroo | MRWA, PTA Landowners |
| | Formalise and deliver identified public access arrangements and easements through redevelopment sites, ensuring they are designed, legally secured and implemented to provide continuous, legible and safe pedestrian and vehicle connections across the WTC. | City of Wanneroo, Landowners, Developers | Landowners, Developers |
| | Facilitate the redevelopment of opportunity sites through pre-lodgement design guidance and review. | City of Wanneroo, Design Review Panel | Landowners, Developers |
| | Coordinate planning for early redevelopment of major catalyst sites, including any future renewal of Wanneroo Central Shopping Centre. | Landowners, Developers | City of Wanneroo |
| Long term (10-20+ years) | Investigate and plan the consolidation or expansion of civic and community infrastructure around Memorial Park, Dundebar Road and the Showgrounds in line with population growth. | City of Wanneroo | State Government, Community |
| | Investigate the possibility of land exchanges for the following Crown Land lots which comprise Crown Land and land owned freehold or vested, to ensure redevelopment is in accordance with the WTCPP:<br>• Lots 1 & 2 Ariti Avenue, Wanneroo<br>• Lot 58 & 59 Leach Road, Wanneroo<br>• Lot 500 Civic Drive, Wanneroo<br>• Lot 100 Dundebar Road, Sinagra<br>• Lot 158 Dundebar Road, Wanneroo | City of Wanneroo, State Government | City of Wanneroo |

| | | | |
|---|---|---|---|
| **Ongoing, or as development occurs** | Redevelopment of Opportunity sites to:<br>• provide higher density mixed-use development across core sub-precincts as infrastructure capacity increases,<br>• provide mid-block pedestrian links through coordinated development, and<br>• deliver landmark buildings and urban spaces at identified nodes. | Landowners, Developers | City of Wanneroo |
| | Deliver planned pedestrian connectivity improvements within Council and State managed land, including improved pedestrian infrastructure and crossings, bus stop facilities and improved key north south and east west connections, in accordance with the Transport and Traffic Strategy. | City of Wanneroo<br>MRWA, PTA | |
| | Require the ongoing consideration, retention and integration of trees and urban ecology assets in subdivision, development and public realm works to support long-term environmental and place outcomes. | City of Wanneroo | Landowners, Developers |
| | Transition surface car parking toward structured or sleeved parking as redevelopment intensity increases. | Developers | City of Wanneroo |
| | Progressively transform Wanneroo Road into a pedestrian activity corridor through public realm upgrades coordinated with redevelopment and State government upgrade, including investigating reciprocal access easements, laneways, service roads and other access arrangements to improve permeability and reduce reliance on direct access from Wanneroo Road and Leach Road. | City of Wanneroo, MRWA | Developers |
| | Deliver staged street tree planting in accordance with the City's Urban Forest Strategy and Street Tree Planting Program, prioritising areas of low canopy cover and urban heat island effects in the short, medium and long term. | City of Wanneroo | Landowner, Developers |
| | Implement WSUD, water-sensitive landscaping and urban cooling measures in both public and private realm works. | City of Wanneroo | Developers, City of Wanneroo |
| | Monitor land use and development outcomes along Rocca Way, Dundebar Road and Wanneroo Road to support the delivery of active ground floor uses and other desired activity centre outcomes as redevelopment occurs. | Developers, Business Owners | City of Wanneroo |
| | Deliver and support pedestrian connectivity improvements within Council and State-managed land, including upgraded pedestrian crossings, bus stop infrastructure, active transport links and key north-south and east-west connections, with particular emphasis on improving movement across Wanneroo Road, in accordance with the Traffic and Transport Management Strategy and relevant City strategies. | City of Wanneroo,<br>MRWA<br>PTA | Landowners, Developers |
| | Monitor development outcomes, including dwelling yields, employment and floorspace, to inform future staging priorities. | City of Wanneroo | City of Wanneroo, Consultants |
| | Implement and continually evolve place-making initiatives across the WTC to enhance public realm quality, strengthen local identity and support a vibrant, safe and people-focused centre. | City of Wanneroo | Landowners, Developers, Community |



# 4.0 Subdivision and Development Requirements

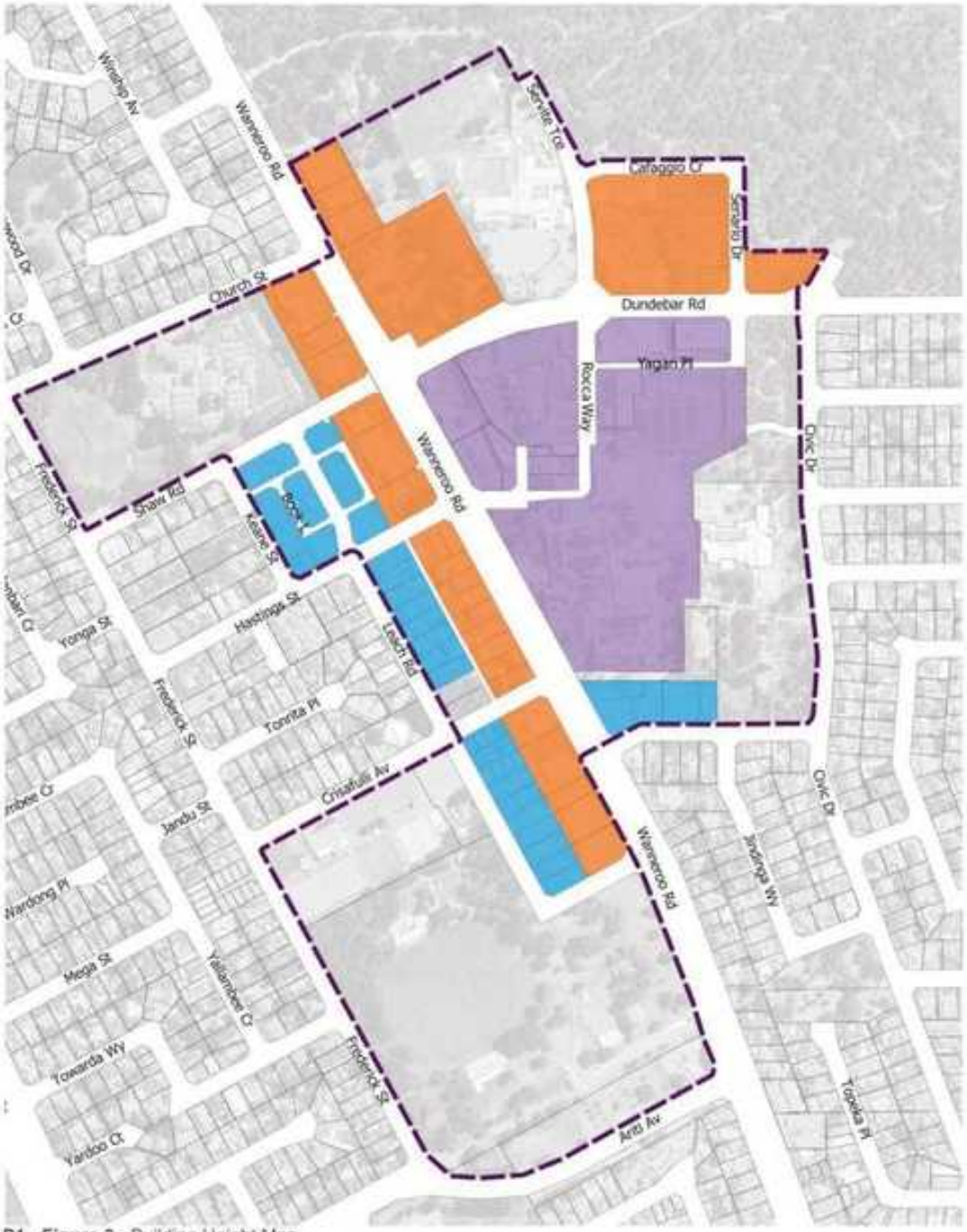




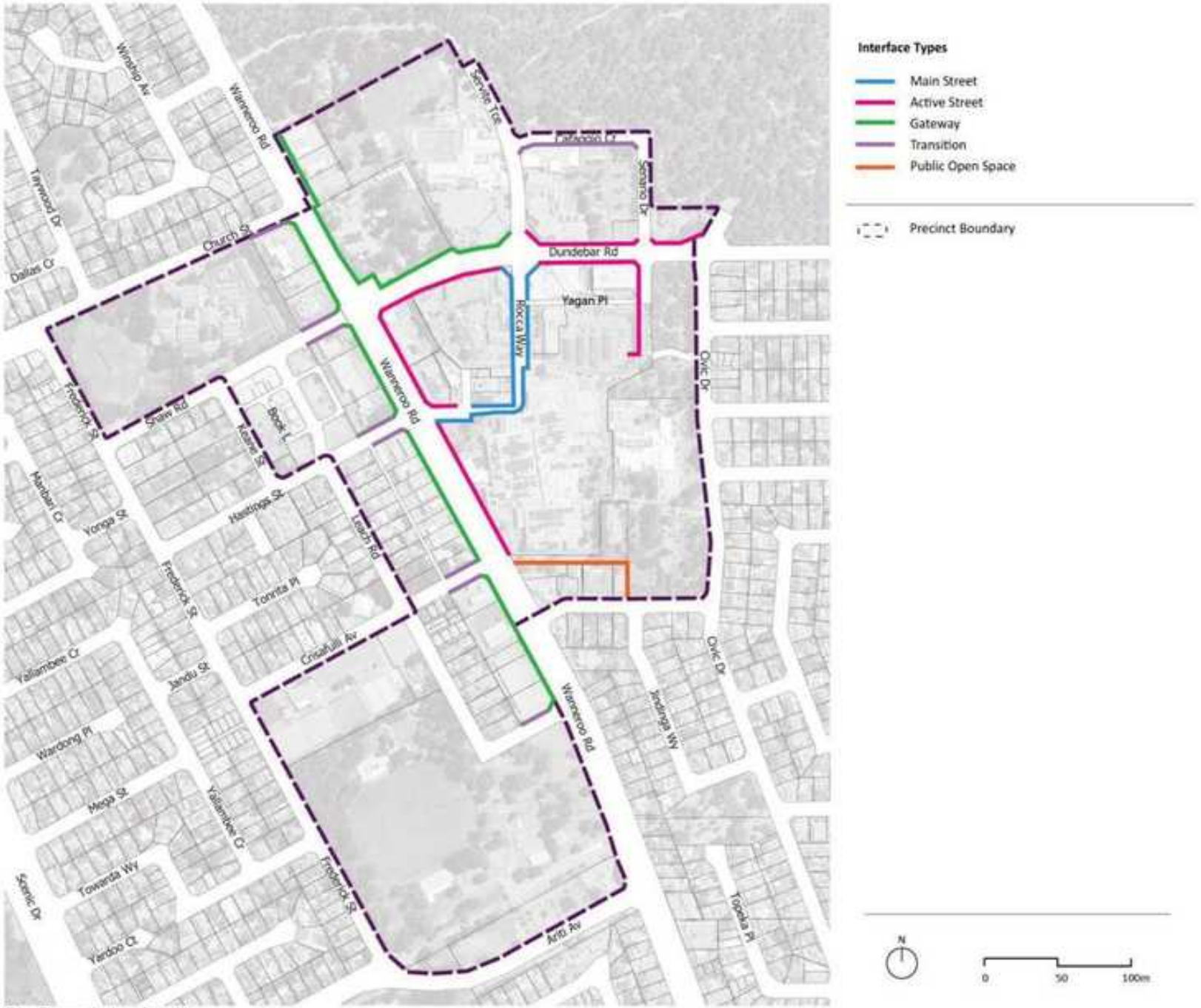

P1 - Figure 1 - WTCPP Map




**P1 - Figure 2** - Sub-Precinct Map




**P1 - Figure 3** - Building Height Map




P1 - Figure 4 - Interface Map

# 4.1 ZONES AND RESERVES

## 4.1.1 ZONES AND PRECINCTS

The WTCPP applies the following zones to land within the WTC as indicated in P1 - Figure 1:

- Residential;
- Mixed-Use;
- Commercial; and
- Private Community Purposes.

The Residential zone is intended to provide a range of housing options appropriate to the activity centre context, while ensuring an effective transition to the existing and planned medium density residential areas adjoining the WTC.

The Mixed Use zone is intended to facilitate a diverse mix of residential and non-residential land around the civic heart and commercial areas of the WTC. The zone is intended to support residential development with non-residential uses at ground level, while providing a transition in land use intensity and scale between the Town Centre's commercial areas and the surrounding lower density residential neighbourhoods.

The Commercial zone is intended to provide a vibrant and attractive activity area within the WTC that accommodates a broad range of commercial, retail, office and entertainment uses, supported by high density residential development above ground level. The zone will establish a strong and well integrated retail core, maximise active ground floor uses along key pedestrian routes and support a mix of land uses that encourage both day and night activity. Development within the zone is intended to contribute to economic growth and place activation, supported by adaptable building forms that can respond to changing market demands, land uses and intensification over time.

The Private Community Purposes zone accommodates St Anthony's Primary School. Community facilities such as schools play a vital role in supporting local community development, and the WTCPP therefore protects this established land use as shown in P1 - Figure 1.

The WTCPP also identifies six Sub-Precincts, which group land areas sharing common land use, built form, zoning and interface characteristics to guide more detailed planning and development outcomes. A map of the Sub-Precincts is contained in P1 - Figure 2.

The Sub-Precincts are:

- Sub-Precinct 1: Rocca Way;
- Sub-Precinct 2: Dundebar;
- Sub-Precinct 3: Wanneroo Road;
- Sub-Precinct 4: Memorial Park;
- Sub-Precinct 5: Frame; and
- Sub-Precinct 6: Showgrounds.

Specific development provisions relating to each of the Sub-Precincts are contained in Section 5.0.

## 4.1.2 PUBLIC OPEN SPACE

Areas of Public Open Space (POS) within the WTCPP are shown in P1 - Figure 1. These reserves form an integral part of the public realm network, providing recreational opportunities, supporting urban greening and contributing to the overall amenity of the Centre.

## 4.1.3 ROAD RESERVES

The WTCPP includes the Wanneroo Road Primary Regional Road reserve, which forms part of the regional road network and is protected for the long-term movement needs of the broader metropolitan area.

The WTCPP incorporates a hierarchy of local road reserves that support internal circulation, provide access to development sites and facilitate safe and efficient connections between key destinations such as the civic core, Wanneroo Central Shopping Centre and adjacent residential neighbourhoods. Together, these regional and local road reservations establish the transport framework necessary to accommodate future development and to ensure an integrated, legible and accessible movement network.

## 4.1.4 LOCAL RESERVES

In addition to POS and Road Reserves, the WTCPP incorporates the following reserves as indicated in P1 - Figure 1:

- Civic and Community; and
- Public Purposes.

The Civic and Community reserve is intended to strengthen and consolidate the existing civic presence within the Centre. It provides opportunities for the development and enhancement of civic buildings, community facilities and public gathering spaces that contribute to a strong sense of place. The location of the reserve also acknowledges the longstanding agricultural history of the locality by providing a focal point for community identity and cultural interpretation within the activity centre.

The Public Purposes reserve accommodates Wanneroo Primary School. The WTCPP recognises that the ultimate development of the WTC will not generate the demand for additional public educational institutions within the locality. Accordingly, the reserve ensures the continued operation of the existing school.

## 4.2 GENERAL DEVELOPMENT REQUIREMENTS

The following general development requirements apply to the entire WTCPP area and should be read in conjunction with the specific requirements for the relevant sub-precinct (as outlined in Section 5.0).

### 4.2.1 ZONING AND LAND USE PERMISSIBILITY

1. The zones across the WTC are indicated in P1 - Figure 1.
2. Within the Commercial and Mixed Use zones, development should maintain or increase opportunities for non-residential uses. Residential development is encouraged where it supports and complements these uses and does not displace the employment, service and activity generating functions of the WTC.
3. In determining the suitability of ground-floor land uses for each interface type, the decision-maker shall have due regard to the 'Preferred' and 'Not Preferred' ground floor uses identified for the relevant sub-precinct in Section 5.0.
4. Where a land use is not identified as a 'Preferred' or 'Not Preferred' ground floor use in Section 5.0, and for all upper floor uses, land use permissibility shall be determined in accordance with Schedule 1 - Zoning Table of the Scheme.

### 4.2.2 DENSITY

1. R-Codes are contained in P1 - Figure 1.
2. Residential development shall be in accordance with the R-Codes, except where variations to the R-Codes are specified in Section 5.0.

### 4.2.3 SUBDIVISION

1. Subdivision proposals shall demonstrate that adequate infrastructure and services are available or can be provided without adversely impacting existing networks.
2. Subdivision shall support the retention of existing mature trees where practicable, having regard to site constraints and development feasibility.
3. Subdivision applications shall demonstrate to the satisfaction of the City that lots are of sufficient size and configuration to support the intended built form, land uses and development intensity of the applicable sub-precinct.
4. Battleaxe lots will generally not be supported where they compromise the creation of an active street frontage, reduce pedestrian connectivity or prejudice future redevelopment opportunities.
5. Where land is zoned Residential or Mixed Use under the WTCPP, subdivision shall be in accordance with the R-Codes.

### 4.2.4 VEHICLE ACCESS AND PARKING

1. Non-residential development is to provide car parking at a rate of 1 bay per 60m² NLA.
2. The City may approve a variation to this rate where supported by a Parking Management Plan that demonstrates the proposed parking provision can adequately accommodate parking demand.
3. Car parking shall be located below ground, within buildings or to the rear of buildings and shall not dominate street frontages or adversely impact the public realm.
4. Vehicle access from the primary street is not permitted where access can be provided from a secondary street. Where no alternative street access is available, vehicle access may be permitted from the primary street at the discretion of the City.
5. Structured parking shall be integrated with surrounding development and designed to minimise visual impacts, including through screening and sleeving where practicable.
6. Shared and consolidated parking facilities are encouraged.

### 4.2.5 BICYCLE PARKING AND END OF TRIP FACILITIES

1. For non-residential development, the provisions of end of trip facilities and bicycle parking shall be provided in accordance with P1 - Table 3.

**P1 - Table 3** - Visitor bicycle parking and end of trip facilities in non-residential development

| TYPE | MINIMUM PROVISION |
|---|---|
| End of trip facilities (for tenants/employees) | • 1 bicycle parking space per 200m² of non-residential gross floor area.<br>• 1 shower for the first 5 bicycle spaces required or part thereof, plus an additional shower for each 10 bicycle parking spaces.<br>• 1 change room or direct access to a communal change room per shower.<br>• 1 locker per bicycle space required. |
| Visitor bicycle parking | • 1 bicycle parking space per 400m² of non-residential gross floor area. |

## 4.2.6 BUILT FORM

### 4.2.6.1 - BUILDING HEIGHT

1. Building heights shall be in accordance with P1 - Figure 3.
2. For the purposes of measuring the number of storeys, the ground floor shall be taken as the floor level adjoining the pedestrian footpath along the primary street frontage.

### 4.2.6.2 - STREET SETBACKS

1. Where no setback has been identified in Section 5.0, setbacks shall be in accordance with the Scheme or R-Codes, as applicable.
2. Where development incorporates a podium with only one additional storey above, the 'above podium' setback provisions do not apply.

### 4.2.6.3 - BUILDING DESIGN

1. Facades visible from the public realm shall incorporate:
   a. Articulation;
   b. Major openings;
   c. Diversity of materials;
   d. Variation in material colours;
   e. Vertical projections; and
   f. Integrated structural features.
2. Development fronting key streets and public spaces is encouraged, where appropriate, to incorporate public art, interpretation or other placemaking elements that contribute to the identity and character of the WTC.

### 4.2.6.4 - ORIENTATION AND ENTRANCES

1. Development shall address both the primary and secondary street (if applicable).
2. Where applicable, development shall address adjoining Public Open Space (POS).
3. For mixed use development, residential building access areas such as lift lobbies, stairs, accessways and individual dwelling entries shall be separated from non-residential tenancy access.

### 4.2.6.5 - AWNINGS

1. Awnings shall be provided in accordance with the relevant Sub-Precinct provisions in Section 5.0.
2. Awnings shall be integrated into the building design, be permanently fixed and constructed of materials that provide weather protection.

### 4.2.6.6 - TOPOGRAPHY

1. Development (including site works and retaining walls) shall be sympathetic to the natural topography of the site and shall not adversely impact the streetscape or the character of the surrounding locality.
2. The podium frontage shall maintain a uniform top-of-wall height across the full street frontage. Where ground levels vary, the podium shall be designed to accommodate these changes internally.

### 4.2.6.7 - LANDMARK CORNERS

1. Landmark corners are identified in the relevant Sub-Precinct provision in Section 5.0. In addition to the requirements of Section 4.0 and Section 5.0, development on landmark corner sites shall incorporate the following:
   a. All street frontages shall be designed as active frontages with doors, windows and visually engaging facades.
   b. Development shall incorporate a distinctive architectural feature at the corner such as additional height, distinct roof forms, canopies, curved walls or tower elements.
   c. Pedestrian entrances shall be provided within 10 metres of the corner truncation on both street frontages to enhance accessibility.

### 4.2.6.8 - CORNER SITES

1. Where a corner site is not designated as a landmark corner, the provisions of this section apply.
2. Development on corner sites shall incorporate the designated podium height to each frontage in accordance with the relevant Sub-Precinct provision in Section 5.0.
3. Where only one frontage of a corner site has a designated podium height in the relevant sub-precinct requirements in Section 5.0, the podium shall turn the corner and continue along the secondary street for 30% of the length of the boundary, before the development transitions to a scale that complements the intended streetscape.

## 4.2.7 VISUAL AMENITY

1. Loading docks, bin storage and service areas of non-residential development shall be screened and located to minimise visual and acoustic impacts on residential development and the public realm.
2. Lift over-runs, rooftop plant and servicing equipment shall not extend higher than 3.5m above the wall height of the development, and shall be suitably screened from the public realm.
3. Air conditioning units, TV antennae, satellite dishes, radio masts and other external fixtures shall be discretely located, adequately screened or integrated into the building to reduce visibility from the public realm.
4. In mixed-use developments, areas intended for the exclusive use of residential occupants shall be clearly separated from the public domain.

## 4.2.8 OPPORTUNITY SITES

1. Opportunity Sites are identified in the relevant Sub-Precinct in Section 5.0.
2. Development of Opportunity Sites shall satisfy the requirements of Sections 4.0 and Section 5.0.
3. Development of Opportunity Sites shall incorporate direct pedestrian connections to surrounding streets, laneways, urban spaces and the broader pedestrian network.
4. Internal access ways within Opportunity Sites and large consolidated development sites that function as streets shall be treated as streets for the purpose of applying street setback and street interface requirements.

## 4.2.9 URBAN SPACES

1. Urban spaces shall be provided in the location shown on P1 - Figure 1.
2. Urban spaces shall incorporate a minimum area of 150m², direct street connection and active edges.
3. Urban spaces shall be designed as high quality, publicly accessible spaces that support social interaction, activation and community life within the WTC.
4. Construction materials, street furniture, public art, landscaping, shade and weather protection shall be incorporated to support comfort, amenity and place activation.
5. Development that delivers a compliant urban space may be eligible for:
   a. A reduction of 20% in the required number of car parking bays; or
   b. A reduction in setbacks above podium level to a minimum of 1 metre.
4. A public access easement shall be established over the urban space to ensure ongoing public access, to the satisfaction of the City.

## 4.2.10 LANDSCAPING

### 4.2.10.1 - TREE RETENTION

1. Existing mature trees shall be retained and incorporated into subdivision and development design where practicable.

### 4.2.10.2 - DEEP SOIL AREAS

1. Deep soil areas for non-residential and mixed-use development shall allocate a minimum of 10 percent of the site area as deep soil area.

### 4.2.10.3 - TREE AND VEGETATION PLANTING

1. Tree planting for non-residential and mixed-use development shall incorporate a minimum of two medium trees or one large tree for every 500m² of site area, in accordance with P1 - Table 4, rounded up to the nearest 500m².
2. Soft landscaping shall be provided within the street setback area specified in Section 5.0, or in the Scheme where not specified in Section 5.0. Landscaping is not required on the Main Street interface where a nil setback to the building is proposed.

**P1 - Table 4** - Tree sizes

| TREE SIZE | CANOPY DIAMETER AT MATURITY | NOMINAL HEIGHT AT MATURITY | REQUIRED DSA PER TREE | RECOMMENDED MINIMUM DSA WIDTH | INDICATIVE POT SIZE AT PLANTING |
|---|---|---|---|---|---|
| Medium | 6-9m | 8-12m | 36m² | 3m | 200L |
| Large | >9m | >12m | 64m² | 6m | 500L |

## 4.2.11 MOVEMENT NETWORK

1. Direct and legible pedestrian connections shall be provided from the primary street to building entrances.
2. Pedestrian links shall be provided in accordance with P1 - Figure 1. Pedestrian links may take the form of an open-air link or covered arcade, but shall remain fully accessible to the public.
3. Pedestrian links shall provide a continuous, unobstructed path of travel with a minimum clear width of 3 metres. Where activation (e.g. outdoor dining, retail spill-out) or landscaping features are proposed, a minimum combined width of 6 metres is required to accommodate both movement and activation.
4. Where pedestrian links on private land are required, a public access easement shall be included as a condition of development approval.

## 4.2.12 FENCING

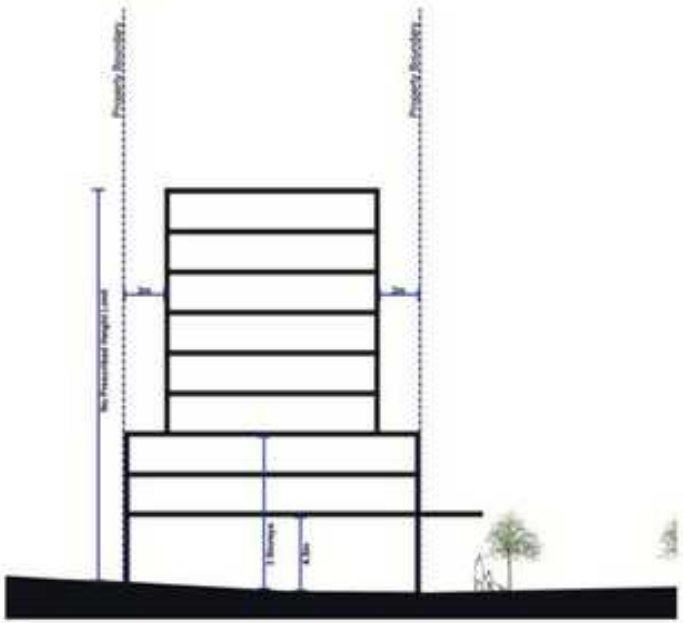
1. Fencing forward of the primary setback line shall not be permitted.
2. Fencing behind the predominant building line shall be constructed of a high quality material and finish in accordance with the City's Fencing Local Law 2021, except where otherwise specified in Section 5.0.
3. Where visible from a street or public space, fencing should incorporate a maximum 600mm solid portion with visually permeable fencing above.

## 4.3 PUBLIC REALM INTERFACES

Five interface types apply throughout the Wanneroo Town Centre, as summarised below and illustrated in Figure 4. Development fronting these interfaces shall accord with the relevant sub-precinct requirements in Section 5.0. The interface types define the intended relationship between built form and the public realm, with the associated development standards in Section 5.0 ensuring a consistent response to each interface. Where an interface type is not identified in Figure 4, development shall default to the general development requirements in Section 4.0 and/or the Scheme.

### MAIN STREET INTERFACE

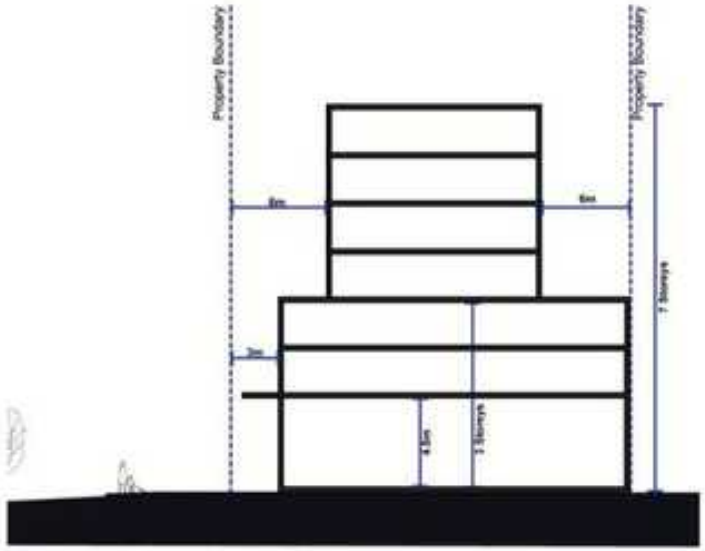
The Main Street Interface forms the urban core and primary pedestrian spine of the WTC. It is characterised by a continuous active street frontage and a mix of uses that support day and night activation. Buildings are generally located on the street boundary to establish a strong and legible street edge. Ground floors are intended to accommodate active uses such as cafés, restaurants and retail, supported by highly transparent facades that encourage engagement with the public realm.



**P1 - Figure 5** - Main Street interface

### ACTIVE STREET INTERFACE

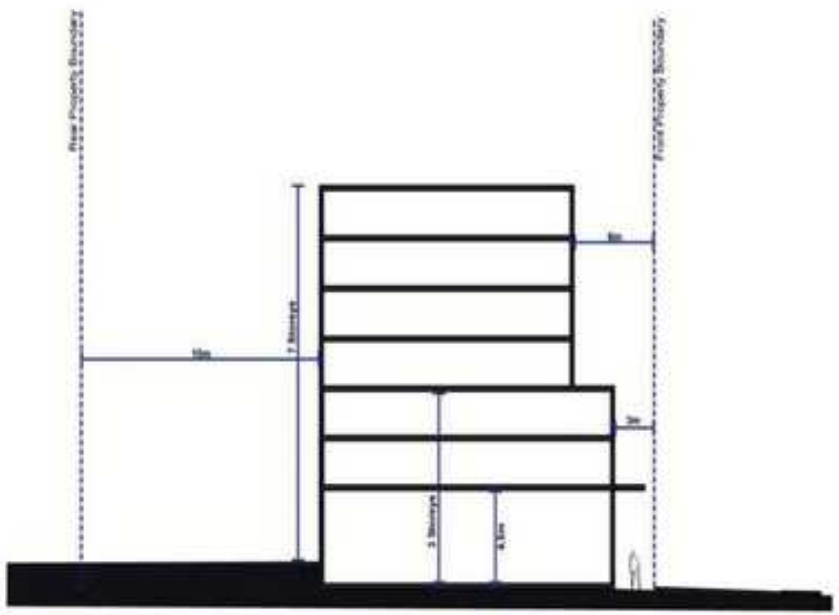
The Active Street Interface supports pedestrian movement and provides a lower level of activation than the Main Street spine. Buildings are set back to allow for landscaping and pedestrian walkways, while maintaining a strong connection with the public realm. Ground floors are intended to accommodate adaptable land uses such as shops, offices, civic or community uses, including professional and knowledge-based industries. Development should incorporate integrated awnings and transparent facades to enhance pedestrian comfort and visual engagement.




**P1 - Figure 6** - Active Street interface

**GATEWAY INTERFACE**

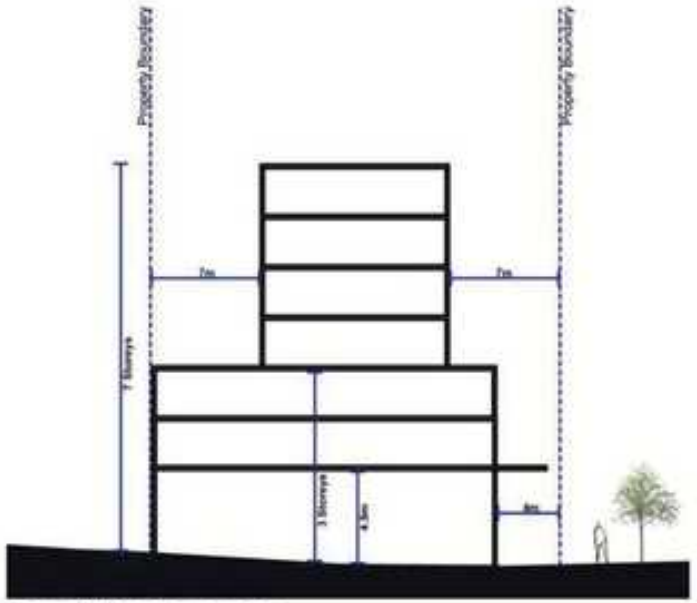
The Gateway Interface applies to key connector roads forming primary entry points to the Town Centre. Buildings are set back to allow for landscaping that enhances amenity and provides separation from traffic, with rear setbacks and articulation managing interfaces with residential areas and sensitive uses. Land uses typically include commercial, service based and specialty retail uses that benefit from vehicle accessibility, with residential uses integrated where appropriate.



**P1 - Figure 7** - Gateway interface

**TRANSITION INTERFACE**

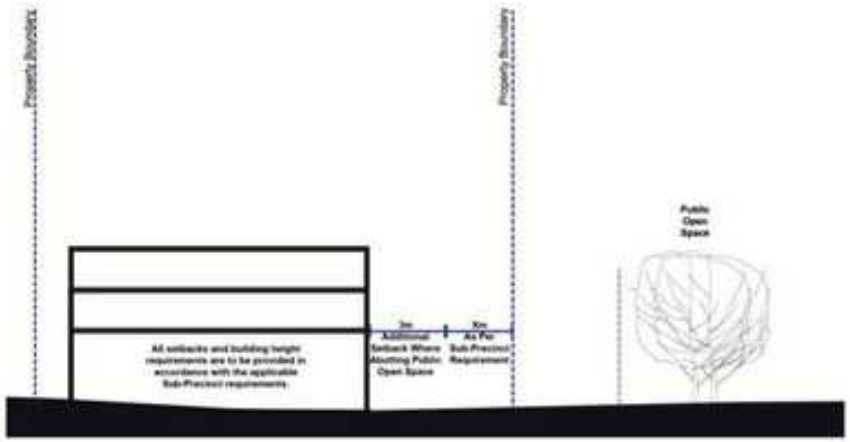
The Transition Interface applies to streets that provide a gradual transition between commercial areas and surrounding uses. It supports a cohesive mixed-use streetscape, with podium-level design and building articulation that maintains a strong street presence while responding to changes in scale and intensity. Ground floors are intended to incorporate semi-active frontages that contribute visual interest and passive surveillance, without requiring constant activation, supporting flexibility in land use over time.



**P1 - Figure 8** -Transition interface

**PUBLIC OPEN SPACE INTERFACE**

The Public Open Space Interface applies to development adjoining public parks and open spaces and is intended to create a positive interface with these areas. Buildings should be oriented toward public open space to support passive surveillance and safety. Setbacks should incorporate high quality landscaping to soften the built form and enhance amenity, while maintaining clear sightlines between buildings and public areas.




**P1 - Figure 9** - Public Open Space interface



5.0

# Sub-Precinct Development Requirements



# 5.1 SUB-PRECINCT 1 (P1) - ROCCA WAY



## SUB-PRECINCT INTENT

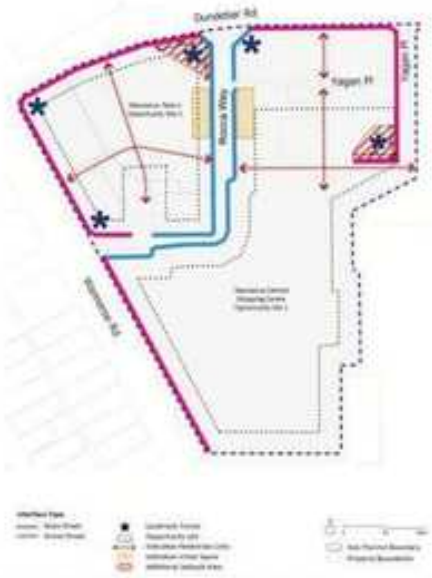
The Rocca Way Sub-Precinct, as shown on P1 - Figure 2 and 10, is intended to evolve as the activation core of the WTC, anchored by Rocca Way as its primary main street and centre of activity.

Development will deliver a contemporary built form that supports an active, pedestrian oriented environment and high-quality public spaces. While the design approach is modern, it should, where appropriate, draw inspiration from the established civic character of the WTC through materiality and architectural detailing.

This will support a cohesive identity for the WTC and a diverse mix of retail, hospitality, residential and civic uses.

## SUB-PRECINCT OBJECTIVES

1. Establish Rocca Way as a vibrant, pedestrian-oriented main street and focal point for activation by delivering active ground floor uses and externally facing tenancies to support continuous street level engagement.
2. Integrate mixed-use development that supports economic resilience, a diverse range of activities and a safe evening economy.
3. Provide a connected and legible pedestrian network that links Rocca Way, Dundebar Road, Wanneroo Road, Bert Togno Park and other key destinations within the WTC.
4. Promote built form that defines landmark corners, reinforces key gateways, respects existing interfaces, and incorporates activated frontages.
5. Enhance the public realm with shade, seating, landscaping, and green infrastructure to encourage social interaction, including within publicly accessible spaces delivered as part of private development.
6. Encourage the redevelopment of large and consolidated landholdings to improve permeability, connectivity and walkability through the provision of new streets, pedestrian links and publicly accessible spaces, while supporting increased development intensity and activity within the Town Centre.
7. Encourage efficient and consolidated parking arrangements, including structured and shared parking, to minimise the visual and functional impact of surface parking on the public realm.




**P1 - Figure 10** - Rocca Way Sub-Precinct




Indicative built form outcome for Rocca Way

## 5.1.1 DEVELOPMENT REQUIREMENTS

In addition to the General Development Standards provided in Section 4.0, the following development controls and those in P1 - Table 5 shall apply to the Rocca Way Sub-Precinct (P1).

Supporting figures in 5.1.6 illustrate how the interface and built form provisions apply within the Rocca Way Sub-Precinct.

## 5.1.2 ZONES

The Rocca Way sub-precinct is zoned Commercial.

## 5.1.3 DENSITY CODING

The density coding for the Rocca Way sub-precinct is R-AC1.

## 5.1.4 LAND USE

Preferred and Not Preferred land uses for ground floor development fronting the Main and Active interfaces within the Rocca Way Sub-Precinct shall be in accordance with the following:

| GROUND FLOOR | |
|---|---|
| **PREFERRED USES** | **NOT PREFERRED USES** |
| • Amusement Parlour<br>• Art Gallery<br>• Betting Agency<br>• Brewery<br>• Hotel<br>• Lunch Bar<br>• Market<br>• Restaurant/Cafe<br>• Shop<br>• Small Bar<br>• Tavern | • Bulky Goods Showroom<br>• Fast Food Outlet (Drive Through)<br>• Funeral Parlour<br>• Garden Centre<br>• Liquor Store - Large<br>• Motor Vehicle, Boat or Caravan Sales<br>• Motor Vehicle Wash<br>• Road House<br>• Service Station<br>• Trade Supplies |

## 5.1.5 OPPORTUNITY SITES

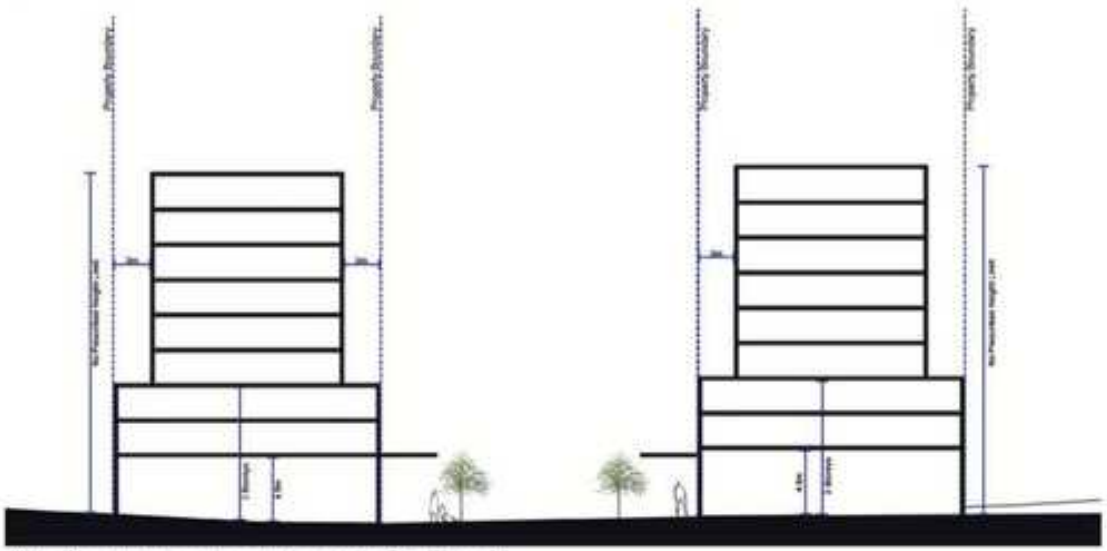
Development within the 'additional setback area' as indicated in P1 - Figure 10 may be set back up to 10 metres from the street in lieu of the required primary street setback to facilitate active outdoor uses.

**P1 - Table 5** - Rocca Way Sub-Precinct Built Form Controls

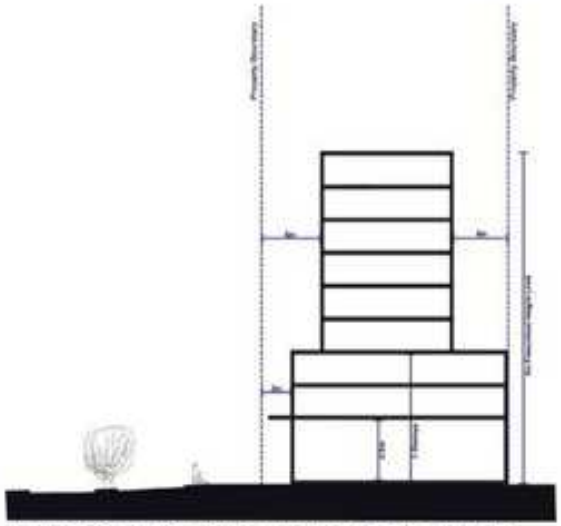
| PROVISION | | INTERFACE TYPE | |
|---|---|---|---|
| | | Main Street (R-AC1) | Active Street (R-AC1) |
| Building Height | Required Podium Height | 3 storeys | 3 storeys |
| | Maximum Building Height | No maximum height prescribed | No maximum height prescribed |
| | Minimum Ground Floor Ceiling Height | 4.5 metres | 4.5 metres |
| Street Setbacks | Primary/Secondary Street (Podium) | Nil* | 3 metres |
| | Primary/Secondary Street (Above Podium) | 3 metres | 6 metres |
| Side and Rear Setbacks | Minimum Side Setback (Podium) | Nil | Nil |
| | Minimum Rear Setback (Podium) | Nil | Nil |
| | Minimum Side and Rear Setback (Above Podium) | 3 metres | 6 metres |
| Plot Ratio | Plot Ratio | Plot Ratio does not apply. | |
| Public Domain Interface | On-Site Parking Between Street and Building | Not Permitted | Not Permitted |
| | Ground Floor Residential Uses | Not Permitted | Not Permitted |
| Vehicle Access/ Parking | Direct Vehicle Access from primary street | Not permitted | Not Permitted |
| Facade Design (Street Level) | Minimum Clear Glazing % (Ground Floor) | 70% | 50% |
| | Awnings as Minimum % of Building Frontage | 100% | 70% |
| | Awnings Minimum Standards | Height: 3 metres<br>Depth: 2.4 metres | Height: 3 metres<br>Depth: 2.4 metres |
| Landscaping/ Deep Soil | Landscaping and deep soil shall be provided in accordance with the requirements set out in Section 4.2.10 | | |

* A nil setback is to be interpreted as applying to the Urban Space edge where applicable.

## 5.1.6 SUB-PRECINCT INTERFACE TYPES

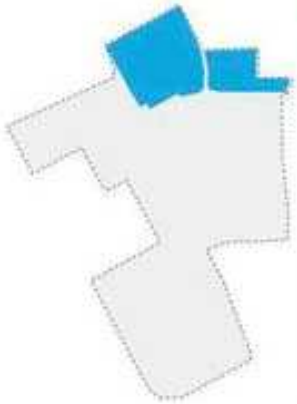


Main Street interface in accordance with P1 - Figure 5



Active Street interface in accordance with P1 - Figure 6

# 5.2 SUB-PRECINCT 2 (P2) - DUNDEBAR



## SUB-PRECINCT INTENT:

The Dundebar Sub-Precinct, as identified in P1 - Figures 2 and 11, will function as a transitional mixed-use area between the WTC core and surrounding lower-scale neighbourhoods. Development will support a mix of commercial, civic and residential uses, improve accessibility and walkability, strengthen connections across the WTC, and reinforce a landmark presence at key intersections.

Anchored by the City of Wanneroo Civic Centre and supported by a concentration of community facilities and public spaces, the Sub-Precinct will maintain a strong civic identity. Building design should respond to the established character of Dundebar Road, including its civic scale, materiality and landscaped setting, while allowing contemporary architectural expression at key interfaces and landmark sites.

## SUB-PRECINCT OBJECTIVES

1. Encourage a mix of complementary uses that contribute to the activation of the WTC while supporting the Rocca Way Sub-Precinct as the primary retail and hospitality hub, including active frontages along Dundebar Road and Wanneroo Road.
2. Integrate mixed-use development that supports accessibility, encourages walking and provides convenient access to services, employment, community facilities and public transport.
3. Reflect elements of Wanneroo's civic and historic identity through high-quality built form, landscaping and public realm outcomes, while supporting contemporary architectural expression.
4. Provide a landmark development at the intersection of Dundebar Road and Wanneroo Road that reinforces the WTC's identity and establishes a key gateway to the centre.
5. Encourage adaptable and accessible residential development in locations with good access to services, public transport and community infrastructure.
6. Provide a sensitive transition in built form, scale and activity between the Rocca Way core and surrounding residential and community areas.




**P1 - Figure 11** - Dundebar Sub-Precinct



Indicative built form outcome for Dundebar Road and Wanneroo Road intersection (DBCA site)

## 5.2.1 DEVELOPMENT REQUIREMENTS

In addition to the General Development Standards provided in Section 4.0, the following development controls in P1 - Table 6 shall apply to the Dundebar Sub-Precinct.

Supporting figures in 5.2.5 illustrate how the interface and built form provisions apply within the Dundebar Sub-Precinct.

## 5.2.2 ZONES

The Dundebar Sub-Precinct is zoned Commercial and Private Community Purposes. A portion of the Sub-Precinct is also reserved as Civic and Community. Only the land within the Commercial zone is intended for redevelopment. Any future redevelopment of the Private Community Purposes zoned land and the Civic and Community reserved land will be subject to the development requirements contained within the applicable planning framework.

## 5.2.3 DENSITY CODING

The density coding for the Dundebar sub-precinct is R-AC1 and R-AC3.

## 5.2.4 LAND USE

Preferred and Not Preferred land uses for ground floor development within the Commercial zone fronting the Active, Gateway and Transition interfaces within the Dundebar Sub-Precinct shall be in accordance with the following:

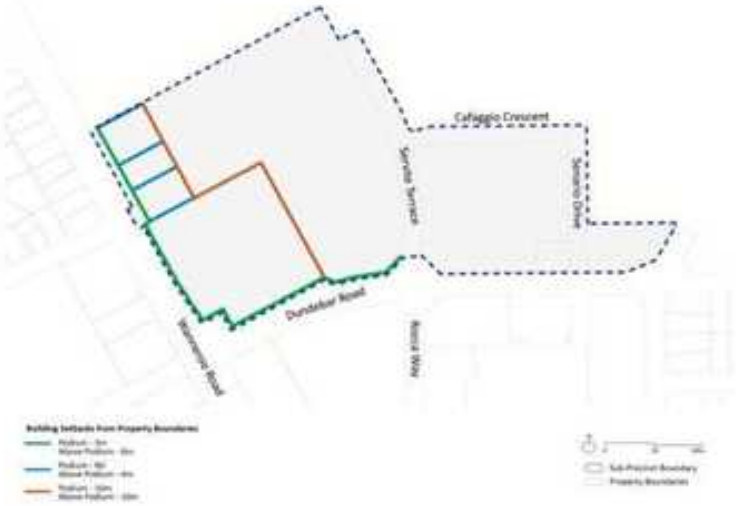
| GROUND FLOOR | |
|---|---|
| **PREFERRED USES** | **NOT PREFERRED USES** |
| • Child Care Premises<br>• Civic Use<br>• Community Purpose<br>• Consulting Rooms<br>• Educational Establishment<br>• Hotel<br>• Medical Centre<br>• Office<br>• Reception Centre,<br>• Recreation - Private<br>• Veterinary Centre | • Bulky Goods Showroom<br>• Fast Food Outlet (Drive Through)<br>• Funeral Parlour<br>• Garden Centre<br>• Liquor Store - Large<br>• Motor Vehicle, Boat or Caravan Sales<br>• Motor Vehicle Wash<br>• Road House<br>• Service Station<br>• Trade Supplies |

**P1 - Table 6** - Dundebar Sub-Precinct Built Form Controls

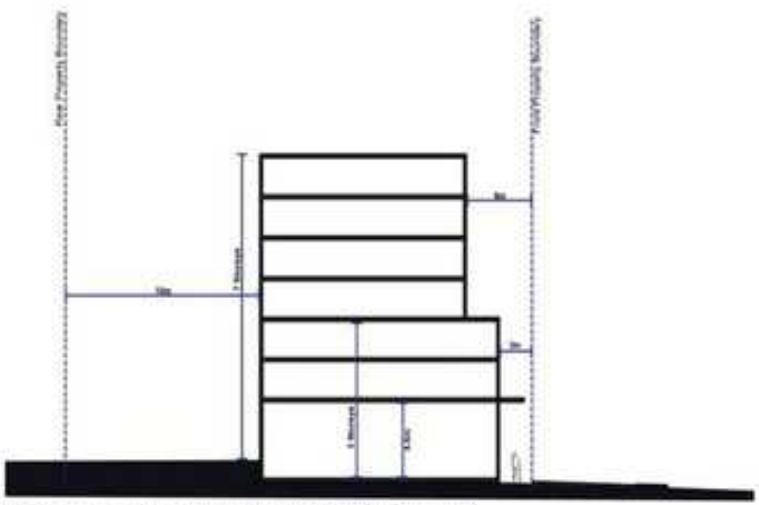
| PROVISION | | INTERFACE TYPE | | |
|---|---|---|---|---|
| | | Active Street (R-AC1) | Gateway (R-AC1 & R-AC3) | Transition (R-AC1) |
| **Building Height** | Required Podium Height | 3 storeys | 3 storeys | 3 storeys |
| | Maximum Building Height | 7 storeys | 7 storeys | 7 storeys |
| | Minimum Ground Floor Ceiling Height | 4.5 metres | 4.5 metres | 4.5 metres |
| **Street Setbacks** | Primary/Secondary Street Setback (Podium) | 3 metres | 3 metres | 4 metres |
| | Primary/Secondary Street Setback (Above Podium) | 6 metres | 6 metres | 7 metres |
| **Side and Rear Setbacks** | Minimum Side Setback (Podium) | Nil | Where shown in P1 - Figure 12: 10 metres*<br>All other boundaries: Nil | Nil |
| | Minimum Side Setback (Above Podium) | 6 metres | Where shown in P1 - Figure 12: 10 metres*<br>All other boundaries: 4m | 7 metres |
| | Minimum Rear Setback (Podium) | Nil | 10 metres* | Nil |
| | Minimum Rear Setback (Above Podium) | 6 metres | 10 metres* | 7 metres |
| **Plot Ratio** | Plot Ratio | Plot Ratio does not apply. | | |
| **Public Domain Interface** | On-Site Parking Between Street and Building | Not Permitted | Not Permitted | Not Permitted |
| | Ground Floor Residential Uses | Not Permitted | Not Permitted | Permitted |
| **Vehicle Access/ Parking** | Direct Vehicle Access from primary street | Not permitted | Not Permitted | Not Permitted |
| **Facade Design (Street Level)** | Minimum Clear Glazing % (Ground Floor) | 50% | 50% | 50% (commercial frontages only) |
| | Awnings as Minimum % of Building Frontage | 70% | 70% | To be provided at the entrance of commercial frontages only |
| | Awnings Minimum Standards | Height: 3 metres<br>Depth: 2.4 metres | Height: 3 metres<br>Depth: 1.8 metres | Height: 3 metres<br>Depth: 1.8 metres |
| **Landscaping/ Deep Soil** | Landscaping and deep soil shall be provided in accordance with the requirements contained in Section 4.2.10 | | | |

* Car parking, access and landscaping can be accommodated within the setback area.

## 5.2.5 SUB-PRECINCT SUPPORTING FIGURES

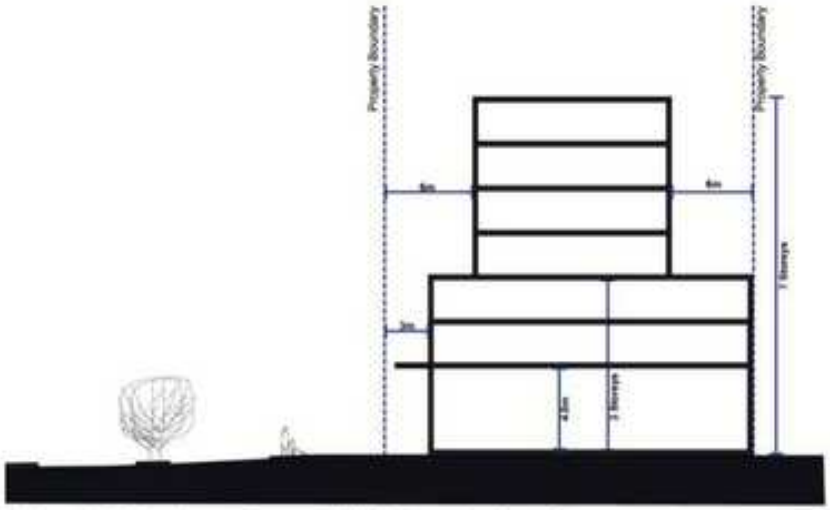



**P1 - Figure 12** - Setback for Gateway Interface - Lot 145 Dundebar Road

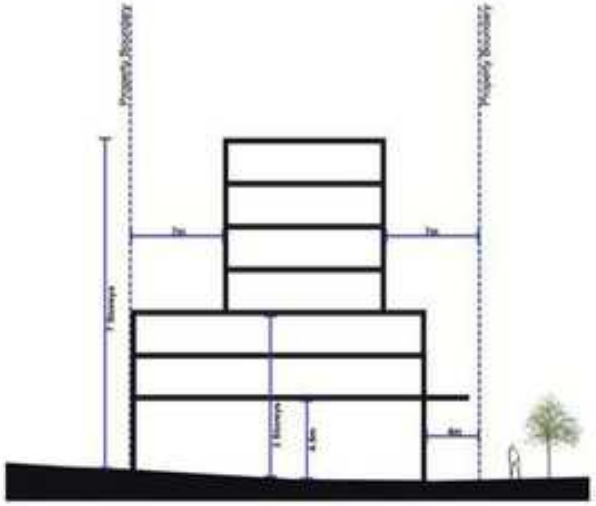


Gateway interface in accordance with P1 - Figure 7

## 5.2.6 SUB-PRECINCT INTERFACE TYPES

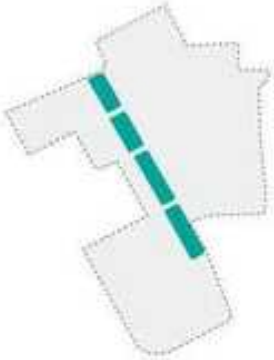



Gateway interface in accordance with P1 - Figure 6




Transition interface in accordance with P1 - Figure 8

# 5.3 SUB-PRECINCT 3 (P3) - WANNEROO ROAD



## SUB-PRECINCT INTENT

The Wanneroo Road Sub-Precinct, as identified on P1 - Figures 2 and 13, will function as a mixed-use gateway to the WTC, accommodating a transition between the more intensive Town Centre core and surrounding residential neighbourhoods west of Wanneroo Road. Development will support a mix of commercial, residential and complementary uses that reinforce the role of the WTC while responding sensitively to adjoining residential areas.

As a key arrival corridor, the precinct will strengthen Wanneroo Road's role as the principal gateway to the Town Centre while improving the relationship between development and the public realm. High-quality built form, landscaping and streetscape improvements will contribute to a stronger sense of arrival, with landmark development at prominent locations, enhanced pedestrian amenity and activated frontages where appropriate.

## SUB-PRECINCT OBJECTIVES

1. Establish a distinctive built form along Wanneroo Road that reinforces its role as a gateway to the Town Centre and creates a strong sense of arrival through high-quality design.
2. Ensure development along Gateway Interfaces contributes to a comfortable, safe and attractive pedestrian environment.
3. Support complementary commercial, residential and mixed-use development that contributes to the function and character of the precinct while maintaining Rocca Way as the primary retail and hospitality hub.
4. Improve pedestrian connectivity within the precinct and between key destinations, public transport and surrounding neighbourhoods.
5. Enhance the landscape character of Wanneroo Road through soft landscaping, tree planting and urban greening that improves amenity, walkability and urban cooling.
6. Encourage integrated parking and access solutions that minimise visual impacts, support active frontages and reinforce the laneway network as the preferred means of vehicle access for adjoining development.



**P1 - Figure 13** - Wanneroo Road Sub-Precinct



Indicative built form outcome for Wanneroo Road west

## 5.3.1 DEVELOPMENT REQUIREMENTS

In addition to the General Development Standards provided in Section 4.0, the following development controls and those in P1 - Table 7 shall apply to the Wanneroo Road Sub-Precinct (P3).

Supporting figures in 5.3.5 illustrate how the interface and built form provisions apply within the Wanneroo Road Sub-Precinct.

## 5.3.2 ZONES

The Wanneroo Road Sub-Precinct is zoned Commercial.

## 5.3.3 DENSITY CODING

The density coding for the Wanneroo Road Sub-Precinct is R-AC1.

## 5.3.4 LAND USE

Preferred and Not Preferred land uses for ground floor development fronting the Active and Gateway interfaces within the Wanneroo Road Sub-Precinct shall be in accordance with the following:

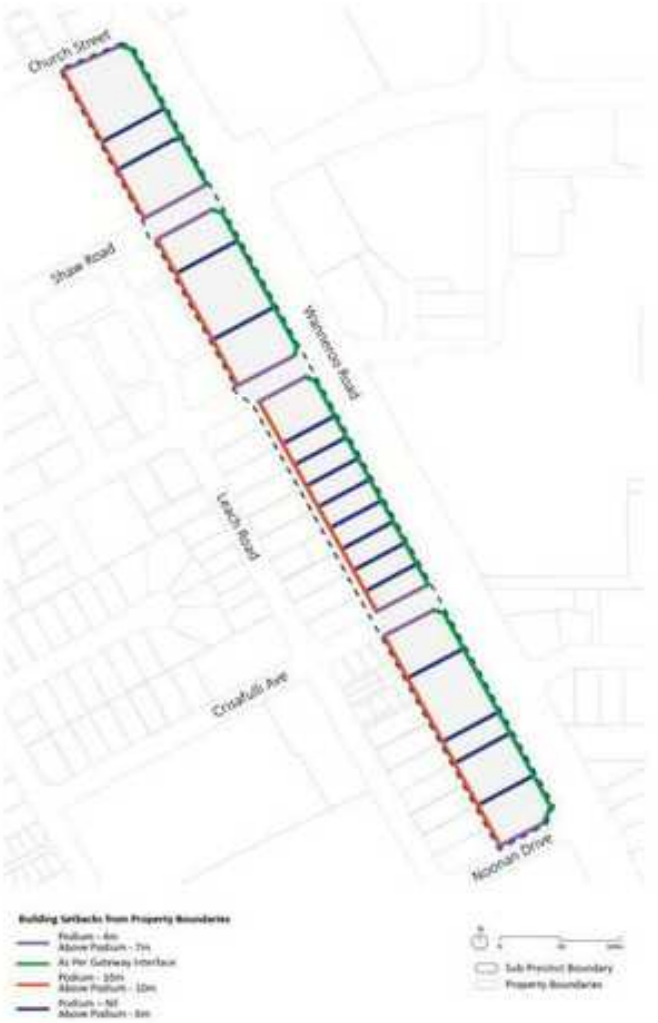
| GROUND FLOOR | |
|---|---|
| **PREFERRED USES** | **NOT PREFERRED USES** |
| • Child Care Premises<br>• Club Premises<br>• Educational Establishment<br>• Hotel<br>• Office<br>• Recreation - Private<br>• Veterinary Centre | • Garden Centre<br>• Motor Vehicle, Boat or Caravan Sales<br>• Motor Vehicle Wash<br>• Nightclub<br>• Road House<br>• Trade Supplies |

**P1 - Table 7** - Wanneroo Road Sub-Precinct Built Form Controls

| PROVISION | | INTERFACE TYPE | |
|---|---|---|---|
| | | Gateway (R-AC1) | Transition (R-AC1) |
| **Building Height** | Required Podium Height | 3 storeys | 3 storeys |
| | Maximum Building Height | 7 storeys | 7 storeys |
| | Minimum Ground Floor Ceiling Height | 4.5 metres | 4.5 metres |
| **Street Setbacks** | Primary/Secondary Street Setback (Podium) | 3 metres except for Lots 200, 400, 2 & 1 Wanneroo Road<br><br>Lots 200, 400, 2 & 1 Wanneroo Road:<br>Minimum as per Scheme<br>Maximum 10 metres | 4 metres |
| | Primary/Secondary Street Setback (Above Podium) | 6 metres except for Lots 200, 400, 2 & 1 Wanneroo Road<br><br>Lots 200, 400, 2 & 1 Wanneroo Road:<br>Minimum: as per Scheme<br>Maximum: 10 metres | 7 metres |
| **Side and Rear Setbacks** | Minimum Side Setback (Podium) | Nil | Where shown in P1 - Figure 14: 10 metres (podium and above podium)*<br><br>Where shown in Figure 14: Nil at podium, 4 metres above podium |
| | Minimum Side Setback (Above Podium) | 4 metres | |
| | Minimum Rear Setback (Podium) | 10 metres* | |
| | Minimum Rear Setback (Above Podium) | 10 metres* | |
| **Plot Ratio** | Plot Ratio | Plot Ratio does not apply. | |
| **Public Domain Interface** | On-Site Parking Between Street and Building | Not Permitted | Not Permitted |
| | Ground Floor Residential Uses | Not Permitted | Permitted |
| **Vehicle Access/ Parking** | Direct Vehicle Access from primary street | Not Permitted | Not Permitted |
| **Facade Design (Street Level)** | Minimum Clear Glazing % (Ground Floor) | 50% | 50% |
| | Awnings as Minimum % of Building Frontage | 70% | To be provided at the entrance of commercial frontages only |
| | Awnings Minimum Standards | Height: 3 metres<br>Depth: 1.8 metres | Height: 3 metres<br>Depth: 1.8 metres |
| **Deep Soil/ Landscaping** | Landscaping and deep soil shall be provided in accordance with the requirements set out in Section 4.2.10 | | |

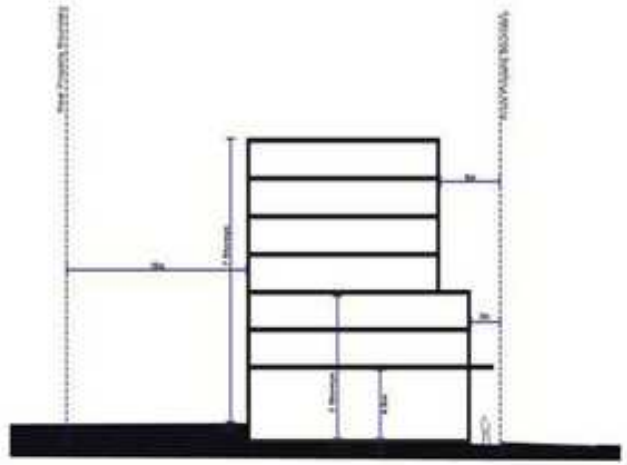
* Car parking, access and landscaping can be accommodated within the setback area

## 5.3.5 SUB-PRECINCT SUPPORTING FIGURES

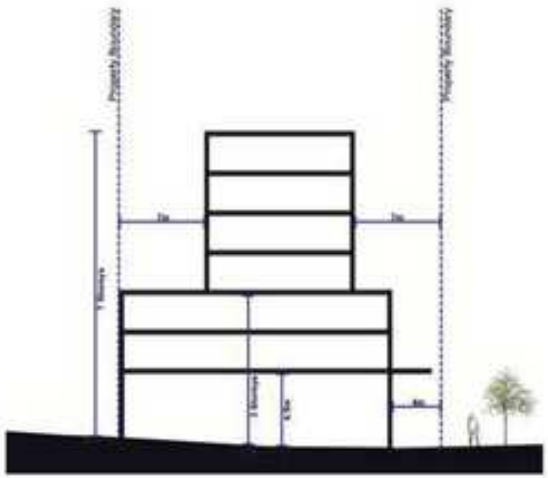



**P1 - Figure 14** - Setback for transition interface

## 5.3.6 SUB-PRECINCT INTERFACE TYPES



Gateway interface in accordance with P1 - Figure 7



Transition interface in accordance with P1 - Figure 8

# 5.4 SUB-PRECINCT 4 (P4) - MEMORIAL PARK



## SUB-PRECINCT INTENT

The Memorial Park Sub-Precinct as identified in P1 - Figure 2 and 15, is characterised by its strong landscape setting and its role in supporting the broader Wanneroo Town Centre. Development within the sub-precinct is to respond sensitively to the character of Memorial Park, with built form that is appropriately scaled and carefully sited to respect adjoining residential areas.

Compatible development will support passive surveillance, everyday activity and safe movement around the park. Pedestrian and cyclist connections will strengthen links between Rocca Way and surrounding neighbourhoods, while maintaining the park spaces as the dominant spatial and landscape element.

## SUB-PRECINCT OBJECTIVES

1. Protect and enhance the established landscape character of the Memorial Park sub-precinct by ensuring development responds sensitively in form, siting and scale.
2. Support compatible land uses that contribute to day to day activity and passive surveillance of streets and park edges, appropriate to the sub precinct's park edge context and its supporting role to Rocca Way.
3. Ensure new development provides an appropriate transition in height, scale and built form between higher intensity development within the Rocca Way Sub precinct and lower height residential development along Civic Drive and Sinagra Street.
4. Maintain and protect solar access and visual connections to Memorial Park and other identified landmarks, while supporting passive surveillance from surrounding streets and public spaces.
5. Provide safe, legible and accessible pedestrian and cyclist connections that strengthen connectivity between the Rocca Way Town Centre and adjoining residential neighbourhoods.




**P1 - Figure 15** - Memorial Park Sub-Precinct



Indicative built form outcome for Sinagra Street interfacing Memorial Park

### 5.4.1 DEVELOPMENT REQUIREMENTS

In addition to the General Development Standards provided in Section 4.0, the following development controls and those in P1 - Table 8 shall apply to the area included within the Memorial Park Sub-Precinct (P4).

### 5.4.2 ZONES

The sub-precinct comprises land zoned Mixed Use and Residential, and includes areas reserved for Civic and Community purposes.

### 5.4.3 DENSITY CODING

The density coding for the Memorial Park Sub-Precinct is R60.

### 5.4.4 LAND USE

Preferred land uses for ground floor development within the Mixed Use zone of the Memorial Park Sub-Precinct are as follows:

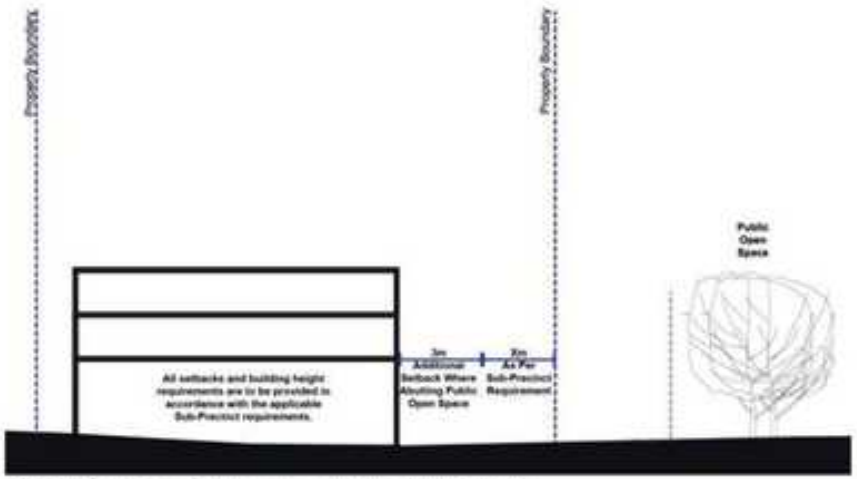
| GROUND FLOOR | |
|---|---|
| **PREFERRED USES** | **NOT PREFERRED USES** |
| • Art Gallery<br>• Civic Use<br>• Community Purpose<br>• Exhibition Centre<br>• Reception Centre | • Betting Agency<br>• Fast Food Outlet (Drive Through) |

**P1 - Table 8** - Memorial Park Sub-Precinct Built Form Controls

| PROVISION | | ZONE | |
|---|---|---|---|
| | | Residential (R60) | Mixed Use (R60) |
| Building Height | Maximum Podium height | N/A | N/A |
| | Maximum Building Height | 3 storeys | 3 storeys |
| | Minimum Ground Floor Ceiling Height | In accordance with the R-Codes | 4.5 metres |
| Street Setbacks | Primary/Secondary Street Setback (Podium) | In accordance with the R-Codes | In accordance with the R-Codes or Scheme |
| | Primary/Secondary Street Setback (Above Podium) | N/A | N/A |
| Side and Rear Setbacks | Minimum Side and Rear Setback (Podium) | In accordance with the R-Codes | In accordance with the R-Codes or Scheme |
| | Minimum Side and Rear Setback (Above Podium) | N/A | 6 metres |
| Site Cover | Maximum Site Cover | In accordance with the R-Codes | In accordance with the R-Codes where applicable |
| Plot Ratio | Plot Ratio | Plot ratio does not apply | |
| Public Domain interface | On-Site Parking Between Street and Building | N/A | Not permitted |
| | Ground Floor Residential Uses | Permitted | Not permitted. |
| Facade Design (Street level) | Minimum Clear Glazing % (Ground Floor) | N/A | 50% |
| | Awnings as Minimum % of Building Frontage | N/A | To be provided at the entrance of commercial frontages only |
| | Awning Minimum Standards | N/A | Height: 3 metres<br>Depth: 1.8 metres |
| Deep Soil/ Landscaping | Deep Soil and Landscaping | Landscaping and deep soil shall be provided in accordance with the R-Codes for Residential zoned land. | Landscaping and deep soil shall be provided in accordance with the requirements set out in Section 4.2.10 |

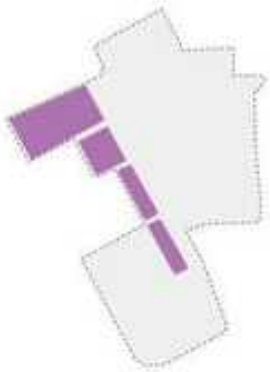
| PROVISION | | INTERFACE TYPE |
|---|---|---|
| | | Public Open Space |
| Setbacks | Where development abuts Public Open Space, the following additional provisions will apply to each adjoining boundary. | |
| | Minimum Additional Setback at Ground Level | 3 metres |
| | Minimum Additional Setback at Upper Floors | 2 metres |
| Additional requirements | Landscaping | Soft landscaping shall be provided within the setback area to a minimum width of 2 metres. |
| | Passive Surveillance | Development adjoining Public Open Space shall incorporate design measures to support passive surveillance, including at least one habitable room or outdoor living area with direct views to the Public Open Space. |
| | Pedestrian Access | Where a site abuts Public Open Space to the rear, direct pedestrian access shall be provided from private open space to the Public Open Space unless otherwise agreed by the City. |

## 5.4.5 SUB-PRECINCT INTERFACE TYPES




Public Open Space interface in accordance with Figure 9

# 5.5 SUB-PRECINCT 5 (P5) - FRAME



## SUB-PRECINCT INTENT

The Frame Sub-Precinct as shown on P1 - Figure 1 and 16 will provide a mixed urban environment that transitions smoothly from the higher-intensity Town Centre to surrounding lower-scale neighbourhoods. A combination of commercial uses and medium to high density houses will support a diverse community and strengthen the Town Centre's economic and social functions.

Development will be designed to ensure an appropriate change in height and scale, while delivering high-quality streetscapes, sustainable buildings, and accessible public spaces that enhance walkability, amenity, and neighbourhood character.

## SUB-PRECINCT OBJECTIVES

1. Facilitate a gradual and contextually appropriate transition in building scale, height and built form between the higher-order commercial areas of the Town Centre and the surrounding lower density residential neighbourhoods.
2. Facilitate a graduated transition in land use intensity that supports a diverse mixed-use environment within the Town Centre while responding appropriately to adjacent lower-density residential areas.
3. Provide a diverse mix of medium density housing options including apartments, townhouses and terrace homes to support affordability, inclusivity and accommodation of a broad range of household types.
4. Encourage adaptable building designs capable of supporting a long term mix of commercial and residential uses and accommodating evolving activity within the Town Centre.
5. Enhance urban amenity and sustainability by incorporating deep soil zones, high-quality landscaping, and the retention and planting of mature and canopy trees within both public and private development.
6. Deliver a well connected and walkable environment that integrates a legible street network, attractive green streetscapes, and safe pedestrian, cycling, and public transport links to the Town Centre core.




**P1 - Figure 16** - Frame Sub-Precinct



Indicative built form outcome for Sub-Precinct 5

## 5.5.1 DEVELOPMENT REQUIREMENTS

In addition to the General Development Standards provided in Section 4.0, the following development controls and those in P1 - Table 9 shall apply to the area included within the Frame Sub-Precinct (P5).

## 5.5.2 ZONES

The Frame Sub-Precinct is zoned Residential and Mixed Use.

## 5.5.3 DENSITY CODING

The density coding for the Frame Sub-Precinct is R60.

## 5.5.4 LAND USE

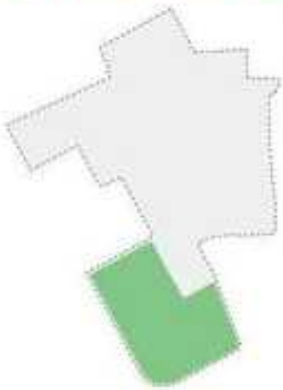
Preferred land uses for ground floor development within the Mixed Use zone of the Frame Sub-Precinct are as follows:

| GROUND FLOOR | |
|---|---|
| PREFERRED USES | NOT PREFERRED USES |
| • Consulting Rooms<br>• Home Office<br>• Lunch Bar<br>• Office | • Betting Agency<br>• Medical Centre<br>• Fast Food Outlet (Drive Through) |

**P1 - Table 9** - Frame Sub-Precinct Built Form Controls

| PROVISION | | ZONE | |
|---|---|---|---|
| | | Residential (R60) | Mixed Use (R60) |
| Building Height | Preferred Minimum Building Height | 2 storeys | 2 storeys |
| | Maximum Building Height | In accordance with the R-Codes | 3 storeys |
| Lot Boundary Setbacks | Minimum Side and Rear Setbacks | In accordance with the R-Codes | In accordance with the R-Codes or Scheme |
| Street Setbacks | Minimum Primary Street Setback | In accordance with the R-Codes | In accordance with the R-Codes or Scheme |
| | Minimum Secondary Street Setback | In accordance with the R-Codes | In accordance with the R-Codes or Scheme. |
| | Maximum Primary/ Secondary Street Setback | 4 metres | 4 metres |
| Site Cover | Maximum Site Cover | In accordance with the R-Codes. | In accordance with the R-Codes where applicable |
| Landscaping/ Deep Soil | Landscaping/ Deep Soil | Landscaping and deep soil shall be provided in accordance with the R-Codes for Residential zoned land. | Landscaping and deep soil shall be provided in accordance with the requirements set out in Section 4.2.10 |
| Streetscape | Garage location | In accordance with the R-Codes. | |

# 5.6 SUB-PRECINCT 6 (P6) - SHOWGROUNDS



## SUB-PRECINCT INTENT

The Showgrounds Sub-Precinct as shown on P1 - Figure 1 and 17, will continue to function as a key community and recreational hub. As one of the City's most historically significant and culturally valued public spaces, the Showgrounds will retain its distinctive character, while improving accessibility and inclusivity for a growing community.

Future planning will prioritise enhanced pedestrian and visual connections, ensuring the Showgrounds remain an accessible space for public events, gatherings and recreation. New built form will be limited in height and scale to protect the historical setting and support complementary land uses focused on community purpose and recreation. Public realm improvements will further enhance the Sub-Precinct's function as a green and active destination within the WTC.

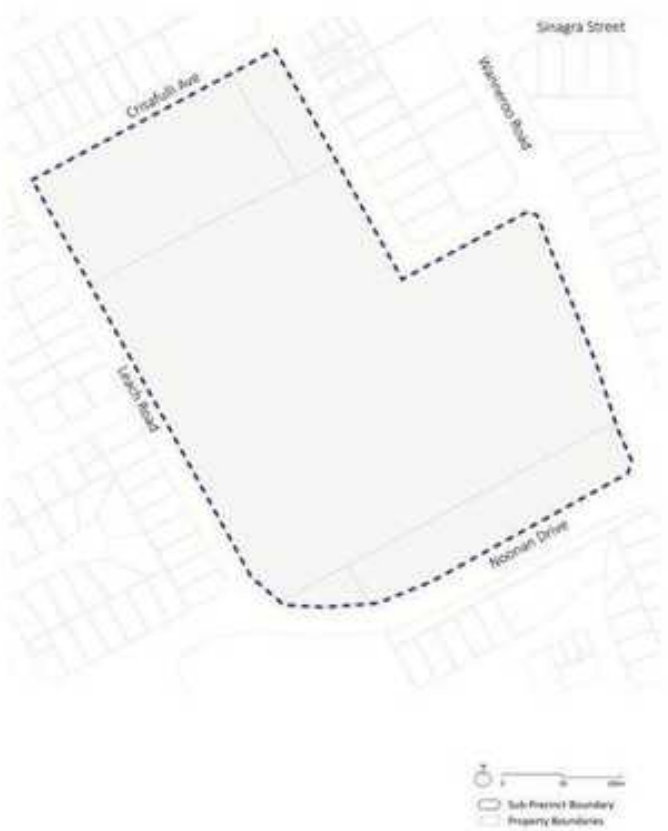
## SUB-PRECINCT OBJECTIVES

1. Preserve and enhance the Showgrounds' historical, cultural and community significance, ensuring that its open character, heritage values and long-established role as a civic gathering place are maintained and reinforced.
2. Protect the precinct's landscape setting by limiting building heights and ensuring any new built form is sensitively integrated, maintains key sightlines and supports compatible community, cultural and recreational uses.
3. Strengthen pedestrian and visual connectivity between the Showgrounds and the WTC through improved access, legibility, wayfinding and investigation of enhanced pedestrian crossing opportunities across Wanneroo Road.
4. Support and enhance both active and passive recreational opportunities by providing high quality public open space, shade, amenities and universal access that cater to the diverse community.
5. Create a welcoming, safe and inclusive public realm through landscaping, lighting, path networks and gathering spaces that encourage year round use, community events and social interaction.
6. Integrate public art and interpretive elements within the Showgrounds Sub-Precinct to celebrate its historical significance, cultural identity and connection to place, enhancing sense of place and visitor experience.

## 5.6.1 DEVELOPMENT REQUIREMENTS

The Showgrounds Sub-Precinct is reserved as Public Open Space. Landowner consent from the City of Wanneroo is required to support any application within this Sub-Precinct.

In addition to the Sub-Precinct Objectives outlined above, all development within this Sub-Precinct shall be consistent with the Public Open Space reserve objectives contained in the Scheme.




**P1 - Figure 17** - Showgrounds Sub-Precinct



# 6.0 Public Realm Requirements



## 6.1 APPLICATION

This section applies to the public realm within the WTCPP. The public realm comprises all publicly accessible spaces between buildings, including privately owned land that is freely open to the public (Privately Owned Public Space) and publicly owned or managed land and outdoor civic areas (Public Open Space)

## 6.2 PUBLIC REALM FRAMEWORK

The delivery of a high quality, connected public realm relies on coordinated efforts between the City, landowners and developers. Section 6.3 of Part 2 provides the rationale for the public realm provisions contained in this section.

All development shall be consistent with the WTC Precinct Plan Map as contained in P1 - Figure 1 which sets out the spatial arrangement of:

- The primary public open space network, civic spaces and the pedestrian network, including indicative locations for mid-block pedestrian links;
- Indicative locations for publicly accessible urban spaces integrated with redevelopment.

**Public Open Space (POS)**

1. Designated POS in the WTC includes the Wanneroo Showgrounds, Memorial Park, Bert Togno Park and the Civic Drive green corridor. These areas shall be retained and enhanced.

**Privately Owned Open Space (POPS)**

1. Where identified on P1 - Figure 1, development shall provide POPS in the form of pedestrian links or urban spaces.
2. The final configuration and de[tailed design of POPS shall be determined through a condition of development or subdivision approval.
3. A public access easement shall be established over POPS to ensure ongoing public access, to the satisfaction of the City.

## 6.3 TREE RETENTION AND URBAN GREENING

1. Public realm and development works shall have regard to the Environmental Assessment and Management Strategy (EAMS) (Appendix 1), including the retention and integration of identified priority flora and vegetation where appropriate. Further flora investigations and any required environmental approvals shall be undertaken at subdivision or development stage in accordance with the EAMS.
2. All public realm improvements and verge upgrades shall incorporate urban greening and shade.

## 6.4 WATER SENSITIVE URBAN DESIGN

1. Public realm upgrades shall incorporate Water Sensitive Urban Design (WSUD) measures where practical, such as tree pits, rain gardens, vegetated swales or other approved infiltration systems, consistent with the objectives of the Local Water Management Strategy (Appendix 2).
2. WSUD features shall be designed to complement pedestrian movement and public amenity, and shall not reduce the functional use of public open space.

## 6.5 PUBLIC REALM AND INTERFACE HIERARCHY

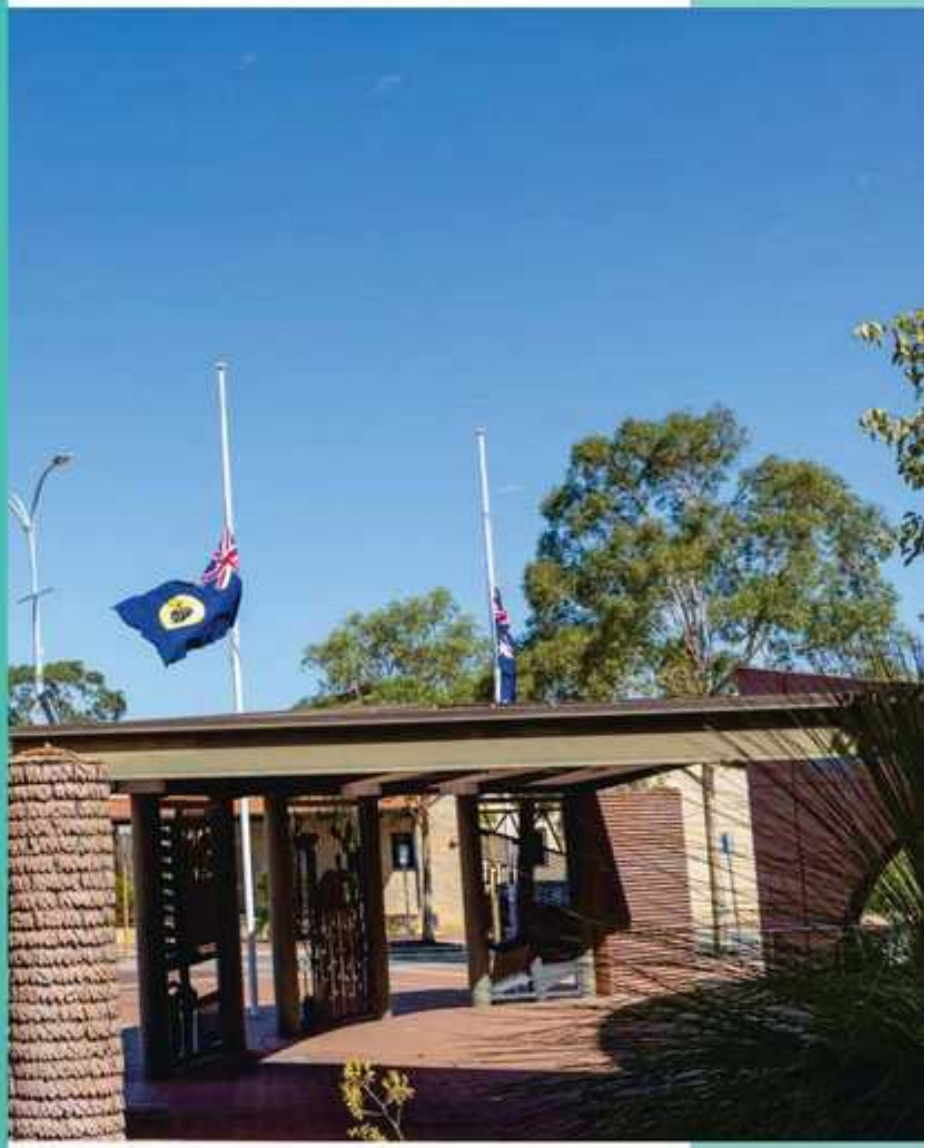
1. Public realm upgrades shall be designed and delivered in a manner that responds to the applicable public realm interface and associated development standards contained in Section 4.0.
2. Where public realm upgrades occur along a Main Street or Active Street interface, or other interfaces that require nil or minimal building setbacks and active ground-floor frontages, works shall not undermine the intended built-form outcomes or pedestrian access and movement.

## 6.6 PUBLIC REALM INTERPRETATION

1. Where applicable, public realm works are to incorporate interpretive, cultural and artistic elements that contribute to a coordinated public realm and strengthen place identity across the WTC. Guidance will be provided through the future Wanneroo Town Centre Master Plan (WTC Master Plan) which will incorporate outcomes and opportunities identified in the supporting documentation applicable to the WTC.



# 7.0 Additional Information and Requirements



# 7.1 ADDITIONAL INFORMATION AND REQUIREMENTS

## 7.1.1 INFORMATION TO BE SUBMITTED WITH AN APPLICATION

1. Additional information may be required to be submitted with an application for development approval and/or subdivision within the WTC.

2. Additional information not listed in P1 - Table 10 may be requested by the City on a case-by-case basis.

**P1 - Table 10** - Information to be submitted with a subdivision or development application

| Additional information | Approval Stage | Approving Authority |
|---|---|---|
| **Water Management** | | |
| Water Management Report (WMR) | Documented in WTCPP<br>Development application or subdivision | WAPC, City |
| **Environment** | | |
| Vegetation and/or Fauna Management Plan | Development application or subdivision | WAPC, City |
| Bushfire Management Plan | Development application or subdivision | WAPC, City |
| Landscape Management Plan | Development application or subdivision | City |
| Acoustic Report | Development application or subdivision | City |
| Heritage Assessment | Development application or subdivision | Heritage Council of WA |
| **Engineering** | | |
| Servicing Report | Documented in WTCPP<br>Development application or subdivision | City, Water Corporation, Western Power, ATCO Gas |
| Transport Impact Assessment | Documented in WTCPP | WAPC, City |
| Geotechnical Report | Development application or subdivision | City |
| **Economy** | | |
| Economic, Retail and Employment Strategy | Documented in WTCPP | WAPC, City |
| **Other** | | |
| Residential Density Code Plan | Subdivision | WAPC |

## 7.1.2 WATER MANAGEMENT PLAN

1. The preparation of any WMP should follow the guidance provided in the State Planning Policy 2.9 - Water (SPP 2.9) Planning for Water Guidelines.

2. Where a UWMP is not required, detailed design shall be in accordance with the WTC LWMS.

## 7.1.3 HERITAGE

1. No Registered Aboriginal Sites are known to occur within the WTC. However, all works should be undertaken in accordance with relevant Aboriginal cultural heritage legislation and due diligence requirements.

2. Eight (8) places within the WTC are listed in the City of Wanneroo Local Heritage Survey (2016). Three of these are also included on the City's Heritage List (detailed in Part 2 - Explanatory section). Proponents of future subdivision and development proposals which may impact upon identified heritage places may be required to undertake a heritage assessment at the discretion of the City. In addition, the City may have an obligation to refer the proposal to the Heritage Council of Western Australia (HCWA) where appropriate.

## 7.1.4 NOISE ATTENUATION

1. For sensitive land uses located within the buffer distance of Wanneroo Road, an acoustic assessment shall be undertaken and included as part of any subdivision or development application to demonstrate that the proposed design will meet the permitted noise levels as contained within State Planning Policy 5.4 - Road and Rail Noise (SPP 5.4).

## 7.1.5 BUSHFIRE MANAGEMENT

1. Subdivision and development applications within areas identified as being bushfire prone are to be undertaken in accordance with a Bushfire Management Plan prepared under *State Planning Policy 3.7* and the *Planning for Bushfire Guidelines*, and approved to the satisfaction of the City and relevant State agencies.

## 7.1.6 DEVELOPER CONTRIBUTIONS

1. Developer contributions are not required for development of land within the WTCPP.

Part Two

# Explanatory Section



# 1.0 Introduction and Purpose

## 1.1 INTRODUCTION AND PURPOSE

The Wanneroo Town Centre (WTC) is the historic and civic heart of the City of Wanneroo (the City) and has long served as the community's principal place for civic, commercial, recreational and social activity. As the City continues to grow, the WTC will evolve from its traditional role as a local service centre into a more diverse, connected and vibrant Secondary Activity Centre. The WTCPP provides the planning framework to guide this evolution by building upon the WTC's existing strengths, history and identity, while supporting future growth, investment and renewal.

The WTCPP adopts a place-based approach to planning that recognises the WTC as more than a location for redevelopment. It seeks to strengthen the qualities that have long defined the centre, including its civic role, established community facilities, public open spaces and local character, while creating a more walkable, connected and mixed-use Town Centre that supports people to live, work and visit.

The Part 2 - Explanatory Section outlines the background, strategic context, design responses and planning rationale that underpin the WTCPP. It also includes the technical studies, supporting investigations, plans and figures that have informed the preparation of the WTCPP.

The *Planning and Development (Local Planning Schemes) Regulations 2015* (Regulations) require precinct structure plans to be prepared in the manner and form approved by the Western Australian Planning Commission and to include the maps and information specified under Part 4 of the Regulations. The WTCPP has been prepared in accordance with these requirements and follows the WA Planning Manual - Guidance for Structure Plans.

The WTCPP replaces the Wanneroo Town Centre Agreed Structure Plan No. 23 (ASP 23), prepared in 2001, together with Local Planning Policy 5.2 - Wanneroo Town Centre (LPP 5.2), adopted in 2012. Upon adoption of the WTCPP, ASP 23 and LPP 5.2 will be revoked and superseded by this Precinct Plan.

In preparing the WTCPP, a comprehensive review of ASP 23 and LPP 5.2 identified that, while the WTC continues to perform an important civic and commercial role, its urban structure, movement network and public realm have not kept pace with the City's growth or contemporary expectations for activity centres. The existing centre remains fragmented and vehicle-oriented, with limited integration between key destinations and an underdeveloped public realm. The WTCPP responds to these challenges through an integrated framework for land use, urban structure, movement, public realm and built form that seeks to create a more connected, vibrant and distinctive Town Centre while celebrating Wanneroo's history, landscape and community identity.



# 2.0 Site and Context Analysis



# 2.1 GOVERNANCE CONTEXT

## 2.1.1 STATE PLANNING CONTEXT

Planning for the redevelopment of the WTC is guided by a range of strategies, State Planning Policies and key documents. Those that are most relevant to the WTCPP are summarised in the following table:

**P2 - Table 1** - Regional Planning Framework summary

| FRAMEWORK | OVERVIEW | RELEVANCE TO WTCPP |
|---|---|---|
| Metropolitan Region Scheme (MRS) | Outlines future land use and provides statutory basis for planning in Perth Metropolitan Region, setting broad land-use zones, regional open spaces, environmental protection, and major infrastructure coordination. | Alignment with MRS is crucial. WTC land is mainly zoned 'Urban,' facilitating its redevelopment. Wanneroo Road and its eastern boundary are reserved as 'Primary Regional Roads' for future infrastructure. |
| Perth And Peel @3.5million North-West Sub-Regional Planning Framework | Guides sustainable development and strategic employment locations, emphasising infill in transit corridors, activity centres, urban corridors, and high-quality open spaces. | Recognises the role of the Wanneroo Secondary Centre in accommodating future urban growth and supporting a more compact urban form. The Wanneroo Secondary Centre and surrounding residential areas are identified as suitable locations to contribute towards the City's urban infill objectives through increased housing diversity, residential density and mixed-use development. |
| SPP 7.0 - Design of the Built Environment | Addresses design quality in planning and development in Western Australia, emphasising good design outcomes including context, character, landscape quality, built form, scale, functionality, build quality, sustainability, amenity, legibility, safety, community, and aesthetics. | The development provisions in Part 1 of this Precinct Plan have been guided by the design principles of SPP 7.0 to ensure the redevelopment of Wanneroo Town Centre over the next 30+ years, emphasises good design outcomes in built environment and public realm. |
| SPP 4.2 - Activity Centres for Perth and Peel | Provides a framework for developing activity centres in Perth and Peel, aiming to consolidate residential and commercial development around activity centres. SPP 4.2 identifies Wanneroo Town Centre as a Secondary Centre. | The WTCPP aligns with SPP 4.2 by guiding the evolution of the Wanneroo Town Centre into a well functioning Secondary Centre that supports a diverse mix of retail, commercial, residential and community uses within an 800 metre walkable catchment. As a Secondary Centre, the Town Centre is intended to accommodate higher residential densities, increased employment opportunities and a more vibrant and connected urban environment.<br><br>The Plan sets a minimum target of 25 dwellings per hectare (aspiring to 35 dwellings per hectare), facilitated through medium to high density housing options such as multiple dwellings and two storey townhouses, ensuring that future growth contributes to the State's dwelling expectations. The balanced mix of land uses, combined with a compact, walkable urban form, reinforces the Town Centre's role as a key activity node serving its broader catchment. |
| SPP 7.2 - Precinct Design | Guides planning and design for precincts including activity centres, urban corridors, residential infill, and heritage precincts. Provides desired outcomes for precinct development and implements planning instruments | The WTCPP aligns with SPP 7.2 and supplementary guidelines, addressing design elements to enhance local characteristics and meet community needs over time. The plan revises draft Activity Centre Plan No. 90 to adopt a precinct based planning approach, meeting objectives of SPP 7.0. |
| State Government's position on Public Open Space (POS) | The WAPC Position Statement: Public Open Space is based on the principle that increased residential development generates additional demand for accessible and functional POS. Applying to both greenfield areas and established urban areas experiencing infill and higher-density development, including activity centres.<br><br>The State position retains the benchmark of a minimum of 10 per cent of residential land is to be provided as POS, unless varied through an approved planning framework. In higher-density and constrained urban environments, flexible and context-responsive approaches are supported, provided an equivalent community benefit is achieved. To address increased demand for public open space, the State position supports:<br>• Provision of new public open space where suitable land opportunities exist; and/or<br>• Enhancement of existing POS and the public realm, including upgrades to parks, civic spaces, streetscapes and community facilities. | The WAPC Position Statement: Public Open Space is directly relevant to the WTCPP, as increased residential density within the town centre will place additional demand on public open space. Consistent with the State position, the WTCPP should:<br>Acknowledge the 10 per cent public open space benchmark as the overarching State standard;<br>• Recognise that alternative public open space delivery mechanisms may be appropriate within the town centre context; and<br>• Provide a clear framework for meeting demand through a combination of:<br>- New urban public open space where feasible; and<br>- Targeted upgrades and activation of existing parks and public realm areas.<br><br>This approach supports a high-quality, connected network of public open space that responds to the intended higher-density living in the WTC, and its role as a secondary centre. |

| | | |
|---|---|---|
| SPP 3.7 Planning in Bushfire Prone Areas | SPP 3.7 addresses land use planning for bushfire risk management in designated bushfire prone areas, setting guidelines for protection levels, appropriate land use, and required bushfire construction standards. | Subdivision and development within land identified as bushfire prone on the State-wide Map of Bush Fire Prone Areas is required to be supported by a Bushfire Management Plan prepared in accordance with State Planning Policy 3.7 - Planning in Bushfire Prone Areas and the relevant Guidelines, unless exempt under State policy.<br><br>The Bushfire Management Plan is to demonstrate that bushfire risk can be appropriately managed having regard to the nature and scale of development, including through site planning, building design, access, water supply, landscaping and ongoing management, and is to be submitted at the appropriate stage of the planning process to the satisfaction of the City and relevant State agencies. |
| SPP 5.4 Road and Rail Noise | SPP 5.4 aims to minimise traffic noise impacts on residential and noise sensitive land uses while ensuring efficient transport corridor operations. Objectives include protecting community from unreasonable noise levels, safeguarding freight corridors, mutual existence of transport infrastructure and land use, early noise impact assessment in planning, and encouraging best practice noise mitigation. | Wanneroo Road is identified as a 'primary road' under SPP 5.4. Any adjacent subdivision or development must include acoustic assessment to meet SPP 5.4 noise level requirements. Other key roads do not currently reach the 20,000 vehicles per day threshold, but future consideration may be needed for a future East Wanneroo Link |
| SPP 7.3 - Residential Design Codes | SPP 7.3 (Volumes 1 and 2) provides the basis for the control of residential development throughout Western Australia for single houses, grouped dwellings and multiple dwellings including residential subdivision proposals. | Proposals for residential development in the WTCPP will be guided by SPP 7.3 except where otherwise specified in this document. |
| East Wanneroo District Structure Plan | Approved in 2018, proposes rezoning to 'Urban Deferred.' Provides strategic guidance for land use, density targets, infrastructure coordination, activity centres, regional open spaces, environmental assets, and buffers | Urbanisation of East Wanneroo will impact WTC due to proximity. Until East Wanneroo's District and Neighbourhood Centres develop, Wanneroo Activity Centre remains a key center for growing population. |

## 2.1.2 LOCAL PLANNING CONTEXT

### CITY OF WANNEROO COUNCIL PLAN 2025 - 2035

The City of Wanneroo Council Plan 2025-2035 (Council Plan) is the City's highest order strategy which outlines matters of importance to local residents and guides how the City will plan for the future including the delivery of services. It also provides a high-level view of how the City will reach its vision. The Council Plan replaces both the previously adopted Strategic Community Plan and Corporate Business Plan.

The City of Wanneroo's Council Plan's vision is:

'Together we grow - safe, green and connected.'

This vision reflects the City of Wanneroo's commitment to building inclusive, vibrant, and resilient communities where everyone feels they belong. Five strategic goals assist to achieve this vision. These goals and the WTCPP proposals to address them are outlined in P1 - Table 2.

**P2 - Table 2** - Strategic alignment with Council Plan

| STRATEGIC GOAL | WTCPP RESPONSE |
|---|---|
| **Strategic Goal 1 - A Safe City:**<br>"Safety grows where people feel seen,supported, and connected to their community" | Buildings and design elements allow for passive surveillance and good pedestrian connectivity land uses facilitate an active environment where people want to linger and connect with others. |
| **Strategic Goal 2 - A Sustainable City:**<br>"Together, we protect today's environment to create a healthier, greener tomorrow for all" | The WTCPP contributes to the City's vision for a sustainable city by promoting a compact, mixed-use and walkable Town Centre that reduces reliance on private vehicle travel and supports more sustainable transport choices. The plan also supports urban greening, increased tree canopy, climate responsive design and high quality public realm outcomes that enhance environmental sustainability, urban cooling and community wellbeing. |
| **Strategic Goal 3 - A Thriving Economy:**<br>"Local jobs, sustainable growth, and shared success, building a future full of opportunity" | Zonings are in place to facilitate a range of economic activities and encourage job creation. Businesses are street facing along main streets to foster vibrant local economies and walkable commercial hubs. Higher-density development encourages efficient use of land, especially near transport nodes, which supports more businesses and housing in key areas. Mixed-Use Development: Integrates residential, commercial, and civic uses to create dynamic precincts that support both living and working. |
| **Strategic Goal 4 - A Connected and Liveable City:**<br>"A true home is where neighbours connect, streets feel safe, and everyday joys are close by." | The Town Centre's strategic transport network allows for the efficient movement of people and vehicles within and between precincts and connects people to key destinations. The Precinct supports a mix of housing types and densities to cater to different household needs and income levels. The WTCPP also includes schools, health centres, libraries, and community hubs, ensuring residents have access to essential services close to home. Precincts are designed with a strong sense of local character and identity, often preserving heritage elements and integrating cultural features. |
| **Strategic Goal 5 - A Well Governed and Managed City:**<br>"Good governance means listening, being open, and doing what's best for you." | The WTCPP translates regional and metropolitan strategies into a plan that can be implemented locally. It has been developed through public consultation and provides clear development guidelines, reducing ambiguity for developers and planners to improve efficiency in approvals, reduces delays, and supports consistent outcomes. The WTCPP has been informed by technical studies to support robust, data-driven decisions that reduce risk and improve long-term outcomes. It includes provisions for review and updates, allowing it to respond to changing conditions. |

## LOCAL PLANNING FRAMEWORK

The following table summarises the City's local planning framework and identifies those most relevant to the WTCPP.

**P2 - Table 3** - Local Planning Framework

| FRAMEWORK | OVERVIEW | RELEVANCE TO WTCPP |
|---|---|---|
| City of Wanneroo Council Plan 2025 - 2035 | The City's Council Plan is a high level strategic document that integrates the City's long term community vision with its corporate planning and delivery priorities. The Council Plan outlines the City's key strategic objectives, service priorities and performance measures, and guides decision making and investment to support sustainable growth, good governance and community wellbeing. It focuses on delivering vibrant, accessible and connected places, while responding to growth and change across the City. | The WTCPP supports the delivery of the City's Council Plan by providing a place-based framework to guide growth, investment and development within the WTC. The WTCPP translates the Council Plan's strategic objectives into local planning outcomes by promoting a vibrant, accessible and connected activity centre that supports housing diversity, economic activity, high quality public spaces and improved community amenity. |
| City of Wanneroo Local Planning Strategy | The City's Local Planning Strategy (LPS) provides a foundation for future development focused on sustainable urban development, housing diversity, economic growth, quality public spaces, and protection of environmental and community assets. The LPS guides future land use decision making and will inform the preparation of the City's new Local Planning Scheme No.3 and future plans and policies. | The WTC is designated a Planning Area in the LPS, requiring an updated planning framework. This WTCPP fulfills this requirement, facilitating the redevelopment ofhe WTC into a contemporary secondary activity centre with mixed land uses, including higher density residential development. |
| City of Wanneroo District Planning Scheme No. 2 | The City's District Planning Scheme No. 2 (DPS2) provides the framework for land planning and development within the City, consistent with the higher level zones and reserves of the MRS. | The WTC is zoned 'Centre' under DPS2, with Wanneroo Road reserved as Primary Regional Roads. The Centre zone allows coordinated planning through the WTCPP process as prescribed in SPP 4.2 and SPP 7.2. The WTCPP refines subdivision and development, aligning zones with DPS2 objectives. |
| Wanneroo Town Centre ASP 23 (ASP 23) | ASP 23, adopted in 2001, guides development within the WTC. It includes four precincts: Wanneroo Square Precinct, Residential Precinct, Wanneroo Road West Precinct, and Showgrounds Precinct. The land use classifications are Residential, Commercial, Civic and Cultural, Parks and Recreation, and Public Purpose. A key component is a public plaza for community gatherings and a maximum retail floorspace limit of 30,000 sqm. | ASP 23 precedes the SPP 4.2 and SPP 7.2 frameworks, resulting in provisions that do not support the long term vision for the WTC. The WTCPP supersedes ASP 23 which will be recinded the adoption of the WTCPP. |
| LPP 3.1 - Local Housing Strategy Implementation | LPP 3.1 provides a framework for implementing the City's Local Housing Strategy. It identifies six 'housing precincts' as priority areas to accommodate increased residential density, and provides a guidance for implementing recommended density increases. | Outside the WTC, residential density is guided by LPP 3.1, which establishes a framework for the location and assessment of higher density housing. In areas not currently identified as housing precincts, the policy provides pathways for future density increases through the creation of new housing precincts or the recoding of smaller land parcels where supported by strategic planning considerations. |
| LPP 4.12 - Heritage Places | Ensures appropriate protection for heritage places identified on the Local Heritage Survey and Heritage List. | Sixteen places within the WTCPP area are included on the City's Local Heritage Survey, with three places subject to assessment under Local Planning Policy 4.12 - Heritage List and Local Heritage Survey. The policy guides the consideration of development affecting local heritage places to ensure heritage significance is appropriately identified, conserved and integrated into future development outcomes. Further detail regarding heritage protection and management is provided in the Ethnographic and Aboriginal Heritage Assessment Report (Appendix 4). |
| LPP 4.3 - Public Open Space | Outlines requirements for the planning, provision, location, design, development, and interim maintenance of public open space (POS) in the City. | The WTCPP has been prepared having regard to the City's Local Planning Policy 4.3 - Public Open Space, which provides a framework for assessing public open space provision within established urban areas and activity centres. The policy supports consideration of the broader open space network, including the accessibility, functionality, quality and distribution of public spaces that serve residents, workers and visitors. |

## 2.2 COMMUNITY CONTEXT

### 2.2.1 PLACE HISTORY AND HERITAGE

Wanneroo has a rich and layered history that reflects both its deep Aboriginal roots and its transformation through European settlement and urban development. For thousands of years, the area was home to the Whadjuk and Yued people, two Noongar language groups who lived in harmony with the land. The wetlands and lakes of the region, such as Lake Joondalup and Lake Goollelal, were vital sources of food, water, and cultural significance, forming part of a broader network of seasonal movement and spiritual connection.

The origins of the WTC trace back to the late 19th and early 20th centuries, when the area around Wanneroo Road and Dundebar Road became the focal point for community life. The first school, opened in 1899 on this corner marking the beginning of formal education in the area, and setting the stage for further civic and community development.

By the early 20th century, the WTC was home to key institutions such as the Wanneroo Road Board, which held its first meeting in 1903. This governance centre was later replaced by the original Shire Hall, a vital civic building that served as the administrative headquarters for decades. The Centenary Hall and Dennis Garage, built in 1929, added to the town's growing identity, providing both community space and essential services.

The mid-20th century saw the expansion of civic and cultural infrastructure. The Wanneroo Showgrounds, established in the 1920s, became a central venue for agricultural shows and community events. In 1932, St Anthony's Catholic Church was built, becoming the town's first church and a landmark of spiritual and architectural significance. The Cultural and Civic Trail, which now winds through the town centre, highlights these and other historic sites, including the old post office, early shops, and plane spotting station from World War II.

In the 1970s, the WTC underwent a significant transformation with the construction of the early civic precinct, which included the Limelight Theatre, Wanneroo Community Centre, and Wanneroo War Memorial. These developments reinforced the area's role as a civic and cultural nucleus. The Wanneroo Central Shopping Centre later emerged as the commercial anchor of the precinct, drawing retail activity and further urbanising the area.

Today, the WTC serves as a key administrative and commercial heart of the City, one of Western Australia's fastest growing local government areas.



Former Dennis Garage


Former Wanneroo Road Board office - 935 Wanneroo Rd

**Wanneroo Town Centre Historic Timeline**

**1899** Wanneroo State School opens at - Wanneroo/ Dundebar Road

**1902** Wanneroo Road Board gazetted

**1903** First Road Board meeting held in school room

**1929** Centenary Hall and Dennis Garage constructed

**1932** Former St Anthony's Catholic Church built

**1952** St Anthony's Servite Priory built

**1971** Civic Precinct developed (Limelight Theatre, Community Centre and War memorial)

**1985** Wanneroo granted City status

**1990** Aquamotion Recreation Centre built

**2000** St Anthony's Catholic Church built

City of Wanneroo Civic and Administration building developed

**2001** Activity Centre Structure Plan 23 gazetted

**2009** Wanneroo Library and Cultural Centre opens

**2017** Civic Centre expansion completed with sustainable design

**2027** WTC Precinct Plan implemented


St Anthony's church


Former Wanneroo School masters house


Former Wanneroo Road Board


Wanneroo Sport and Social club






Limelight theatre


Former City of Wanneroo shire office


Wanneroo War memorial


Wanneroo showgrounds

**P2 - Figure 1** - Places of historic significance included on the City's Local Heritage Survey 2025

## 2.2.2 COMMUNITY PROFILE

The following community profile provides an overview of the key demographic and socio-economic characteristics of the WTC catchment. The analysis is based on data derived from Forecast.id, which utilises the latest available Australian Bureau of Statistics (ABS) Census data (2021), together with population forecasts. The following sections examine population, age structure, household composition, employment, housing and travel characteristics to inform an understanding of the existing community and its implications for the future planning and development of the WTC.

### WTC CATCHMENT

The WTC catchment has been defined using Statistical Areas within a 5km radius of the centre, including Wanneroo, Ashby, Tapping, Sinagra, Hocking and Pearsall (as defined by profile.id and shown in P2 - Figure 2. In defining the catchment, consideration has also been given to the barrier presented by Lake Joondalup.

As a broader context, the City had a usual resident population of approximately 209,111 in 2021.

The demographic characteristics of the WTC catchment are outlined in the following analysis, providing an overview of the existing community profile supporting the centre. Benchmark comparisons are made against the City of Wanneroo local government area and Greater Perth.




**P2 - Figure 2** - WTC Catchment

### POPULATION

In 2021, the WTC catchment had a population of approximately 41,353 residents. Between 2021 and 2046, the population is forecast to increase by 77,259 persons, representing growth of 181.05% and accounting for approximately 34.84% of total growth within the City of Wanneroo. This level of growth indicates that the WTC will be required to support a substantial and expanding population. This reinforces the need for appropriate planning to ensure the centre can meet the needs of both current and future communities. In the shorter term, this role is likely to extend to servicing emerging communities within East Wanneroo, prior to the establishment of planned activity centres in that area.

### AGE

Analysis of the WTC catchment age structure in 2021, compared to Greater Perth, indicates a higher proportion of younger residents (0-17 years) and a lower proportion of older residents (60+ years). Overall, 25.1% of the population was aged 0-17 years and 19.8% was aged 60 years and over, compared to 22.5% and 21.2% respectively for Greater Perth. Key differences in the age profile of the WTC catchment relative to Greater Perth include:

- A higher proportion of 'Primary schoolers' (10.4% compared to 9.0%)
- A lower proportion of 'Young workforce' (13.1% compared to 14.4%)
- A slightly higher proportion of 'Parents and homebuilders' (21.8% compared to 21.0%)
- A lower proportion of 'Empty nesters and retirees' (9.5% compared to 10.2%)

Between 2016 and 2021, the WTC catchment population increased by 2,498 people. The most significant changes in age structure over this period were:

- Growth in 'Seniors' (70-84 years) (+1,117 people)
- Decline in 'Young workforce' (25-34 years) (-603 people)
- Growth in 'Older workers and pre-retirees' (50-59 years) (+588 people)
- Growth in 'Empty nesters and retirees' (60-69 years) (+510 people)

This age profile indicates a strong presence of family households, alongside a growing older population. This has implications for the WTC in accommodating demand for family oriented services and facilities, including education, recreation and community infrastructure, while also ensuring the centre responds to the increasing needs of older residents through accessible design, health services and opportunities for ageing in place.

### HOUSEHOLD TYPES

Analysis of household composition in the WTC catchment in 2021, compared to Greater Perth, indicates a higher proportion of couple families with children and a lower proportion of lone person households.

Overall, 38.5% of households were couple families with child(ren) and 19.9% were lone person households, compared to 32.0% and 24.0% respectively for Greater Perth. The catchment also had a lower proportion of group households (2.0% compared to 3.4% in Greater Perth).

Between 2016 and 2021, the number of households in the WTC catchment increased by 1,184. The most significant changes in household composition over this period were:

- Growth in lone person households (+615 households)
- Growth in one parent families (+329 households)
- Growth in couples without children (+230 households)
- Growth in couples with children (+220 households)

This household profile highlights a predominantly family oriented catchment, while also indicating increasing diversity in household types, particularly smaller households and single person living. In a planning context, this reinforces the need for the WTC to provide a mix of housing typologies, including medium and higher-density options in proximity to the centre, consistent with SPP 4.2 objectives for activity centres. It also supports the provision of a diverse range of services and amenities, including family oriented facilities, local services, and adaptable community spaces that can respond to varying household needs over time.

### BIRTHPLACE

In 2021, 38.0% of the WTC catchment population was born overseas, compared to 36.0% in Greater Perth. The most common non-English speaking country of birth within the catchment was India, representing 5.4% of the population (918 people). Key differences in the birthplace profile of the WTC catchment relative to Greater Perth include:

- A higher proportion of people born in the United Kingdom (15.9% compared to 9.7%)
- A higher proportion of people born in South Africa (3.1% compared to 1.8%)

Between 2016 and 2021, the number of overseas born residents increased by 645 people. The largest increases were among those born in:

- India (+154 persons)
- Ireland (+116 persons)
- Philippines (+113 persons)
- South Africa (+107 persons)

This reflects a diverse and growing multicultural population within the WTC catchment. In a planning context, this has implications for the WTC in supporting inclusive and accessible services, community facilities and retail offerings that respond to a range of cultural needs, as well as opportunities for the centre to accommodate diverse food, retail and service based businesses.

## EDUCATION AND QUALIFICATIONS

Analysis of educational attainment in the WTC catchment in 2021, compared to Greater Perth, indicates a higher proportion of residents who left school at Year 10 or below and a lower proportion who completed Year 12 or equivalent.

Overall, 27.9% of the population left school at Year 10 or below, and 55.9% completed Year 12 or equivalent, compared to 24.8% and 59.6% respectively for Greater Perth.

Analysis of post school qualifications indicates that the WTC catchment has a slightly lower proportion of residents with formal qualifications and a higher proportion with no formal qualifications. Overall, 54.1% of residents aged 15 years and over held a qualification, while 38.9% had no qualifications, compared to 56.5% and 35.6% respectively for Greater Perth.

Key differences in qualifications within the WTC catchment relative to Greater Perth include:

- A higher proportion of residents with no qualifications (38.9% compared to 35.6%)
- A higher proportion of residents with vocational qualifications (25.7% compared to 20.3%)
- A lower proportion of residents with Bachelor or higher degrees (18.1% compared to 26.5%)

Between 2016 and 2021, the number of residents with qualifications increased, particularly in:

- Bachelor or higher degrees (+995 persons)
- Vocational qualifications (+823 persons)
- Advanced Diploma and Diploma qualifications (+411 persons)

This education and qualification profile indicates a workforce with a strong representation of vocational skills, alongside comparatively lower levels of higher education attainment. In a planning context, this reinforces the role of the WTC in supporting a diverse employment base, including local jobs in retail, service and trade based industries. It also highlights the importance of facilitating access to education, training and upskilling opportunities within or in proximity to the centre, including vocational and community based training services, to support employment pathways and improve workforce participation over time.

## MODE OF TRAVEL TO WORK

On Census day 2021, 70.0% of employed residents in the WTC catchment travelled to work by private vehicle, 6.2% used public transport and 1.1% walked or cycled. A further 7.5% worked from home. In total, 1,311 people used public transport, compared to 14,993 who travelled by private vehicle.

Comparison with Greater Perth indicates a higher reliance on private vehicles and lower use of public transport within the catchment, with 6.2% using public transport and 70.0% using private vehicles, compared to 8.4% and 66.4% respectively for Greater Perth. Key differences in travel behaviour relative to Greater Perth include:

- A higher proportion of residents traveling by car as driver (65.8% compared to 62.0%)
- A lower proportion of residents traveling by bus (1.4% compared to 3.5%)

Between 2016 and 2021, the number of employed residents increased by 1,789. The most significant changes in travel behaviour over this period were:

- Increase in travel by car as driver (+936 persons)
- Increase in working from home (+778 persons)
- Increase in those who did not travel to work (+545 persons)

This travel profile indicates a strong reliance on private vehicles and comparatively limited uptake of public and active transport modes. In a planning context, this reinforces the need for the WTC to improve accessibility across a range of transport modes, including enhanced public transport integration, walkable catchments and active transport connections. It also highlights the opportunity to support a greater concentration of residential and employment uses within a walkable catchment of the centre, reducing the need for longer distance travel and contributing to a more self-sufficient and accessible WTC over time.

## EMPLOYMENT

In 2021, 21,161 residents of the WTC catchment were employed, of which 60.5% worked full time and 33.5% part time. The labour force within the catchment totalled 22,179 persons, including 12,802 full time and 7,094 part time workers.

Analysis of employment status indicates similar levels of employment and unemployment compared to Greater Perth, with 95.4% of the labour force employed and 4.6% unemployed, compared to 94.7% and 5.3% respectively for Greater Perth. The WTC catchment recorded a higher labour force participation rate of 68.2%, compared to 65.2% for Greater Perth.

Between 2016 and 2021, employment within the catchment increased, with an additional 1,835 people employed and a reduction of 455 unemployed persons. Over the same period, the labour force increased by 1,380 people.

This employment profile indicates a relatively strong and active labour force within the WTC catchment. In a planning context, this reinforces the role of the WTC in accommodating a greater share of local employment opportunities, including retail, commercial and service based uses, consistent with its function as a secondary activity centre. Increasing the availability and diversity of employment opportunities within and around the centre will support improved employment self-sufficiency, reduce reliance on commuting to higher order centres, and contribute to a more accessible and economically resilient community.

It also highlights the opportunity to align employment growth with increased residential densities within the walkable catchment of the WTC, supporting the co-location of jobs and housing and reinforcing the centre as a more self-contained and transit supportive activity node over time.

## WEEKLY HOUSEHOLD INCOMES

In 2021, 22.5% of households in the WTC catchment earned a high income (defined as $3,000 or more per week), while 17.5% earned a low income (less than $800 per week).

Compared to Greater Perth, the WTC catchment had a slightly lower proportion of both high income households (22.5% compared to 24.2%) and low income households (17.5% compared to 19.5%).

Key differences in household income distribution relative to Greater Perth include:

- A higher proportion of households earning $2,500 - $2,999 per week (9.6% compared to 7.1%)
- A lower proportion of households earning $4,500 - $4,999 per week (3.5% compared to 4.6%)
- A lower proportion of households earning $6,000 - $7,999 per week (1.5% compared to 2.5%)

This income profile indicates a broadly middle income catchment, with a relatively balanced distribution across income groups. In a planning context, this reinforces the need for the WTC to support a diverse range of housing, retail and service offerings that are accessible to a broad cross section of the community. This includes consideration of housing affordability, a mix of dwelling types, and a variety of retail and service price points, as well as community infrastructure that supports equitable access to services and amenities.

## DWELLINGS

In 2021, the WTC catchment was characterised by a high proportion of low-density housing, with 90.2% of dwellings being separate houses, 8.7% medium density and 0.2% high density. This compares to 75.6%, 17.6% and 6.1% respectively for Greater Perth.

Overall, 8.9% of dwellings in the catchment were medium or high density, significantly lower than the 23.7% recorded across Greater Perth. In total, there were 14,183 separate houses, 1,362 medium density dwellings and 38 high density dwellings within the catchment.

Between 2016 and 2021, the total number of dwellings increased by 943. The most significant changes in dwelling types over this period were:

- Increase in separate houses (+1,027 dwellings)
- Decrease in medium density dwellings (-103 dwellings)
- Increase in high density dwellings (+38 dwellings)

This dwelling profile highlights the predominance of low-density housing within the WTC catchment, with limited provision of medium and high-density typologies and a continued trend toward separate housing. In a planning context, this reinforces the need for the WTC to accommodate increased residential density and a broader mix of dwelling types within its walkable catchment.

Increasing medium and higher-density housing in proximity to the centre will support forecast population growth, improve housing choice, and enable a greater diversity of households to locate close to services and employment. This will also support the co-location of housing and jobs, contribute to a more active and vibrant centre, and assist in reducing reliance on private vehicle travel over time.

## HOUSING TENURE

In 2021, 76.2% of households in the WTC catchment either owned their home outright or were purchasing it, while 17.4% were renting privately and 1.2% were in social housing.

Compared to Greater Perth, the catchment had a lower proportion of outright home ownership (24.8% compared to 27.6%), a higher proportion of households purchasing their home (51.3% compared to 40.5%), and a lower proportion of rental households (18.6% compared to 26.0%).

Between 2016 and 2021, the number of households increased, with the most notable changes including:

- Increase in households with a mortgage (+620 households)
- Increase in fully owned dwellings (+459 households)
- Increase in rental households (+285 households)

This tenure profile reflects a predominantly owner-occupier catchment, with a strong representation of mortgage holding households and relatively lower levels of rental accommodation. In a planning context, this highlights the importance of increasing housing diversity within and around the WTC, including opportunities for more rental and adaptable housing options.

Expanding the range of tenure types will support a more inclusive and flexible housing market, enabling access for different household groups, including younger residents, key workers and smaller households. This will assist in supporting population growth, improving housing affordability and choice, and reinforcing the WTC as a more accessible and mixed-use activity centre.

## 2.3 PHYSICAL CONTEXT

### 2.3.1 REGIONAL CONTEXT

The WTC is located approximately 23 km north of the Perth Central Business District, 10 km east of Joondalup, 1 km east of Lake Joondalup and 27 km south of Yanchep. The centre is strategically located within the City's activity centre network and is well connected to regional transport infrastructure, including Wanneroo Road, the Mitchell Freeway and the Joondalup-Yanchep rail corridor. P2 - Figure 3 shows the WTC within its regional context.

The WTC was established in the early 1900s to support the commercial and service needs of the surrounding rural community. The first residential estate was developed west of Wanneroo Road in the 1970s and, since that time, significant urbanisation has occurred throughout the locality. This growth has gradually transformed the area from a primarily rural settlement into an established urban centre, with many market gardening activities relocating further north and east.

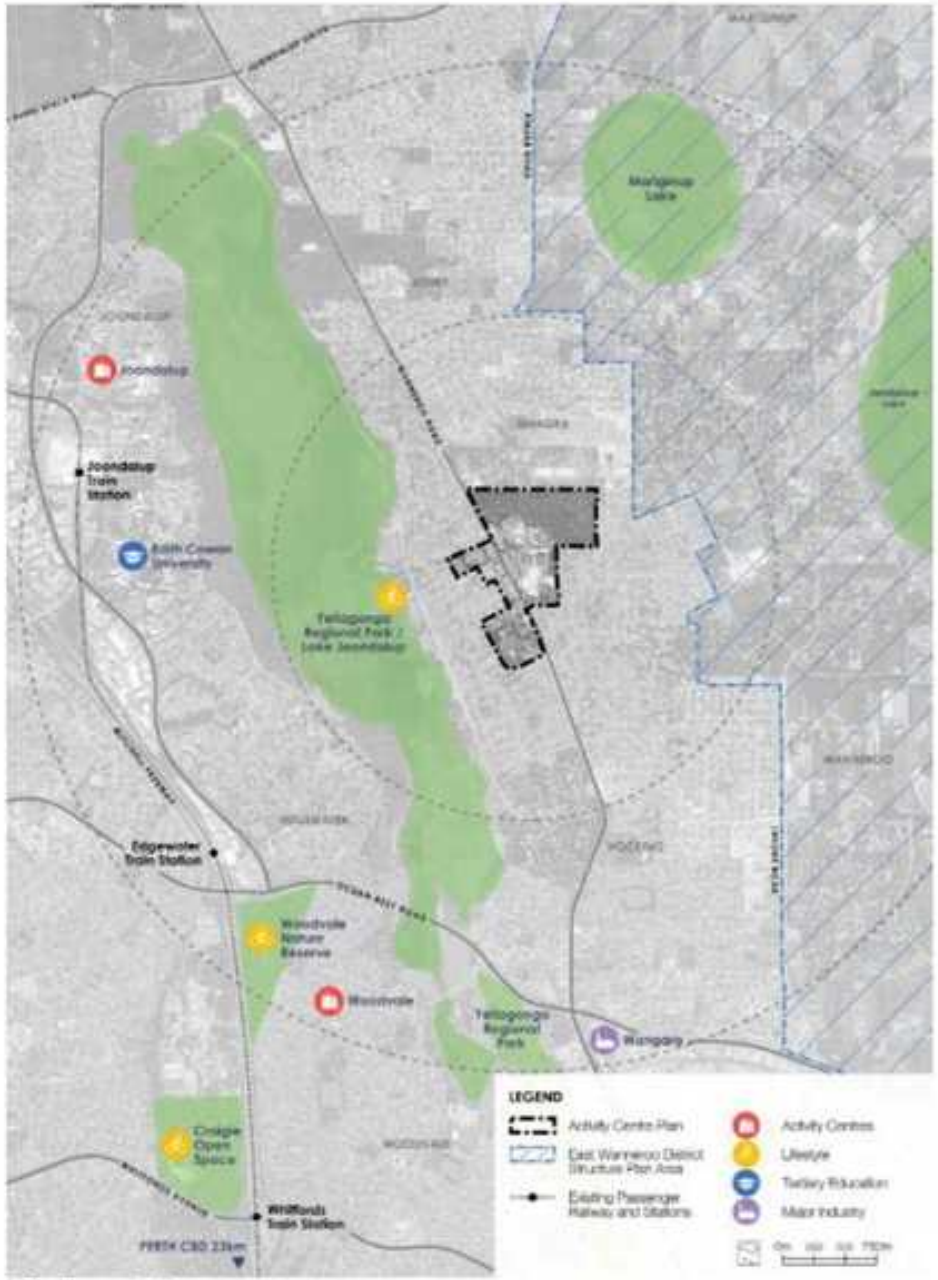
In 2016, following extensive planning and community engagement, the City initiated Amendment No. 119 to District Planning Scheme No. 2, increasing residential densities within the Wanneroo Housing Precinct. The amendment has supported the redevelopment of land surrounding the WTC, enabling the gradual replacement of ageing housing stock with a broader range of housing types to meet changing community needs.

The WTC is located adjacent to the suburbs of Hocking, Tapping, Sinagra and Wanneroo, and is strategically positioned to service future growth within the East Wanneroo District Structure Plan (DSP) area. Covering approximately 8,300 hectares of predominantly rural land within the localities of Wanneroo, Mariginiup, Gnangara, Jandabup and Pinjar, the East Wanneroo DSP area is expected to accommodate substantial urban development over the coming decades, resulting in significant population growth and increased demand for housing, employment, services, community facilities and transport infrastructure.

The WTC is designated as a Secondary Activity Centre under SPP 4.2 and is one of the City's two Secondary Centres, alongside Clarkson. Consistent with the role of a Secondary Centre, the WTC is intended to provide a diverse range of retail, commercial, civic, community and employment opportunities that serve both the local community and the broader surrounding catchment.

As East Wanneroo continues to develop, the WTC will play an increasingly important role as the primary focal point for retail, community services, employment and civic activity within the eastern corridor of the City. The centre will support the needs of existing and future residents, workers and visitors and contribute to the long-term delivery of a more connected and self-sufficient urban region.

The WTC contains several destinations of local and civic significance, including the City of Wanneroo Civic Centre, Wanneroo Showgrounds, Aquamotion Aquatic and Recreation Centre, and the Wanneroo Library and Cultural Centre. The centre is also supported by a network of major and local roads, including Wanneroo Road (Primary Distributor), Dundebar Road and Civic Drive (Local Distributors), and several Access Roads such as Servite Terrace and Rocca Way, as classified under the Western Australian Road Hierarchy.




**P2 - Figure 3** - Regional context

## 2.3.2 URBAN STRUCTURE

The WTC has evolved since its establishment in the early 1900s, originally serving the commercial needs of surrounding rural communities. Over time, incremental subdivision and development have resulted in a diverse pattern of land tenure and built form.

WTC is intended to evolve into a contemporary mixed-use Secondary Centre that balances increased urban intensity with the established civic, cultural and landscape character of Wanneroo. Unlike more highly urbanised metropolitan centres, the WTC is intended to retain a distinct local identity shaped by its civic functions, historic settlement pattern, mature landscape setting and community facilities. Future redevelopment should reinforce this identity through a walkable public realm, a human scaled main street environment, integrated green infrastructure and high-quality contemporary built form that responds to local context.

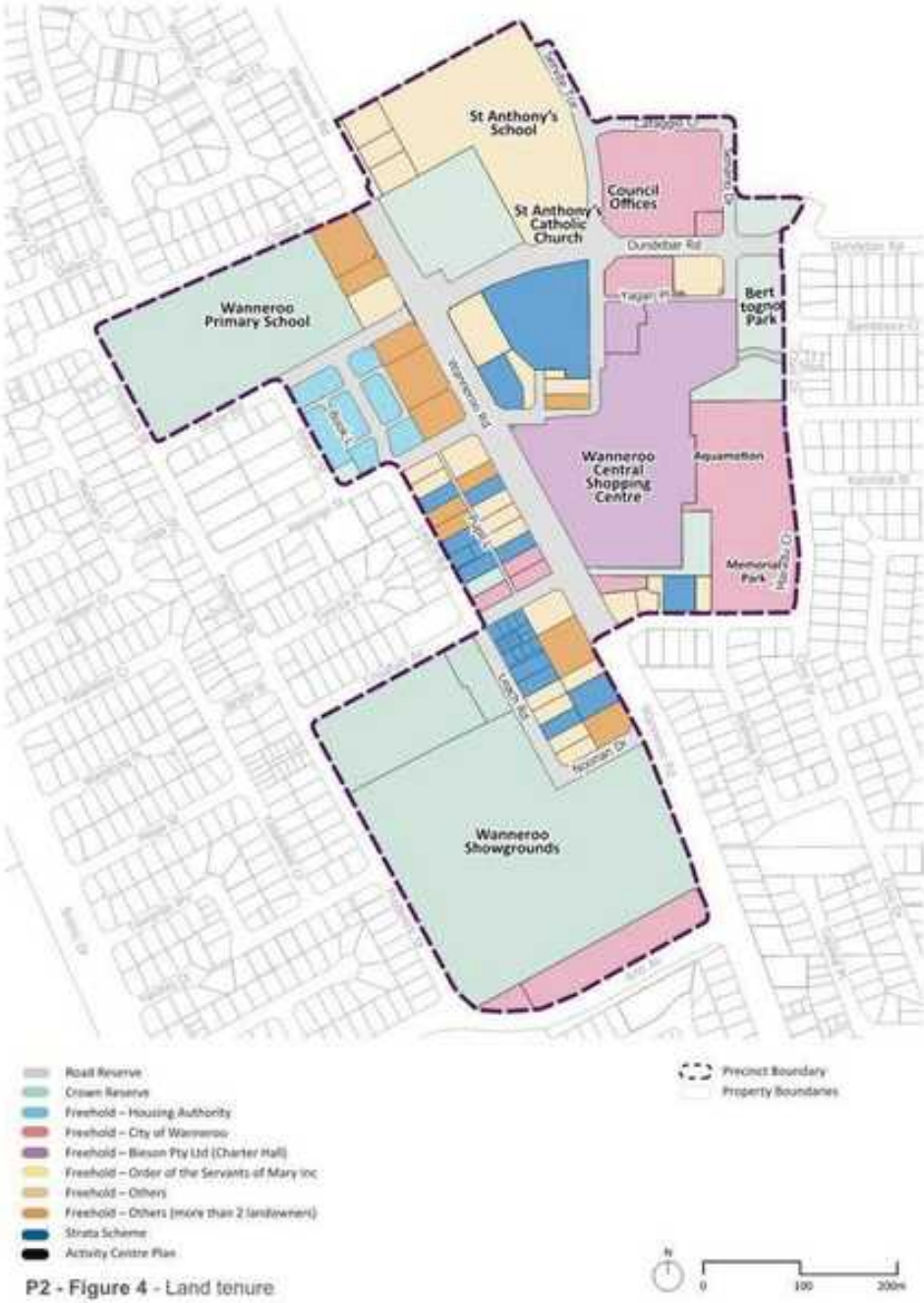
The centre will transition over time from a predominantly vehicle oriented commercial area toward a more connected, pedestrian focused urban environment, with Rocca Way functioning as the social, civic and commercial heart of the Town Centre. Higher intensity mixed-use development will be concentrated within the core precincts and around key activity corridors, while carefully managing transitions to surrounding residential neighbourhoods and community uses.

The future character of the WTC is intended to support a vibrant day and evening economy, increased housing diversity, enhanced employment opportunities and improved public realm amenity, while maintaining a strong sense of place that reflects WTC's evolving identity as a strategic Secondary Centre.

### LAND TENURE

The urban structure is characterised by a mix of large freehold land parcels, fragmented lots under multiple ownership, and key Crown reserves. Notable public landholdings include the Wanneroo Primary School, Wanneroo Showgrounds, and the Department of Biodiversity, Conservation and Attractions (DBCA) site. The City of Wanneroo also owns significant areas of public open space, including land surrounding the Aquamotion recreation facility, the Wanneroo Civic Centre and Wanneroo Library and cultural Centre. This pattern of land tenure presents both opportunities and constraints for coordinated redevelopment:

- Fragmented land ownership may limit the ability to deliver cohesive redevelopment outcomes. Lot amalgamation and collaboration among landowners will be essential to unlock the full development potential of these areas.
- Strategic opportunity sites have been identified where large, single owner parcels can support significant redevelopment. For example, the Department of Biodiversity and Conservation, and the Wanneroo Tavern and surrounding sites offer the potential for higher-density mixed use development, serving as potential catalyst projects that can deliver community benefits and stimulate adjacent private investment.
- Public realm enhancements and improved connectivity around key civic and recreational assets, such as Rocca Way, Memorial Park and Aquamotion, will support mixed-use development and contribute to a vibrant, walkable town centre.
- Lot 9000 comprises a 31-hectare greenfield site in single ownership on the northern edge of the WTC. While currently excluded from the WTCPP pending further environmental assessment, the site represents a significant future redevelopment opportunity that could substantially increase the residential population of the Town Centre and support its long term growth and development (Lot 9000 is not shown on P2 - Figure 4).




**P2 - Figure 4** - Land tenure

## 2.3.3 BUILT FORM CONTEXT

### CHARACTER

The existing character of the WTC reflects its evolution from a local service centre supporting the surrounding agricultural community into an established civic and commercial centre for the broader Wanneroo community. The built environment combines retail, commercial and civic functions and is closely integrated with significant public spaces, mature trees and landscape assets, including Bert Togno Park and Memorial Park, which contribute to the Town Centre's distinctive green and civic character. Several civic and community facilities, including the Civic Centre, Library and Cultural Centre, further reinforce this identity through their architectural form, materiality and landscaped settings, contributing to a strong sense of place. While the WTC benefits from generally well maintained roads, footpaths and crossings, its overall layout and built form remain strongly car oriented

### HEIGHT AND MASSING

The WTC primarily features low-rise buildings, typically ranging from one to three storeys in height. This existing scale reflects the historic development pattern of the centre as a local retail and civic destination rather than a higher intensity mixed-use activity centre. Future redevelopment will provide opportunities to introduce increased intensity in appropriate locations while maintaining human scale streets, protecting important interfaces and reinforcing the established civic and community character of the WTC.

### STREET INTERFACE

The key street interfaces in WTC vary in character and function. Within the commercial core area, retail and hospitality uses are predominately inward facing, particularly within the Wanneroo Central Shopping Centre, drawing activity away from surrounding streets and public spaces.

Dundebar Road functions as a key internal street, balancing vehicle access with pedestrian movement. In contrast, Wanneroo Road is characterised by large front setbacks, extensive surface car parking interfacing with Wanneroo Road and frequent vehicle crossovers, resulting in a fragmented pedestrian environment, limited street activation and a weaker relationship between buildings and the public realm

### KEY SPACES AND FEATURES

The WTC is distinguished by a unique mix of civic, community and recreational destinations that are closely integrated with public open spaces and landscape assets. The City's Civic Centre (constructed in 2000 and expanded in 2017), Wanneroo Library and Cultural Centre (opened in 2009), Aquamotion Aquatic and Recreation Centre (originally opened in 1990 and subsequently refurbished), Limelight Theatre and Wanneroo Community Centre collectively establish a significant civic and community focus within the Town Centre.

The Aquamotion Aquatic and Recreation Centre occupies a prominent position within the WTC and is closely connected to Bert Togno Park, Memorial Park and surrounding community facilities. Together with the Wanneroo Showgrounds, these civic, recreational and public spaces create a distinctive environment where community life, recreation, civic activity and public events are concentrated. This interconnected network of buildings, public spaces and landscape assets contributes significantly to the identity, character and sense of place of the WTC, providing a strong foundation for its future evolution.

### PLANNING RESPONSE TO BUILT FORM

The existing built form of the WTC provides a strong foundation for future renewal, with opportunities to transition from a predominantly low-rise, car oriented commercial centre into a more connected, mixed-use and people focused activity centre. Future redevelopment should build upon the established civic character of the WTC, including the materiality and landscaped setting of key civic and community buildings, while supporting increased activity, housing diversity and employment opportunities and responding appropriately to adjacent residential areas.

Rocca Way presents the strongest opportunity to develop as the WTC's primary main street. Its central location and proximity to civic, commercial and community destinations support a more pedestrian focused environment characterised by active frontages, a consistent street edge and a strong public realm interface. Over time, redevelopment and public realm improvements will reinforce its role as the social and commercial focus of the Town Centre.

Wanneroo Road will continue to perform its important arterial movement function while progressively adapting to better support pedestrian activity and an enhanced public realm. Opportunities exist to strengthen the relationship between development and the street through improved built form outcomes, streetscape enhancements and increased pedestrian amenity.

Collectively, the coordinated delivery of built form, public realm and movement improvements will strengthen connections between key destinations, enhance walkability and support the ongoing evolution of the WTC as a connected, vibrant and identifiable Town Centre. Detailed built form responses to guide this transition are provided in Section 6.6.



Opportunity for built form renewal and redevelopment.

## 2.3.4 LAND USES CONTEXT

Historically, the WTC served as the commercial and community focus for the Wanneroo district, supporting the needs of surrounding agricultural landowners and the broader community. This legacy continues today through its diverse mix of retail, commercial, civic, cultural and community uses, which collectively distinguish the WTC from many other activity centres and reinforce its role as the City's principal community destination.

### RESIDENTIAL

Residential development within the WTC is currently limited and generally concentrated around the edges of the centre, including along Leach Road and Sinagra Street. These areas are predominantly characterised by single dwellings and low-scale grouped housing. The broader WTC catchment is similarly characterised by low-density suburban residential development, reflecting the area's historic development pattern.

### COMMERCIAL/RETAIL

The WTC also includes a diverse retail offering centred around the Wanneroo Central Shopping Centre, with supermarkets, specialty shops and services catering to daily needs. The shopping centre underwent expansion in 2018, providing an additional 2,045m2 floorspace and reconfiguration of the existing car park.

A range of commercial land uses including office, hospitality, post office, shops, service station and pharmacy uses are located on lots surrounding the shopping centre, and Wanneroo Road provides further commercial land uses including a mix of office, shops, food and beverage and personal care services.

Parts of the Wanneroo Road corridor are characterised by vehicle-oriented land uses, including drive-through food and beverage premises, service stations and car wash facilities. These uses reflect the historic role of Wanneroo Road as a major movement corridor; however, they also present opportunities for future redevelopment that improves built form outcomes, strengthens the public realm and supports a more walkable and active Town Centre environment.

### EDUCATION

Existing education facilities located within the WTC include the Wanneroo Primary School and St Anthony's Catholic Primary School.

### CIVIC AND COMMUNITY

In addition to its key commercial and retail attractions, the WTC has a number of civic and community purpose uses including:

- The City of Wanneroo Library and Cultural Center comprising library, museum, gallery and theatre;
- The City of Wanneroo Administration and Civic Centre building;
- The Wanneroo Community Centre;
- The Wanneroo Showgrounds;
- ECU Health Centre including Wanneroo GP Super Clinic, ECU psychology and allied health.

### PLANNING RESPONSE TO LAND USE

The existing land use pattern provides a strong foundation for the future evolution of the WTC. In particular, the concentration of civic, community, cultural and recreational facilities distinguishes the WTC from many activity centres and reinforces its role as an important destination for the surrounding district. Together with the centre's retail and commercial functions, these uses contribute to a unique civic focus and strong sense of place.

Consistent with the findings of the Economic, Retail and Employment Strategy in Appendix 3, future growth should build on these strengths by reinforcing the commercial and mixed-use core, supporting the expansion of retail, commercial, health and employment-generating uses in highly accessible locations, while increasing opportunities for higher-density residential development that supports centre activity. This approach will strengthen the relationship between where people live, work, access services and participate in community life.

The close integration of civic, community, cultural and recreational facilities presents significant opportunities to improve connections between destinations through enhanced public spaces, stronger pedestrian links and a more legible movement network. Rather than functioning as a collection of individual destinations, these places can evolve as a more interconnected Town Centre that encourages walking, supports local businesses and enhances the everyday experience of the WTC.

Within this structure, Rocca Way and surrounding sites are well positioned to form the mixed-use heart of the WTC, supporting additional retail, hospitality and commercial activities integrated with higher-density residential development. Wanneroo Road will continue to perform an important commercial and movement function, with opportunities over time to improve built form outcomes, strengthen the public realm and support complementary commercial and mixed-use development.

Collectively, these land use directions establish the strategic basis for the future growth and development of the WTC. The land use framework, key land use outcomes and precinct-based directions that support this vision are discussed in detail in Section 6.5

## 2.3.5 PUBLIC REALM CONTEXT

### REGIONAL PUBLIC OPEN SPACE

The WTC is strategically positioned within a well established urban setting, surrounded by significant public open spaces that contribute to broader ecological connectivity and recreational value, including:

- Lake Joondalup and Yellagonga Regional Park (approx. 1 km west)
- Lake Mariginiup (approx. 1.5 km north)
- Jandabup Nature Reserve (2.5 km east)
- Frederick Duffy Park (200 m east)
- Boyagin Park (east, adjoining the Centre)

These regional assets provide an opportunity to strengthen ecological and recreational connections into the WTC, reinforcing the relationship between the Town Centre's urban spaces, surrounding landscapes and Wanneroo's broader natural setting.

### LOCAL PUBLIC OPEN SPACE

A range of well established civic, recreational and cultural open spaces already exist within the WTC and play an important role in supporting its identity and community life, including:

**Jacaranda Amphitheatre** - A key civic and event space adjacent to the City of Wanneroo Civic Centre. Future connections should prioritise pedestrian permeability to better integrate this space with surrounding activity areas and emerging public realm upgrades.

**Wanneroo Showground** - A 12.9 hectare site of regional cultural significance that reflects the WTC's 'evolved country town' character.

**Memorial Park** - A central community focal point containing the WTC war memorial. The WTCPP identifies opportunities to improve park amenity, enhance east-west connectivity and reconfigure parking to support a more cohesive and accessible civic open space.

**Bert Togno Park/Walls Of Honour** - A valued local park incorporating public art and commemorative elements. There is an opportunity to strengthen connections between this space and the broader green network.

## EXISTING STREETS AS PUBLIC REALM

Streets within the WTC form a critical component of the public realm, providing the primary setting for movement, access and everyday activity. Together, they establish the framework through which people experience and navigate the Town Centre.

Rocca Way is centrally located within the WTC and connects a range of retail, civic, community and recreational destinations. While its current function is primarily focused on vehicle access and circulation, its location and surrounding land uses provide a strong foundation for a more active and pedestrian-oriented environment over time.

Dundebar Road accommodates a mix of vehicle and pedestrian movement and interfaces directly with key civic, education and health destinations. Its role within the civic heart of the WTC makes it an important connector between community facilities, public spaces and surrounding neighbourhoods.

Wanneroo Road is a major arterial route that prioritises vehicle movement and regional connectivity. The corridor is characterised by high traffic volumes, multiple vehicle crossovers, expansive areas of surface parking and a relatively weak relationship between development and the public realm, resulting in a less comfortable pedestrian environment.

## PLANNING RESPONSE TO PUBLIC REALM

The existing public realm provides a strong foundation for the future evolution of the WTC. Its network of parks, civic spaces, streets and community destinations contributes significantly to the WTC's identity and presents opportunities to strengthen connectivity, legibility and everyday community life.

A key opportunity identified through the WTCPP is the creation of a more active, walkable and people focused public realm. Central to this vision is the progressive evolution of Rocca Way into the WTC's primary main street environment, supported by future public realm improvements and built form outcomes that encourage activation, strengthen the relationship between public and private spaces, and support community life, social interaction and economic activity.

The WTCPP also establishes a framework to enhance the function and quality of key streets, including Dundebar Road and Wanneroo Road, through improved pedestrian amenity, accessibility, streetscape quality and integration with adjoining development. Over time, these initiatives will strengthen connections between civic, commercial, community and recreational destinations and support a more cohesive and connected Town Centre.

Collectively, these opportunities establish the strategic direction for the WTC's future public realm network and support the creation of a more connected, attractive and pedestrian-oriented Town Centre. The Public Realm framework, strategies and design responses that support this vision are discussed in detail in Section 6.3








Existing streets offer opportunities for public realm enhancement and activation.



# 3.0

# Stakeholder Engagement



# 3.0 STAKEHOLDER AND COMMUNITY ENGAGEMENT

## 3.1.ENGAGEMENT ACTIVITIES

Stakeholder and community engagement was undertaken in April and May 2018 to inform the preparation of draft ASP 90. This engagement process played a key role in establishing a shared vision, identifying priorities and aspirations, and shaping the overall intent for the future redevelopment of the WTC. Feedback received through this engagement process informed the development and testing of a range of redevelopment scenarios and concepts for the WTC. These scenarios explored opportunities to enhance the public realm, improve pedestrian movement, integrate civic and commercial uses, and support long term economic and residential growth. Community and stakeholder input helped refine these concepts and establish the overarching vision and strategic directions that underpin the WTCPP.

While the engagement was undertaken prior to the preparation of this revised WTCPP, the community sentiment, opportunities and long term vision identified through the process remain relevant. The issues raised, including the desire for a more vibrant and activated centre, improved public realm and connectivity, a stronger civic focus, and a broader mix of uses, continue to align with the strategic planning objectives for the WTC. As the WTCPP builds upon the established vision and intent derived from the 2018 engagement process, additional community engagement was not considered necessary at this stage of preparation of the WTCPP.

Since the 2018 engagement process, the City has undertaken additional place-making engagement activities within the WTC to inform broader Town Centre initiatives. While separate to the preparation of the WTCPP, feedback received through these processes has generally reinforced the themes and aspirations identified through the earlier community engagement. In addition to community and stakeholder engagement, the preparation of the WTCPP has been informed through engagement with the City's Design Review Panel and Council Forums. These processes provided valuable input on urban design, public realm, built form and strategic planning matters, helping to refine the WTCPP and ensure alignment with broader City objectives and aspirations for the future of the WTC.

The outcomes of the engagement process provide an important foundation for understanding the opportunities and constraints influencing the future development of the WTC. These are outlined in the following section and have directly informed the land use, built form, movement and public realm directions of the WTCPP. Engagement initiatives included:

- Regular and ongoing engagement with the former Wanneroo Town Centre Advisory Group throughout the development of the WTCPP.
- Council Forums with Elected Members to discuss key concepts and priorities.
- Visioning workshop with government stakeholders, including Main Roads WA, Department of Transport, Department of Planning, Lands and Heritage, and the Department of Biodiversity, Conservation and Attractions.
- Wanneroo Community Sundowner at Limelight Theatre, featuring a presentation and visioning workshop targeting landowners, business owners, and senior citizens.
- Information booth at Wanneroo Youth Centre, capturing input from younger community members.
- Three separate information booth sessions at Wanneroo Library and Cultural Centre, scheduled at different times to engage a broad demographic.

The outcomes of the engagement process, together with feedback received through subsequent place-making engagement activities, Design Review Panel reviews and Council Forums, provide an important foundation for understanding the opportunities and constraints influencing the future development of the WTC. These are outlined in the following section and have directly informed the land use, built form, movement and public realm directions of the WTCPP.

Through this collaborative and inclusive process, the WTCPP reflects a shared vision for the future of the WTC that is shaped by meaningful community and stakeholder input. The resulting vision and objectives represent the culmination of discussions, ideas and feedback gathered throughout engagement, ensuring the plan is firmly grounded in local aspirations and provides a clear foundation for guiding the WTC's redevelopment.



## 3.2 WHAT WE HEARD

The following points summarise the key themes emerging from engagement, which have informed the strategies and design responses embedded throughout the WTCPP. Subsequent sections outline how the WTCPP responds to these themes across six design elements

### URBAN ECOLOGY

- **Interest in waterwise and sustainable landscaping:** Strong support for waterwise landscaping and water-sensitive urban design (WSUD) to enhance environmental performance and public realm amenity.
- **Support for local and native planting:** Feedback supported the use of local and native species to strengthen landscape character, biodiversity and urban cooling.
- **Cultural connections to landscape:** Participants identified opportunities to reflect Aboriginal heritage through culturally significant planting, interpretation and public art.

### URBAN STRUCTURE

- **Fragmented urban structure:** Feedback identified a fragmented Town Centre with disconnected destinations and no clearly defined centre or organising structure.
- **Desire for a stronger Town Centre core**: Participants supported creating a more defined and active core that brings together retail, commercial, civic and community activity.
- **Improved walkability and connectivity:** Strong support was expressed for a more walkable movement network with safer, more direct connections between key destinations.
- **Clearer precinct identity:** Feedback highlighted the need for better-defined precincts connected by legible streets, public spaces and pedestrian links

### PUBLIC REALM

- **Public realm amenity:** Strong support for more shade, seating, lighting, landscaping and waterwise design to improve comfort, safety and environmental performance.
- **Wayfinding and identity:** Feedback highlighted the need for clearer wayfinding and a more cohesive WTC identity, including opportunities to celebrate local history and Aboriginal culture.
- **Activation and vibrancy:** Participants supported more active and flexible public spaces that accommodate markets, events, outdoor dining and everyday community interaction.
- **Safety and accessibility:** Improving passive surveillance, lighting and universal accessibility was identified as a priority to create safe, welcoming and inclusive public spaces.

### MOVEMENT

- **Walking and cycling connections:** Feedback highlighted fragmented pedestrian and cycling networks, with vehicle-dominated streets reducing walkability and connectivity.
- **Public transport integration:** Participants supported better integrated public transport, including improved bus stop amenity, visibility and a stronger transport connections.
- **Parking management:** Support was expressed for a more efficient 'park once' approach, shared parking and end-of-trip facilities to reduce parking dominance and encourage active travel.
- **Safer streets:** Feedback identified a need for traffic calming, safer crossings and lower vehicle speeds to improve pedestrian safety and comfort.

### LAND USE

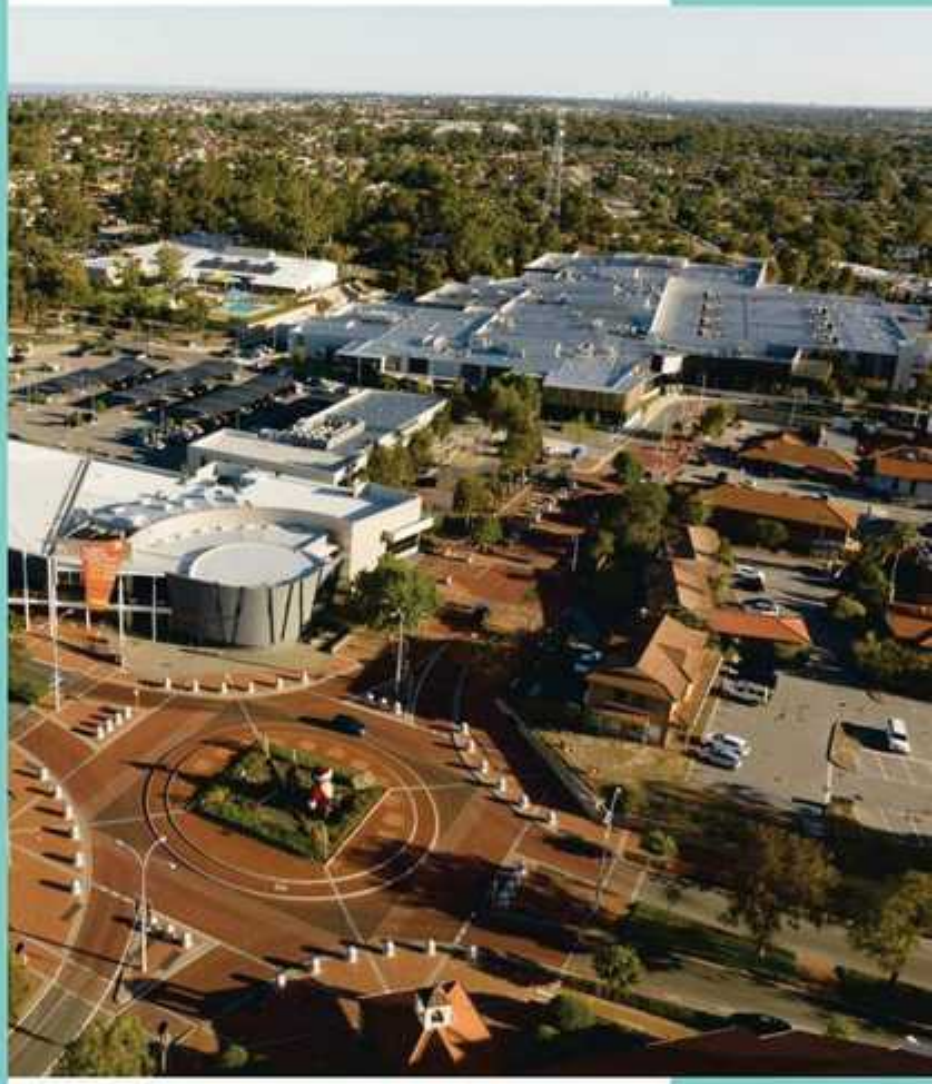
- **Integrated land uses:** Feedback supported a more cohesive mix of retail, commercial, civic and residential uses to strengthen activity, connectivity and the Town Centre experience.
- **Housing diversity:** Participants identified a need for a broader range of housing, including apartments, townhouses and housing suited to older residents.
- **More active Town Centre:** Strong support was expressed for additional hospitality, dining and entertainment uses to encourage activity beyond traditional business hours.
- **Mixed-use development:** Feedback supported mixed-use development, particularly active ground-floor commercial uses with residential or commercial uses above within the Town Centre core.

### BUILT FORM

- **Distinctive WTC character:** Feedback highlighted the need for a more consistent built form that strengthens the WTC's identity and sense of place.
- **Building height and transition:** Participants sought greater clarity around building heights, scale and transitions to provide confidence for future redevelopment.
- **Street level experience:** Feedback supported buildings that better address streets and public spaces through active frontages, reduced setbacks and improved pedestrian amenity.
- **High design quality:** Strong support was expressed for well-designed buildings, with landmark and gateway sites providing distinctive architectural outcomes that reinforce the WTC's identity



# 4.0 Opportunity and Constraints Analysis



# UNDERSTANDING AND RESPONDING TO OPPORTUNITIES AND CONSTRAINTS

The preparation of the WTCPP has been informed by a comprehensive analysis of the opportunities and constraints that shape the physical, environmental, social and economic context of the WTC. This work included a review of the existing planning framework, on-site investigations, stakeholder engagement, and an assessment of the WTC's urban structure, movement networks, built form, public realm, land use and environmental attributes. Together, these investigations provide a clear understanding of both the challenges to be addressed and the strengths that can be leveraged to support the long-term evolution of the WTC.

From a place-making perspective, this analysis recognises that the WTC is defined not only by its individual sites and land uses, but also by the quality of the places, connections and experiences it offers. Existing constraints, such as fragmented pedestrian networks, inconsistent public realm amenity, incompatible legacy land uses and a varied built form character, present opportunities for coordinated renewal that strengthens the WTC's identity, improves connectivity and enhances the everyday experience of people who live, work and visit the centre.

These opportunities and constraints have directly informed the strategic direction of the WTCPP and underpin the place-based responses across the six integrated design elements of Urban Ecology, Urban Structure, Public Realm, Movement, Land Use and Built Form. Together, these design elements provide a coordinated framework for guiding future redevelopment, public investment and infrastructure delivery, ensuring that change contributes to a connected, vibrant and distinctive Town Centre while reinforcing the WTC's role as the City's civic, community and retail heart.

The following tables summarise the key opportunities and constraints that have informed the WTCPP and identify the corresponding strategic responses. These responses establish the basis for the detailed design element strategies presented in Section 6.0.

**P2 - Table 4** - Opportunities and constraints summary

| URBAN ECOLOGY | | |
|---|---|---|
| **KEY CONSTRAINTS** | **KEY OPPORTUNITIES** | **WTCPP RESPONSE/CONSIDERATION** |
| **FRAGMENTED VEGETATION AND LIMITED CANOPY** | | |
| Existing trees and remnant vegetation are scattered and inconsistent, reducing shade, ecological connectivity and habitat value. | Enhance urban biodiversity through the retention and integration of existing trees and vegetation within redevelopment areas. | The WTCPP prioritises the retention of significant and mature trees and native vegetation, informed by a tree survey, with replacement planting of semi-mature native species where removal is unavoidable. Development standards require adequate deep soil areas and minimum tree planting in accordance with Part 1 to support increased canopy cover and reinforce the landscape character of Wanneroo over time. |
| **URBAN WATER MANAGEMENT** | | |
| Inadequate storm water and water management planning may result in flooding, water quality degradation, groundwater impacts and inconsistent development outcomes. | Implement sustainable storm water management and water conservation measures to protect groundwater and improve environmental resilience. | Urban Water Management Plans are required in accordance with DoW (2008) Guidelines as a condition of subdivision, with development assessed against the Local Water Management Strategy to ensure consistent WSUD outcomes. The WTCPP mandates on-site storm water retention, treatment of the first 15 mm of rainfall at source, appropriate finished floor levels, and water conservation measures aligned with Better Urban Water Management (WAPC 2008). |
| **HERITAGE AND PLACE MAKING CONSIDERATIONS** | | |
| Risk of disturbance to Aboriginal and historic heritage sites during redevelopment. | Cultural interpretation, public art and storytelling can be embedded into public spaces to reinforce local identity and enhance sense of place. | Due diligence in accordance with the Aboriginal Heritage Act 1972 and LPP 4.12 is required. Engagement with Aboriginal heritage consultants and/or the City's Aboriginal and Torres Strait Islander Advisory Group is encouraged where relevant. The WTCPP also supports interpretation and public art opportunities, informed by future WTC Master Planning. |
| **URBAN HEAT AND LIMITED SHADE** | | |
| High proportion of hardstand and building surfaces combined with limited canopy cover contributes to urban heat island effects and reduces thermal comfort in the Town Centre. | Strengthen climate resilience by increasing tree canopy, integrating Water Sensitive Urban Design (WSUD), and improving shade to create cooler, comfortable public spaces. | Tree retention and new canopy planting are prioritised across streets, car parks and public spaces, supported by meaningful deep soil areas and climate-resilient species. Part 1 provisions set minimum tree planting requirements and promote building orientation, awnings and shade structures to mitigate urban heat and improve thermal comfort within streets, public spaces and redevelopment areas throughout the Town Centre. |

| URBAN STRUCTURE | | |
|---|---|---|
| **KEY CONSTRAINTS** | **KEY OPPORTUNITIES** | **WTCPP RESPONSE/CONSIDERATION** |
| **STREET HIERARCHY AND LEGIBILITY** | | |
| The fragmented pattern of existing development creates difficulties in achieving a continuous built form and clear street hierarchy. | Reinforce a coherent urban structure by defining a clear hierarchy of streets and spaces, supporting legibility and a sense of place within the Town Centre. | The WTCPP establishes Rocca Way as the WTC's primary mixed-use spine, supported by a network of secondary streets and pedestrian connections linking key civic, commercial and community destinations. Development standards in Part 1 reinforce this hierarchy through public realm interface types, encouraging active frontages, consistent setbacks and clearly defined interface treatments. |
| **BLOCK AND LOT PATTERN** | | |
| Irregular lot sizes and fragmented ownership hinder coordinated redevelopment and efficient land use. | Encourage consolidation and coordinated development to achieve a more regular block pattern and support higher density mixed-use outcomes. | The WTCPP encourages lot amalgamation and coordinated redevelopment through minimum lot size provisions to support intended development outcomes. This approach prioritises coordinated redevelopment within the Rocca Way, Dundebar and Memorial Park precincts, where larger redevelopment sites can support improved permeability, more efficient urban form and higher intensity mixed-use outcomes consistent with the WTC's role as a Secondary Centre. |
| **BUILT FORM AND SCALE** | | |
| Existing low scale development limits opportunities for intensification and does not reflect the desired character of a secondary activity centre. | Support a transition to mid and high-rise built form that delivers higher density development while maintaining a human scale and responding to local context. | Part 1 development standards support a mid- to high-rise character through building height controls and upper-level setbacks that protect streetscape quality. Podium design provisions ensure a pedestrian-scale, human centred interface, with articulated built form, active ground floors and appropriate transitions to adjoining residential areas. |
| **PUBLIC SPACES AND CONNECTIONS** | | |
| Limited integration of public spaces within the urban structure reduces opportunities for social interaction and connectivity. | Integrate public spaces and green links into the urban structure to enhance connectivity and create a network of vibrant, accessible places. | The WTCPP embeds a connected network of civic spaces, green links and pedestrian laneways throughout the WTC, improving access between Rocca Way, Memorial Park, Bert Togno Park, Wanneroo Central and surrounding community facilities. Development standards in Part 1 require development to contribute to these spaces through setbacks, landscaping and active interfaces, creating a cohesive and inclusive town centre environment. |
| **INTERFACE WITH SURROUNDING NEIGHBOURHOODS** | | |
| Transitions in scale and land use at the WTC edge risk amenity impacts and a poor interface with adjoining residential areas. | Provide a clear transition in scale and intensity between the WTC core and surrounding neighbourhoods, supporting a sensitive and legible edge condition. | The WTCPP applies a graduated height and density framework, stepping down built form and intensity towards adjoining residential areas and providing adequate setbacks to reduce impacts to adjoining primary schools. Part 1 includes interface controls (setbacks, heights and landscape buffers) to manage amenity impacts and ensure a respectful transition in scale. |
| **CHARACTER AND SUB-PRECINCT DESIGNATION** | | |
| Lack of clear character guidance across different areas of the WTC risks inconsistent built form and land use outcomes, reducing overall cohesiveness. | Designate sub-precincts to provide a framework for consistent built form, character and land use outcomes, while ensuring integration and cohesiveness with the WTC as a whole. | The WTCPP defines distinct sub-precincts to guide built form, character and land use in a coordinated manner. Development standards guide redevelopment in each sub-precinct to deliver its intended role while maintaining visual and functional cohesion across the Town Centre. |



## MOVEMENT

| KEY CONSTRAINTS | KEY OPPORTUNITIES | WTCPP RESPONSE/CONSIDERATION |
|---|---|---|
| **ACTIVE TRANSPORT** | | |
| Constraints to active transport include:<br>• Fragmented pedestrian and cycle paths limiting connectivity.<br>• Wanneroo Road creates a major barrier to walkability.<br>• Site level changes and retaining walls restrict pedestrian movement. | • Deliver direct and legible pedestrian/ cycling connections between key destinations.<br>• Improve east-west connectivity.<br>• Expand pedestrian links through redevelopment sites. | The WTCPP establishes a connected network of pedestrian and green links, active transport routes and public realm improvements that support walkability, cycling and accessibility. The WTCPP prioritises improved connectivity between destinations, enhanced east-west movement across Wanneroo Road, lower speed environments and delivery of pedestrian and cycling infrastructure as redevelopment occurs. |
| **CYCLE NETWORK** | | |
| • Limited dedicated cycling infrastructure within the Town Centre.<br>• Existing footpaths are narrow and disconnected. | • Upgrade existing paths to shared paths and integrate with the City's Bike Plan.<br>• Connect the Town Centre to regional cycle routes | The WTCPP supports implementation of the City's Active Transport Plan and Long-Term Cycle Network and promotes improved cycling connectivity, shared paths, bicycle parking and end-of-trip facilities. Part 1 provisions require bicycle parking and end-of-trip facilities in accordance with relevant State policy requirements. |
| **PUBLIC TRANSPORT** | | |
| • No bus priority measures or signal priority within or around the WTC.<br>• Current car dominated environment limits public transport viability. | • Enhance connectivity and integration of public transport services.<br>• Ensure Wanneroo Road and the centre core can support future high priority public transport improvements. | The WTCPP supports a compact and walkable urban form that encourages greater use of public transport over time.<br>The WTCPP supports future public transport investment and seeks to ensure that redevelopment within the Town Centre does not compromise opportunities for future State-led transport initiatives. Any future public transport corridor or interchange infrastructure will be subject to separate transport planning, agency support and funding commitments. |
| **PARKING MANAGEMENT** | | |
| • Large, visually intrusive parking areas dominate the Town Centre.<br>• Unclear reciprocal parking arrangements and consolidated facilities. | • Reduce the visual and functional impact of parking through consolidation and shared facilities.<br>• Encourage 'park once' behavior and shared parking. | The WTCPP applies a car parking standard for non-residential development, including a parking rate of one bay per 60m² of gross floor area, consistent with the principles of the WA Planning Manual: Non-Residential Car Parking Rates in Perth and Peel. The WTCPP encourages shared parking and a 'park once' approach, supported by improved pedestrian connectivity that enables access to multiple destinations from a single parking location. Strategic parking locations and improved walkability will help reduce the need for vehicles to circulate through the centre in search of parking. |



## REGIONAL ROAD AND ACCESS CONSTRAINTS

| | | |
|---|---|---|
| Wanneroo Road performs an important regional movement function and operates as a significant barrier to east-west movement, pedestrian connectivity and centre integration. The road's regional function also limits the City's ability to implement changes without Main Roads WA support. | Strengthen east-west connectivity across Wanneroo Road through improved pedestrian crossings and active transport connections linking the Town Centre, surrounding neighbourhoods and Lake Joondalup. | The WTCPP acknowledges the regional role of Wanneroo Road whilst seeking to improve its function as part of a walkable activity centre. The WTCPP supports investigation of improved pedestrian connectivity, crossing opportunities, lower speed environments where appropriate, enhanced public transport accessibility and active transport improvements in partnership with Main Roads WA and relevant agencies. |



## PUBLIC REALM

| KEY CONSTRAINTS | KEY OPPORTUNITIES | WTCPP RESPONSE/CONSIDERATION |
|---|---|---|
| **CONNECTIVITY AND ACCESSIBILITY** | | |
| • Disconnected pedestrian and cycling links limit walkability and seamless movement between the public realm.<br>• Inconsistent wayfinding reduces legibility and ease of navigation. | • Strengthen pedestrian and cycling networks to improve east-west and north-south connectivity.<br>• Implement a cohesive wayfinding strategy incorporating interpretive elements | The WTCPP establishes a connected and legible pedestrian network linking Rocca Way, civic facilities, public open spaces and surrounding redevelopment precincts. Required mid-block pedestrian links and end-of-trip facilities are delivered through the development standards in Part 1, supporting permeability, accessibility and increased uptake of active transport modes.<br><br>Future wayfinding should be addressed through a coordinated and cohesive approach as part of the future WTC Master Plan to improve legibility throughout the centre. |
| **AMENITY AND FUNCTIONALITY** | | |
| • Lack of shade, seating, and landscaping reduces comfort and usability.<br>• Previous ad hoc upgrades have resulted in inconsistent materials, furniture, lighting and planting treatments, weakening overall identity and legibility. | • Enhance public realm amenity, shade and activation<br>• Embed universal access across all public spaces<br>• Implement a coordinated public realm framework to unify streetscapes and public spaces | Public realm upgrades prioritise shade, accessibility and landscape consistency to improve the comfort and identity of streets and civic spaces, aligned with Local Planning Policy 4.3. The WTC Master Plan will coordinate streetscape elements to reinforce Rocca Way as the primary civic spine, while Part 1 development standards require shade, landscaping and universal access at key public realm interfaces. |
| **ACTIVATION** | | |
| Limited activation of public spaces impacts safety, surveillance, and vibrancy. | • Deliver flexible public spaces designed to accommodate markets, events, and alfresco dining.<br>• Encourage active commercial frontages along key streets and public spaces to create a vibrant main street environment. | The WTCPP supports the transformation of Rocca Way into a 'main street' environment that accommodates outdoor dining, community activity and strengthened day-to-evening activation. Part 1 development standards require active frontages, including transparent glazing and accessible entries along primary streets, while the WTC Public Realm and Interpretation study identifies indicative opportunities for flexible spaces to accommodate markets, events and alfresco dining, to be refined through detailed design and implementation. |
| **SAFETY** | | |
| Poor lighting, obstructed sight lines and limited passive surveillance reduce both perceived and actual safety within public spaces. | Incorporate CPTED principles, including improved lighting, clear sight lines and active frontages, to enhance safety and accessibility. | • All public realm design will apply CPTED principles to improve safety and accessibility in accordance with LPP 4.3 - Public Open Space.<br>• Development standards in Part 1 ensure buildings and public spaces maintain strong visual connection to streets, parks and pedestrian routes to improve safety and comfort. |
| **ENVIRONMENT AND SUSTAINABILITY** | | |
| Limited integration of sustainable design principles in the public realm, together with the loss of mature trees, reduces environmental performance, character and ecological value. | • Embed sustainability measures, including water-sensitive urban design, landscape enhancement and native planting.<br>• Retain mature trees where feasible as key landscape features integrated into public spaces | Public realm design incorporates native and climate-resilient planting, water-sensitive urban design measures and the retention of existing trees where feasible, including those with habitat value. Together, these measures support improved environmental performance, reinforce landscape character and contribute to a stronger and more connected green network across the WTC. |



| LAND USE | | |
|---|---|---|
| **KEY CONSTRAINTS** | **KEY OPPORTUNITIES** | **WTCPP RESPONSE/CONSIDERATION** |
| **LAND USE DIVERSITY** | | |
| Fragmented land uses, limited residential presence and legacy uses reduce integration and weaken centre viability, activation and alignment with the Town Centre vision. | Promote a diverse mix of land uses, including mixed-use development, to support economic vitality, community needs and a dynamic, self-sustaining Town Centre, while reinforcing its role as a key civic and community hub. | The WTCPP establishes a coordinated land use framework that concentrates activity generating uses within the inner sub-precincts, with a graduated transition in intensity to surrounding areas. Preferred and non-preferred uses are identified to reinforce intended character. Retail, hospitality and entertainment uses are encouraged to cluster along Rocca Way and within the commercial core, particularly at ground floor level and along key active interfaces, to reinforce the primary activity spine and support increased day-to-evening activity. |
| **HOUSING DIVERSITY AND CHOICE** | | |
| A predominance of single detached dwellings and limited medium and higher-density housing constrain diversity, demographic mix, activation and walkability. | Promote a diverse range of housing options, including medium and higher-density development, within walkable proximity to services and transport to support population growth, housing choice and Town Centre activation. | The WTCPP supports a diverse and inclusive housing mix by restricting low-density housing within the commercial core and applying a graduated density framework from R-AC1 in the core to R60 at the periphery. Medium- to high-density and mixed-use development is promoted to support a broader residential population within walking distance of employment, community facilities and daily services while reinforcing activity within the WTC core. |
| **ACTIVATION** | | |
| Limited night-time uses and residential presence, combined with a public realm environment that does not consistently support pedestrian activity, reduce vibrancy and multi-purpose visits. | Increase day-to-night uses and residential activity, and attract anchor tenants with integrated parking to support pedestrian movement and overall Town Centre vitality. | The WTCPP supports day-to-night activation of the WTC through a combination of active frontage requirements, mixed-use development and flexible land-use and built form controls. These provisions enable the delivery of anchor tenancies and higher-intensity development that support employment, services and a diverse range of uses over time. Activation is further reinforced through development outcomes that prioritise pedestrian movement and reduce vehicle dominance, including consolidated parking solutions that support efficient land use and a more connected and people-focused Town Centre environment. |
| **EMPLOYMENT** | | |
| Lack of higher-order employment opportunities such as professional/ knowledge based services and creative industries limits the town centre's role as a secondary centre. | Strengthen the town centre's economic role by attracting professional services, health, education, and creative industries. | The WTCPP facilitates employment growth through zoning that supports professional services, health, education, civic and knowledge-based employment uses that strengthen the WTC's role as a Secondary Centre serving the Wanneroo and broader community. Development standards ensure adequate floorspace for employment-generating uses and emerging industries. |
| **CENTRE COMPETITIVENESS** | | |
| Competition from nearby centres and online retail risks economic leakage and reduced investment in the WTC. | Reinforce the WTC's competitive position by consolidating its role as a mixed-use, community-focused Secondary Activity Centre, with a strong civic and main street character that supports diverse uses and multi-purpose trips. | The WTCPP establishes a coordinated land use framework that concentrates higher intensity, activity generating uses within the WTC core, particularly along Rocca Way, supported by a diverse mix of retail, commercial, residential and community uses. This is reinforced by mixed-use development, an enhanced public realm and flexible public spaces that support day-to-evening activity and multi-purpose visits. Together, these measures strengthen the WTC's competitive position and consolidate its role as a vibrant, civic and community focused centre. |



| BUILT FORM | | |
|---|---|---|
| **KEY CONSTRAINTS** | **KEY OPPORTUNITIES** | **WTCPP RESPONSE/CONSIDERATION** |
| **DESIGN QUALITY** | | |
| Inconsistent design quality and poor building interfaces with the public realm reduce visual appeal, cohesion and sense of place within the Town Centre. | Promote articulated facades and high-quality design to enhance visual appeal and strengthen the interface between buildings and the public realm. | The WTCPP establishes robust development standards and a mandatory design review process under LPP 4.23 for key opportunity sites and significant development to ensure high-quality, context responsive design outcomes. Requirements for articulated facades, varied materials and human scale detailing enhance visual interest and building interfaces with the public realm, while landmark corners are to deliver distinctive built form that reinforces gateway locations. |
| **HEIGHT AND MASSING** | | |
| Undefined parameters create redevelopment uncertainty. | Define a clear and legible built form hierarchy through graduated building heights and massing that support density while maintaining a human-scale environment and high-quality streetscape outcomes. | The WTCPP establishes a clear height profile, allowing up to nine storeys (R-AC1) within the core and stepping down to 3-4 storeys at the edges to provide a sensitive transition to surrounding residential areas. Development standards incorporate podium levels and upper-level setbacks to maintain a comfortable pedestrian scale while managing overshadowing and interface impacts on adjoining residential areas, schools and public spaces. |
| **LOCAL IDENTITY** | | |
| A lack of consistent architectural character, together with the potential loss of historic and cultural elements through redevelopment, reduces the WTC's identity and sense of place. | Establish a cohesive WTC character by encouraging the reflection of Wanneroo's historic and cultural identity in design, while supporting contemporary architectural expression. | The WTCPP encourages the integration of existing local character with the intended future character outlined in the Part 1 sub-precinct statements. In the Dundebar sub-precinct, development is intended to respond to the established civic character through the use of traditional materials such as limestone, brick and terracotta, supported by complementary colour palettes. Public spaces, including Rocca Way, will incorporate interpretive elements in accordance with future WTC Master Planning, embedding Aboriginal, civic and historic identity through coordinated materials, public art and landscape design. |
| **ENVIRONMENTALLY SUSTAINABLE DEVELOPMENT** | | |
| Risk of overlooking sustainability principles. | Embed green building practices and energy-efficient systems into all new development. | Provisions encourage the integration of rainwater harvesting, and water-sensitive urban design features, as well as on-site renewable energy generation where feasible, to improve long-term environmental performance and climate resilience within the WTC. |
| **ACTIVE FRONTAGES** | | |
| Poor street-level activation and lack of weather protection reduce vibrancy and pedestrian comfort. | Encourage vibrant, street level commercial frontages to enhance engagement and pedestrian activity. | Key primary interfaces, including Main Street, Active Street, Gateway, Transition and Public Open Space, are identified to guide built form and public realm outcomes and support appropriate levels of activation. Development standards in Part 1 set clear requirements for building heights, setbacks, awnings and minimum ground-floor ceiling heights to enable adaptable commercial uses and alfresco opportunities, creating more engaging and comfortable street environments. This includes opportunities to create a more seamless and integrated transition between private and public spaces through landscaping, seating and facade treatments, supporting greater interaction and activation along both commercial and residential frontages. |





# 5.0 Vision and Objectives



*"The Wanneroo Town Centre will evolve as a vibrant, connected and welcoming destination that integrates contemporary design with its historic character, providing a diverse mix of land uses and high-quality public spaces as the civic heart of the City."*




Image demonstrates indicative built form outcome - North-east intersection of Wanneroo Road and Dundebar Road

## 5.1 OBJECTIVES

### URBAN ECOLOGY

- Deliver urban greening outcomes that increase tree canopy, retain mature trees where feasible, and establish native, climate-resilient landscapes that support biodiversity, amenity, local character and urban heat mitigation.
- Integrate water sensitive urban design and fit-for-purpose water use to support sustainable, resilient and climateresponsive landscapes and public realm outcomes.
- Encourage sustainable and energy-efficient buildings through passive design, adaptive reuse, smart technologies, renewable energy and other measures that support comfortable and resilient urban environments.
- Integrate design, materials, public art and interpretation to reflect Wanneroo's Indigenous cultural identity and local heritage within the built and public realm.

### URBAN STRUCTURE

- Strengthen physical and visual links between Wanneroo Road, Rocca Way main street, and surrounding mixed-use and residential areas to support integrated activity.
- Provide a consolidated WTC core focused around Wanneroo Central Shopping Centre and Rocca Way/ Conlan Avenue, creating a vibrant and compact urban environment.
- Deliver a resilient and adaptable urban structure that supports long term growth and investment.
- Encourage landmark built form at key corner sites and entry points, particularly along Wanneroo Road and at key strategic intersections.

### PUBLIC REALM

- Deliver high-quality, inclusive and vibrant public spaces that support social connection, community interaction and everyday use.
- Provide comfortable and climate responsive public spaces through shade, weather protection, urban tree canopy and water sensitive urban design.
- Support activation through ground-floor uses, community event spaces and place-making initiatives that bring the WTC to life.
- Integrate native and climate resilient planting with a connected green network to support amenity, environmental performance and legible movement throughout the WTC.
- Incorporate interpretive and artistic elements that reflect local culture, stories and identity within the public realm.

### MOVEMENT

- Establish a clear and legible movement network that prioritises walking, cycling, and universal accessibility while accommodating vehicles.
- Support consolidated and well designed car parking that supports local access without compromising a pedestrian friendly environment.
- Support access to public transport and active transport modes through end-of-trip facilities, shared paths, wayfinding, and integration with regional transport connections.
- Ensure streets and public spaces are designed for safety and comfort, with active frontages and passive surveillance.
- Integrate connections with regional transport networks and ensure safe crossings and wayfinding throughout the precinct.

### LAND USE

- Support local job creation with a target of approximately 2,000 new jobs by 2043, contributing to the City's 60% employment self-sufficiency goal.
- Encourage a mix of retail, commercial, and residential uses to service the catchment and align with the Secondary Centre role.
- Facilitate housing that integrates with commercial land uses to increase the number of people supporting local businesses.
- Encourage housing options for aged care, aged related accommodation, and short stay accommodation to support visitors and residents.
- Incorporate flexible spaces for emerging industries and community facilities.

### BUILT FORM

- Support a fine grain, street oriented built form that frames and activates public spaces through minimal setbacks and transparent frontages.
- Promote passive surveillance by designing buildings to overlook streets, parks, and other public areas to enhance safety and comfort.
- Encourage adaptable and climate responsive building design that supports sustainable living and future reuse.
- Ensure built form interfaces respond sensitively to heritage sites, open spaces, and adjacent residential areas.
- Apply design excellence criteria to deliver high quality architecture and urban design outcomes.

## 5.2 DELIVERING THE VISION THROUGH PLACE

The WTCPP adopts a place-based approach that recognises the WTC as more than a location for growth and development. It builds on Wanneroo's history, landscape, community assets and local identity to strengthen its role as the City's civic, community and retail destination while supporting its evolution into a more connected, mixed-use and vibrant Secondary Activity Centre.

Unlike many metropolitan activity centres where retail is the primary focus, the WTC functions as a multi-purpose centre where civic, community, commercial and retail activities collectively contribute to its identity and role. Anchored by Wanneroo Central Shopping Centre, together with major civic and community facilities, public open spaces and community destinations, the WTC supports retail activity, civic life, recreation, community services and social interaction.

The WTCPP provides a coordinated framework for future growth that integrates land use, movement, built form, public realm and landscape. In doing so, it supports a broader mix of housing, employment, commercial activity and community opportunities while reinforcing the qualities that make Wanneroo distinctive.

### DISTINCT PLACES, ONE TOWN CENTRE

The WTCPP organises the WTC into a series of sub-precincts that respond to existing characteristics, opportunities and future roles within the centre. Each sub-precinct establishes a clear vision and objectives to guide future development, investment and place-making outcomes.

Together, the sub-precincts create a network of complementary places that reinforce the WTC as a connected and cohesive Secondary Activity Centre. While each precinct has its own identity and function, all contribute to the broader vision of a vibrant, welcoming Town Centre and civic focus for the community.

### DELIVERING PLACE THROUGH INTEGRATED DESIGN

The WTCPP recognises that successful places are created through the coordinated application of the six integrated design elements established by SPP 7.2. Together, these elements guide future development, public realm improvements, infrastructure investment and place-making initiatives to create a connected, attractive and distinctive Town Centre.

The transformation of the WTC will occur progressively through private redevelopment, public investment and partnerships between the City, government agencies, landowners and the community. While the WTCPP does not directly deliver these initiatives, it provides the framework to coordinate future decision-making and guide change towards a shared long-term vision.

The place-based framework established by the WTCPP is translated into the development requirements contained within Part 1, ensuring future development contributes to the intended role, character and experience of each precinct. Through its consistent application, future growth will strengthen the WTC's civic role, landscape character, heritage and community assets while creating a greener, more connected and vibrant Town Centre.





# 6.0 Design Elements



# 6.1 URBAN ECOLOGY

## 6.1.1 URBAN ECOLOGY STRATEGIES

Urban Ecology considers the relationship between the built, cultural and natural components of the urban environment, recognising that healthy ecological systems are fundamental to creating attractive, comfortable and resilient places. As one of the six integrated design elements of the WTCPP, Urban Ecology works with the other design elements to reinforce the WTC's landscape character, strengthen environmental performance and create a greener, more climate-responsive town centre.

The WTCPP builds upon the landscape setting, cultural history and longstanding civic role of the WTC, recognising these qualities as fundamental to the identity and character of Wanneroo. By protecting and enhancing environmental, landscape and historic values as the centre evolves, Urban Ecology supports the creation of healthier places, improved biodiversity and a stronger sense of place through increased tree canopy, connected green places and reflection of the unique cultural and historical identity of Wanneroo.

The Urban Ecology strategies below guide public realm improvements and redevelopment to ensure future growth contributes positively to ecological function, climate resilience and the long-term vision for a resilient, distinctive and connected town centre. The implementation actions set out in Section 7.0 identify how these strategies will be progressively delivered through planning, design, infrastructure and public realm initiatives.

### Strategy 1 - Protect and enhance existing ecological value

- Retain mature trees and vegetation where feasible, prioritising those that contribute to local habitat, shade and landscape character.
- Support biodiversity through native planting, habitat supportive vegetation and opportunities for habitat creation within public and private development.

### Strategy 2 - Recognise and reflect cultural and heritage values

- Embed cultural expression, local knowledge and heritage within the landscape, public realm and built form, and reflect the WTC's cultural identity through materiality, public art, interpretive elements and place responsive design.

### Strategy 3 - Strengthen ecological connections within the WTC

- Reinforce the WTC's green network by improving canopy coverage, strengthening landscape corridors and supporting continuous planting along key pedestrian routes.
- Integrate ecological outcomes into public realm upgrades and publicly accessible private urban spaces in key redevelopment sites.

### Strategy 4 - Apply sustainable water management

- Incorporate WSUD measures throughout the WTC to retain and treat stormwater as close to the source as practicable, including rain gardens, tree pits, bio-retention areas, fit-for-purpose water sources, and site based storm water infiltration.
- Promote water efficient planting, irrigation systems and landscape design that reduces water demand.

### Strategy 5 - Support climate resilience

- Mitigate urban heat through increased canopy, shade structures and heat resilient design elements in streets, public spaces and private development.
- Support development that addresses solar orientation, passive design, energy efficiency and the City's broader sustainability objectives.



## 6.1.2 ENVIRONMENTAL CONSIDERATIONS

The following environmental considerations provide the baseline understanding that informs the Urban Ecology strategies. While the WTC is a highly urbanised environment, it retains important landscape, ecological and cultural assets that contribute to its character and provide opportunities to enhance environmental performance, resilience and sense of place as the Town Centre evolves.

### LAND FORMS

The WTC is characterised by gently undulating landforms, generally sloping east to west at an average grade of approximately 4-5 per cent. While historic development has leveled many individual sites, localised topographic variation remains an important consideration for subdivision design, built form outcomes and drainage. The WTC is located within the Spearwood Dune System of the Swan Coastal Plain, with soils predominantly comprising Karrakatta sand. These conditions are generally conducive to urban development, subject to appropriate design responses to site levels and interfaces.

### GROUND AND SURFACE WATER

Groundwater levels across the WTC are generally deep, with depth to groundwater exceeding 5-10 metres across most of the Town Centre. Shallower groundwater levels are present along the western boundary and within the Wanneroo Showgrounds, where groundwater may occur within approximately 2 metres of the surface. While groundwater conditions do not represent a constraint to development across most of the WTC, site specific consideration will be required for development within areas of shallower groundwater, particularly in relation to basement construction, drainage design and finished floor levels.

### VEGETATION, FLORA AND ECOLOGICAL COMMUNITIES

An Environmental Assessment and Management Strategy (EAMS) in Appendix 4 has been prepared to support the WTCPP and provides the primary framework for identifying environmental values, constraints and management responses within the WTC.

The EAMS identifies that the WTC has been extensively modified through historic clearing and urban development. Remaining native vegetation is limited (approximately 2.1 hectares) and is generally in degraded to completely degraded condition, with remnant vegetation largely confined to discrete areas within the WTC and within Lot 9000 (land not subject to the WTCPP). Notwithstanding the highly urbanised context, the site retains pockets of conservation significance including:

- Banksia Woodlands of the Swan Coastal Plain TEC/PEC (~0.05 ha)
- Tuart Woodlands TEC (~0.08 ha within the site, with additional potential areas)

These ecological communities are regionally significant due to their limited remaining extent and will require consideration through future development and environmental approvals.

No threatened flora species were recorded during surveys; however, a number of threatened and priority flora species have potential to occur, particularly within higher quality vegetation areas.

Consistent with SPP 7.2, the WTCPP adopts an approach that prioritises:

- Avoidance and minimisation of impacts to remnant vegetation
- Retention of vegetation within POS and landscape corridors where practicable
- Integration of native planting to enhance biodiversity outcomes in an urban setting

Further detailed flora investigations and approvals (where required) will be undertaken at subdivision or development stage, in accordance with the EAMS.



### TREE CANOPY AND URBAN GREENING

The WTCPP supports the objectives of the City's Urban Forest Strategy by enabling increased tree canopy and urban greening outcomes across both public and private realms. This includes facilitating street tree planting through the City's planting program, retaining existing vegetation where feasible, and integrating canopy within public open space, streetscapes and development interfaces. These measures support habitat, enhance amenity and contribute to urban cooling and reduced heat island effects, while strengthening a connected network of green corridors throughout the WTC.

The WTC contains a number of mature trees across public and private land that contribute to landscape character, urban canopy and ecological function. The EAMS identifies approximately 170 mature trees with potential to provide habitat for black cockatoos, representing a key ecological asset within the WTC.

While the EAMS does not identify a definitive schedule of individually protected trees, it establishes a framework for recognising trees of elevated ecological and landscape value. These include trees with a diameter at breast height (DBH) of 500 mm or greater (as potential black cockatoo habitat), trees located within remnant vegetation areas associated with Banksia Woodland and Tuart Woodland ecological communities, and native canopy species such as marri, jarrah and tuart. These categories are to be prioritised for retention where practicable.

The WTCPP supports the retention and integration of mature trees through:

- encouraging tree retention within development sites where feasible
- supporting canopy expansion consistent with the City's Urban Forest Strategy

Retention outcomes will be further refined through subdivision and development processes, including site specific tree assessments where applicable.

### FAUNA

The urbanised nature of the site limits fauna habitat; however, remnant vegetation and mature trees provide important habitat values within a fragmented urban landscape. Key fauna values are concentrated within remnant vegetation in the northern portion of the site and within scattered mature trees across the urban area. The EAMS identifies that the WTC supports:

- Approximately 4.8 ha of black cockatoo foraging habitat; and
- Approximately 170 potential habitat trees.

While habitat quality varies across the WTC, these areas contribute to broader ecological connectivity within the region and provide foraging and movement opportunities for fauna species, particularly black cockatoos. The WTCPP supports the retention of habitat trees and the integration of urban greening to enhance habitat function over time, including through canopy expansion and native planting.

Future subdivision and development may require:

- Assessment under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) where impacts to Matters of National Environmental Significance (MNES), including black cockatoos, are likely; and
- Preparation of fauna assessment and management measures where habitat is proposed to be impacted.

The extent and management of retained habitat areas will be determined through future environmental assessment and approvals processes, informed by the EAMS and any relevant Commonwealth or State requirements.

## 6.1.3 INFRASTRUCTURE CONSIDERATIONS

### WATER MANAGEMENT AND WATER SENSITIVE URBAN DESIGN

The WTC is supported by a Local Water Management Strategy (LWMS) in Appendix 2. Water management within the WTC focuses on maintaining the existing drainage network while progressively integrating Water Sensitive Urban Design (WSUD) measures through redevelopment and public realm upgrades. These measures contribute not only to improved environmental performance, but also to creating greener, more attractive and climate-resilient places throughout the Town Centre. Water management also responds to groundwater protection requirements, including areas within a Priority 3 Public Drinking Water Source Area, with development required to demonstrate protection of groundwater quality consistent with the LWMS.

WSUD measures are expected to be integrated into new development and public realm works to manage stormwater close to its source while contributing to greener streets, healthier landscapes, urban cooling and high-quality public spaces. The extent and design of WSUD measures will be informed by the LWMS and refined through detailed design at subdivision or development application stage, as appropriate.

Preparation of an Urban Water Management Plan (UWMP) is generally required to support subdivision where land use, drainage catchments or infrastructure are being created or reconfigured. Where development is progressed through a Development Application that is consistent with the endorsed LWMS, a separate UWMP may not be required. In these instances, water management outcomes may be addressed through detailed engineering design and WSUD plans submitted with the development application, to the satisfaction of the City and relevant authorities. Detailed water management design and approval will be undertaken at the appropriate stage of the planning process, having regard to the scale and nature of development, groundwater conditions and the objectives of the LWMS.

### WASTEWATER AND SERVICING

The WTC is serviced by existing gravity sewer infrastructure within the Wanneroo Sewer District, with portions of the northern Town Centre area identified within future Water Corporation planning for the Neerabup Sewer District. Portions of the Town Centre may be influenced by future Water Corporation sewer network upgrades and extensions as redevelopment occurs. The timing and delivery of these works will be determined by the Water Corporation and informed by future development demand and infrastructure planning.

### ENERGY, TELECOMMUNICATIONS AND UTILITIES

The WTC is supplied by established gas, electricity and telecommunications networks. Current servicing capacity is expected to support short to medium term redevelopment; however, network upgrades, including potential augmentation of high-voltage electricity infrastructure, may be required as redevelopment intensity increases over time. The timing and extent of any upgrades will be determined by the relevant servicing authority and informed by future development demand. Telecommunications infrastructure, including the NBN network, is expected to support future development without significant constraint. Utility upgrades will occur progressively and in coordination with redevelopment and service agency requirements.

### WASTE MANAGEMENT

Waste management within the WTC is guided by circular economy principles that prioritises waste minimisation, reuse and resource recovery. Development proposals are expected to provide appropriate on site waste separation, storage and collection arrangements that support efficient servicing and minimise impacts on pedestrian priority areas. Larger redevelopment sites are encouraged to incorporate shared or consolidated waste facilities to reduce truck movements and support high quality public environments. Waste management arrangements will be assessed as part of individual development applications.

### PRECINCT PLANNING IMPLICATIONS

The infrastructure considerations outlined above are informed by the supporting Infrastructure Servicing Report (Appendix 6), which provides a strategic assessment of existing servicing infrastructure, future network requirements and infrastructure planning considerations relevant to redevelopment of the Town Centre.

Infrastructure upgrades and service augmentations are expected to occur progressively as redevelopment within the Town Centre proceeds. The timing and sequencing of infrastructure provision will be influenced by the rate, scale and location of redevelopment, together with the planning and capital works programs of servicing authorities. Future subdivision and development applications may require further servicing investigations to demonstrate the availability of adequate infrastructure and identify any upgrades required to support redevelopment.

### BUSHFIRE MANAGEMENT

The WTC is predominantly urbanised, with bushfire risk generally limited to interfaces with retained vegetation in the northern portion of the site (Lot 9000). The WTCPP supports redevelopment within an established urban environment and does not propose greenfield expansion into bushland. The accompanying Bushfire Management Plan (Appendix 1) demonstrates that future subdivision and development can achieve acceptable bushfire risk outcomes through site planning, subdivision design and ongoing vegetation management, without the need for extensive vegetation clearing.

Bushfire management is addressed through:

**Part 1 - Statutory provisions -**

Part 1 of the WTCPP establishes the statutory requirements that apply to subdivision and development, including the preparation of a Bushfire Management Plan where required under State Planning Policy 3.7 - Planning in Bushfire Prone Areas and the Planning for Bushfire Guidelines.

**Part 2 - Explanatory and Implementation guidance -**

Areas of bushfire-prone vegetation are identified in the supporting Environmental Assessment and Management Strategy (Appendix 4) and Bushfire Management Plan (Appendix 1). Detailed bushfire assessment is to be undertaken by proponents at subdivision and/or development stage, recognising that risk and mitigation measures are dependent on site-specific design, vegetation management and staging. This enables bushfire considerations to be addressed alongside other environmental and planning matters when determining future development outcomes.

## 6.1.4 HERITAGE AND SENSE OF PLACE CONSIDERATIONS

As part of the EAMS, an Ethnographic and Aboriginal Heritage Assessment report has been prepared to support the WTC PP. (Appendix 4).

### ABORIGINAL HERITAGE

The EAMS confirms that no Registered Aboriginal Sites occur within the Town Centre however, three recorded places (modified/ scar trees) are present but are not registered under the Aboriginal Heritage Act. Despite the absence of statutory sites, the broader area holds strong cultural significance, particularly in relation to connections to water, traditional movement routes and land use patterns, and the continuation of cultural knowledge and practices. There also remains potential for Aboriginal heritage values within remnant vegetation areas, particularly in the less disturbed northern portions of the WTC area (Lot 9000).

Recognising the importance of Aboriginal culture and heritage to the identity of Wanneroo, the City has recently undertaken a collaborative process to prepare an Aboriginal Cultural Narrative and Design Guidance Report. The report establishes a valuable foundation for understanding and expressing Aboriginal cultural values, stories and connections to place within the public realm of the WTC. The WTCPP recognises the role this work can play in informing future public realm initiatives, interpretation, public art, place-making activities and the preparation of a future WTC Master Plan, helping to embed Aboriginal cultural identity and storytelling into the ongoing evolution of the Town Centre.

### HISTORIC HERITAGE

The EAMS identifies a number of heritage places within the WTC that are included on the City's Local Heritage Survey, including three places on the Heritage List protected under the City's approved Planning Scheme. Together with other civic, cultural and community sites, these places contribute to the distinctive identity of the WTC and reflect its evolution as the civic and community focus of Wanneroo.

The City supports the retention, adaptive reuse and sensitive integration of heritage places into future redevelopment, with heritage considerations addressed through the development assessment process in accordance with the Planning Scheme. The WTCPP also recognises opportunities to celebrate Wanneroo's cultural and historical identity through public art, landscape design, signage and other place-making initiatives. Future heritage interpretation will be coordinated and guided through the WTC Master planning process, establishing a coherent framework for the location, themes and delivery of initiatives that celebrate the history, identity and evolution of the Town Centre.

**P2 - Table 5** - Other identified Aboriginal heritage places:

| DPLH ID | NAME | STATUS | DESCRIPTION |
|---|---|---|---|
| 16058 | Shaw Road, Wanneroo | Not a registered site -data stored by COW | Modified / scar tree |
| 20054 | Wanneroo Primary School Scarred Tree #1 | Not a registered site -data stored by COW | Modified / scar tree |
| 20055 | Wanneroo Primary School Scarred Tree #2 | Not a registered site -data stored by COW | Modified / scar tree |

**P2 - Table 6** - Local Heritage Inventory places:

| PLACE NAME | COW CATEGORY | PROPOSED WTCPP IMPACT |
|---|---|---|
| Wanneroo Showgrounds | 2 | Continuation of existing POS land use. Unlikely impact from future potential low scale development. |
| Wanneroo War Memorial - Memorial Park, Civic Drive | 2 | Potential mixed use intensification of adjoining properties. |
| Wanneroo Road Board's Road, Health and Vermin Office (former) - 935-937 Wanneroo Road | 2 | Potential intensification of adjoining commercial zoned properties |
| Aquamotion | 3 | Continuation of existing civic and community land use. |
| CALM Forestry House (former) - 1-5 Dundebar Road | 3 | Intensification of existing low-density land use to facilitate future commercial and mixed-use land uses. |
| CALM School Classroom (former) | 3 | Intensification of existing low-density land use to facilitate future commercial and mixed-use land uses. |
| COW Administration, Council Chambers, Library, Museum and Cultural Centre - Dundebar Road | 3 | Continuation of existing land uses in the medium to long term. |
| Saint Anthony - 15 Dunderbar Road | 3 | Continuation of existing land uses in the medium to long term. |
| Wanneroo Sports and Social Club - 22 Crisafulli Avenue | 3 | Continuation of existing land use. Unlikely impact from future potential low scale upgrades /development. |
| Wanneroo Central Shopping Centre - 950 Wanneroo Road | 3 | Continuation of existing land use. Further commercial intensification. |
| Wanneroo Community Centre, Wanneroo Civic Precinct (former), Shire Hall (former) | 3 | Future proposals are likely to involve intensification and/or redevelopment of this land. |
| St Anthony's Catholic Church (former) | 4 | Intensification of existing vacant land uses to facilitate commercial land uses. |
| Wanneroo Road Board Office and Agricultural Hall - 930 Wanneroo Road | 4 | Continuation of existing commercial land uses. |
| Dennis Centenary Hall and Garage (site), Crisafulli Pictures (site) - 951 Wanneroo Road | 4 | Intensification of existing land uses to facilitate commercial land uses |
| World War Two Plane Spotting Hut (site) and Togno Delicatessen (site) - 960 Wanneroo Road | 4 | Continuation of existing commercial land uses. Future proposals may involve redevelopment of this land. |
| Villanova Shopping Centre (former) - 956 Wanneroo Road | 4 | Intensification of existing land uses to facilitate commercial land uses |

*Category relevance:*
*Category 2 - included on the City's Heritage List*
*Category 3 and 4 - included on the City's Local Heritage Survey*

## 6.1.5 URBAN ECOLOGY - RESPONSE TO STATE PLANNING POLICY

The WTCPP has been prepared in accordance with State Planning Policy, embedding urban ecology considerations within the future development. The WTCPP adopts an integrated, place-based approach that supports environmental sustainability, climate resilience and local character. The following tables outline how the WTCPP responds to the relevant policy objectives and requirements of SPP 4.2 and SPP 7.2.

**P2 - Table 7** -Urban Ecology response to State Planning Policy

| RELEVANT SPP 4.2 POLICY THEMES | WTCPP RESPONSE |
|---|---|
| Promote sustainable development and efficient use of resources | Indigenous cultural values and local heritage are reflected through landscape treatments, materials and interpretive elements in the public realm. The WTCPP identifies opportunities to further enhance cultural and history heritage through the WTC, supported by future WTC Master Planning. |
| Promote sustainable development and efficient use of resources | The plan supports energy efficient built form, passive design, adaptive reuse and integration of renewable energy technologies. |
| Create high quality, attractive and resilient centres | Green infrastructure, increased canopy cover and native landscaping are embedded within streets, parks and development sites. |
| Improve environmental performance of activity centres | Water sensitive urban design and climate responsive landscapes will be incorporated in future development to manage water, reduce heat and enhance comfort. |
| Support centres that adapt to climate change | Tree retention, urban greening and micro-climate design measures strengthen long term climate resilience outcomes. |

| SPP 7.2 OBJECTIVES | CONSIDERATIONS | STRATEGIC RESPONSE/COMMENT |
|---|---|---|
| To protect, enhance and respond to the ecological systems of the precinct. | Identify and respond to the topography and landscape of the precinct and its surrounding area. | The WTC sits within an established landscape setting that has long contributed to the character and identity of Wanneroo. While much of the centre has been modified through earlier development, the area retains important landscape assets, including mature vegetation, public open spaces and connections to the broader green network. The town centre also slopes generally east-west and, although many areas have been graded, some locations continue to exhibit significant level changes. Part 1 development standards require design responses that sensitively manage topography, including minimising visually intrusive retaining walls, incorporating stepped built form or tiered landscaping, and ensuring universal pedestrian access from primary streets. Built form controls, including front setbacks and appropriate podium levels, help maintain activated frontages and high-quality pedestrian interfaces where level changes occur.<br><br>Landscape provisions in Part 1 encourage the retention of existing trees, provision of adequate deep soil areas to support mature canopy growth, and climate-responsive planting that contributes to an environmentally resilient and visually cohesive Town Centre. Collectively, these measures support the protection and enhancement of the WTC's established landscape character while strengthening connections between key landscape and public open space assets. |
| | Identify opportunities to develop and/ or enhance the extent, connectivity and quality of the green network. | The WTCPP identifies opportunities to strengthen the extent, connectivity and quality of the WTC's green network through enhanced public realm spaces, increased tree canopy, landscape upgrades and greener pedestrian connections linking key destinations, open spaces and community facilities. Building on the area's established landscape character, the WTCPP seeks to create a more connected network of green infrastructure that improves ecological function, supports urban cooling, enhances biodiversity and contributes to a more attractive and walkable Town Centre.<br>Green network enhancements will be guided by the Part 1 development standards and the public realm concepts in Section 6.3, ensuring landscaping within both public and private realms contributes to shade, visual amenity, environmental resilience and improved pedestrian experience. |
| | Consider the total water cycle and how any proposed management responds to the hydrological system, the site and its development context | A comprehensive water management system exists within the WTC and will continue to be refined as redevelopment occurs. The WTCPP is informed by the Local Water Management Plan (Appendix 2), which considers the site's hydrological context and identifies measures to manage stormwater quantity, water quality and broader water cycle outcomes. Water Sensitive Urban Design (WSUD) initiatives, including bio-retention areas, stormwater capture, permeable surfaces and landscape integration, will be implemented in accordance with Section 6.1.3. Together, these measures ensure future development responds appropriately to local hydrological conditions, supports the long term performance of the drainage network and contributes to environmental sustainability and urban cooling outcomes. |

| | | |
|---|---|---|
| | Identify opportunities to support habitat protection and enhancement in the precinct. | The Reconnaissance Flora and Vegetation Survey (Appendix 4) identifies opportunities to retain vegetation that supports endangered local habitat. Development standards in Part 1 include provisions encourage mature tree retention, increased tree canopy, native landscaping and habitat supportive planting. These measures collectively enhance biodiversity outcomes within a highly urbanised centre and improve ecological connectivity where feasible. |
| To enhance sense of place by recognising and responding to Aboriginal, cultural and built heritage. | Acknowledge and incorporate local Aboriginal knowledge, concepts and stories of place. | The WTCPP recognises that the identity of the WTC is shaped by its Aboriginal cultural heritage, historic development, civic role and established built character. Opportunities to acknowledge and celebrate Aboriginal cultural knowledge, stories and connections to place are supported through future public realm initiatives, interpretation, public art and place-making activities, informed by the Aboriginal Cultural Narrative Report once adopted.<br><br>The WTCPP also recognises the contribution of local heritage places, civic buildings and community assets to the character and identity of the Town Centre. Part 1 supports the retention, adaptive reuse and sensitive integration of heritage places into future redevelopment, while future interpretation, public art and place-making initiatives will be coordinated and guided through the WTC master planning process. Collectively, these measures ensure that Aboriginal culture, local history and significant built features continue to inform the design and evolution of the WTC while reinforcing a distinctive sense of place. |
| | Consider and integrate the cultural heritage of the area into the precinct design. | |
| | Identify and incorporate unique built features, including built heritage, into precinct design. | |
| To reduce the environmental and climate change impacts of the precinct development. | Identify opportunities to retain existing trees and enhance the tree canopy through new planting. | Enhancing tree canopy is a core objective of the WTCPP. Public realm design prioritises the retention of existing trees where feasible, supported by native and climate-resilient planting and water-sensitive urban design to improve habitat, mitigate urban heat and enhance amenity. Part 1 development provisions complement these outcomes by encouraging tree retention, deep soil areas and increased planting within development sites, contributing to a stronger and more connected urban canopy across the WTC. |
| | Consider the influence of the precinct design on energy demand and review the potential for precinct scale energy generation, distribution and storage. | Precinct design encourages passive design, solar orientation, energy efficient building forms and opportunities for renewable energy integration at site level. As further guidance from the City's climate related strategies becomes available, redevelopment within the WTCPP area will align with emerging precinct scale initiatives such as distributed energy systems, energy sharing arrangements or solar ready development standards. |
| | Prioritise consideration of waste management at the relevant scale in line with low-waste, circular economy objectives | Waste management will be assessed through development applications, which must demonstrate waste minimisation, on site storage, appropriate collection solutions and compatibility with circular economy principles. Shared waste facilities, consolidated storage areas and design measures to improve separation and recycling will be encouraged, particularly on larger redevelopment sites. |
| | Promote water conservation including water reuse and recycling. | The WTCPP area is supported by an integrated water management framework that will be implemented progressively in accordance with the design criteria outlined in Section 6.3 and the Local Water Management Strategy. Water conservation and management are addressed through the application of water-sensitive urban design (WSUD) principles, including native planting, efficient irrigation, stormwater capture and opportunities for non-potable reuse where feasible. This framework will guide the integration of water management measures into future subdivision and redevelopment, with more detailed water management plans to be prepared at subdivision stage, consistent with statutory requirements. |
| | Evaluate the performance of precinct development proposals against leading Australian sustainability performance standards. | While the City does not currently apply a formal sustainability benchmarking framework to the WTC, development is encouraged to demonstrate alignment with recognised sustainability principles or tools such as Green Star or equivalent where appropriate. This flexible approach allows applicants to incorporate best practice sustainability measures without imposing mandatory rating requirements. As the City's broader sustainability strategies continue to evolve, including future guidance relating to energy efficiency, water management, urban heat mitigation and biodiversity enhancement, these will inform and support more detailed expectations for redevelopment within the WTC. |

# 6.2 URBAN STRUCTURE

## 6.2.1 URBAN STRUCTURE STRATEGIES

Urban Structure provides the spatial framework that organises the WTC into a series of connected places, reinforcing the distinct role and identity of each sub-precinct while creating a cohesive and legible town centre. As one of the six integrated design elements of the WTCPP, Urban Structure coordinates land use, movement, public realm, built form and urban ecology to ensure future growth contributes to a connected, walkable and vibrant place.

The urban structure builds upon the WTC's established civic, community and retail functions by strengthening the network of streets, public spaces and activity corridors that shape how people experience the WTC. Rocca Way forms the primary mixed-use main street and social heart of the centre, Dundebar Road reinforces the civic and community focus, while Wanneroo Road functions as the principal gateway, balancing regional movement with opportunities for urban activation. Together, these places will be connected through an enhanced network of east-west and north-south pedestrian links that will improve permeability, accessibility and the overall experience of moving through the Town Centre.

The Urban Structure strategies establish the framework for coordinating redevelopment over time, responding to the existing block pattern, land ownership and movement network while supporting a flexible and resilient structure that can evolve with future growth. Through the coordinated application of these strategies, Urban Structure provides the foundation upon which the remaining design elements collectively deliver the long term vision for the WTC.

**Strategy 1 - Reinforce a compact, legible and walkable centre**

- Improve east-west and north-south connections to support intuitive, safe and universally accessible movement through the centre.
- Strengthen Rocca Way as the primary pedestrian spine, supported by high amenity streets, universally accessible design and new mid block links through redevelopment sites.

**Strategy 2 - Deliver place-based outcomes through sub-precincts**

- Apply a sub-precinct based urban structure framework to manage variations in block structure, movement function, land use intensity and built form, ensuring development responds to local context while contributing to a cohesive and legible Town Centre.

**Strategy 3 - Support coordinated redevelopment**

- Encourage lot amalgamation where fragmented ownership currently limits redevelopment potential.
- Ensure subdivision results in development parcels of a size and configuration that support intended mixed use and higher density outcomes.

**Strategy 4 - Establish a strong sense of arrival and identity**

- Support landmark built form at key corner sites and entry points, particularly at Wanneroo Road and Dundebar Road intersections, consistent with Part 1 development standards.
- Retain and enhance key view corridors to significant civic and cultural buildings.

**Strategy 5 - Align urban structure with movement and public realm**

- Coordinate built form with public realm, movement networks and pedestrian connections.
- Ensure block structure and access arrangements support active frontages, safe pedestrian routes and high quality streetscapes.

**Strategy 6 - Enable flexibility and long term adaptability**

- Provide an urban structure that supports incremental redevelopment and allows for shifts in market demand.
- Protect key catalyst sites from under development to ensure long term strategic objectives can be met.



## 6.2.2 SUB-PRECINCT URBAN FRAMEWORK

The WTCPP establishes a series of defined sub-precincts within the WTC to provide a place-based framework that responds to the distinct characteristics, opportunities and intended future roles of different areas within the centre.

While the WTC functions as a single activity centre, its different locations perform distinct functions and contribute differently to the identity and experience of the place. The sub-precinct framework recognises these differences by establishing a coordinated structure for land use, built form, movement, public realm and development outcomes, while ensuring each area contributes to the broader vision for the WTC.

This approach reflects the performance based and context responsive principles of SPP 7.2, which encourages planning frameworks to respond to local character, opportunities, constraints and community aspirations. The designation of sub-precincts enables the WTCPP to:

- Establish clear roles and identities for different parts of the WTC, responding to their physical characteristics, surrounding context, economic function and future opportunities.
- Guide appropriate development outcomes by linking proposals to defined sub-precinct intent, objectives and development standards established in Part 1.
- Support a diverse and resilient activity centre by providing tailored land use guidance that encourages appropriate combinations of retail, commercial, residential, civic, community and hospitality uses.
- Strengthen design outcomes by focusing assessment on the matters most relevant to each location, including built form transitions, public realm activation, interfaces and pedestrian experience.

The WTC sub-precincts have been identified through an analysis of existing conditions, opportunities and constraints, including:

- existing land uses and activity patterns;
- movement networks and connectivity opportunities;
- public realm characteristics and enhancement opportunities;
- surrounding interfaces and transition requirements;
- development opportunities and market considerations; and
- the future role of the WTC within the broader activity centre hierarchy.

The sub-precinct boundaries are intended to provide a practical framework for guiding future redevelopment while recognising that activity centres evolve over time. They establish a clear basis for coordinating land use, built form, public realm and movement outcomes without limiting opportunities for innovative design responses.

Each sub-precinct has a defined intent and set of objectives contained within Part 1 of the WTCPP. Development proposals will be assessed against their contribution to the intended role and character of the relevant sub-precinct, together with the overarching vision, objectives and development standards applying across the WTC.

### COMBINING COMMUNITY PRIORITIES AND PLANNING PRINCIPLES

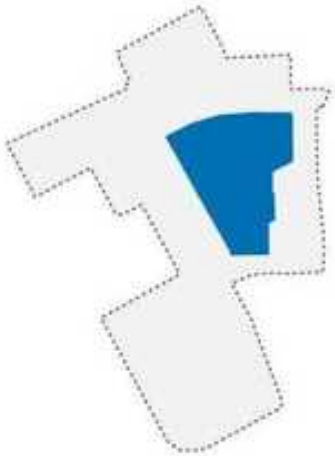
The WTCPP translates community aspirations and State planning principles into a clear place-based framework to guide the future growth, renewal and transformation of the WTC. Together, the six sub-precincts provide a coordinated structure that reinforces the identity of the town centre while enabling each area to develop a distinct role and character through private development, coordinated public realm planning and future investment.

Community and stakeholder engagement identified a consistent set of priorities for the future of the WTC, including:

- A vibrant and welcoming main street with active uses, improved amenity and high-quality public spaces.
- Improved walkability, safer pedestrian connections and reduced reliance on vehicle-dominated movement patterns.
- Retention and enhancement of valued civic spaces, community facilities and public open spaces.
- A greater diversity of uses, including hospitality, entertainment and community activities that support activity throughout the day and evening.
- Increased housing diversity and residential density close to services, employment opportunities and public transport.
- High-quality design outcomes that reflect WTC's civic identity, landscape character and sense of place.

These priorities align with the objectives of the State Planning Framework, including the promotion of activity centre hierarchy, mixed-use integration, housing diversity, sustainable transport outcomes and high-quality urban design.

## Sub-Precinct 1
## ROCCA WAY



The Rocca Way sub-precinct will evolve as the vibrant commercial and community focus of the WTC, anchored by a pedestrian-oriented main street that supports social connection, economic activity, housing and a distinctive sense of place.

Its central location, relationship with existing retail and civic anchors, and proximity to key opportunity sites position Rocca Way as the WTCs primary activity spine and the focal point for community life. The Wanneroo Library and Cultural Centre, together with the Wanneroo Central Shopping Centre, provide a strong foundation for the continued evolution of Rocca Way as the WTC's principal destination.

Over time, Rocca Way will evolve from a vehicle dominated street into the WTC's principal main street through coordinated public realm improvements guided by future WTC Master Planning. Streetscape upgrades, expanded pedestrian spaces, new plazas and forecourts, street tree planting, public art and high-quality landscape design will create a welcoming and highly walkable environment. Opportunities to celebrate Wanneroo's history and Whadjuk Noongar heritage through interpretation, landscape and public realm design will further strengthen the identity of the main street.

Improved mid-block connections and pedestrian links between retail, civic facilities, parks and surrounding streets will reinforce Rocca Way as the primary focus of movement and activity within the WTC. Future development should prioritise active ground-floor retail, hospitality, entertainment, cultural and community uses that contribute to a lively street environment, while upper levels accommodate compatible commercial uses and medium to high-density residential development.

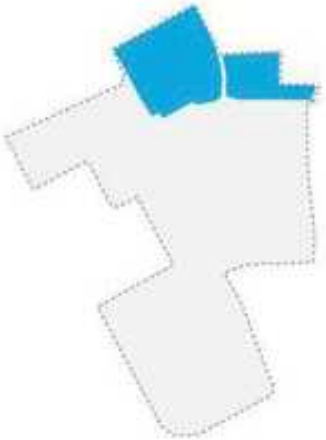
The WTCPP identifies Rocca Way as the preferred location for higher intensity mixed-use development, reflecting its accessibility, concentration of existing activity and role within the movement network. Development is expected to occur incrementally over time, ranging from moderate mid-rise buildings through to higher-intensity mixed-use development on key opportunity sites and larger landholdings. While no maximum building height is prescribed, built form outcomes are guided through podium requirements, upper level setbacks and design controls that maintain a pedestrian scaled environment and high-quality public realm, while allowing flexibility for future growth and investment

Early investment in the public realm, including streetscape upgrades, landscaping, urban spaces and improved pedestrian connections, will establish the conditions for private investment and redevelopment. Together, these coordinated improvements will reinforce Rocca Way as the WTC's primary main street and a vibrant, connected destination for community life, business and everyday activity.




Indicative built form outcome for Rocca Way

## Sub-Precinct 2
## DUNDEBAR



The Dundebar Sub-Precinct plays a defining civic and community role within the WTC. Located between the Rocca Way activity core and surrounding residential neighbourhoods, it provides an important community anchor, supporting administration, local services, institutions and places for gathering.

Anchored by destinations including the City of Wanneroo Administration and Civic Centre, Jacaranda Amphitheatre, and St Anthony's Church and Primary School, the precinct possesses a distinctive civic and community character that complements the more retail and hospitality-focused role of Rocca Way. These destinations establish a strong identity that will continue to inform the scale, interfaces and design response of future development.

The planning approach recognises opportunities for mixed-use and employment-generating development that builds on the precinct's established role. The WTC Economic Review and Employment Strategy identifies opportunities to strengthen community services, commercial office, medical, allied health, professional and knowledge-based employment within the centre.

The DBCA opportunity site at the corner of Dundebar Road and Wanneroo Road represents a significant redevelopment opportunity, with potential to accommodate employment-generating, residential and complementary uses while delivering landscape and public realm outcomes that reinforce the character of this prominent gateway location.

Future development is expected to comprise predominantly mid-rise mixed-use development integrating residential, commercial, community and employment uses. Buildings will generally be up to seven storeys and supported by high-quality design outcomes that maintain appropriate relationships with existing public, institutional and residential interfaces. Dundebar Road forms an important connection within the WTC, linking the Rocca Way activity core with surrounding neighbourhoods and community destinations. Future improvements to streetscape quality, pedestrian amenity and connections between key destinations will further strengthen its role as an accessible and well-connected street.

Redevelopment is expected to occur incrementally in response to landowner priorities, operational requirements and market conditions. Higher-intensity mixed-use development (generally 5 to 7 storeys) may be accommodated on the DBCA opportunity site, while more moderate development (typically 3 to 5 storeys) is anticipated elsewhere.

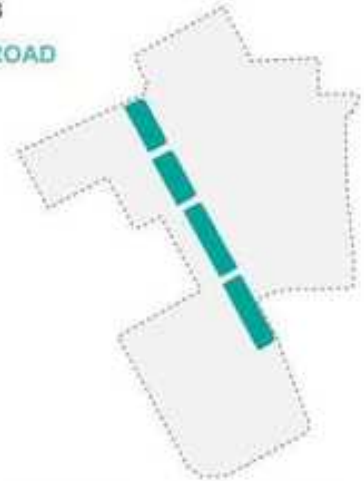
Some land is expected to remain in community, institutional or administrative use throughout the life of the WTCPP. Land currently used for City administration parking may also present a longer-term redevelopment opportunity, subject to future Council decisions, operational requirements and timing. Any future redevelopment should respond to the established character and role of the Dundebar Sub-Precinct.



Indicative built form outcome for Dundebar Road and Wanneroo Road intersection (DBCA site)

## Sub-Precinct 3

## WANNEROO ROAD



The Wanneroo Road Sub-Precinct forms the gateway to the WTC and creates the first impression of the centre for many residents and visitors. Its prominent frontage to a major regional corridor presents an opportunity to strengthen the identity of the WTC through high-quality development, attractive streetscapes and an improved arrival experience.

The sub-precinct accommodates a diverse mix of commercial and service-based activities while providing an important transition between the higher intensity town centre core and surrounding residential neighbourhoods.

While currently characterised by predominantly commercial development, it is intended to evolve into a mixed-use precinct incorporating residential development, supporting a more vibrant and diverse town centre. The planning approach seeks to balance Wanneroo Road's important regional movement function with the aspiration to create a more people focused and connected urban environment. Achieving this outcome will require a coordinated and long term partnership between the City, Main Roads WA, landowners and other stakeholders to progressively improve the public realm. Priorities include enhancing pedestrian safety and accessibility, strengthening connections across Wanneroo Road, rationalising vehicle crossovers where opportunities arise, increasing street tree planting and creating a more cohesive streetscape that better integrates the western side of the WTC with the town centre core and surrounding neighbourhoods.

As a principal gateway into the WTC, the sub-precinct should be characterised by high-quality architecture, landscape treatments and landmark buildings at key locations that reinforce the centre's identity and improve legibility. Development will support a diverse mix of commercial, service-based and mixed-use activities, with residential uses progressively integrated over time to support centre vitality, passive surveillance and housing diversity.

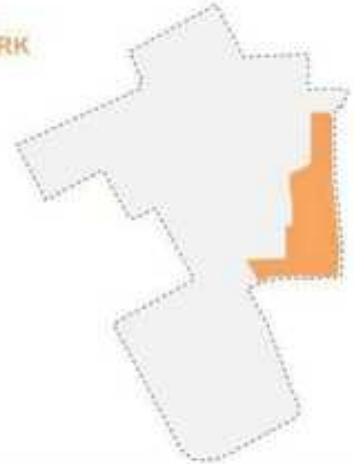
Predominantly mid-rise mixed-use development, generally between four and seven storeys, is anticipated. This will be supported by provisions requiring podium elements, generous ground floor ceiling heights, articulated facades and landscaped setbacks. Together, these measures will promote a more attractive and human scaled streetscape while providing an appropriate transition to adjoining low-scale residential areas.

Vehicle movement will remain an important function of Wanneroo Road. However, parking, servicing and access arrangements are intended to be progressively consolidated behind or within development and, where appropriate, accessed from the rear laneway network to reduce the visual dominance of at-grade parking and vehicle crossovers. Redevelopment is expected to occur incrementally in response to landowner priorities and market conditions. While existing commercial uses, including service stations and fast-food outlets, are likely to remain in the medium term, redevelopment of these sites may present longer-term opportunities to strengthen the gateway character and support the continued evolution of the WTC.



Indicative built form outcome for Wanneroo Road west

## Sub-Precinct 4
## MEMORIAL PARK



The Memorial Park sub-precinct forms the green heart of the WTC, defined by its established landscape character, significant public open spaces and concentration of community, recreation and cultural facilities. Anchored by Memorial Park, Bert Togno Park, Aquamotion Aquatic and Recreation Centre and the Limelight Theatre, it provides a place for recreation, community gatherings and everyday activity that complements the more urban character of the town centre core.

The WTCPP seeks to retain and enhance these valued open spaces and community assets while supporting carefully integrated redevelopment that strengthens their role, accessibility and long-term vitality. Sensitive redevelopment opportunities are focused primarily along the southern edge of the sub-precinct, where new development can positively address the parks while respecting the established landscape setting of Memorial Park and adjoining residential neighbourhoods.

Future development is anticipated to comprise predominantly lower-scale residential and limited mixed-use buildings (generally 2 to 6 storeys), designed to provide active frontages, passive surveillance and high-quality park interfaces. Development will incorporate generous landscaping, appropriate setbacks and articulated built form to reinforce the landscape character and ensure a sensitive transition to surrounding residential areas.

Targeted activation opportunities, particularly on Council-owned land adjoining Bert Togno Park, may include cafes, community-focused uses and nature-based play that encourage greater day-to-day use of the parks while maintaining their open and landscaped character. The longer-term redevelopment of the City-owned community centre site also presents an opportunity to introduce complementary mixed-use development and increased housing diversity, subject to future Council decisions and detailed planning.

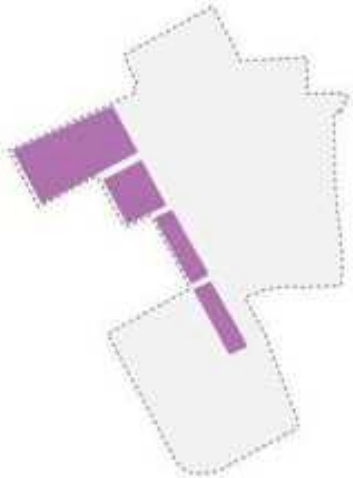
The sub-precinct also plays an important role in improving movement and connectivity across the WTC. Future public realm improvements will strengthen pedestrian and cycling connections between Memorial Park, Rocca Way, Wanneroo Road and surrounding neighbourhoods through enhanced pathways, safer crossings, improved wayfinding, increased shade and tree planting. Place-making initiatives, including wayfinding, public art and historic and cultural interpretation, will further reinforce the identity of the sub-precinct and improve the visitor experience. The detailed design and implementation of these initiatives will be guided by future WTC Master Planning, ensuring a coordinated and consistent approach across the WTC.

Redevelopment is expected to occur progressively over time, balancing new investment with the retention of valued community facilities, mature landscape character and the open space qualities that define the identity of the Memorial Park sub-precinct.



Indicative built form outcome for Sinagra Street interfacing Memorial Park

## Sub-Precinct 5
## FRAME



The Frame Sub-Precinct forms the residential edge of the WTC, providing an important transition between the higher-intensity mixed-use core and surrounding established neighbourhoods. It will evolve as a predominantly residential neighbourhood that expands housing choice, supports population growth and reinforces the long-term vitality and liveability of the Town Centre.

The WTCPP identifies the Frame Sub-Precinct, west of Wanneroo Road, as the primary location for medium scale residential development and compatible mixed-use outcomes. A diverse range of housing typologies, including low-rise apartments, townhouses, terraces and affordable housing, will provide opportunities for people at different life stages to live within walking distance of shops, services, employment, schools and community facilities. By increasing the residential population close to the WTC core, the precinct will support local businesses, strengthen passive surveillance and contribute to activity throughout the day and evening.

The Frame plays an important role in integrating the WTC with surrounding neighbourhoods through a sensitive transition in scale, built form and land use intensity. Small-scale commercial, mixed-use and home-based business opportunities may also be accommodated where they complement the residential character and provide convenient local services and employment opportunities.

Built form is expected to remain predominantly low-rise, with development generally up to three storeys. Building heights, setbacks, landscaping and interface treatments will provide an appropriate transition from the higher-intensity mixed-use core while respecting the amenity of adjoining residential areas.

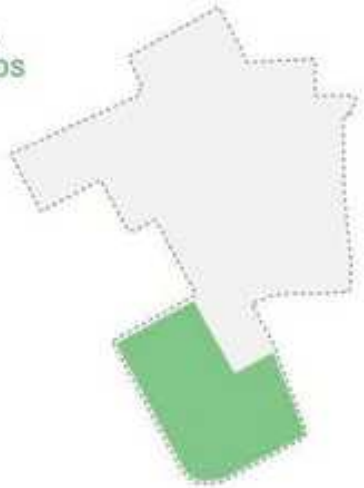
The sub-precinct includes the Hastings Quarter development, a State-led initiative delivering a mix of housing types, including affordable housing. Together with future redevelopment opportunities, it will contribute to a broader and more diverse housing supply that supports the WTC's long term residential growth. Wanneroo Primary School will continue to play an important role within the precinct, reinforcing its family-friendly character and contributing to neighbourhood identity and community life. Improved pedestrian and cycling connections will strengthen links between the WTC core, schools, public transport, parks and surrounding neighbourhoods, supporting convenient access to everyday services without reliance on the private car.

Redevelopment is expected to occur progressively in response to market demand and increased residential density opportunities, while maintaining compatibility with adjoining neighbourhoods and existing community infrastructure. As the residential population grows, the Frame Sub-Precinct will evolve as a well-connected neighbourhood that supports housing diversity and strengthens the role of the WTC as a vibrant and sustainable Secondary Activity Centre



Indicative built form outcome for Sub-Precinct 5

## Sub-Precinct 6
## SHOWGROUNDS



The Showgrounds sub-precinct will continue to evolve as a key community, recreation and events destination within the WTC. Home to one of the City's most significant public open spaces, it is distinguished by its expansive landscape setting, mature tree canopy and long standing role as a venue for major community events, organised sport and everyday recreation. Together with the existing Youth Hub, Skate Park and surrounding community facilities, the Showgrounds provides an important landscape setting that balances the more urban, higher-intensity parts of the Town Centre while supporting recreation, social connection and community life for people of all ages.

The WTCPP seeks to retain the Wanneroo Showgrounds primarily as public open space and a valued community asset, recognising its cultural, recreational and historical significance. Maintaining its open character will preserve opportunities for large scale events, informal recreation and community gatherings while protecting one of the defining landscape features of the WTC.

Future planning will focus on enhancing existing sporting, recreation and community facilities, including the youth hub and skate park, while protecting the mature tree canopy, landscape character and ecological values of the site. Established trees provide important habitat and foraging opportunities for native fauna, including Black Cockatoos, reinforcing the Showgrounds contribution to the WTC's broader green network. Opportunities include upgrades to recreation facilities, landscaping, public amenities and the integration of public art and interpretive elements that celebrate the site's history, Whadjuk Noongar heritage and community significance, guided by the Noongar Cultural Narrative Report and WTC Master Planning.

Built form within the sub-precinct will remain limited and ancillary to its primary recreation and open space function, ensuring development supports community uses without compromising the openness, flexibility or landscape setting of the site.

Improved pedestrian and cycling connections will strengthen links between the Showgrounds, Rocca Way, Memorial Park and surrounding neighbourhoods, reinforcing its role within the WTC's network of public spaces and making it a more accessible and connected destination throughout the year

Redevelopment is expected to occur progressively through the enhancement of community infrastructure, recreation facilities and public realm improvements, while retaining the Showgrounds as one of the defining community, recreation and events destinations within the WTC.



## 6.2.4 ROLE AND FUNCTION OF OPPORTUNITY SITES

Three key opportunity sites have been identified within the WTC based on their strategic location, redevelopment potential and ability to support the long-term evolution of the Town Centre:

- Wanneroo Central Shopping Centre (Opportunity Site 1)
- Wanneroo Tavern and surrounding lots (Opportunity Site 2)
- Department of Biodiversity, Conservation and Attractions (DBCA) site (Opportunity Site 3)

Collectively, redevelopment of these sites are critical to achieving the vision for the WTC as a connected, walkable and mixed-use Secondary Centre. They are intended to act as catalysts for change, helping shape future built form, public realm, movement networks and land use outcomes while supporting housing and employment growth and encouraging broader investment across the Town Centre. Each site performs a distinct but complementary role within the WTC's urban structure.

Wanneroo Central Shopping Centre (OS1) will remain the WTC's primary retail anchor, with future renewal supporting the transition from an inward facing shopping centre to a more permeable mixed-use precinct. Redevelopment will play a key role in establishing Rocca Way as the Town Centre's main street through active frontages, improved pedestrian connectivity, new public spaces and stronger links between retail, civic and community destinations.

Wanneroo Tavern and surrounding lots (OS2) represent a significant redevelopment opportunity due to their size and prominent location at the convergence of Rocca Way, Dundebar Road and Wanneroo Road. Redevelopment will support a more urban built form, introduce new pedestrian connections and public spaces, reinforce landmark corners and strengthen the Town Centre's principal gateway.

DBCA Site (OS3) occupies a prominent gateway location at the intersection of Dundebar Road and Wanneroo Road and provides an opportunity for a landmark mixed-use development that signifies arrival into the WTC. As a State Government-owned site, it presents a unique opportunity to demonstrate design excellence, support high-quality mixed-use development and establish a benchmark for future redevelopment across the Town Centre.

Collectively, redevelopment of the opportunity sites will:
support higher-density mixed-use development within the Town Centre core;

- reinforce Rocca Way as the primary main street through active frontages and high-quality public realm outcomes;
- deliver new pedestrian connections and publicly accessible urban spaces;
- establish landmark development at key gateways and intersections; and
- facilitate the transition to a more cohesive, walkable and people-focused urban environment.

As identified in the staging strategy, early investment and redevelopment within these locations will help build confidence in the WTC, encourage further private investment and demonstrate the viability of higher-density mixed-use development over time.

While these sites have strategic importance, their identification does not predetermine specific development outcomes. The timing, land use mix, built form and staging of redevelopment will respond to market conditions, infrastructure delivery, detailed design and future planning processes. Accordingly, this framework provides strategic direction to guide the long-term evolution of the WTC rather than prescribe a fixed redevelopment outcome



Image demonstrates indicative built form outcome for Opportunity Site 2 - Rocca Way and Dundebar Road intersection

## 6.2.5 URBAN STRUCTURE - RESPONSE TO STATE PLANNING POLICY

The Urban Structure element of the WTCPP sets out the strategic framework and high-level responses that guide connectivity, block structure and long-term evolution of the WTC. It aligns with SPP 4.2 and SPP 7.2, supporting its role as a Secondary Activity Centre through a walkable, legible and adaptable urban structure. The tables below outline how the Urban Structure strategies respond to relevant State Planning Policy objectives, supported by the development controls in Part 1.

**P2 - Table 8 -** Urban Structure response to State Planning Policy

| RELEVANT SPP 4.2 POLICY THEMES | WTCPP RESPONSE |
|---|---|
| Activity centre role and hierarchy | The Urban Structure consolidates activity within the Rocca Way and Wanneroo Central core, reinforcing WTC's role as a Secondary Activity Centre within the metropolitan hierarchy through compact blocks and intensified development patterns. |
| Walkable catchments and accessibility | A coordinated network of redevelopment sub-precincts, pedestrian links and public spaces establishes a more legible and connected Town Centre framework over time. The WTCPP concentrates higher intensity mixed-use redevelopment within the Rocca Way and Dundebar sub-precincts to reinforce the WTC's role as a Secondary Centre and support increased day-to-evening activity. |
| Integration of land use, movement and public realm | Movement is coordinated with land use and built form provisions to support active frontages, safe pedestrian movement and high quality public spaces. The urban structure prioritises improved connections between Rocca Way, civic facilities, Wanneroo Central and surrounding neighbourhoods to support a more integrated and accessible Town Centre. |
| Consolidation and efficient land use | Lot amalgamation and coordinated redevelopment are encouraged to unlock underutilised sites and deliver development parcels capable of supporting mixed use and higher density outcomes. |
| Long term adaptability and resilience | The Urban Structure supports incremental redevelopment, protects strategic opportunity sites from under development and allows flexibility to respond to future market demand and transport investment. |

| SPP 7.2 OBJECTIVES | SPP 7.2 CONSIDERATIONS | STRATEGIC RESPONSE/COMMENT |
|---|---|---|
| To ensure the pattern of blocks, streets, buildings and open space responds and contributes to a distinct, legible precinct character. | Design the urban structure in response to the existing or intended future precinct character. | The long established block pattern provides a strong foundation for reinforcing a compact and legible Town Centre. The WTCPP reinforces a clear spatial hierarchy between core activity areas, civic destinations, gateway sites and surrounding residential interfaces. The WTCPP proposes a series of east-west and north-south connections across sub precincts to improve access to key destinations. |
| | Create blocks and lots of the appropriate size, proportion and orientation to support the intended character and functions of the precinct. | Portions of the centre contain large lots in single ownership offering significant opportunities for redevelopment that can catalyse renewal across the WTC. Through subdivision and amalgamation standards in Part 1, the WTCPP supports coordinated lot amalgamation to achieve development parcels capable of accommodating higher intensity mixed use outcomes. |
| | Identify existing key landmarks to create view corridors and highlight destinations and focal points within the urban structure supporting intended built form. | Opportunity sites and landmark corners identified in Part 1 include development standards and objectives to maximise view lines and create landmark development at key strategic intersections and sites. Identified landmark sites are intended reinforce the Town Centre's identity by anchoring sub-precincts and supporting high quality built form at strategic locations. These sites play a defining role in supporting legibility and place character across the centre. |
| To promote an urban structure that supports accessibility and connectivity within and outside the precinct. | Design a legible, interconnected and functional urban structure that supports ease of movement to and through the precinct. | The WTCPP enhances connectivity by strengthening pedestrian and cycling links and establishing new north-south and east-west connections through large redevelopment sites. Plan 1 identifies locations where redevelopment should deliver integrated pedestrian and active transport links to improve local permeability, strengthen connections between activity nodes and support a legible, interconnected and functional urban structure. |
| | Develop an urban structure that gives priority to safe walking and cycling, with a focus on achieving 400m and 800m walkable catchments around nodes of activity and public transport hubs. | The WTC structure is organised around Rocca Way as the primary civic and mixed-use spine, supported by integrated public spaces, pedestrian connections and clearly defined gateway locations. The block structure and mid block pedestrian links ensure direct routes for walking and cycling, supporting safe, comfortable and efficient movement across the centre. |
| | Identify opportunities to create new or enhance existing connections to and through the precinct. | Opportunities for new publicly accessible pedestrian links have been identified, particularly where large strategic sites are redeveloped. These connections improve permeability, reduce reliance on vehicular movement and reinforce the Town Centre's walkable structure. |

| | | |
|---|---|---|
| To ensure the urban structure supports the built form, public realm and activity intended for the precinct. | Provide block configurations that support the function and amenity of the precinct. | The established block pattern provides the basis for a functional and accessible centre, enhanced through public realm upgrades identified in Part 2. Consolidated commercial land in the Rocca Way sub-precinct supports high density mixed-use development, and key identified sites along Dundebar Road and Wanneroo Road offer opportunities for landmark buildings that reinforce character and visibility. |
| | Design lots (size and configuration) that can support intended retail, commercial and mixed use development. | The WTCPP supports lot layouts and amalgamation that achieve development parcels with adequate frontage, depth and access to support contemporary retail, commercial and mixed use built form consistent with a secondary centre. |
| | Design lot layouts to respond to local climate, topography and existing natural features, while supporting intended built form. | Future redevelopment will respond to local climate, topography and existing site characteristics through climate responsive design, supporting solar access, passive surveillance and pedestrian comfort. Development standards in Part 1 manage building placement, setbacks and podium design to accommodate level changes and varied site conditions, while maintaining activated frontages and continuous, universally accessible pedestrian access. Where site-level modifications are required, adaptable podium elements, setbacks and interface controls ensure development can respond to topography without compromising street edge quality, walkability or public realm outcomes. This approach enables consistent built form delivery across varied sites, while supporting the intended urban structure, built form and place-based outcomes for the Town Centre. |
| | Design an urban structure that can accommodate lots for large format uses outside the precinct core where desired. | Large format uses are directed to peripheral arterial road interfaces (Wanneroo Road west) where traffic access requirements and built form impacts can be appropriately managed. This protects the finer grain, pedestrian focused character of the Town Centre core. |
| | Create an urban structure that contributes to the development of accessible, safe and well located public spaces. | The urban structure reinforces a connected network of public and semi public spaces aligned with key pedestrian routes. Public realm improvements and redevelopment driven open spaces enhance amenity, safety and usability for all users. |
| To ensure an adaptable urban structure that can respond to and facilitate change within a precinct | Develop a street block pattern that can accommodate change over time. | Although the historic block pattern cannot be significantly altered, it provides flexibility for incremental redevelopment and evolution of land uses over time. Opportunity sites and coordinated amalgamation enable the introduction of new pedestrian links and higher intensity development where appropriate. |
| | Identify long-term strategic opportunity/ catalyst sites and detail how they are to be protected from under-development. | Opportunity sites located within key sub-precincts are subject to subdivision and amalgamation standards that ensure resulting lots are of a size, configuration and orientation capable of supporting large-scale mixed use or commercial development. These standards safeguard the strategic intent of the precinct by preventing fragmented or undersized outcomes that would limit development potential or compromise the desired built form.<br><br>Development of these sites is expected to act as a catalyst for broader precinct renewal, enabling higher intensity activity, improved connectivity and enhanced public realm outcomes across adjoining land. High level objectives guiding the evolution of these sites are included in Part 1 under the relevant sub-precinct development requirements, ensuring future proposals align with the long term intent for the Town Centre. |
| | Illustrate the relationship between the proposed urban structure and precinct staging. | While the ultimate staging of development will be largely led, short term focus on public realm improvements will lay the foundation for redevelopment of opportunity sites within the Rocca Way sub-precinct. The development of the State owned DBCA site could also provide a short to medium term catalyst to future investment and development of the centre. Growth in surrounding areas including future development beyond the precinct such as Lot 9000 and East Wanneroo will influence retail and commercial demand, but is external to this plan. The urban structure allows flexible, incremental development consistent with the long term evolution of the centre. |

# 6.3 PUBLIC REALM

## 6.3.1 PUBLIC REALM STRATEGIES

The Public Realm creates the everyday spaces where community life occurs, shaping how people experience, move through and connect with the WTC. As one of the primary organising elements of the WTC, the public realm connects civic, commercial, recreational and residential destinations through a network of streets, parks, urban spaces and pedestrian links that support movement, social interaction and economic activity.

While the WTCPP establishes the strategic framework and desired outcomes for the public realm within the WTC, it does not itself deliver public realm upgrades, streetscape improvements or public spaces. Rather, it identifies the priorities, spatial structure and place-based directions that will guide future planning, design and delivery. Detailed public realm initiatives will be further developed through subsequent implementation processes, including a future WTC Master Plan, detailed design investigations and future redevelopment projects.

Future public realm improvements should prioritise pedestrian comfort, shade, landscape character, accessibility, activation and the enhancement of local identity and place character, while also supporting climate resilience, urban cooling and biodiversity outcomes. The coordinated delivery of future public realm will enhance the town centre experience and reinforce the WTC as a walkable, mixed-use centre.

The Public Realm strategies below guide the creation of a connected, inclusive and vibrant public realm that strengthens the identity and sense of place of the WTC over the medium to long term.

### Strategy 1 - Strengthen the green network and landscape connections

- Retain and enhance existing mature tree canopy wherever practicable, recognising its contribution to landscape character, urban cooling and habitat for native fauna.
- Prioritise native and climate-responsive planting integrated with WSUD throughout streets, parks and urban spaces.

### Strategy 2 - Create a walkable, legible Town Centre

- Support the development of a fine-grain pedestrian network through new and improved east-west and north-south connections, including publicly accessible mid-block links, urban spaces and green corridors.
- Improve priority pedestrian routes by upgrading footpaths, providing shade and weather protection, incorporating appropriate lighting and prioritising universal accessibility.

### Strategy 3 - Deliver high quality civic and public spaces

- Guide the creation of a connected network of civic spaces, parks and urban spaces that provide opportunities for gathering, recreation, community activity and events, supported by a coordinated approach to public realm planning and delivery through the future WTC Master Plan.

### Strategy 4 - Celebrate cultural identity and heritage

- Highlight local stories, heritage sites and Wanneroo's Aboriginal cultural, agricultural and civic history through integrated landscape, public art and interpretive elements, guided by the WTC Aboriginal Cultural narrative and Design Guidance Report, and WTC Interpretation Study.

### Strategy 5 - Integrate public realm and built form to enable activation

- Integrate building design and public realm to create active, comfortable and engaging streets, parks and public spaces.

### Strategy 6 - Deliver public realm through partnerships

- Coordinate public and private investment to deliver public realm improvements, including publicly accessible urban spaces, pedestrian connections and other place-making initiatives.

### Strategy 7 - Reinforce local identity through coordinated place-making

- Promote a cohesive place identity across the WTC through a coordinated approach to paving, furniture, lighting, planting, signage, wayfinding, public art, interpretation and landscape design, while supporting community-led place-making initiatives and public space activation.



Memorial Park

## 6.3.2 PUBLIC OPEN SPACE

Existing public open space (POS) within the WTC is summarised in Table 9 and illustrated in Figure 5. The WTC currently contains approximately 3.25 hectares of creditable POS (excluding the Wanneroo Showgrounds), comprising a network of local parks that support a range of recreational, social and community functions.

As an established activity centre, the WTC has evolved through historic subdivision and development patterns, with limited opportunity to deliver significant areas of additional traditional POS through redevelopment. In this context, the adequacy of open space provision is not determined solely by a percentage based measure, but by the ability of the broader open space and public realm network to support the needs of residents, workers and visitors. Consistent with Liveable Neighbourhoods and the City's Local Planning Policy 4.3 - Public Open Space, consideration should therefore be given to the accessibility, functionality, distribution and quality of public open spaces within and surrounding the Town Centre, together with opportunities to enhance the overall public realm.

In addition to creditable POS, the WTC benefits from several important public open space and public realm assets; including the Wanneroo Showgrounds, civic green spaces, and opportunities for new publicly accessible urban spaces as redevelopment occurs. While these spaces may not constitute creditable POS under Liveable Neighbourhoods, they perform an important role in supporting recreation, community events, social interaction, walkability, shade, urban greening and place activation. Collectively, these spaces contribute to a diverse and connected network of open spaces and public places that supports the function and amenity of the WTC.

**P2 - Table 9 -** Public Open Space schedule

| TYPE | POS | FUNCTION |
|---|---|---|
| **EXISTING** | | |
| Local POS | Bert Togno Park -1.2ha<br>Memorial Park - 1.6 ha<br>Leach Road - 0.23 ha<br>Hasting/Keane Street - 0.09 ha<br>Jacaranda Amphitheater - 0.13 ha | Passive recreation<br>Civic and community events |
| District POS | Wanneroo Showgrounds 12.9 ha | Active recreation<br>Civic and community events |
| **PROPOSED** | | |
| Proposed local | Rocca Way Plaza - 0.14 ha (non-creditable) | Passive recreation<br>Civic and community events |
| Proposed Urban space | Privately owned publicly accessible urban spaces - as determined at subdivisions and development stage (non-creditable) | Passive recreation |




**P2 - Figure 5 -** Public Open Space Plan

### 6.3.3 ACTIVATION AND USE

Stakeholder engagement identified a strong desire for more activated public spaces, including opportunities for street markets, alfresco dining, events and entertainment. In response, the WTCPP establishes a strategic framework to support activity, social interaction and community life throughout the WTC. The framework seeks to strengthen the relationship between development and the public realm, creating opportunities for a more vibrant and inviting town centre environment over time.

#### ACTIVATED PUBLIC SPACES

The WTCPP promotes a network of public spaces that support everyday activity, community events and social interaction throughout the WTC. Public spaces, privately owned public urban spaces and adjoining development should operate together to create a lively and connected public realm.

The WTCPP is supported by a built form framework that seeks to strengthen the relationship between development and the public realm throughout the WTC. Through the development provisions contained within Part 1, development adjoining key streets, parks and civic spaces is encouraged to provide active frontages through non-residential ground floor uses, transparent frontages, frequent pedestrian entrances, weather protection and minimal setbacks. These measures strengthen the relationship between buildings and the public realm, supporting surveillance, economic activity and street life.

Private publically accessible urban spaces resulting from the redevelopment of opportunity sites will complement the public realm by providing mid-block pedestrian connections, pocket plazas, landscaped pause points and small gathering spaces. These spaces will improve permeability, support urban greening and create opportunities for informal recreation and social interaction.

Existing public spaces should be enhanced to support a greater range of activities, including markets, alfresco dining, community events and everyday use. Potential future public realm initiatives may include the enhancement of Aquamotion Court as a green civic space, improved interfaces with Bert Togno Park, and upgrades such as additional seating, landscaping, shade and other amenity improvements to support year-round use and activation. Detailed planning, design and delivery of any such initiatives will occur through future master planning and implementation processes, subject to Council consideration and approval.

#### UPGRADING ROCCA WAY TO A MAIN STREET ENVIRONMENT

Rocca Way is identified within the WTCPP as the primary main street of the WTC, with the potential to evolve over time as a more pedestrian oriented environment that supports community activity, economic activation and a high quality public realm. The WTCPP establishes the strategic intent for Rocca Way to function as a key civic, retail and community focus within the WTC, strengthening connections between surrounding destinations and reinforcing its role as the public realm heart of the centre.

Supporting investigations, including the Traffic and Transport Study prepared by Arup, indicate that changes to vehicle access and movement arrangements within Rocca Way may be feasible from a transport network perspective. Accordingly, the WTCPP provides a high level framework to support consideration of opportunities for increased pedestrian priority, improved public realm outcomes and enhances place activation, subject to future Council direction, detailed feasibility assessment, design development and implementation planning.

A draft WTC Public Realm and Interpretation Study, prepared by Creative Spaces and Four Landscape Studio, has also informed the high level preparation of the WTCPP. The study explores opportunities to enhance pedestrian amenity, tree canopy, shade, seating, landscape character and the integration of interpretation and place-making initiatives that reflect the cultural and historic identity of the WTC. While these opportunities help illustrate how Rocca Way and the broader public realm may evolve over time, the study does not form part of the WTCPP or its statutory provisions. Any future public realm improvements within Rocca Way will be subject to further planning, feasibility investigations, detailed design, funding availability and future Council consideration.







Images are indicative only and illustrate intended quality and experience of future public realm outcomes.

## 6.3.4 MOVEMENT AND PLACE

A highly connected movement network is fundamental to the success of the WTC as a walkable mixed-use centre. Equally important is the quality of the places and spaces through which people move. The WTCPP therefore adopts an integrated movement and place approach that balances accessibility and connectivity with the creation of attractive, comfortable and engaging public spaces. Through improved pedestrian and cycling connections, enhanced streetscapes and stronger links between key destinations, the framework supports a public realm where people can move easily, connect with others and enjoy the town centre experience.

### ACTIVE TRANSPORT

Improved pedestrian and cycling infrastructure, together with minimum requirements for end-of-trip facilities, will encourage active transport within and to the WTC. The WTCPP identifies opportunities to strengthen connections between key destinations through a fine-grain network of pedestrian and cycling links, including the mid-block connections shown on P1 - Figure 1. These connections are intended to improve permeability, reduce walking distances and support movement between activity areas, public spaces and redevelopment sites.

Future public realm improvements, including potential enhancements to Rocca Way and surrounding streets and spaces, may further improve pedestrian comfort and accessibility through the provision of shade, shelter, street furniture, weather protection, rest areas, flush paving treatments and universally accessible footpaths. Collectively, these measures will contribute to a safer, more comfortable and accessible Town Centre environment that encourages walking, cycling and social interaction while reinforcing the WTC as a connected and walkable Secondary Centre

### WAYFINDING AND LEGIBILITY

Improved pedestrian and cycling infrastructure, together with minimum requirements for end-of-trip facilities, will encourage active transport within and to the WTC. The WTCPP identifies opportunities to strengthen connections between key destinations through a fine-grain network of pedestrian and cycling links, including the mid-block connections shown on P1 - Figure 1. These connections are intended to improve permeability, reduce travel distances and support movement between activity areas, public spaces and redevelopment sites.





Future public realm improvements and redevelopment outcomes should contribute to a connected and legible movement network through the provision of pedestrian links, footpaths, shared paths and accessible connections. Collectively, these measures will support a more walkable, cycle-friendly and connected Secondary Centre.

## 6.3.5 AMENITY, SAFETY AND INCLUSIVITY

### COMFORT, INCLUSIVITY AND MICRO-CLIMATE

The WTCPP promotes comfortable, inclusive and accessible public spaces that encourage people to walk, gather and spend time within the WTC. Public realm improvements should incorporate shade, tree canopy, landscaping, seating, lighting, weather protection and other measures that improve amenity and support social interaction.

Universal access principles should be integrated throughout the public realm through accessible paths, ramps, tactile paving, seating and other inclusive design features that support people of all ages and abilities. Future public realm improvements, including potential enhancements to Rocca Way and surrounding streets and spaces, should seek to improve pedestrian comfort, accessibility and urban cooling, subject to future planning, design, funding and Council consideration.

### CPTED AND SAFETY

Public spaces should incorporate Crime Prevention Through Environmental Design (CPTED) principles in accordance with Local Planning Policy 4.3 - Public Open Space. Lighting, clear sight lines, active frontages and appropriate landscaping will promote passive surveillance and enhance perceptions of safety, while low planting and carefully designed landscape treatments will maintain visibility across streets, parks and public spaces.

### STREETSCAPE QUALITY

Streets, parks and public spaces should present a consistent, high-quality landscape character that reinforces the identity of the WTC. Materials, planting, street furniture, lighting and interpretive elements should be durable, context-responsive and coordinated across the centre while recognising the distinctive character of individual sub-precincts. Future streetscape improvements should be informed by relevant City strategies, master planning processes and other supporting studies undertaken for the WTC.

## 6.3.6 ENVIRONMENT AND SUSTAINABILITY

### SUSTAINABLE DESIGN

The WTCPP integrates sustainability principles consistent with SPP 7.2 through WSUD, climate responsive landscape design, native and drought-tolerant planting, efficient irrigation and integrated stormwater management. Together with expanded street tree planting, these measures will improve micro-climate, reduce urban heat, enhance biodiversity and create comfortable, climate resilient public spaces that encourage year round use.

### TREE RETENTION AND CANOPY EXPANSION

Existing mature trees and established tree canopy should be retained wherever practicable, recognising their important contribution to the WTC's landscape character, environmental performance and sense of place. Tree retention should be complemented by strategic canopy expansion through additional planting to improve shade, support habitat for native fauna, including black cockatoos, strengthen biodiversity and reinforce the WTC's distinctive green identity. The Town Centre's topography also provides opportunities to maximise views of the established tree canopy, further contributing to landscape character, urban cooling and a more comfortable, walkable public realm.

## 6.3.7 PUBLIC REALM CHARACTER AND DESIGN DNA

The future public realm of the WTC will be shaped by a distinctive design language that reflects its evolving identity as a contemporary, connected and community focused centre. The design response should be grounded in the stories, culture, landscape and built form character of Wanneroo, creating places that are welcoming, memorable and meaningful for the community.

The public realm should celebrate the unique qualities of the WTC, including its Aboriginal cultural heritage as a continuing and living connection to Country, alongside its agricultural history, landscape setting and civic character. These narratives should inform the design of public spaces through culturally appropriate storytelling, interpretation, landscape design, public art and opportunities for community expression.

A consistent design approach across streets, parks, plazas and civic spaces will strengthen the identity and legibility of the WTC while allowing individual places to retain their own character and function. Public realm design should prioritise pedestrian comfort, accessibility, safety and social interaction through high-quality landscaping, shade, seating, lighting, materials, planting and adaptable spaces that support both everyday activity and community events.

### WANNEROO TOWN CENTRE MASTER PLAN

The WTCPP establishes the strategic vision and framework for the future WTC public realm, but does not determine the detailed design or delivery of public realm improvements. To support implementation, the City intends to prepare a WTC Master Plan that translates the WTCPP's strategic directions into a coordinated program of public realm projects and initiatives. Building on key initiatives including the WTC Public Realm and Interpretation Study, the Aboriginal Cultural Narrative Report and other place-based projects, the Master Plan will guide the future planning, design and prioritisation of streets, parks, urban spaces and other public realm improvements throughout the WTC.

The WTC Master Plan will not replace the WTCPP or establish a new vision for the WTC. Rather, it will provide an implementation framework that brings together the recommendations and opportunities identified through the WTCPP and supporting studies, projects and community engagement to inform the prioritisation, staging and delivery of future public realm improvements.

Collectively, these studies and initiatives have explored the identity, history, landscape setting and cultural values of the WTC, identifying opportunities to strengthen local character, celebrate Aboriginal and non-Aboriginal heritage, enhance connectivity and reinforce a stronger sense of place. The Aboriginal Cultural Narrative Report in particular provides a foundation for recognising the area's enduring Aboriginal cultural connections through storytelling, interpretation, public art, landscape design and place-making initiatives.

The WTC Master Plan will bring these themes together through a coordinated approach to public realm design, materials, wayfinding, landscape character, place activation, public art and interpretation. It will also assist in identifying priority projects, sequencing investment and coordinating the delivery of public realm improvements across the WTC over time.












Images are indicative only and illustrate intended quality and experience of future public realm outcomes.

## 6.3.8 PUBLIC REALM SPATIAL PLAN

The Public Realm Spatial Plan translates the public realm objectives and strategies of the WTCPP into a spatial framework that identifies key public realm priorities, strategic connections and opportunities across the WTC. The framework supports interpretation of the WTCPP and promotes a place responsive approach to future public realm planning, design and development. It is indicative in nature and is intended to guide future planning, coordination, prioritisation and investment decisions, while providing a foundation for preparation of the WTC Master Plan and more detailed design processes over time. The WTC Master Plan may further refine these opportunities and identify additional locations, projects and initiatives in response to evolving community needs, investment priorities and implementation opportunities.

**P2 - Table 10 -** Public Realm opportunities

| LEGEND | |
|---|---|
| 1 | **Wanneroo Showgrounds** - provides a flexible setting for events, community activities and recreation, functions as a major green anchor and provides opportunities for historic interpretation. |
| 2 | **Mid block pedestrian links** - deliver publicly accessible pedestrian links connecting Rocca Way, public spaces and surrounding streets. |
| 3 | **Rocca Way Public Plaza -** a central, civic and celebration space forming the heart of the Town Centre, supporting markets, events and everyday gathering. |
| 4 | **Wanneroo Road to Memorial Park Link -** opportunities to provide a safe, attractive and legible pedestrian connection linking Wanneroo Road with Memorial Park. |
| 5 | **Tree Retention and significant vegetation -** retention of significant existing trees and vegetation throughout the Town Centre, integrated into streets, parks and urban spaces as defining landscape features. |
| 6 | **Aquamotion Court -** opportunity for enhancing as a public green space incorporating active uses such as water play features, cafes or other activity generating uses. |
| 7 | **Bert Togno Park urban green space -** retention and enhancement of the southern portion of Bert Togno Park as an urban green space, supporting events, informal recreation and cultural expression |
| 8 | **Central north - south green spine -** a series of linked public spaces and POS areas aligned with the primary north - south pedestrian route and Civic Drive open space network. |
| 9 | **Memorial Park Civic Space -** retention of the War Memorial and potential reconfiguration of the park, including relocation of surface parking. |
| 10 | **Skate Park/Youth Activity Hub -** retain and upgrade centrally located youth focused public space that supports informal recreation and social interaction. |




**P2 - Figure 6 -** Public Realm Spatial Plan

## 6.3.9 PUBLIC REALM - RESPONSE TO STATE PLANNING POLICY

The following tables outlines how the WTCPP responds to the relevant requirements and considerations of SPP 4.2 and SPP 7.2 in relation to the element of Public realm.

**P2 - Table 11** - Public Realm response to State Planning Policy

| RELEVANT ACTIVITY CENTRE POLICY THEMES | WTCPP RESPONSE |
|---|---|
| Activity centres as vibrant, mixed use civic and community hubs | The WTCPP positions the public realm as core infrastructure supporting the WTC's civic, social and economic role. The WTCPP identifies a strategic network of civic spaces, parks and urban spaces, including opportunities for a future civic gathering space within the Town Centre core. Detailed planning, design and delivery of these spaces will be undertaken through future master planning, redevelopment and capital works initiatives. |
| Walkable, accessible and well connected centres | The WTCPP establishes a strategic framework for a fine-grain pedestrian network that prioritises walking and cycling, strengthens east-west and north-south connections and links key destinations, public spaces and surrounding neighbourhoods. The framework guides future public realm improvements that support pedestrian comfort, legibility and accessibility. |
| Integration of land use, built form and public realm | Built form and public realm outcomes are closely integrated through Part 1 development provisions requiring active ground floor uses, minimal setbacks, transparent frontages and weather protection along key streets and public spaces. These measures ensure buildings frame, overlook and activate public spaces, supporting passive surveillance and seamless indoor/outdoor relationships. |
| Active main streets and attractive public spaces | Rocca Way is identified as the primary main street and civic spine of the Town Centre. The WTCPP establishes a framework to guide future planning and design initiatives that support pedestrian priority, activation and public realm improvements over time. |
| Centres that support a range of activities throughout the day and evening | Public spaces are designed to be flexible and multifunctional, accommodating markets, events, alfresco dining and informal recreation. Lighting, CPTED principles and active edges support safe use of public spaces beyond business hours, contributing to extended activity and vitality within the Town Centre. |
| High quality public realm that reflects local identity and character | Public realm improvements incorporate opportunities for landscape character, interpretation and civic gathering spaces that reflect Wanneroo's cultural, historic and community identity. Delivery should be guided by the future WTC Master Plan to ensure cohesive, place responsive outcomes. |
| Environmentally responsive and resilient activity centres | Tree retention, canopy expansion, native and climate resilient planting and water sensitive urban design are prioritised throughout the public realm to improve micro climate, mitigate urban heat and enhance environmental performance, supporting a comfortable and climate resilient Town Centre. |

| SPP 7.2 OBJECTIVES | CONSIDERATIONS | STRATEGIC RESPONSE/COMMENT |
|---|---|---|
| To ensure the public realm is designed to promote community health and wellbeing. | Provide a range of public spaces that support and contribute to the community's health and wellbeing, in response to identified community need. | The WTCPP maps the extent of existing public spaces across the WTC in P2 - Figure 5, and identifies opportunities for staged improvements to infrastructure and amenity as redevelopment progresses. The WTCPP identifies Rocca Way as the WTC's primary civic and social spine and supports consideration of future public realm improvements that may strengthen pedestrian amenity, activation and civic function, subject to future planning, design and implementation processes. As extensive POS already exists in the WTC, the WTCPP focuses on identifying opportunities to improve the quality, function and accessibility of existing spaces over time. |
| | Design public spaces for multiple uses, to efficiently accommodate a range of functions and activities. | The existing public spaces throughout the WTC cater to a range of different active and passive uses. The WTCPP highlights opportunities to enhance existing public spaces. Part 1 development standards encourage land adjacent to key public spaces to deliver land uses and built form that maximise activation and support a range of community functions. |
| | Consider year round user comfort in the design of the public realm. | The Plan emphasises all season comfort, including retention of existing trees, new canopy planting, shade structures, and improved lighting to ensure places remain accessible and welcoming throughout the year. |
| To enable local character and identity to be expressed in public realm design to enhance sense of place. | Demonstrate appropriate interpretation of Aboriginal knowledge, history and heritage within public realm design. | Existing cultural elements such as the Walls of Honour are acknowledged, and the City remains committed to partnering with the Aboriginal and Torres Strait Islander Reference Group (Ni Kadadjiny Koort) and the wider community to embed meaningful cultural interpretation within future public realm improvements. |
| | Design the public realm to reflect the heritage significance of the precinct and support the precinct's intended character and identity. | Future public realm planning and design initiatives should incorporate opportunities to interpret Wanneroo's rural history and cultural heritage, including recognition of the Showgrounds and historic land use patterns, to reinforce local identity, storytelling and sense of place throughout the Town Centre. These opportunities should be further explored and coordinated through the future WTC master planning process. |

| | | |
|---|---|---|
| | Public realm design should incorporate local natural topography, habitats and vegetation to enhance sense of place. | Native planting is prioritised in new and upgraded public realm areas, and existing trees that contribute to canopy, habitat and amenity are retained where possible. Key landscape features are integrated to strengthen the Town Centre's distinct local character, including built form provisions that consider and respond to site level changes throughout the centre. |
| To ensure that key environmental attributes are protected and enhanced within the public realm. | Integrate environmental features of the precinct within the public realm. | The WTCPP supports the integration of significant natural features into future public realm planning and design, focusing on tree retention, native planting and enhancing ecological connections where feasible. Public realm design will also respond to the natural topography of the WTC, complemented by built form provisions in Part 1 which guide development to appropriately address level changes and reinforce local landscape character.<br>The WTCPP (Part 1) highlights key locations where trees will be retained, supporting the City's Urban Forest Strategy (2022). Future public realm initiatives should support both retention of existing trees and expansion of the urban canopy in accordance with the strategic directions of the WTCPP. |
| | Ensure the public realm contributes to creating and/or improving the urban tree canopy within the precinct and its surrounds. | |
| | Incorporate waterwise species into the green network and public realm where appropriate. | Landscaping and WSUD will be guided by the City's Urban Forest Strategy (2022), Local Water Management Strategy, Liveable Neighbourhoods and the City's operational landscape guidelines. Detailed species palettes, planting guidance and materiality standards will be resolved at the landscape design stage and informed by the future WTC Master Plan, and *LPP 4.3 - Public Open Space*. |
| | Incorporate water sensitive urban design into the public realm. | |
| | Provide opportunities for urban greening, such as community gardens and rooftop gardens. | The WTCPP identifies opportunities to integrate publicly accessible private open space and with existing open space areas to provide additional greening and connectivity. In addition, the implementation of SPP 7.3 encourages the provision of rooftop gardens and significant landscaping in new residential and mixed use developments. |
| To ensure the public realm is designed to be inclusive, safe and accessible for different users and people of all ages and abilities. | Develop legible routes and intersections, connected by identifiable landmarks to aid navigation through the public realm. | The WTCPP identifies a series of legible routes to assist navigation through the Town Centre and connect to key features and spaces. The plan also identifies key opportunity sites whereby identifiable landmark development can serve as wayfinding opportunities, and incorporate mid-block pedestrian links that will assist to provide legibility and connection through the commercial precincts. |
| To ensure the public realm is designed to be inclusive, safe and accessible for different users and people of all ages and abilities. | Accommodate and promote inclusion and accessibility for people of all ages and abilities in the public realm. | Any development or redevelopment of the public realm will prioritise universal access, adhering to the provisions of the City's Pathways Policy and Local Planning Policy 4.3 - Public Open Space which ensure accessibility and safety are maximised. |
| | Design the public realm according to the principles of Crime Prevention through Environmental Design (CPTED). | CPTED principles will guide the design of public spaces under LPP 4.3 to ensure places are safe, open, visible and appropriately activated. Built form provisions included in Part 1 are established on CPTED principles including the provisions of lighting, improved sight lines, passive surveillance and activation of key edges. |
| To ensure public realm design is integrated with the built form, movement network and landscape of the precinct. | Design well-proportioned and appropriately scaled public spaces and streets. | The WTCPP supports future public realm improvements that seek to ensure streets and spaces are appropriately scaled for comfort, activity and accessibility, supported by built form provisions in Part 1 that reinforce a human-scale environment and encourage enjoyable use of public spaces. These measures work together to deliver cohesive, safe and high-amenity places throughout the Town Centre. |
| | Consider and enhance relationships between the public realm and surrounding land uses and activities to create mutual benefit | The WTCPP addresses this objective through the designation of land uses and built form development standards to provide activation of public realm spaces and opportunities for business to benefit from the vibrancy created in and around public spaces. |
| | Design the public realm as a series of well connected, legible spaces. | The WTCPP identifies opportunities for future public realm, pedestrian and streetscape improvements to provide a stronger relationship between built form and land use to activate spaces and provide a safe, accessible and legible series of public spaces. |
| | Integrate services and utilities to minimise impact on function and amenity of public spaces, streets and surrounding built form. | As the Town Centre has an established services network, future infrastructure upgrades will be designed to minimise impacts on amenity, function and built form. Servicing and utilities considerations in private development interfacing public spaces are managed through development provisions in Part 1 where discreet integration or screening of utilities and services maintain visual quality and protect pedestrian amenity. |

# 6.4 MOVEMENT

## 6.4.1 MOVEMENT STRATEGIES

Movement within the WTC is about creating connections between people, places and activities, prioritising walking, cycling and public transport while ensuring appropriate access for vehicles, servicing and freight. A connected, legible and accessible movement network is fundamental to achieving the vision for the WTC as a vibrant, inclusive and people focused Secondary Centre.

The WTCPP establishes the strategic framework for the future movement network within the WTC, supporting improved connectivity, accessibility and integration between land use, transport and the public realm. While the WTCPP identifies key movement priorities, desired outcomes and spatial connections, it does not itself commit to the delivery of transport infrastructure or network upgrades. Rather, the movement framework is intended to guide future investigations, transport planning, detailed design, development outcomes, advocacy, partnership opportunities, funding decisions and implementation priorities over time.

A Traffic and Transport Management Strategy in Appendix 5 has been prepared in response to State planning requirements and informs the movement framework and strategic directions of the WTCPP. The following strategies provide guidance for the future planning, design and implementation of the WTC movement network.

### Strategy 1 - Strengthen walking, cycling and active transport connectivity

- Support the development of a connected, safe and legible network for walking, cycling and other active modes throughout the Town Centre, linking key destinations, public spaces, services, public transport and surrounding neighbourhoods.
- Improve pedestrian and cyclist safety, comfort and accessibility through enhanced crossing opportunities along key streets, particularly Wanneroo Road and Dundebar Road, together with bicycle parking, end-of-trip facilities and a highly permeable movement network that encourages people to park once and walk between multiple destinations within the Town Centre.

### Strategy 2 - Provide a legible and universally accessible movement network

- Design movement networks to be safe, inclusive and accessible for people of all ages and abilities through the application of universal access principles.
- Improve wayfinding, visibility and directness of pedestrian routes by ensuring streets, paths and public links provide clear connections and intuitive navigation between key destinations, public transport stops and public spaces.

### Strategy 3 - Deliver a street network that balances movement and place

- Reinforce a clear street hierarchy that prioritises local access, walking and cycling, while discouraging unnecessary through traffic within the Town Centre core.
- Support the introduction of traffic calming measures and safe intersection treatments within high activity pedestrian areas to enhance safety and comfort.

### Strategy 4 - Support public transport and plan for future transit

- Promote higher-density, mixed-use development within walkable catchments of existing and future public transport services.
- Integrate public transport services with safe, continuous and connected pedestrian and cycling routes.

### Strategy 5 - Manage parking, servicing and access

- Support a transition from large surface car parks to more efficient shared, consolidated and structured parking solutions as redevelopment occurs, improving urban form, pedestrian amenity and land use efficiency.
- Manage parking, servicing and access to support a 'park once' approach, minimise unnecessary vehicle movements within the Town Centre and reduce conflicts between vehicles, pedestrians and cyclists through shared parking arrangements, reciprocal access easements, rear-lot servicing and consolidated loading facilities.

### Strategy 6 - Integrate with the wider regional transport network

- Support improved connections between the WTC and the wider regional transport network, including Wanneroo Road, regional cycling routes, surrounding activity centres and public transport services.
- Support measures that improve connectivity across Wanneroo Road and strengthen links between the Town Centre, surrounding neighbourhoods, regional recreational destinations and future public transport opportunities.



## 6.4.2 EXISTING TRAFFIC AND MOVEMENT

### ROAD TRAFFIC USAGE

The WTC occupies a strategic location within the City of Wanneroo and is served by the regional road network, including Wanneroo Road and Dundebar Road. These roads perform important local and regional movement functions and provide access to surrounding residential communities, employment areas and activity centres.

Traffic analysis undertaken as part of the Traffic and Transport Management Strategy (Appendix 5) indicates that, while some intersections experience peak period congestion, the existing road network generally accommodates current travel demand. The most notable constraints occur along Wanneroo Road, reflecting its dual function as both a regional transport corridor and a key street within the Town Centre.

Wanneroo Road is the principal movement corridor serving the WTC and carries approximately 26,000-27,000 vehicles per day. Dundebar Road functions as the primary east-west distributor road and carries approximately 8,800-9,000 vehicles per day. Most local streets carry substantially lower traffic volumes and primarily serve local access functions. Traffic volumes are forecast to continue increasing to 2036 as a result of regional population growth and urban development. Traffic on Wanneroo Road is forecast to increase by approximately 16-26%, while Dundebar Road is forecast to increase by approximately 35-50%. The greatest growth is anticipated on Servite Terrace following its future extension to Illyarrie Rise.

In response, the WTCPP promotes an integrated movement network that prioritises transport choice, active transport and future public transport improvements, while managing travel demand and avoiding unnecessary increases in road capacity.

### PEDESTRIAN NETWORK

The WTC benefits from an established pedestrian network connecting key destinations including Wanneroo Central Shopping Centre, the Civic Centre, Aquamotion, Memorial Park, schools, community facilities and surrounding residential neighbourhoods. However, pedestrian movement is constrained by the barrier effect created by Wanneroo Road and, to a lesser extent, Dundebar Road. These roads can affect the convenience, comfort and legibility of east-west pedestrian movement across the centre. Wanneroo Road presents the most significant barrier, carrying approximately 26,000 vehicles per day south of Dundebar Road. Despite this, pedestrian crossing opportunities occur at relatively frequent intervals of approximately 152 metres.

The Traffic and Transport Management Strategy identifies opportunities to improve pedestrian accessibility through improved pedestrian crossing opportunities, enhanced wayfinding, expanded low-speed environments, additional pedestrian links and stronger connections between key destinations and activity nodes.

### CYCLING NETWORK

The WTC is connected to the City's broader active transport network through a combination of local streets, shared paths and regional cycling routes. Existing active transport infrastructure, including key east-west connections through the Town Centre, supports access between surrounding neighbourhoods, community facilities, public open spaces and the wider cycling network.

Opportunities exist to strengthen cycling access to key destinations through upgraded shared path infrastructure, improved crossing facilities, end-of-trip facilities and integration with the City's Active Transport Plan and Long-Term Cycle Network. Future improvements identified through relevant City strategies, including works along Dundebar Road and Wanneroo Road, will further strengthen connections between the Town Centre, surrounding residential areas and the broader cycling network.

Future redevelopment is expected to contribute towards a safer, more connected and legible cycling network that supports both local and regional cycling movements.

### PUBLIC TRANSPORT

The WTC is currently serviced by a number of local and regional bus services connecting the centre with surrounding communities and strategic destinations including Joondalup, Whitfords and Perth. Three Transperth bus routes currently operate through the Town Centre, providing approximately 226 weekday services.

Despite the availability of these services, public transport patronage remains relatively low, with approximately 249 weekday boardings and 256 weekday alightings recorded across the 13 bus stops within the Town Centre. Public transport use is concentrated at a small number of bus stops adjacent to Wanneroo Central Shopping Centre and the Civic Centre.

Travel patterns within the WTC continue to be characterised by a high level of private vehicle use. Journey to Work data indicates that approximately 68% of employed residents travel to work as a car driver, while only around 1% travel by bus and less than 1% travel by train.

State strategic planning documents identify Wanneroo Road as a potential future public transport corridor and recognise the need to improve public transport accessibility within the north-east corridor. While future public transport improvements may occur over time, no specific higher-order public transport project is currently committed within the Town Centre. The WTCPP therefore supports the protection of opportunities for future public transport improvements while recognising that service planning, funding and infrastructure delivery remain the responsibility of relevant State agencies.

### VEHICLE PARKING

Parking within the WTC is currently provided through a combination of public and private at-grade parking areas associated with retail, commercial, community, educational and recreational land uses. The Town Centre currently contains approximately 2,110 off-street parking bays and 217 on-street parking bays. Parking demand is concentrated within the Wanneroo Central, Aquamotion and Civic Centre car parks; however, the overall parking network generally accommodates existing demand.

Analysis undertaken as part of the WTC Parking Study found that, while some parking areas experience high utilisation during peak periods, sufficient parking capacity generally exists across the centre. The primary issue is therefore the distribution, management and accessibility of parking rather than an overall shortage of supply.

As redevelopment occurs, opportunities exist to improve parking efficiency through shared parking arrangements, enhanced pedestrian connectivity, improved wayfinding and the gradual transition towards more consolidated and structured parking solutions. Collectively, these findings indicate that while the WTC currently functions as a predominantly vehicle oriented centre, there is significant opportunity to improve walkability, cycling accessibility, public transport integration and parking efficiency as redevelopment occurs.

The movement framework of the WTCPP seeks to support this transition whilst maintaining appropriate vehicle access and network functionality.

## 6.4.3 PROPOSED TRAFFIC AND MOVEMENT

### PEDESTRIAN NETWORK

The WTCPP promotes a highly walkable urban environment where daily needs can be met within convenient walking distance of homes, businesses, community facilities and public spaces. The movement framework seeks to strengthen pedestrian connectivity throughout the centre by improving the quality, safety and legibility of pedestrian routes and by creating direct connections between key destinations, including the Town Centre core, Wanneroo Central Shopping Centre, civic and community facilities, schools, recreation areas, public open spaces and future redevelopment sites.

#### Pedestrian movement improvements

To support walking as a preferred mode of travel within the WTC, the WTCPP recommends measures that improve pedestrian safety, accessibility, comfort and connectivity throughout the Town Centre.

Key recommendations include investigating opportunities to expand the 40 km/h speed environment throughout appropriate parts of the Town Centre, subject to Main Roads WA approval, retaining and enhancing pedestrian crossing opportunities at key intersections and activity nodes, and improving east-west connectivity across Wanneroo Road through pedestrian-priority treatments and investigation of additional crossing opportunities where warranted, including signalised crossing improvements and mid-block crossings

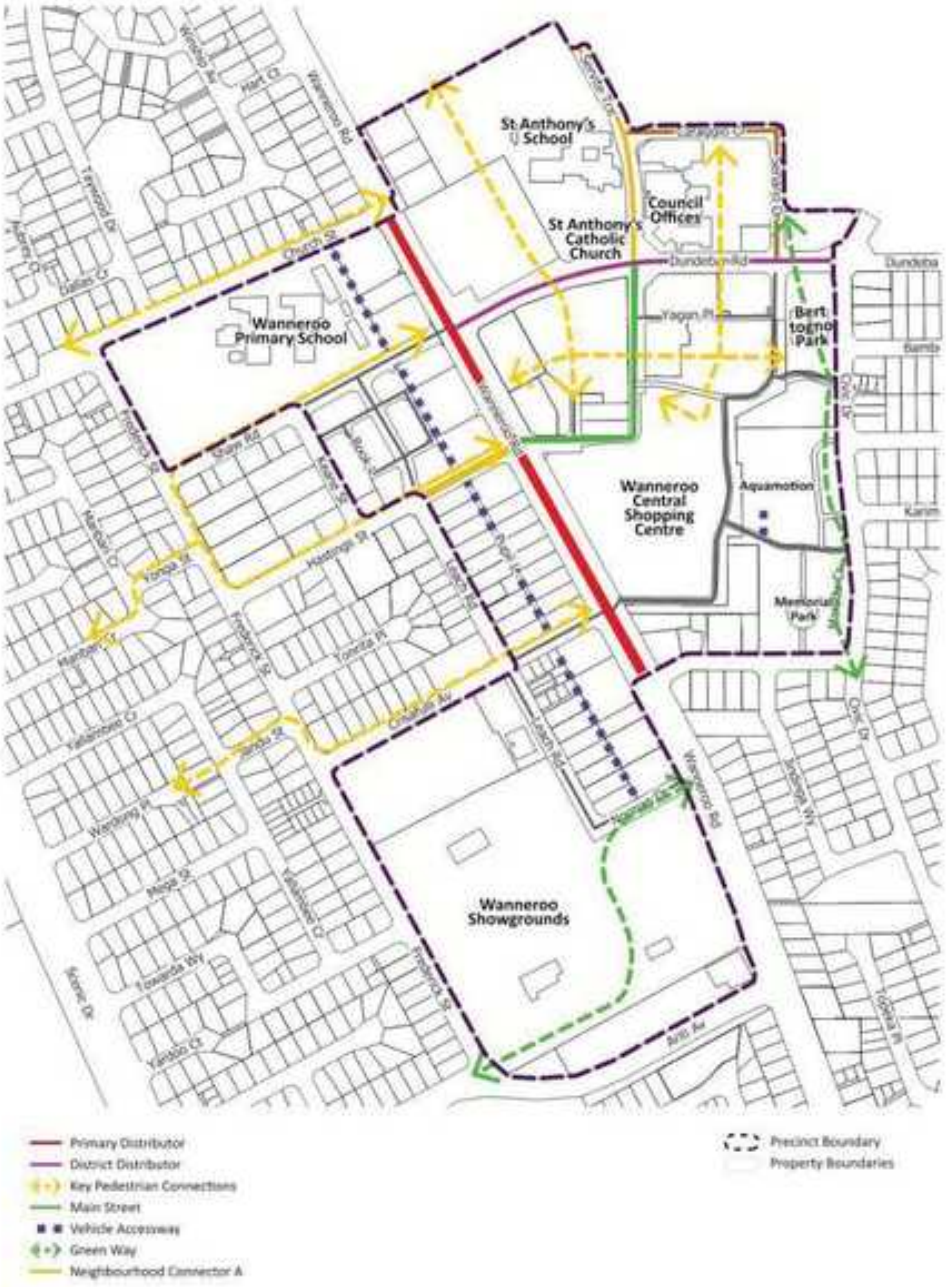
The WTCPP also supports improved footpath and shared path connections in accordance with the City's Pathways Policy, enhanced wayfinding, pedestrian-priority crossing treatments, future zebra crossings at the Dundebar Road roundabout, and improved pedestrian connections between the Town Centre, surrounding neighbourhoods and regional recreational destinations such as the Scenic Drive and Lake Joondalup area. The timing and delivery of these measures will be subject to future planning, funding, approvals and redevelopment opportunities. Collectively, these recommendations will contribute to a safer, more accessible and legible pedestrian environment that supports the role of the WTC as a walkable, active and connected Secondary Centre.

#### Pedestrian connections

The WTCPP identifies a network of pedestrian connections throughout the Town Centre, as shown on P2 - Figure 7. These pedestian connections form a key component of the future movement network and are intended to improve connectivity, permeability and walkability by providing direct and attractive connections between destinations, public spaces and surrounding neighbourhoods. In addition to improving accessibility, the links support urban greening, increased tree canopy, shade provision, biodiversity outcomes and urban cooling.

A number of the identified pedestrian links traverse large redevelopment and opportunity sites where existing movement connections are limited. As redevelopment occurs, development proponents will be required to incorporate and deliver these strategic pedestrian connections through subdivision, development and public realm improvements. This will assist in creating a finer grain movement network and improving access between destinations throughout the Town Centre.

The City will also seek opportunities to progressively enhance pedestrian and green links within existing road reserves and public land through streetscape upgrades, landscaping, street tree planting, lighting, wayfinding and shared path infrastructure. The alignment and delivery of these links will occur through future redevelopment and public realm projects.




P2 - Figure 7 - Movement Network

## PUBLIC TRANSPORT AVAILABILITY AND USAGE

The WTCPP supports a land use pattern that encourages greater use of public transport over time by concentrating retail, commercial, residential, entertainment and community activities within a compact and walkable centre.

State strategic planning documents identify Wanneroo Road as a potential future public transport corridor and recognise the importance of improving connections between the growing north-east corridor, activity centres and future strategic transport infrastructure. The WTCPP supports these broader strategic objectives and seeks to ensure future development does not compromise opportunities for future public transport investment.

While opportunities for enhanced public transport services may emerge over the life of the Plan, no higher order public transport project or transit interchange is currently committed within the WTC. Accordingly, the WTCPP adopts an enabling approach by supporting future advocacy for improved public transport outcomes and ensuring future development does not compromise opportunities for future public transport improvements where appropriate.

The City will continue to work with the Public Transport Authority, Department of Transport and other relevant State agencies to advocate for improved public transport accessibility, service frequency, network connectivity and passenger amenity within the WTC.

In support of these objectives, the WTCPP recommends:

- improvements to bus stop infrastructure and passenger facilities, including shelters, seating and wayfinding;
- improved pedestrian connections to public transport stops and key destinations;
- support improved bus service connections between the WTC, surrounding communities and future East Wanneroo growth areas.;
- improved service frequency and network connectivity between the WTC, Joondalup, Whitfords and surrounding activity centres;
- integration of future public transport investment with walking and cycling infrastructure; and
- investigation of future public transport initiatives identified through State strategic transport planning processes.

Collectively, these measures will help improve public transport accessibility, support increasing levels of activity within the Town Centre and reduce reliance on private vehicle travel over time.

## ROAD NETWORK

### Road Network upgrades

The strategic road network servicing the WTC will largely remain unchanged. Consistent with the findings of the Traffic and Transport Management Strategy, future improvements should focus on strengthening local connectivity, improving pedestrian amenity, supporting active transport and facilitating redevelopment, rather than increasing strategic road capacity.

The WTCPP supports the creation of a finer grain street network within redevelopment areas, including street connections that improve permeability, accessibility and network resilience. Particular emphasis is placed on enhancing connectivity within areas north of Dundebar Road and supporting a street network that balances movement and place outcomes.

Future road upgrades should seek to create a more pedestrian friendly urban environment through improved streetscapes, street tree planting, landscaping, footpaths, cycling infrastructure, traffic calming measures and place-based street design treatments. Development should contribute to the delivery of the movement network identified within the WTCPP and demonstrate how it supports improved connectivity and accessibility.

The following road improvement opportunities are identified by the Traffic and Transport Management Strategy for future investigation, planning and delivery through subdivision, redevelopment and development processes:

- extension of Servite Terrace and Friars Drive through the northern redevelopment area (pending Lot 9000 environmental approvals);
- delivery of new east-west road connections between Servite Terrace, Friars Drive, Boyagin Way and adjoining development sites to improve network permeability and traffic distribution (pending Lot 9000 environmental approvals);
- widening of the Scenario Drive and Cafaggio Crescent road reserves to accommodate improved pedestrian infrastructure, landscaping and public realm outcomes;
- provision of laneways, service roads and reciprocal access arrangements to improve rear-lot access and reduce reliance on direct access from Wanneroo Road;
- future intersection upgrades where warranted by traffic, pedestrian and cycling demand; and
- implementation of safe access arrangements to Wanneroo Road in consultation with Main Roads WA.

Consistent with advice provided by Main Roads WA, the WTCPP supports the protection of sufficient road reserve width along Wanneroo Road north of Dundebar Road to match the existing reserve width to the south.

### Public Road Network and permeability through opportunity sites

Throughout the WTC, a number of internal access roads, laneways and circulation routes provide important north-south and east-west movement connections and contribute to the overall permeability through the town centre. In several locations, these connections remain in private ownership.

Where existing private roads perform a broader movement function and contribute to connectivity within the Town Centre, the WTCPP supports investigation of opportunities for their future transition to public roads. This would improve permeability, strengthen network resilience and provide greater certainty regarding long term public access.

The WTCPP does not require the immediate transfer of private roads into public ownership. However, where redevelopment, subdivision or major site renewal occurs, opportunities should be explored to formalise strategic movement connections and improve public accessibility where appropriate.

The delivery and potential public dedication of these connections will be considered on a case-by-case basis through future subdivision, redevelopment and site specific planning processes. Particular emphasis is placed on improving permeability throughout the Town Centre core and strengthening connections between key destinations, redevelopment sites and the wider movement network.

## VEHICLE PARKING AND ACCESS

Consistent with the findings of the Traffic and Transport Management Strategy, parking should increasingly operate as a shared community resource rather than being provided independently by individual developments. This approach recognises that parking demand varies throughout the day and allows parking resources to be used more efficiently while reducing the amount of land required for parking.

The WTCPP supports a 'park once' approach whereby visitors can park within the Town Centre and comfortably access multiple destinations on foot. To support this approach, future parking management measures may include shared parking arrangements, reciprocal parking agreements, consolidated parking supply, improved pedestrian connections between parking areas and destinations, enhanced parking wayfinding and the prioritisation of short stay parking within the Town Centre core.

A strategic benchmark of approximately one parking bay per 60m² of non-residential floor area will be used to guide future development assessment, subject to site specific circumstances, land use requirements and opportunities for shared parking.

As redevelopment occurs, structured parking solutions should be prioritised over large surface car parks where feasible. This will support more efficient land use outcomes, improved urban form, increased redevelopment opportunities and the creation of active frontages and high-quality public spaces.

Consistent with the Traffic and Transport Management Strategy, a future multi-level public parking facility may be considered on suitable City-owned land to support long term growth within the Town Centre. Initial investigation areas may include the Civic Centre, Aquamotion and Memorial Park precincts. Any such facility would be subject to detailed feasibility assessment, funding availability and future Council consideration.

The City will continue to monitor parking demand and utilisation across the WTC to ensure that future parking provision supports redevelopment, economic activity and transport choice while minimising unnecessary reliance on private vehicle travel.

## CYCLE NETWORK

The WTCPP supports implementation of the City's Active Transport Plan and Long-Term Cycle Network through the delivery of a connected, safe and legible cycling network across the Town Centre. The movement framework seeks to improve cycling access to key destinations while strengthening connections to surrounding residential neighbourhoods, recreation areas and the broader cycling network.

Priority recommendations include upgrades to cycling infrastructure along Dundebar Road and Wanneroo Road, additional shared path infrastructure, improved crossing opportunities, stronger connections to surrounding residential areas and better integration with regional cycling routes. These improvements will support both recreational and transport-related cycling and encourage greater use of active transport for local trips.

Development within the Town Centre should contribute to a high-quality cycling environment through the provision of bicycle parking facilities, end-of-trip facilities and appropriate integration with the broader active transport network. Redevelopment should also respond to the objectives of the City's Active Transport Plan and Long-Term Cycle Network where relevant.

Bicycle parking and end-of-trip facilities are important components of a successful Secondary Centre and support increased use of active transport. Development within the WTC should provide bicycle parking, showers, change facilities and lockers in accordance with Part 1 of the WTCPP and relevant State planning policy requirements.

Collectively, these measures will support mode shift, improve accessibility and contribute to the creation of a more sustainable, healthy and resilient Town Centre.



Creating greener connected pedestrian linkages.




Potential to strengthen wayfinding and connectivity.



Potential to reposition parking and strengthen the pedestrian environment.

## 6.4.4 MOVEMENT SPATIAL PLAN

The Movement Spatial Plan translates the movement objectives and strategies of the WTCPP into a clear spatial framework that guides the future location, function and hierarchy of streets, paths and transport infrastructure throughout the Wanneroo Town Centre. The WTCPP identifies strategic movement priorities and key connections that support improved accessibility, permeability, safety and transport choice. Together, these initiatives seek to strengthen the role of the WTC as a highly walkable, accessible and connected Secondary Centre.

The actions identified on the Movement Spatial Plan establish a long term framework to guide future transport planning, detailed design, public realm improvements, redevelopment outcomes, financial programming and advocacy initiatives.

**P2 - Table 12** - Movement opportunities

| LEGEND | |
|---|---|
| 1 | **Support pedestrian movement along Wanneroo Road** - reduce traffic speed and street function between Hart Close and Ariti Avenue - subject to Main Road WA planning and delivery |
| 2 | **Improve pedestrian and cyclist crossings** - provide frequent, safe and legible crossings at intersections and key streets to improve connectivity across the centre - in conjuntion with Main Roads WA |
| 3 | **Identify a potential future transit node location** - support investigation of opportunities for a future transit hub and associated public transport infrastructure, including any land use and movement planning implications, in consultation with the Public Transport Authority and Main Roads WA. |
| 4 | **Local street upgrades** - plan and implement upgrades to local road network as required. |
| 5 | **Investigate a new multi level parking facility** - identify, safeguard and construct a centrally located multi-level parking facility to - subject to Council decision making and feasibilty |
| 6 | **Enhance Civic Drive green link** - upgrade and extend the Civic Drive shared path north of Dundebar Road as required to support walking and cycling. |
| 7 | **Provide continuous pedestrian links through the Town Centre** - create east-west and north-south pedestrian links through private and public development. |
| 8 | **Support continuous rear of lot vehicle access along Wanneroo Road** - maintain two way vehicle access at the rear of lots through redevelopment, laneway upgrades or reciprocal access easements. |
| 9 | **Introduce a WTC wayfinding network** - through the WTC Master Plan, providing a coordinated pedestrian and cyclist wayfinding system across the Town Centre. |
| 10 | **Provide end-of-trip and active transport facilities** - locate bicycle parking and end-of-trip facilities at major destinations and public transport stops to support active and sustainable travel. |




**P2 - Figure 8** - Movement Spatial Plan

## 6.4.5 MOVEMENT - RESPONSE TO STATE PLANNING POLICY

The State Planing framework emphasises the importance of integrated, accessible and legible movement networks that support walkability, public transport use and reduced reliance on private vehicles within activity centres. The following tables outline how the movement framework and strategies of the WTCPP respond to the relevant objectives and considerations of SPP 4.2 and SPP 7.2, supporting a well-connected Town Centre that supports active transport and strengthens the role of the WTC as a walkable and transit-supported Secondary Activity Centre

**P2 - Table 13** - Movement response to State Planning Policy

| RELEVANT ACTIVITY CENTRE POLICY THEMES | WTCPP RESPONSE |
|---|---|
| Prioritise walking, cycling and public transport | The WTCPP prioritises active transport through a network of pedestrian and green links, improved footpaths and shared paths, enhanced pedestrian crossings, expansion of lower speed environments, bicycle parking and end-of-trip facilities. Future public transport improvements are supported through integrated land use planning and ongoing advocacy to relevant State agencies. |
| Ensure parking is adaptable over time and supports long-term centre evolution | Parking is planned to transition from surface parking to structured and multi-level formats over time. Consolidated parking, reciprocal access arrangements and maximum parking provisions encourage shared use and reduce unnecessary vehicle trips within the centre. |
| Integrate land use and transport | Higher-density mixed-use development is concentrated within the Town Centre core, increasing opportunities to access employment, services, public spaces and community facilities by walking and cycling. |
| Create a safe and attractive public realm that supports pedestrian movement | The WTCPP supports public realm improvements, pedestrian priority environments, landscaping, street tree planting, traffic calming measures, active frontages and improved wayfinding to enhance safety, comfort and accessibility. |
| Develop a resilient movement network that prioritises affordable, efficient and healthy transport modes | The WTCPP improves connectivity and reduces barriers to walking, cycling and public transport through pedestrian and green links, active transport infrastructure, improved crossings, enhanced access to key destinations and a finer-grain movement network that encourages short trips to be undertaken without reliance on private vehicles. |
| Ensure accessibility for all users | Universal access principles are embedded throughout the movement framework through accessible routes, crossing facilities, public realm upgrades and wayfinding initiatives. |

| SPP 7.2 OBJECTIVES | CONSIDERATIONS | STRATEGIC RESPONSE/COMMENT |
|---|---|---|
| To ensure the movement network supports the function and ongoing development of the precinct. | Address the current and future access needs of the precinct through an integrated transport planning and land use assessment process. | A Traffic and Transport Management Strategy has informed the preparation of the WTCPP and identifies opportunities to improve connectivity, active transport, parking management and movement throughout the Town Centre. The WTCPP identifies a future movement network, pedestrian links and strategic connections to support growth and redevelopment over time. |
| | Design the movement network in balance with place considerations, local access and neighbourhood/district/regional access requirements for travel to, through and around the precinct. | The WTCPP adopts a place-based movement framework that prioritises walkability, improved public realm outcomes and local accessibility whilst maintaining the role of Wanneroo Road and other key distributor roads within the broader transport network. |
| To ensure a resilient movement network that prioritises affordable, efficient, sustainable and healthy modes of transport. | Develop a movement network that enables convenient and comfortable travel and access for users of all ages and abilities | The WTCPP supports a connected pedestrian and cycling network, improved crossings, wayfinding, universal accessibility principles and public realm improvements that increase accessibility and comfort for all users. |
| | Design transport infrastructure that provides a safe network for all users. | The WTCPP prioritises active transport modes through improved pedestrian links, shared paths, reduced speed environments, bicycle facilities and support for improved public transport integration. |
| To ensure a resilient movement network that prioritises affordable, efficient, sustainable and healthy modes of transport. | Prioritise walking, cycling, public transport and shared mobility, to minimise car dependency. | The WTCPP prioritises active transport through pedestrian and green links, shared paths, lower speed environments, bicycle parking, end-of-trip facilities and enhanced pedestrian connectivity. Public transport accessibility is supported through integrated land use planning and future advocacy for service improvements. |
| | Establish mode share targets for the precinct. | While no specific mode share targets have been established for the WTCPP, the movement framework seeks to progressively increase the proportion of trips made by walking, cycling and public transport through the delivery of pedestrian and green links, improved active transport infrastructure, lower speed environments, end-of-trip facilities, integrated land use planning and enhanced public transport accessibility. Future monitoring of travel behaviour and transport network performance may inform the development of mode share targets as the Town Centre evolves. |

| | | |
|---|---|---|
| To enable a range of transport choices that meet the needs of residents, workers and visitors. | Prioritise provision of direct and legible pedestrian routes within the precinct and to adjacent areas. | The WTCPP identifies a network of pedestrian and green links connecting key destinations, public spaces, community facilities, redevelopment sites and surrounding neighbourhoods. Development is expected to contribute to the delivery of these links where relevant. |
| | Provide a bicycle network within the precinct that integrates with the broader cycle network and connects safely and conveniently to key destinations. | The WTCPP supports implementation of the City's Active Transport Plan and Long-Term Cycle Network through upgraded cycling infrastructure, shared paths, improved crossings and enhanced connections to surrounding residential areas and regional cycling routes. |
| To enable a range of transport choices that meet the needs of residents, workers and visitors. | Identify public transport services and infrastructure to be upgraded or established to improve coverage, frequency, connection and user choice. | The WTCPP supports future improvements to public transport accessibility, service integration and passenger amenity. While State planning documents identify potential future public transport corridors and initiatives, no higher-order public transport project is currently committed within the Town Centre. Future improvements will be subject to State planning, funding and delivery processes. |
| | Design public transport infrastructure to integrate with and be appropriate for the intended mode share, patronage and place character of the precinct. | The WTCPP supports improved pedestrian and cycling access to bus stops, potential upgrades to passenger facilities and integration of future public transport investment with the public realm and movement network. |
| | Consider access requirements for service vehicles and logistical freight movements within the precinct. | The WTCPP retains appropriate freight and servicing access via Wanneroo Road and Dundebar Road and supports rear-lot servicing and access arrangements where appropriate. |
| | Design the movement network to allow for private vehicle access and movement that is appropriate to the precinct function. | The WTCPP retains the strategic road network whilst supporting future local road connections, improved permeability, traffic calming measures and place-based street design. |
| To ensure the quantity, location, management and design of parking supports the vision of the precinct. | Provide the minimum amount of car parking appropriate for the precinct. | The WTCPP supports a parking management approach that balances accessibility with reduced reliance on private vehicle travel. A parking benchmark of approximately one bay per 60m² of non-residential floor area may be used to guide future development assessment, subject to site-specific circumstances. |
| | Manage and locate car parking to prioritise access according to the needs of different user groups. | Shared parking, reciprocal access arrangements, consolidated parking supply, public parking and short-stay parking are supported to improve parking efficiency across the Town Centre. |
| | Design parking to be integrated with the urban form. | The WTCPP supports the gradual transition from large surface car parks to more efficient and integrated parking solutions, including structured parking where appropriate. |
| | Design parking for adaptability over time to accommodate potential future change of use. | Future structured parking facilities may be considered as demand increases, subject to detailed feasibility assessment, funding availability and future Council consideration. |
| | Consider parking requirements and end of trip facilities for other transport modes. | Bicycle parking and end-of-trip facilities are required through Part 1 provisions and support increased walking, cycling and sustainable travel within the WTC. |

# 6.5 LAND USE

## 6.5.1 LAND USE STRATEGIES

Land Use supports the unique role of each place while creating the diversity required for a vibrant live-work-visit destination. As a Secondary Centre within the metropolitan activity centre hierarchy, the WTC will provide a mix of retail, commercial, civic, community, employment and residential activities that serve the northern growth corridor.

The WTC is intended to evolve beyond its traditional retail and civic functions toward a more diverse mixed-use centre that supports population growth, local employment, investment and community activity. This transition will be supported through higher intensity development within walkable core areas, improved public realm and movement connections, and redevelopment of key opportunity sites.

The WTC is not intended to replicate the role of larger strategic metropolitan centres. Instead, it will retain its distinctive civic and community focus while expanding the range of services, employment opportunities, housing choices and experiences available locally. Land use planning seeks to support a diverse, adaptable and complementary mix of uses that strengthens the role, identity and long-term sustainability of the WTC.

### Strategy 1 - Reinforce the WTC as a Secondary Activity Centre

- Provide for a diverse mix of retail, commercial, office, health, education, civic, community, entertainment and residential uses that support the needs of the growing catchment.
- Support land use outcomes that strengthen economic resilience, employment opportunities, activity diversity and day-to-night activation.

### Strategy 2 - Focus activity generating uses within key locations

- Concentrate higher intensity retail, hospitality, entertainment and commercial uses within the Rocca Way core and key activity interfaces, including Wanneroo Road and Dundebar Road.
- Support active streets, public spaces and civic areas by locating activity-generating uses that encourage pedestrian movement, passive surveillance and social interaction.
- Avoid dispersal of key activity functions to locations that weaken the role of the WTC core

### Strategy 3 - Support mixed-use development and housing diversity

- Encourage mixed-use development within appropriate locations to maximise land efficiency, increase activity and support a compact urban form.
- Promote active non-residential uses at ground level along key streets, activity corridors and key public realm interfaces.
- Facilitate medium to high-density residential development consistent with R60 to RAC-1 coding, supporting diverse dwelling sizes, formats and tenures within walking distance of services, employment, transport and open space.

### Strategy 5 - Manage land use transitions and protect amenity

- Provide appropriate transitions in land use intensity between the WTC core and surrounding residential neighbourhoods.
- Ensure the distribution of uses supports compatibility between higher intensity activity areas and lower scale residential interfaces.
- Encourage development outcomes that respond sensitively to surrounding land uses and established community assets.

### Strategy 6 - Protect civic functions and support local employment

- Reinforce the WTC's role as the civic heart of the City of Wanneroo by retaining and supporting civic, community, cultural and recreational uses in accessible and prominent locations.
- Provide capacity for employment-generating uses including office, health, education, retail and services.
- Support population-driven and knowledge-intensive employment opportunities that contribute to long-term economic sustainability.



## 6.5.2 ECONOMIC, RETAIL AND EMPLOYMENT CONTEXT

The WTC is intended to evolve as a diverse, mixed-use Secondary Activity Centre that performs an important civic, commercial, employment and community function within the southern portion of the City of Wanneroo. Consistent with SPP 4.2, the WTC is expected to accommodate a broad range of employment generating and investment attracting uses in locations that are accessible, walkable and well connected to surrounding communities.

An Economic, Retail and Employment Strategy (ERE Strategy) as included in Appendix 4 has been prepared in support of the WTCPP. The ERE Strategy identifies that the WTC plays an important role within the City's activity centre hierarchy and is well positioned to evolve beyond its traditional civic and retail function toward a mixed-use centre supporting a broader mix of land uses including professional services, health and medical services, community facilities, hospitality, entertainment and higher density residential development.

The ERE Strategy identifies that future growth within the WTC will be driven primarily by:

- population growth within the surrounding catchment, including East Wanneroo;
- increasing demand for population serving services and facilities;
- growth in health, community and professional services;
- opportunities to improve local employment outcomes;
- increased residential density and centre activation; and
- continued redevelopment, economic diversification and strengthening of the Town Centre.

The WTCPP seeks to support these outcomes through a land use framework that balances residential growth with the retention and expansion of commercial, civic and community uses to support long-term economic diversification and resilience. The land use framework also seeks to create certainty for private investment by identifying locations capable of accommodating future commercial, mixed-use and employment generating development as market demand emerges.

### POPULATION GROWTH AND DEMAND DRIVERS

The ERE Strategy identifies strong long term population growth within the WTC catchment and forecasts significant growth in demand for retail, commercial, health/allied health and community activities over time. The catchment is characterised by a relatively young and family oriented population, a growing workforce and increasing demand for a range of goods, services and employment opportunities.

Forecast population growth associated with both established suburbs and future urbanisation areas is expected to increase demand for:

- retail floorspace;
- hospitality and food and beverage uses;
- health and community services;
- professional and business services;
- entertainment and recreation activities; and
- local employment opportunities.

The WTCPP responds by providing capacity for a diverse range of residential and non-residential uses and supporting progressive intensification within appropriate locations throughout the WTC.

### EMPLOYMENT GROWTH AND RESILIENCE

The ERE Strategy identifies that the City currently experiences moderate employment self-sufficiency and relatively low employment self-containment, with many residents travelling outside the City for work despite local employment opportunities existing in several major industries. The Strategy identifies an opportunity for WTC to support improved local employment outcomes by attracting additional population-serving and knowledge-intensive service businesses.

As a Secondary Centre, WTC is not intended to function as a Strategic Metropolitan Centre, but is expected to provide a greater diversity of local employment opportunities and services for its growing catchment. Future employment growth is anticipated in sectors including:

- health, medical, allied health and community services;
- professional and business services;
- commercial office and administrative uses;
- retail and hospitality; and
- recreation, entertainment and cultural activities.

These sectors align with identified floorspace gaps and the needs of a growing and maturing population, and are expected to support local job creation, improve employment self-containment, attract investment and strengthen the long-term economic resilience of the WTC. Employment projections indicate WTC could support approximately 2,000 additional jobs by 2046.

### FLOORSPACE NEEDS AND ECONOMIC OPPORTUNITIES

Population growth within the catchment, together with increasing demand for local services, facilities and employment opportunities, is expected to drive significant growth in both retail and non-retail commercial floorspace over time. The ERE Strategy forecasts substantial growth in supportable commercial floorspace to accommodate this demand. In particular, non-retail floorspace is expected to account for the majority of future growth, reflecting the increasing role of the WTC in providing a broader range of commercial, health, community and professional services. This shift supports the ongoing evolution of the WTC as a mixed-use Secondary Activity Centre rather than a predominantly retail focused centre.

Expanding the range of retail, commercial and service uses within the WTC will also assist in retaining local expenditure, reducing the need for residents to travel elsewhere to access employment, shopping and services. The diversification of land uses will strengthen economic resilience and reinforce the WTC's role as the principal activity centre serving the southern portion of the City. Consistent with the ERE Strategy, the WTCPP supports residential intensification alongside the retention and growth of employment generating, commercial, community and civic activities, ensuring the WTC continues to function as a balanced mixed-use Secondary Activity Centre.

**P2 - Table 14** - Indicative Commercial Floorspace Growth

| FLOORSPACE CATEGORY | EXISTING FLOORSPACE (2026) | SUPPORTABLE FLOORSPACE (2046) |
|---|---|---|
| Shop/Retail | 19,632 m² | 27,000 - 33,300 m² |
| Non-Shop/Retail | 35,393 m² | 71,500 - 82,900 m² |
| Total Commercial Floorspace | 55,025 m² | 98,500 - 116,200 m² |

*Source: Economic, retail and Employment Strategy (Pracsys 2026)*

WTC is strategically positioned between the Wangara and Neerabup industrial areas, enabling it to function as a complementary commercial and service centre that supports the broader employment corridor. The ERE Strategy identifies opportunities for WTC to accommodate population-serving and office-based employment uses, including health, professional services, administration, retail and hospitality, which can cater to the needs of trade and industrial businesses and workers, capitalising on its proximity to these industrial areas while enhancing local employment self-containment within the City.

### 6.5.3 IMPLICATIONS FOR PRECINCT PLANNING

While the ERE Strategy identifies that WTC currently performs an important civic and service role, it also identifies opportunities to strengthen centre activation, increase employment generating activities and diversify the commercial offer of the centre to better fulfil its intended role and function. These findings have informed the land use framework and precinct planning responses contained within the WTCPP as addressed in the following sections.

**P2 - Table 15** - Summary of ERE Strategy Findings

| ERE STRATEGY FINDING | WTCPP RESPONSE |
|---|---|
| Strengthen retail, hospitality and entertainment activity | Support a broader range of retail, hospitality, entertainment and commercial uses that contribute to centre activation and economic vitality. |
| Increase health/medical, allied health and community service related uses | Provide opportunities for health, medical, allied health and community service within appropriate locations throughout the Town Centre. |
| Expand commercial office and professional service related uses | Facilitate professional and commercial office based uses beyond Local Government Administrative uses. |
| Improve local employment opportunities | Retain employment generating land uses and support a greater diversity of local employment opportunities. |
| Increase residential population to support centre activity | Facilitate higher density residential and mixed-use development in appropriate locations. |
| Improve centre activation and walkability | Prioritise active frontages, public realm improvements and strong pedestrian connections. |
| Evolve toward a live-work-visit Secondary Centre | Support a balanced mix of residential, commercial, civic, community and recreation uses. |

#### Reinforce Rocca Way as the commercial, social and hospitality heart of the WTC

Rocca Way is intended to evolve as the commercial, social and hospitality heart of the WTC, providing the primary focus for retail, dining, entertainment and everyday activity. This responds directly to the ERE Strategy, which identifies opportunities to strengthen the centre's retail, hospitality, food and beverage, entertainment and commercial functions while improving activation and pedestrian activity. The WTCPP reinforces this role through its preferred land use framework, active frontage requirements and built form provisions, encouraging mixed-use redevelopment, active ground floor uses and residential development above commercial premises. Collectively, these measures will strengthen Rocca Way as the centre's primary destination for day and evening activity.

#### Strengthen Dundebar Road as the civic, health and professional services precinct

Dundebar Road will continue to evolve as the civic, health and professional services precinct of the WTC, building on its established role as the location of the City of Wanneroo Civic Centre, community facilities and other institutional uses. The WTCPP supports this role by providing for a civic-anchored mixed-use precinct that accommodates health, allied health, professional offices, community services and commercial employment, integrated with supporting residential development and existing community infrastructure. The preferred land use framework in Part 1 reinforces this role, while mixed-use opportunities and built form provisions provide capacity for population-serving and knowledge-intensive employment that complements the precinct's civic function and contributes to a diverse and resilient Town Centre economy.

#### Establish Wanneroo Road as a mixed-use gateway and employment corridor

Wanneroo Road will evolve as the WTC's primary gateway corridor, presenting a high-quality arrival experience while accommodating a diverse mix of employment, commercial and mixed-use development. Building on its strategic location and regional exposure, the WTCPP supports office, professional, service-based, community and other population-serving employment activities, together with complementary retail and residential uses.

The preferred land use framework reinforces this role by encouraging commercial office, business, community and service-oriented activities in locations that benefit from the visibility, accessibility and exposure provided by Wanneroo Road. Over time, mixed-use redevelopment will strengthen the corridor's gateway function, increase employment opportunities and contribute to a more active, connected and integrated Town Centre.

#### Support a diverse local economy and employment base

The ERE Strategy identifies opportunities to improve local employment outcomes by increasing the diversity of employment generating and investment attracting uses within the WTC, particularly in health, professional services, retail, hospitality and community sectors. The WTCPP supports these outcomes through the provision of Commercial and Mixed-Use zones, opportunities for mixed-use redevelopment, and land use provisions that encourage employment generating activities in highly accessible locations within the centre.

#### Create a vibrant and walkable Town Centre

The ERE Strategy identifies that the WTC has experienced a decline in occupied floorspace and centre activity over time, demonstrating the need to improve activation, walkability and connections between key destinations within the centre. Increased pedestrian activity, a broader mix of uses and stronger links between residential, commercial and civic functions are identified as important contributors to future centre vitality. The WTCPP supports these outcomes through:

- a walkable mixed-use structure centred on Rocca Way;
- active frontage requirements in key locations;
- improved pedestrian links between the civic precinct and Wanneroo Central;
- higher residential densities in accessible locations;
- opportunities for food and beverage, entertainment and community uses that contribute to increased activity throughout the day and evening.

Together these initiatives are intended to improve economic activation, increase visitation and support long term centre revitalisation.

### Support the long term evolution of the WTC as a live-work-visit destination

The ERE Strategy identifies that the WTC should evolve beyond its traditional retail and civic role to become a more diverse live-work-visit destination that supports employment, retail, community facilities, recreation and residential living. It also recognises that substantial population growth within the catchment will increase demand for housing, jobs, services and community infrastructure, requiring a flexible planning framework capable of responding to changing market conditions over time.

The WTCPP responds by facilitating mixed-use development, increasing residential density in appropriate locations, supporting a broader mix of commercial, community and employment-generating uses, and strengthening the walkability, activation and connectivity of the WTC. Redevelopment and intensification are focused within identified opportunity locations, while a flexible land use framework provides capacity to respond to future economic growth and community needs.

This is supported by a built form framework that provides capacity for the long-term expansion of retail, commercial, health, community and employment-generating floorspace, alongside increased residential development. Building height and development controls have been structured to enable higher-intensity redevelopment in appropriate locations while maintaining the WTC's important civic and community role. Collectively, these measures provide sufficient flexibility to accommodate future market demand while supporting the continued evolution of the WTC as a vibrant, resilient and sustainable Secondary Centre.

## 6.5.4 PREFERRED LAND USES

The WTC will provide a diverse range of land uses that are consistent with its Secondary Centre classification. In accordance with State Planning Policy, the following table includes land uses considered to be desirable in Secondary Activity Centres.

**P2 - Table 16** - Secondary Activity Centre desired land uses

| Use category | Land Uses |
|---|---|
| **Shop/Retail** | Shop, liquor store, fast food outlet / lunch bar, restaurant/café market, restricted premises, convenience store |
| **Other Retail** | Bulky goods showroom |
| **Office/Business** | Office, medical centre |
| **Entertainment/ Recreation/ Cultural** | Amusement parlor, art gallery, private recreation,small bar, tavern, nightclub, cinema/theatre, hotel, motel. |
| **Other** | Educational establishment |

The State planning framework has increasingly moved toward a precinct based place-led design approach for areas requiring a high level of planning, particularly where higher-density and mixed-use development is proposed and within higher-order activity centres. Preparation of the WTCPP has applied this place-led approach to land use.

Accordingly, the six sub-precincts identified in the WTCPP each have a distinct land use intent that reflects the role they are intended to play in the successful redevelopment of the centre. Each sub-precinct includes a statement of intent and objectives to guide preferred land uses and design responses.

### SUB-PRECINCT LAND USE INTENT

The following describes the land use intent relevant to each sub-precinct:

#### Sub-Precinct 1 - Rocca Way

The Rocca Way is intended to function as the primary commercial and activity core of the WTC. Preferred land uses include retail, hospitality, entertainment, commercial and mixed-use development, with active ground floor uses addressing streets and key pedestrian spaces. Medium to high-density residential development above ground floor commercial uses is encouraged where it supports the sub-precinct's role as the main street and focal point of activity, and is not envisaged as a standalone land use.

#### Sub-precinct 2 - Dundebar

The Dundebar sub-precinct is intended to perform a civic-anchored mixed-use role within the WTC. Preferred land uses include civic, community, office, health and knowledge based services within mixed-use development. Residential development is encouraged where it maintains the precinct's civic function and supporting commercial role and is not envisaged as a standalone or dominant land use.

#### Sub-Precinct 3 - Wanneroo Road

The Wanneroo Road sub-precinct is intended to function as a mixed-use gateway corridor along Wanneroo Road, accommodating office, service based and employment-generating commercial and residential uses. Land uses are to respond to the sub-precinct's road-oriented and transitional role, with residential development typically located above non-residential uses and not envisaged as a standalone or dominant land use.

#### Sub-precinct 4 - Memorial Park

The Memorial Park sub-precinct is intended to accommodate civic, community, recreation and supporting residential uses within a strong landscape setting. Development is to be low-rise and sensitively integrated with public open space and civic facilities, with residential and limited mixed-use development supporting activation, surveillance and housing diversity while remaining secondary to the sub-precinct's civic and open space role.

#### Sub-precinct 5 - Frame

The Frame sub-precinct is intended to accommodate predominantly low-rise residential and compatible mixed-use development that provides a transition between the WTC and surrounding lower-intensity residential areas. Residential development is expected to support housing diversity and neighbourhood integration, with non-residential uses limited to those that complement residential amenity and the function of the Town Centre core.

#### Sub-precinct 6 - Showgrounds

The Showgrounds sub-precinct is intended to be retained for public open space, civic, cultural, recreational and community purposes. Residential development is not contemplated, with built form limited to facilities and structures that directly support the sub-precinct's open space and community function.

## 6.5.5 RESIDENTIAL DEVELOPMENT

The WTCPP supports the introduction of a diverse range of housing opportunities that will enable more people to live within walking distance of employment, shops, community facilities, public transport and public open space. Increasing the resident population within the WTC is fundamental to supporting a vibrant, walkable and economically resilient Secondary Centre, providing the critical population needed to sustain local businesses, services and community activity throughout the day and evening.

The WTCPP facilitates a range of residential housing typologies through the application of medium to higher-density residential codes, ranging from R60 to R-AC1. Residential and mixed-use development within the WTC is to be assessed against the relevant Residential Design Codes (as shown on Plan X) and the provisions of this WTCPP.

The Residential, Mixed Use and Commercial zones are intended to provide a variety of living opportunities that are appropriate to the role of the WTC as a Secondary Activity Centre. Medium-density development is generally directed toward the periphery of the centre to provide an appropriate interface with surrounding lower-density residential areas. Higher-density apartment based development is intended to be concentrated within the central areas, where access to services, employment, public transport and amenity is strongest.

The WTC interfaces directly with established residential areas along Sinagra Street and Leach Road. The built form provisions in Part 1 manage these interfaces by providing an appropriate transition in building height, scale and residential density to adjoining neighbourhoods, ensuring a high standard of visual and residential amenity while reinforcing the intended urban character of the WTC.

### RESIDENTIAL DEVELOPMENT YIELDS

Residential development is fundamental to the long-term success of the WTC, providing the population needed to support local businesses, employment, community facilities and public transport while contributing to a more vibrant, active and walkable Town Centre. Consistent with SPP 4.2, residential development should:

- support the Town Centre's employment, retail and civic role;
- contribute to centre vitality and extended hours of activity;
- be concentrated in locations with high accessibility and amenity; and
- respond sensitively to major civic, community and public open space assets.

The dwelling yield analysis for the WTC has been prepared in the context of an established centre undergoing long term renewal, rather than a greenfield development. Redevelopment is expected to occur incrementally over time, reflecting fragmented land ownership, varying lot sizes and configurations, the continued viability of existing development, infrastructure delivery and changing market conditions.

Accordingly, the dwelling yield assumptions do not rely on comprehensive or simultaneous redevelopment of all sites. Instead, they reflect a realistic pattern of gradual, market led intensification, with higher density outcomes concentrated in identified opportunity sites and locations with strong amenity and accessibility. This approach supports infrastructure coordination and staging over a long term planning timeframe of approximately 10 to 20+ years.

The outcomes presented in this section reflect the current WTCPP boundary. Lot 9000 Wanneroo Road, Sinagra, which was identified for residential development under previous planning frameworks, has been excluded from the WTCPP pending environmental assessment.



Consequently, the current dwelling yield and housing typologies are based on the remaining residentially capable land within the WTC. Should Lot 9000 be included within a future planning framework, it is anticipated to accommodate predominantly lower to medium-density housing forms, including single and grouped dwellings.

Transformation of the WTC is expected to occur progressively over the long term, with public realm improvements, infrastructure investment and redevelopment of key opportunity sites acting as catalysts for private investment. To recognise the inherent uncertainty associated with market-led redevelopment, the WTCPP presents Low, Target and High development scenarios that reflect different rates of redevelopment and housing delivery. Dwelling yields are expressed as centre wide gross densities derived from sub-precinct assumptions, consistent with the design led and outcome focused approach adopted throughout the WTCPP.

**P2 - Table 17** - Indicative dwelling yield by sub-precinct

| SUB-PRECINCT | DWELLINGS LOW (25DW/HA GROSS) | DWELLINGS TARGET (32DW/HA GROSS) | DWELLINGS HIGH (33DW/HA GROSS) |
|---|---|---|---|
| Rocca Way | 670 | 915 | 1,000 |
| Dundebar | 400 | 500 | 600 |
| Wanneroo Road | 185 | 230 | 275 |
| Memorial Park | 40 | 60 | 75 |
| Frame | 125 | 145 | 180 |
| Showgrounds | 0 | 0 | 0 |
| TOTAL | 1,480 | 1,850 | 2,220 |

*Note:*
1. *Density assumptions reflect typical dwelling sizes and development efficiencies appropriate to each sub precinct. Specific dwelling sizes and bedroom mixes are not prescribed and will be determined at the development application stage.*
2. *All dwelling yield figures are indicative and approximate only and represent medium to long term scenarios rather than maximum development capacity. Figures have been rounded for clarity and are intended to illustrate the extent of residential capacity rather than exact dwelling numbers.*
3. *Sub-precinct residential density assumptions expressed in dwellings per hectare refer to net developable area (NDA), not the gross centre area. Dwelling yields are derived from NDA within residentially capable sub-precincts, with gross centre-wide density calculated using the total Precinct Plan area (ST.3).*
4. *Low scenario = Target less 20%, High scenario = Target plus 20%*

### Scenarios and outcomes

Low, Target and High dwelling yield scenarios illustrate a range of potential redevelopment outcomes by applying different residential density assumptions to the Net Developable Area (NDA) of each sub-precinct.

- Low Scenario - reflects slower redevelopment and lower-density uptake, resulting in approximately 1,480 dwellings (25 dwellings per gross hectare).
- Target Scenario - achieves approximately 1,850 dwellings (32 dwellings per gross hectare). It assumes a balanced level of redevelopment aligned with the intended role and built form of each sub-precinct and would accommodate approximately 4,625 residents based on an average household size of 2.5 persons per dwelling.
- High Scenario - represents an upper range capacity outcome of approximately 2,220 dwellings (39 dwellings per gross hectare), assuming strong market uptake and redevelopment at the higher end of the built form controls over time.

The Target Scenario achieves an average residential density of approximately 32 dwellings per gross hectare across the WTC, exceeding the minimum benchmark of 25 dwellings per gross hectare for a Secondary Activity Centre.

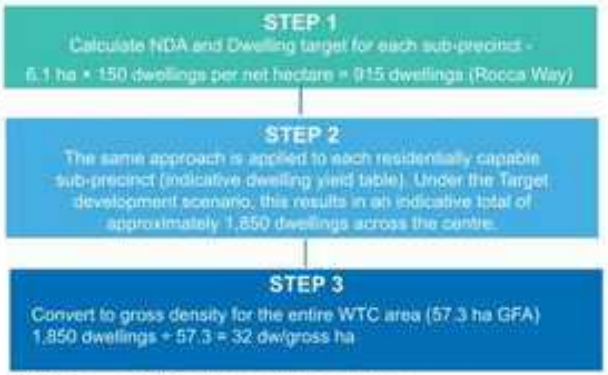
The indicative dwelling yields have been prepared in conjunction with the non-residential floorspace capacity to ensure the WTC continues to evolve as a balanced Secondary Centre. Consistent with the findings of the ERE Strategy, residential growth is intended to support, not displace, the centre's retail, commercial, employment, civic and community functions. Accordingly, the dwelling yield assumptions allow for active ground-floor commercial uses, mixed-use development, employment-generating floorspace, and the retention of significant civic, community and public open space assets, ensuring the WTCPP delivers a balanced live-work-visit environment. Under the Target Scenario, the WTC would accommodate approximately 4,625 residents, providing a population base to support local services, businesses, community facilities and public transport while reinforcing the role of the centre as a Secondary Activity Centre.

### Net Developable Area and Residential Density Assumption methodology

Indicative dwelling capacity has been prepared using a sub-precinct-based, land-led methodology that applies residential density assumptions to the NDA of each sub-precinct. NDA represents land that is realistically capable of accommodating redevelopment over the medium to long term, excluding roads, public open space, civic and community uses, schools, infrastructure and land intended for long term retention. The Showgrounds sub-precinct has been excluded from the dwelling yield calculations as it is not intended to accommodate residential development.

Residential density assumptions (expressed as dwellings per net hectare) reflect the intended role, built form and land use outcomes for each sub-precinct. Higher densities are focused within the WTC core and mixed-use sub-precincts, while moderated densities apply to civic, park-edge and transition areas to respond to interface, amenity and built form considerations.

Dwelling yield estimates are indicative only and should not be interpreted as development entitlements. While separate floorspace modeling tested the theoretical capacity enabled by the proposed built form controls, the WTCPP adopts the land-based methodology as the preferred policy position, as it more accurately reflects realistic, staged and market-led redevelopment within an established activity centre. **P2 - Table 18** summarises the assumptions that underpin the indicative dwelling yield calculations.




**P2 - Figure 9** - Dwelling yield calculation

**P2 - Table 18** - Sub-precinct dwelling assumptions

| SUB-PRECINCT | ROLE/ FUNCTION | NDA | TARGET NET DENSITY (DW/HA) | BUILT FORM OUTCOME | PLANNING RATIONALE |
|---|---|---|---|---|---|
| **Rocca Way** | Primary activity centre core and main street | 6.11ha | 150 | Mixed-use, Mid to higher rise apartments (up to 9 storeys) | • highest accessibility and amenity;<br>• supports retail and, commercial core;<br>• active ground floor uses;<br>• opportunity sites and larger landholdings enable higher intensity outcomes |
| **Dundebar** | Civic anchored mixed-use precinct | 5.02ha | 100 | Mixed-use, mid rise (generally between 5 - 7 storeys) | • significant civic and institutional land retained;<br>• residential supports employment and civic functions;<br>• mid-rise built form as a transition between core and surrounding areas |
| **Wanneroo Road** | Gateway, mixed use corridor | 3.05ha | 75 | Mixed-use, mid-rise (typically up to 4 - 7 storeys | • primary regional road interface;<br>• built form responds to access, traffic and amenity constraints;<br>• redevelopment facilitated by lot consolidation over time |
| **Memorial Park** | Residential/ mixed-use interface with retained POS and civic | 1.17ha | 50 | Low to mid-rise residential and mixed-use (generally 2 - 4 storeys) | • sensitive interface with open space;<br>• requires setbacks, landscaping and amenity protection;<br>• supports passive surveillance and park activation |
| **Frame** | Mixed-use, Residential transition | 3.55ha | 40 | Low-rise residential and mixed-use (townhouses, terraces, low-rise apartments) | • interface with existing residential areas and school;<br>• transitioning lower scale built form;<br>• supports housing diversity and gradual transition |
| **Showgrounds** | Community and recreational precinct | N/A | N/A | No residential development | • land retained for community use;<br>• excluded from dwelling yield calculations |

*Note:*
1. *Net Developable Area (NDA) excludes roads, public open space, civic and community uses, schools and other land identified for long term retention.*
2. *Residential densities are expressed per hectare of NDA and are indicative only.*
3. *Built form ranges are indicative and subject to detailed design and development approval.*

## HOUSING DIVERSITY

The WTCPP seeks to support a diverse range of housing types and sizes that respond to the changing demographic profile and future growth of the Wanneroo community. Increasing the resident population within the WTC is fundamental to creating a vibrant, walkable and mixed-use centre, providing more people with the opportunity to live within walking distance of shops, employment, community facilities, parks and public transport. Demographic analysis identifies increasing demand for smaller, more accessible and diverse housing options, including homes suited to older residents wishing to age in place, smaller households, key workers and people seeking an urban lifestyle connected to everyday services.

Residential development within the WTC is intended to:

- provide housing suitable for a range of household types, including singles, couples, families, downsizers and older residents;
- support ageing in place by enabling residents to remain close to services and community facilities as their housing needs change;
- deliver a mix of housing forms and dwelling sizes that respond to the role and character of each sub-precinct;
- contribute to a critical residential population that supports local businesses, services and civic facilities; and
- reinforce the WTC as a compact, walkable, live-work-visit destination.

Residential development is expected to be delivered predominantly through medium and higher-density apartments and mixed-use development within the Town Centre core, with grouped housing and lower-rise residential forms generally limited to transition areas. This reflects the intended role of the WTC as a Secondary Activity Centre and supports efficient use of land, infrastructure and services.

An indicative interpretation of dwelling yields by dwelling type is provided in P2 - Table X to illustrate the likely housing mix under the Target development scenario (approximately 1,850 dwellings). The indicative mix has been informed by the dwelling yield analysis, demographic trends, sub-precinct roles and intended built form outcomes. It is provided for illustrative purposes only and does not prescribe or limit future development outcomes.

**P2 - Table 19** - Indicative dwelling type by sub-precinct

| SUB-PRECINCT | TARGET DWELLINGS | SINGLE DWELLINGS | GROUPED DWELLINGS | MULTIPLE DWELLINGS |
|---|---|---|---|---|
| **Rocca Way** | 915 | 0 | 0 | 915 |
| **Dundebar** | 500 | 0 | 150 (30%) | 350 (70%) |
| **Wanneroo Road** | 230 | 0 | 0 | 230 |
| **Memorial Park** | 60 | 3 (5%) | 33 (55%) | 24 (40%) |
| **Frame** | 145 | 22 (15%) | 102 (70%) | 22 (15%) |
| **Showgrounds** | 0 | 0 | 0 | 0 |
| **TOTAL** | **1,850** | **25** | **435** | **1,390** |

## 6.5.6 LAND USE SPATIAL PLAN

The Land Use Spatial Plan provides a map based illustration of the intended distribution and role of land uses across the WTC, demonstrating where different activity generating, mixed-use, commercial, civic and supporting uses are encouraged to occur. It is indicative in nature and is intended to assist in interpreting the land use provisions of the WTCPP.

**P2 - Table 20** - Land Use opportunities

| LEGEND | |
|---|---|
| 1 | **Reinforce Rocca Way as the primary mixed use activity core** - accommodating the highest concentration of retail, hospitality, entertainment and commercial uses, with upper level residential development supporting day to night activity and centre vitality. |
| 2 | **Establish Wanneroo Road as a mixed use activity corridor and gateway** - prioritising employment generating, service based and commercial land uses suited to a regional road environment, with opportunities for upper level residential development. |
| 3 | **Consolidate civic, community and institutional land uses along Dundebar Road** - locating them in close proximity to retail, hospitality and entertainment uses to maximise accessibility, co location benefits and everyday activation. |
| 4 | **Support mixed-use development** - integrating commercial, employment and residential uses to reinforce activity, accessibility and centre vitality. |
| 5 | **Enable higher density mixed-use development** - in locations with the highest access to services, public transport and amenities. |
| 6 | **Provide medium density mixed use and residential development** - delivering a clear transition in scale and intensity between the Town Centre core and surrounding lower density neighbourhoods. |
| 7 | **Retain and protect key civic and recreational assets** - with development limited to uses that support community, cultural and recreational functions |
| 8 | **Facilitate targeted activation opportunities** - including cafe, restaurant and community uses overlooking Bert Togno Park and along new and existing pedestrian links. |
| 9 | **Encourage a diverse mix of land uses that support a day to night economy** - including retail, hospitality, entertainment, community and employment uses |




**P2 - Figure 10** - Land Use Spatial Plan

## 6.5.7 LAND USE - WTCPP RESPONSE TO STATE PLANNING POLICY

As a designated Secondary Activity Centre under SPP 4.2, the WTC is required to accommodate a diverse mix of land uses, increased residential density and employment within accessible, well-connected locations. SPP 7.2 provides a precinct-led framework to integrate land use, built form, movement and public realm outcomes.

The following tables outline how the land use framework and strategies of the WTCPP respond to SPP 4.2 and SPP 7.2, translating State planning policy into a locally appropriate land use structure that supports economic vitality, housing diversity and the ongoing role of the WTC as the City's civic and commercial heart.

**P2 - Table 21** - Land use response to State Planning Policy

| RELEVANT SPP 4.2 POLICY THEMES | WTCPP RESPONSE |
|---|---|
| Provide a diverse mix of land uses appropriate to the function of a Secondary Centre | The WTCPP provides for a broad mix of land uses consistent with a Secondary Activity Centre, including retail, commercial, health, education, civic, community and higher density residential uses. This diversity supports economic resilience, extended activity hours and a strong sense of place within the Town Centre. |
| Concentrate activity generating uses within the centre core and along key movement corridors | Higher intensity retail, commercial, entertainment and mixed use development is focused within the Rocca Way core, along Wanneroo Road and around identified and potential future transit nodes. This approach supports walkability, public transport use and efficient infrastructure provision. |
| Support increased residential density and housing diversity within activity centres | The WTCPP facilitates medium to high density residential development (R60 to R AC1), including mixed use development with residential above ground floor commercial uses. This contributes to achieving SPP 4.2 density targets and provides a diverse range of housing options close to services and employment. |
| Protect and enhance the role of civic, community and cultural facilities | Civic and community uses are retained and reinforced within the Dundebar Road civic spine and Memorial Park precinct, ensuring these uses remain accessible, visible and integrated with surrounding retail and commercial activity. |
| Manage land use transitions and amenity impacts | Land use intensity transitions from the commercial core and Wanneroo Road to mixed use and medium density residential areas at the periphery of the centre. This approach manages amenity impacts and provides an appropriate interface with surrounding lower density neighbourhoods. |
| Support local employment and economic self sufficiency | The WTCPP provides sufficient capacity for population driven and knowledge intensive employment uses, supporting long term employment growth and making a positive contribution to sub regional employment self sufficiency targets. |

| SPP 7.2 OBJECTIVES | CONSIDERATIONS | STRATEGIC RESPONSE/COMMENT |
|---|---|---|
| To ensure current and planned land uses respond to the needs and expectations of the community. | Review existing zonings and land uses within and adjacent to the Precinct to identify gaps and determine the appropriate zones and land use mix. | The existing zonings and land uses within and adjacent to the Town Centre are consistent with the diversity of uses and dwelling types suitable for a Secondary Centre. |
| | Consider the current and future need for services, utilities and social infrastructure, including community, civic and cultural facilities. | Currently the Town Centre contains a broad range of community services and community infrastructure. Where new infrastructure or infrastructure upgrades have been identified through the Precinct planning process as identified in the WTCPP, these will be addressed as development in the town centre progresses and as funding and implementation opportunities arise in collaboration with State government and private developers. |
| | Identify locations for staged land use transition to meet changing community needs. | The WTCPP does not specifically identify the staging of land use transition given the fragmented nature of land ownership, rather it proposes the increased intensification of commercial and residential development which will be assessed on an individual basis. Notwithstanding, the identification of opportunity sites which will accommodate future land use changes including mixed use and higher density residential development aligned with community growth and evolving needs. The early development of these sites may serve as a catalyst to further development and intensification of the centre. |
| To ensure the planned land use types contribute positively to the precinct character and amenity. | Co-locate land uses that have a mutual, positive benefit. | The WTCPP promotes co-location of complementary land uses such as retail, hospitality and community services to enhance vibrancy and convenience within the Town Centre. The plan also provides suitable densities to support high density and mixed use development, ensuring that there is a local population to support business growth, employment opportunities and activity through both the day and evening. |

| | | |
|---|---|---|
| | Locate and distribute land uses to manage amenity impacts such as noise, visual and air pollution. | The WTCPP area is dissected by Wanneroo Road which is a high traffic volume road, as such cannot avoid noise as a consideration. Therefore, development will need to be designed to ensure these impacts on residents and sensitive uses are minimised, and where adjoining Wanneroo Road, consideration will need to be given to State Planning Policy 5.4 - Road and rail noise. Land use distribution concentrates retail and high activity generating commercial activity within the centre core and along Wanneroo Road, transitioning to mixed use and residential uses towards the fringe. This provides opportunity to locate sensitive land uses such as low scale residential and community facilities away from high traffic corridors and entertainment zones. |
| | Distribute land uses across the precinct to support and benefit from the movement network. | The WTCPP focuses on opportunities to improve the movement network, with a focus on active transport through the provision of key pedestrian links through the commercial precincts. Land uses are distributed to align with the integrated movement network, particularly ensuring accessibility to public transport, pedestrian pathways and cycling routes to support sustainable travel and precinct activation. |
| To achieve a mix of land uses and activity that supports the precinct vision. | Determine the appropriate land use mix for the Precinct. | The WTCPP supports a diverse mix of residential, commercial, civic and recreational uses, consistent with its classification as a secondary centre. To support the vision for the town centre, preferred land uses for each sub-precinct have been included in Part 1, intended to foster a vibrant commercial core, supported by mixed uses development and civic uses, transitioning to medium density residential towards the centre's fringe. |
| | Determine the appropriate distribution of residential density to support the intended character and function of the Precinct. | Higher residential densities are focused within the centre core, transit nodes and along transit corridors to support pedestrian movement, public transport use and local business viability, while maintaining medium densities in transitional areas. |
| | Provide for land uses that appropriately activate and promote safety in the public realm. | The WTCPP supports mixed use development with commercial uses at ground level to activate the area during the day and evening in the key commercial areas, along with built form provisions that provide active frontages that enhance street level engagement and passive surveillance, contributing to a safe and lively town centre. |
| | Identify a land use mix that supports local employment and the local economy. | The WTCPP includes provisions for compatible, flexible and employment generating uses to support local business growth and economic resilience. |

# 6.6 BUILT FORM

## 6.6.1 BUILT FORM STRATEGIES

Built Form gives physical expression to the character, identity and function of each place within the WTC. It shapes how streets, parks and public spaces are experienced, reinforces the role of each sub-precinct, and creates the framework for a vibrant, walkable and people focused Secondary Activity Centre.

The scale, form and design of buildings influence how people move through the centre, how public spaces are defined and activated, and how development responds to surrounding neighbourhoods and valued landscape settings. Together with the Urban Structure, Public Realm, Movement and Land Use frameworks, built form establishes a cohesive and legible urban environment that supports economic activity, housing diversity and a strong sense of place.

The WTCPP establishes a clear built form framework that balances increased development intensity with high quality streets, comfortable public spaces and sensitive transitions to surrounding residential areas, parks and civic places. The intended built form outcomes are expected to emerge progressively through coordinated redevelopment, public realm investment and the renewal of catalyst sites over time.

The following strategies provide the design direction for achieving these outcomes, guiding the application of the development standards contained in Part 1. Implementation responsibilities and delivery mechanisms are outlined in Section 7.0 - Implementation and Delivery.

### Strategy 1 - Reinforce the WTC structure through building height and scale

- Concentrate the greatest building height and intensity within the Town Centre core and identified opportunity sites.
- Use podiums and appropriate building proportions to maintain a comfortable human scale
- Transition building height and scale to surrounding neighbourhoods, parks and civic places.

### Strategy 2 - Create active streets and memorable public places

- Frame streets, parks and public spaces with active, people-oriented building frontages
- Prioritise active ground floor uses, transparent facades and frequent entrances along key pedestrian routes.
- Minimise blank walls, servicing and vehicle dominance to create engaging public streets.

### Strategy 3 - Respond to the character of each street and place

- Apply interface-specific provisions that reflect the role and character of each street, park and public space.
- Tailor setbacks, activation and building scale to reinforce the identity of each sub-precinct
- Create consistent, legible and high-quality streetscapes throughout the WTC.

### Strategy 4 - Deliver distinctive architecture that reflects place

- Encourage high-quality architecture that responds to the character and identity of each sub-precinct.
- Use articulated facades, fine-grain detailing and durable materials to create visually interesting streets.
- Manage building bulk through podiums, upper-level setbacks and built form envelopes.

### Strategy 5 - Support adaptable and climate-responsive development

- Encourage lot consolidation to support comprehensive and coordinated redevelopment.
- Facilitate flexible building forms capable of accommodating changes in land use over time.
- Support climate responsive design through building orientation, shading and integration with landscaping.

### Strategy 6 - Celebrate gateways and important civic locations

- Use landmark architecture to define important gateways, intersections and civic places
- Reinforce the identity of Wanneroo Road, Dundebar Road and the Rocca Way core through distinctive building form and architectural expression.
- Encourage development that contributes to wayfinding, legibility and a memorable Town Centre.



Indicative built form - Wanneroo tavern opportunity site

## 6.6.2 PRECINCT PLAN RESPONSES

The following built form responses explain how the development standards and sub-precinct provisions contained in Part 1 will work together to shape the character, identity and experience of the WTC. They demonstrate how built form will reinforce the Urban Structure, frame the Public Realm, support the Movement network, strengthen the role of each sub-precinct and deliver the live-work-visit function of the WTC through a cohesive and place-responsive built environment.

### HEIGHT AND MASSING

Building height and massing across the WTC are articulated in Part 1 of this WTCPP through the application of Public Interface Types. These interface types establish podium and street wall requirements, upper-level setback controls, and interface specific built form outcomes that collectively manage development intensity, human scale and transitions across the centre.

The WTCPP establishes a clear hierarchy of building height and massing that reinforces the Urban Structure by expressing the different roles of each sub-precinct. Building height is used to define the Town Centre core, frame key streets and public spaces, and create a legible transition between higher intensity mixed-use areas and surrounding neighbourhoods.

The greatest development intensity is focused within the Rocca Way core and identified opportunity sites, reinforcing their role as the commercial, civic and mixed-use heart of the WTC. While no maximum building height is prescribed within the Rocca Way Sub-Precinct, development intensity is managed through a combination of three-storey podiums, upper-level setbacks, building articulation and other built form controls that maintain a comfortable pedestrian scale and high-quality public realm. Building height and scale then transition through the surrounding sub-precincts, where heights of up to 7 storeys are generally permitted, before reducing to lower-scale outcomes of 3 to 4 storeys towards the edges of the WTC to achieve appropriate transitions and protect the amenity of adjoining residential neighbourhoods and public open spaces.

Podiums define the human scale of streets and public spaces, framing pedestrian movement, supporting active frontages and creating comfortable, well proportioned public environments

### PLOT RATIO

The WTCPP does not apply plot ratio controls. Built form outcomes are instead managed through building height limits, podium requirements, setbacks, site coverage and interface-specific provisions. Together, these controls provide clear direction on scale, massing and streetscape character, while allowing flexibility to respond to varied site conditions across the Town Centre.

In the context of the WTC, this approach allows built form to respond to the unique role and character of each sub-precinct rather than relying on a single quantitative measure. Podium design, height transitions and setbacks work collectively to deliver built form outcomes that support activation and amenity, while avoiding excessive bulk and maintaining a strong relationship with the public realm. As a result, plot ratio controls are not considered necessary to achieve the built form outcomes sought by the WTCPP.

### SETBACKS

Setbacks across the WTC are articulated in Part 1 of this WTCPP through the application of Public Interface Types. These interface types establish street, side and rear setback requirements that respond to street function, desired character and interface sensitivity, and provide the primary mechanism for managing building separation, pedestrian amenity and transitions.

Setbacks are used to shape the character, comfort and experience of different streets and public spaces across the WTC, helping create memorable streetscapes while balancing activation, landscaping and pedestrian amenity. Nil setbacks are used along Rocca Way to establish a strong and continuous street edge, while increased setbacks of up to 3 metres along Active, Gateway and Transition interfaces allow for landscaping, pedestrian amenity and scale transitions.

Side and rear setbacks support appropriate building separation, privacy, solar access and servicing, particularly where higher intensity development interfaces with residential areas, schools or public open space. Setbacks are used in conjunction with podium controls to ensure built form responds to topography and contributes to a consistent and legible streetscape.

### ACTIVATION AND GROUND FLOOR DESIGN

Ground floor design is fundamental to delivering the WTC as a vibrant live-work-visit destination. Active, transparent and people oriented building frontages strengthen the relationship between development and the public realm, encourage movement between destinations and support day-to-day economic and community activity.

Activation is focused along Rocca Way, key pedestrian routes, civic spaces and park interfaces, where buildings are expected to frame streets, support walking, strengthen activity and create memorable public places throughout the day and evening. The WTCPP encourages active ground floor uses, generous glazing, frequent entrances and clear orientation toward the public realm in commercial areas to promote day to night activity. Ground floor ceiling heights are designed to accommodate a range of commercial and community uses and support long term adaptability. Awnings, weather protection and fine grain facade articulation enhance pedestrian comfort and amenity.

Development is expected to be oriented toward key streets, public spaces and pedestrian routes, with primary entrances and active frontages addressing the public realm. Building orientation will reinforce legibility and wayfinding, support activation of streets and public spaces, and ensure strong visual and physical connections between buildings and the surrounding public realm.

Servicing, loading and waste areas are to be located and designed to minimise visual and acoustic impacts on streets and public spaces, consistent with the built form and interface provisions in Part 1.

### VISUAL SURVEILLANCE AND PRIVACY

Built form provisions prioritise passive surveillance of streets, parks, pedestrian links and public spaces through the orientation of habitable rooms, windows, balconies and building entrances. This approach supports safe, welcoming and well-used public spaces.

Privacy impacts are managed through building separation distances, setbacks, podium articulation and upper level setbacks, particularly where higher density development interfaces with lower scale residential areas or public open space. These measures ensure appropriate amenity for both new and existing development while enabling increased intensity in suitable locations.

## VISUAL AMENITY AND DESIGN QUALITY

The WTCPP promotes high quality built form outcomes that enhance the visual amenity and identity of the WTC. Articulated facades, minimisation of blank walls, varied materials and fine grain detailing are encouraged to create visual interest and break down perceived building bulk.

Architectural expression should respond to the distinct role and character of each sub-precinct while contributing to a cohesive WTC identity. Collectively, buildings should reinforce local character, create memorable streets and public spaces, and contribute to a contemporary interpretation of Wanneroo's evolving identity.

Development interfacing with Dundebar Road and adjoining civic spaces is expected to respond to the civic character of this precinct. Built form should be compatible with and reflect elements of the existing civic materiality, scale and architectural language, while allowing for contemporary interpretation. This approach will reinforce the civic identity of the Town Centre and ensure new development complements the established public buildings and public realm.

## LANDMARK CORNERS

Landmark corners as identified in the WTCPP, particularly at strategic intersections such as Wanneroo Road and Dundebar Road are identified as focal points for enhanced built form outcomes. Development at these locations is expected to demonstrate architectural quality, vertical emphasis and strong street presence. Landmark buildings reinforce the WTC's network of gateways, terminate important views, strengthen orientation and create memorable points of arrival that contribute to the Town Centre's identity and skyline.

## LANDSCAPING AND DEEP SOIL

Landscaping is integrated as a fundamental component of built form delivery, contributing to visual amenity, urban cooling and long term environmental resilience. The WTCPP requires landscaping to be incorporated within podium setback areas and building interfaces to soften built form and enhance the pedestrian environment.

Deep soil areas are required to support the establishment of medium and large canopy trees, contributing to urban greening and the City's broader tree canopy objectives. Together, public and private landscaping contribute to a continuous green network that reinforces the Public Realm Framework and strengthens the landscape character of the WTC.

## CLIMATE RESPONSIVE BUILT FORM

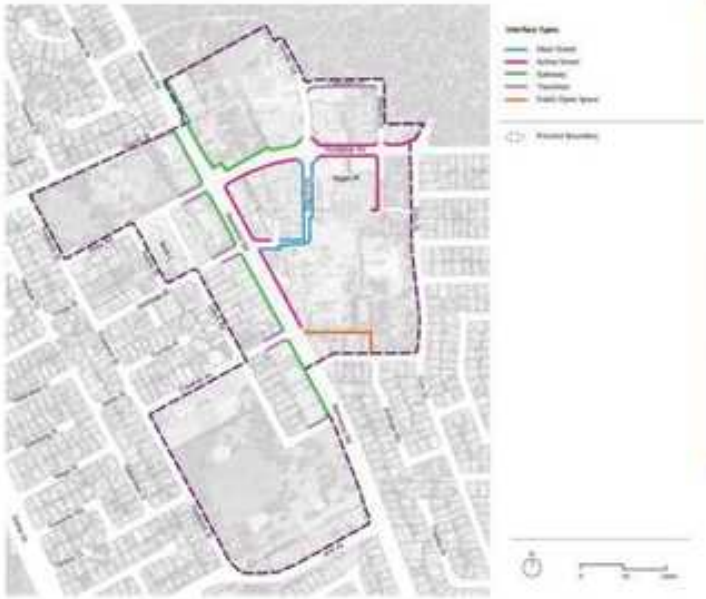
The WTCPP encourages climate-responsive built form outcomes that support pedestrian comfort, internal amenity and long-term resilience to changing climatic conditions. While detailed environmental performance is addressed at the development stage, the built form framework established in Part 1 provides the structure for development to respond positively to local climate conditions at a precinct scale.

Building height, massing, podium design and setbacks are used to manage solar access, shading and wind effects along key streets, public spaces and pedestrian routes. Podium-based development and upper level setbacks assist in reducing overshadowing at street level, moderating wind impacts and maintaining comfortable micro-climatic conditions within the public realm. Weather protection is further supported through the provision of continuous awnings along pedestrian priority streets and at key ground-floor commercial frontages, improving year-round pedestrian comfort and usability of the public realm. Together, these measures create comfortable, walkable streets and public spaces that encourage year round movement, improve urban resilience and enhance the everyday experience of the WTC.

## 6.6.3 PUBLIC INTERFACE TYPES

Public Interface Types are a primary tool used to shape the relationship between buildings and the public realm across the WTC. They define how development responds to different streets, parks and public spaces, ensuring built form reinforces the role, character and movement function of each place.

By applying interface specific provisions, the WTCPP delivers a consistent yet place-responsive built form framework that supports walkability, activation, legibility and high-quality public realm outcomes, while allowing flexibility to respond to individual sites and future redevelopment opportunities. The interface types seek to achieve the following outcomes.



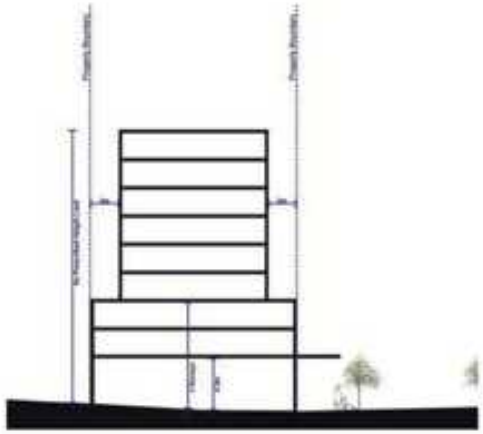
**P2 - Figure 11** - Public interface plan




### MAIN STREET INTERFACE

The Main Street Interface defines the primary pedestrian spine and civic heart of the WTC, creating an active, walkable environment centred on Rocca Way and Conlan Avenue. Buildings frame the public realm through a continuous podium and active ground floors, reinforcing the role of the Main Street as the focus of retail, hospitality, community life and everyday activity.

Development generally comprises a three storey podium with no prescribed overall building height limit. Nil or minimal front setbacks create a strong street edge, while upper level setbacks reduce visual bulk and maintain pedestrian comfort. Key design priorities include active frontages, transparent facades, continuous awnings, frequent building entries and high-quality architectural articulation that supports day and evening activity.

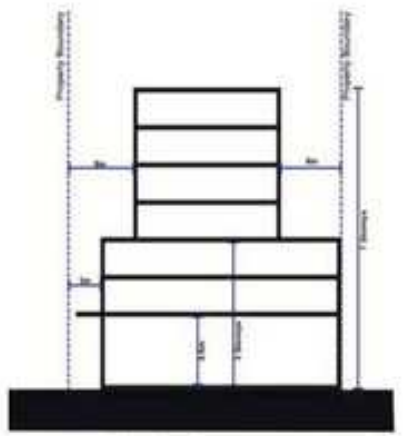





### ACTIVE STREET INTERFACE

The Active Street Interface extends the vitality of the town centre beyond the Main Street, strengthening connections between key destinations, public spaces and surrounding sub-precincts. It supports a vibrant mixed-use environment where movement, activity and development reinforce a walkable WTC.

Development generally comprises a three storey podium with building heights being responsive to the surrounding context. Front setbacks of approximately 3 metres provide opportunities for landscaping and pedestrian amenity while maintaining an active relationship with the street. Key design priorities include adaptable ground-floor uses, transparent facades, frequent entries, passive surveillance and integrated landscaping that enhances comfort, safety and activity.





### GATEWAY INTERFACE

The Gateway Interface establishes the principal arrival corridors into the WTC, creating a strong urban edge that signals entry into the Town Centre and reinforces its identity. Development along this interface presents a high-quality built form to one of the WTC's most prominent streets.

Development generally comprises podium-based buildings of up to three storeys with overall heights of up to 7 storeys where appropriate. Front setbacks of approximately 3 metres provide space for landscaping and separation from traffic, while upper-level setbacks reduce visual bulk and support transitions to adjoining residential areas and schools. Key design priorities include a strong street presence, quality architectural design, landmark development at prominent corners and active ground floor uses where appropriate.




### TRANSITION INTERFACE

The Transition Interface provides a gradual change in scale between the Town Centre core and adjoining residential, education and community areas, ensuring increased development intensity is integrated sensitively into its surrounding context. This interface reinforces the overall urban structure by balancing higher-density development with neighbourhood amenity.

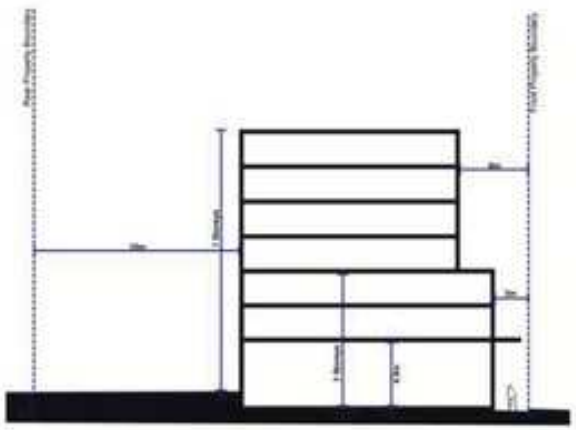
Development generally comprises a two storey podium with building heights of up to 7 storeys where appropriate. Increased setbacks, building articulation and separation are used to soften building bulk, improve privacy, protect solar access and create landscaped transitions at sensitive interfaces. Key design priorities include landscape integration, passive surveillance and built form that responds appropriately to adjoining lower-intensity development.

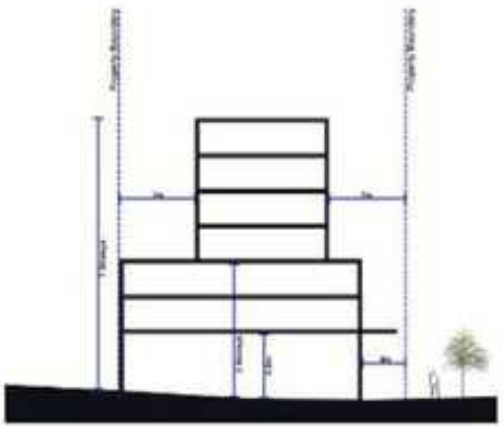


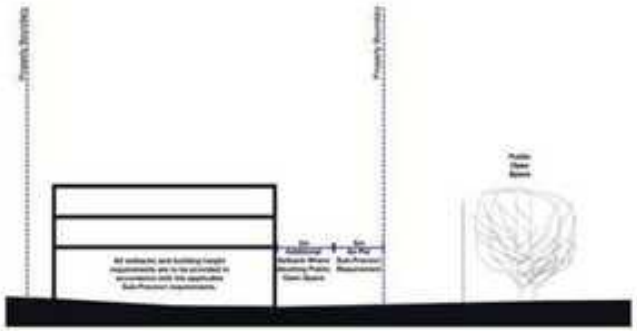
### PUBLIC OPEN SPACE INTERFACE

The Public Open Space Interface applies to development adjoining key parks and civic open spaces, including Memorial Park. It is intended to create attractive, safe and active park edges that strengthen the relationship between development and the public realm.

Development should address adjoining open space with building entrances, windows and balconies to provide passive surveillance and support everyday activity. Setbacks and landscaping should soften the interface, maintain solar access where appropriate and create a comfortable transition between buildings and public space. Building height, setbacks and orientation should respond sensitively to adjoining parks and nearby residential areas, ensuring development contributes positively to the character, amenity and long-term enjoyment of the WTC's public open spaces.





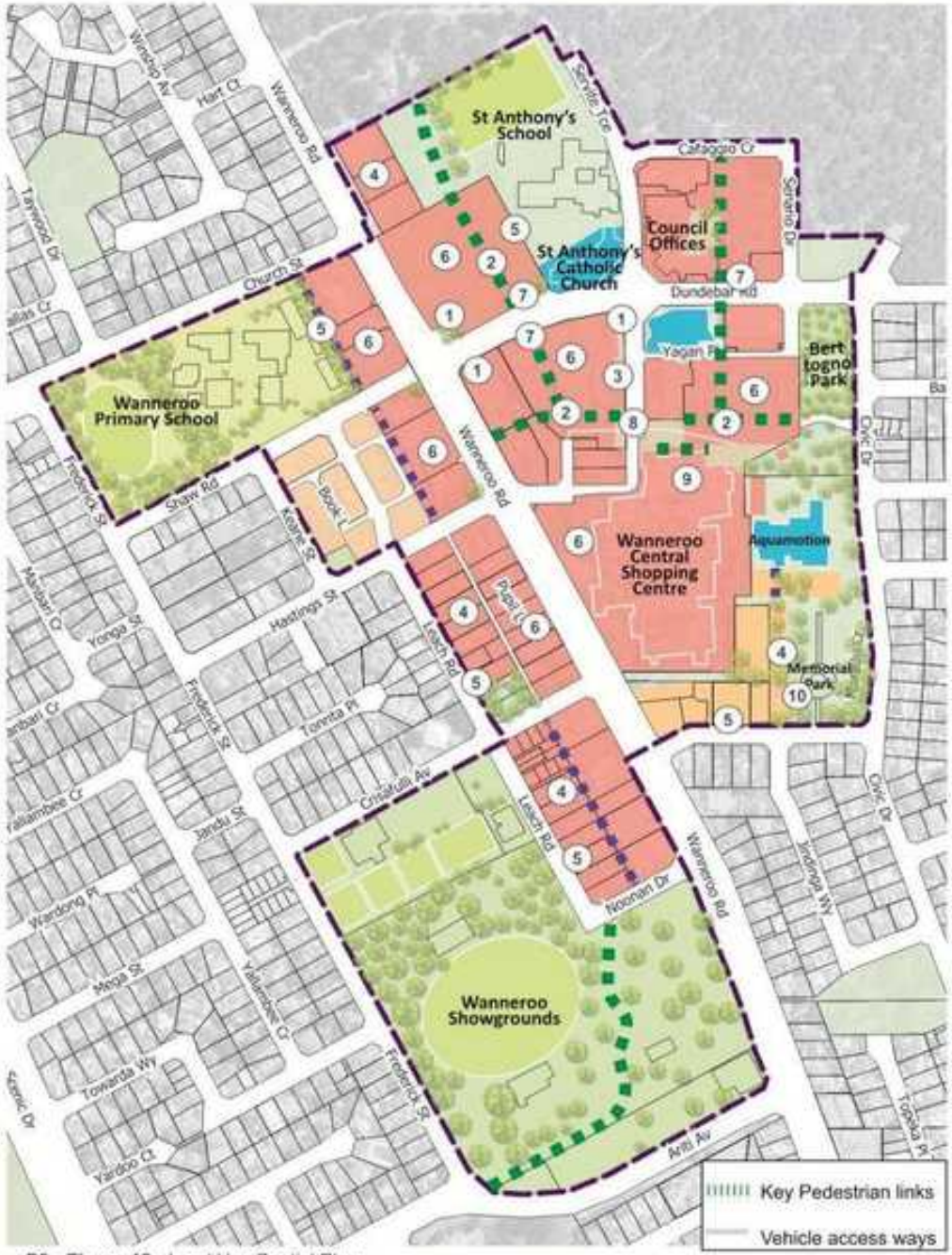


## 6.6.4 BUILT FORM SPATIAL PLAN

The Built Form Spatial Plan provides a map based illustration of the key built form responses for the WTC, demonstrating where particular built form outcomes are intended to occur across the centre. The framework supports interpretation of the WTCPP and reinforces a place responsive Town Centre structure. It is indicative in nature and is intended to assist in interpreting the built form provisions set out in Part 1.

**P2 - Table 22** - Built Form opportunities

| LEGEND | |
|---|---|
| 1 | **Landmark Corners** - distinctive built form at key intersections, gateways and view line end points to support legibility, wayfinding and Town Centre identity |
| 2 | **Mid block pedestrian links** - deliver publicly accessible pedestrian links connecting Rocca Way, public spaces and surrounding streets. |
| 3 | **Rocca way plaza** - a central public plaza along Rocca Way as the WTC's primary civic and celebration space, framed by active and publicly oriented built form. |
| 4 | **Adaptable mixed use development** - flexible building forms within mixed use areas, capable of accommodating changing commercial and residential uses over time. |
| 5 | **Town Centre edge transitions** - graduated heights providing sensitive transitions to residential areas and school sites |
| 6 | **Parking Management** - parking and servicing located behind, beneath or within buildings to minimise visual impact along streets and public space edges. |
| 7 | **Civic character edges** - street oriented built form reflect civic character interpretation addressing Dundebar Road |
| 8 | **Continuous main street** - reinforce Rocca Way and Conlan Avenue as a continuous Main Street spine that supports activation through built form outcomes |
| 9 | **Wanneroo Central retail and mixed use anchor** - support redevelopment of the Wanneroo Central site to deliver a mix of retail, hospitality, commercial and residential uses that contribute to day to night activity. |
| 10 | **Public open space interfaces** - built form oriented to Memorial Park providing passive surveillance and landscaped setbacks |




**P2 - Figure 12** - Land Use Spatial Plan

## 6.6.5 BUILT FORM - WTCPP RESPONSE TO STATE PLANNING POLICY

The Built Form provisions of the WTCPP have been prepared in accordance with SPP 4.2 and SPP 7.2. The Plan establishes a clear framework for building height, massing, interfaces and design quality that supports the WTC's role as a Secondary Activity Centre, while responding to local context, surrounding neighbourhoods and key public spaces. The following tables outline how the WTCPP responds to the Built Form objectives and considerations of these policies, supported by the development provisions in Part 1.

**P2 - Table 23** - Built Form response to State Plannng Policy

| RELEVANT SPP 4.2 POLICY THEMES | WTCPP RESPONSE |
|---|---|
| Activity Centre role and hierarchy | The WTCPP establishes a built form framework that supports WTC's role as a Secondary Activity Centre. Height and intensity are focused within the core and along key activity streets, reinforcing the centre's function as a focal point for employment, services and higher density development within the activity centre hierarchy. |
| Compact and efficient urban form | Built form outcomes promote a compact, consolidated Town Centre through increased development intensity in appropriate locations, supported by podium based development, lot consolidation and coordinated redevelopment. This approach enables efficient use of land while supporting walkability, activation and efficient infrastructure delivery. |
| High quality built environment | The WTCPP prioritises design quality through provisions that promote articulated facades, active ground floors, clear public realm relationships and human scale podiums. Landmark sites and key intersections are identified as opportunities for distinctive architectural outcomes that reinforce WTC's identity. |
| Integration of land use and built form | Built form is closely aligned with land use planning, supporting active commercial and community uses at ground level and higher density residential development above in key commercial areas. This integration encourages day to night activity, supports local businesses and contributes to a vibrant and safe Town Centre environment. |
| Pedestrian focused and activated streets | Development is required to address streets, public spaces and pedestrian links, with built form outcomes that prioritise active frontages, transparency and frequent entrances. Podium based development reinforces pedestrian comfort and supports a fine grain, walkable street network consistent with activity centre principles. |
| Transition and interface management | Built form controls reinforce higher intensity mixed-use development within core precincts while maintaining appropriate transitions to surrounding residential areas. Taller buildings are concentrated in the core, with built form controls including moderated heights and setbacks ensuring sensitive transitions to surrounding residential areas, schools and public open spaces to protect amenity and neighbourhood character. |
| Place identity and legibility | Built form contributes to a strong sense of place by reinforcing key streets, gateways and landmark corners at strategic intersections. These locations support visually prominent and legible built form that assists wayfinding and signals arrival into the Town Centre. |
| Adaptability and long term resilience | Built form provisions encourage flexible and adaptable building forms capable of accommodating changes in land use over time. The framework supports climate responsive design, integration of landscaping and deep soil areas, and long term resilience consistent with the evolving role of the Town Centre. |

| SPP 7.2 OBJECTIVES | CONSIDERATIONS | STRATEGIC RESPONSE/COMMENT |
|---|---|---|
| To ensure building placement, scale and massing is appropriate for the intended Precinct and streetscape character | Set height controls to ensure buildings within a Precinct have a positive impact on the surrounding streetscape and public spaces. | Height controls through interface based provisions and podium elements ensure appropriate transitions from the higher intensity core to the lower scale frame, reinforcing a coherent Town Centre character while allowing contemporary development outcomes appropriate to a Secondary Activity Centre. Podium based built form supports a human scale street environment, while upper level height is managed to respond sensitively to surrounding areas. Ground floor commercial buildings provide generous ceiling heights to support pedestrian comfort, visual prominence and flexibility of uses. |
| | Develop setback controls in consideration of the intended relationship between buildings and the street. | The setback provisions in Part 1 ensure buildings are appropriately set back to reinforce the desired street character for key streets within each sub-precinct, identified by interface type. Where appropriate, front setbacks support pedestrian access and landscaping, maintain continuous and legible building edges, and respond to natural ground levels. Side and rear setbacks provide appropriate building separation and transitions to adjoining uses, particularly where development interfaces with residential areas and school sites. |
| | Apply built form envelopes to define the streetscape and reinforce the Precinct character | Built form envelopes establish a consistent street wall height and scale, particularly within commercial zones, and define the intended relationship between buildings and the public realm. These envelopes support podium based and mixed-use configurations, managing bulk and scale while reinforcing the character and activation. |
| | Determine plot ratio controls appropriate for the existing or intended future character of the Precinct, where relevant. | The WTCPP does not apply plot ratio controls, instead managing development intensity through height limits, podiums, setbacks and interface provisions. This approach provides effective control over built form quality, streetscape outcomes and public realm relationships, and supports flexible, place responsive development. |

| | | |
|---|---|---|
| To ensure that built form design reduces energy demand across the Precinct by facilitating climate responsive design. | Locate and arrange buildings to optimise solar access to buildings and the public realm. | The WTCPP supports climate responsive built form outcomes through the building height limits, podium requirements, setbacks and articulation set out in Part 1, which collectively manage building bulk, overshadowing and wind effects at street level. These provisions assist in maintaining solar access to key streets, parks and pedestrian spaces, while enabling opportunities for natural ventilation and minimising adverse wind impacts. Detailed building orientation and design responses are addressed at the development stage in accordance with the Part 1 provisions and the R-Codes, ensuring pedestrian comfort, internal amenity and climate responsive development. |
| | Consider the placement and layout of buildings to optimise natural ventilation and minimise wind | |
| To ensure that built form design is responsive to the streetscape and contributes to a safe and comfortable public realm. | Design and setback buildings to enable passive surveillance and outlook to the street. | Through the development provisions in Part 1, buildings will incorporate passive surveillance features including transparent glazing, balconies overlooking public realm, and well positioned entrances to enhance safety and street activation. |
| | Design for weather protection for pedestrian priority streets and public spaces, where appropriate. | Continuous awnings are required along the pedestrian priority Main Street (Rocca Way) and, where appropriate, at commercial ground floors along key pedestrian streets to provide weather protection, enhance pedestrian comfort and reinforce active street edges. |

# 7.0 Implementation and Delivery

## 7.1 IMPLEMENTATION FRAMEWORK

This section provides a consolidated implementation framework to support the coordinated, staged and incremental delivery of the vision, objectives and development outcomes for the WTC over time.

The implementation tables identify the key actions, initiatives and responsibilities required to support the intended outcomes of the WTCPP. They clarify the respective roles of the City of Wanneroo, landowners, developers and relevant State agencies, and outline the primary delivery mechanisms through which outcomes may be achieved.

The implementation tables should be read alongside the explanatory guidance provided throughout Part 2 and in conjunction with the Staging Plan contained within Part 1. While the Staging Plan provides an indicative framework for the sequencing of redevelopment, public investment and catalyst projects, many actions identified within the WTCPP are influenced by factors outside the direct control of the City, including market conditions, landowner intentions, redevelopment timing, infrastructure provision and funding availability.

Accordingly, implementation will occur progressively through a combination of public and private sector initiatives responding to redevelopment opportunities as they arise. Actions may therefore be delivered incrementally, opportunistically or in partnership, rather than through a fixed or linear sequence. References in the Staging Plan to ongoing actions or actions occurring as development opportunities arise recognise this flexible and responsive approach to implementation.

The following implementation tables do not introduce additional statutory requirements. Rather, they provide a practical framework to guide how the WTCPP's objectives and strategies may be realised through development assessment, subdivision, public realm and movement improvements, capital works programming, future master planning processes, technical studies and collaboration between the City, landowners, developers and relevant State agencies.

Delivery mechanisms identified in the implementation tables may include, but are not limited to:

- development application and subdivision assessment;
- conditions of approval;
- Local Development Plans (where applicable);
- public realm and streetscape improvements guided through future master planning, capital works programming and other detailed implementation processes;
- technical studies and management plans; and
- collaboration between the City, landowners, developers and State agencies.

The implementation framework in P2 - Table 24 is designed to be flexible and responsive to changing circumstances, including infrastructure provision, funding availability, land ownership patterns and redevelopment timing. The City may refine delivery mechanisms, priorities and partnerships over time where this supports improved planning, urban design or public realm outcomes consistent with the intent of the WTCPP.

## 7.2 CATALYST PROJECTS AND DEVELOPMENT TRIGGERS

To support the ongoing evolution of the WTC, a number of catalyst projects, initiatives and development opportunities have been identified that have the potential to stimulate reinvestment, enhance amenity and strengthen the WTC's role as a mixed-use activity centre.

These catalysts are not intended to represent a fixed sequence of delivery, a statutory requirement, or a committed works program. Rather, they identify a series of complementary public and private opportunities that may help guide future planning, investment, redevelopment and infrastructure initiatives. Individually or collectively, these opportunities may assist in unlocking redevelopment potential, improving connectivity and reinforcing confidence in the long-term vision for the centre.

The WTCPP does not itself deliver these initiatives. Rather, it provides the strategic framework that can inform future master planning, feasibility investigations, capital works programming, redevelopment proposals, infrastructure investment and partnership opportunities. While development and investment will ultimately occur in response to market conditions, landowner intentions, funding availability and infrastructure provision, the following catalyst opportunities illustrate how coordinated actions may contribute to the incremental revitalisation of the WTC over time.

### PUBLIC REALM AND MOVEMENT CATALYSTS

#### *Rocca Way Main Street*

The continued evolution of Rocca Way as the WTC's primary main street presents a significant opportunity to establish a strong sense of place and reinforce its role as a walkable, mixed-use destination. Future streetscape improvements, pedestrian-priority initiatives and integration with surrounding urban spaces have the potential to support active ground floor uses, encourage day-to-day activity and provide a flexible setting for events and community use. In combination, these improvements may enhance the attractiveness of adjacent sites for redevelopment, supporting increased intensity and strengthening Rocca Way's role as the social and commercial focus of the centre.

#### *Pedestrian Links and Permeability Network*

Enhancing north-south and east-west pedestrian connections throughout the WTC presents an important opportunity to address existing movement barriers and improve overall legibility. The progressive development of a more fine-grained network, through future public realm initiatives, redevelopment opportunities and privately delivered publicly accessible spaces, can improve access between key destinations including Rocca Way, Memorial Park, civic uses and retail areas. Improved permeability has the potential to unlock underutilised or constrained sites, support more coordinated redevelopment outcomes and reinforce a pedestrian-oriented urban structure as the centre evolves.

#### *Servite Terrace Upgrade and Northern Connection*

Improvements to Servite Terrace, together with the potential for a future northern pedestrian connection, represent a longer-term opportunity to strengthen the WTC's connectivity and support future growth. Subject to landowner decision making, broader planning, environmental considerations and approvals, this connection may, over time, enhance access to surrounding residential areas, support increased development intensity and reinforce the role of Servite Terrace within the evolving urban structure of the town centre.

#### *Civic Drive and Memorial Park Precinct Enhancements*

Targeted upgrades to the Civic Drive linear park and within the Memorial Park sub-precinct present an opportunity to strengthen the WTC's public realm network and support everyday use of community spaces. Potential future initiatives such as enhanced walking and cycling paths, landscaping, lighting and upgrade or expansion of recreational facilities can contribute to increased amenity and better integration with surrounding development. Collectively, these enhancements may support residential intensification, encourage activity beyond business hours and contribute to a more vibrant and connected environment within the Town Centre.

### OPPORTUNITY SITE CATALYSTS

In addition to public realm and movement initiatives, several strategically located sites within the WTC present opportunities for redevelopment that could play an important role in demonstrating and reinforcing the intended future character of the centre. The redevelopment of these sites, whether independently or in combination, has the potential to introduce mixed-use outcomes, improve built form interfaces and contribute to a more cohesive and active urban environment.

#### *Wanneroo Central Shopping Centre renewal*

As a key activity anchor, the future evolution of Wanneroo Central Shopping Centre represents a significant opportunity to support Town Centre revitalisation. Over time, renewal of the site could facilitate more intensive and diverse land uses, including mixed-use development and more efficient parking formats.

Improved integration with Rocca Way and the surrounding pedestrian network may enhance connectivity and contribute to increased foot traffic, supporting both the centre itself and surrounding development opportunities.

#### *Wanneroo Tavern and surrounding lots*

The Wanneroo Tavern and adjoining landholdings represent a prominent opportunity site with the capacity to transition to a more urban, mixed-use outcome over time. Redevelopment could support active frontages, improved pedestrian connections and increased development intensity in a highly visible Town Centre location. Change on this site has the potential to demonstrate the feasibility of more intensive development and contribute to broader confidence in the ongoing transformation of the centre.

#### *DBCA site*

The DBCA site presents a strategically important opportunity for coordinated redevelopment aligned with the broader vision for the WTC. As a publicly owned site, it may provide opportunities to deliver higher-density employment, community or mixed-use development while also supporting improvements to the surrounding public realm and movement network. Future redevelopment of this site has the potential to set a benchmark for design quality and integration, while also contributing to increased confidence and investment in surrounding areas.

**P2 - Table 24** - WTCPP Implementation Plan

| URBAN ECOLOGY | | | |
|---|---|---|---|
| **ACTION/INITIATIVE** | **PRIMARY RESPONSIBILITY** | **STAKEHOLDER** | **DELIVERY MECHANISM** |
| Retain mature trees and significant landscape assets identified in the WTCPP. | Developers / Landowners | COW City of Wanneroo | WTCPP Part 1 tree retention provisions, development assessment, subdivision conditions |
| Increase urban tree canopy and street planting throughout the WTC. | City of Wanneroo | Developers (adjacent verge upgrades) | Urban Forest Strategy, Street Tree Planting Program, Capital Works Program, WTC Master Planning |
| Integrate WSUD, fit-for-purpose water sources, infiltration and on-site | Developers | City of Wanneroo | Local Water Management Plan, development assessment, Local Water Management Strategy |
| Encourage waterwise, climate-responsive and locally appropriate planting throughout public and private realms. | City of Wanneroo Developers | | Landscape Design Specifications, Street Tree Policy, Landscape plans, development assessment |
| Protect and enhance ecological and habitat values where present. | Landowners | City of Wanneroo, EPA (as required) | EAMS recommendations, development assessment, subdivision conditions |
| Strengthen landscape connections, green corridors and ecological links throughout the WTC. | City of Wanneroo | Developers, Landowners | WTC Master Planning, Capital Works Program, development assessment |
| Integrate Aboriginal cultural knowledge, heritage values and place-based interpretation within public realm and redevelopment initiatives where appropriate. | City of Wanneroo | Developers, Community, Aboriginal Advisory groups | Aboriginal Cultural Narrative Report (once adopted), WTC Master Planning, place-making initiatives |
| Manage bushfire risk in accordance with relevant bushfire management requirements. | Landowners, Developers | City of Wanneroo | Bushfire Management Plans, development assessment and subdivision conditions |
| Reduce urban heat impacts through shade, materials, landscaping and urban cooling initiatives. | City of Wanneroo | Developers | Urban Forest Strategy, WTC Master Planning, Capital Works Program |
| Encourage energy-efficient and climate-responsive building design. | Developers | City of Wanneroo | WTCPP Built Form provisions, development assessment |
| Promote waste minimisation and efficient waste management outcomes in redevelopment. | Developer | City of Wanneroo | Waste Management Plans, development assessment |
| **URBAN STRUCTURE** | | | |
| Facilitate coordinated redevelopment of opportunity and catalyst sites in accordance with the WTCPP vision. | Developers/ Landowners | City of Wanneroo, State Agencies (where relevant) | WTCPP provisions, pre-lodgement processes, development assessment |
| Encourage landmark built form and identifiable destinations at key gateways, nodes and entry points. | Developers | City of Wanneroo | WTCPP Built Form provisions, Design Review Process |
| Reinforce Rocca Way as the primary Main Street and organising spine of the WTC. | City of Wanneroo Developers | | WTC Master Planning, Capital Works Program, WTCPP provisions |
| Protect and enhance identified view corridors and visual connections. | Developers | City of Wanneroo | WTCPP Built Form provisions, Design Review Process |
| Manage transitions between differing development intensities and built form outcomes across sub-precincts. | Developers | City of Wanneroo | WTCPP interface and built form provisions and development assessment |
| **MOVEMENT** | | | |
| Improve pedestrian connectivity and permeability throughout the Town Centre through delivery of pedestrian and green links, redevelopment outcomes and public realm improvements. | City of Wanneroo / Developers | Landowners | WTCPP provisions, development assessment, subdivision conditions, WTC Master Planning |
| Strengthen east-west connectivity across Wanneroo Road through investigation of improved pedestrian access, crossing opportunities and active transport connections. | Main Roads WA / City of Wanneroo | PTA, adjacent landowners | Traffic and Transport Strategy, advocacy, transport planning, future investigations |
| Deliver new north-south and east-west connections within redevelopment areas to improve connectivity, accessibility and movement choice. | Developers/ Landowners | City of Wanneroo | Development assessment, subdivision conditions and structure planning |

| ACTION/INITIATIVE | PRIMARY RESPONSIBILITY | STAKEHOLDER | DELIVERY MECHANISM |
|---|---|---|---|
| Support implementation of the City's Active Transport Plan and Long-Term Cycle Network. | City of Wanneroo | Developers, Main Roads WA | Active Transport Plan, Capital Works Programs |
| Support future investigation of public transport connections, including between the WTC, East Wanneroo and future regional transport infrastructure where identified through State strategic planning processes. | City of Wanneroo, PTA | PTA, Department of Transport, Main Roads WA, WAPC | Strategic transport planning, advocacy initiatives, State infrastructure planning |
| Facilitate a transition from surface parking towards shared, consolidated and structured parking over time. | City of Wanneroo, Developers | Landowners | Parking Strategy, WTCPP provisions, development assessment |
| Support a coordinated parking management approach that promotes reciprocal parking, shared parking and 'park once' principles. | City of Wanneroo | Landowners, Business Owners | Parking Strategy, future parking management initiatives |
| **PUBLIC REALM** | | | |
| Enhance the quality, function and character of the Rocca Way Main Street precinct. | City of Wanneroo | Adjacent landowners/ Developers | WTC Master Planning, Capital Works Program |
| Facilitate the provision of publicly accessible open space, pedestrian links and gathering spaces as redevelopment occurs. | City of Wanneroo, Developers/ landowners | City of Wanneroo | Development assessment, subdivision and development conditions |
| Enhance key public open spaces, civic places and recreation areas to support community activity, recreation and place identity. | City of Wanneroo | Community, landowners | WTC Master Planning, Capital Works Program, future detailed planning |
| Integrate water sensitive urban design and landscape infrastructure within public realm improvements and redevelopment. | Developers/City of Wanneroo | Landowners | WTCPP Public Realm provisions, Local Water Management Plan, development assessment |
| Improve shade, canopy coverage, weather protection, lighting and comfort throughout the public realm network. | City of Wanneroo | Developers (adjacent frontages) | Urban Forest Strategy, WTC Master Planning, Capital Works Program |
| Strengthen connections between public spaces, civic facilities, recreation areas and activity nodes through coordinated public realm, landscape and streetscape improvements. | City of Wanneroo | | WTC Master Planning, Capital Works Program |
| Establish a consistent public realm palette including materials, furniture, lighting and landscape treatments | City of Wanneroo | Landowners, Developers | WTC Master Planning |
| Integrate cultural interpretation, public art and storytelling within the public realm. | City of Wanneroo | Community, Aboriginal stakeholders, heritage groups | WTC Master Planning, Aboriginal Cultural Narrative Report (once adopted), place-making initiatives |
| Deliver a coordinated wayfinding and signage network across the WTC | City of Wanneroo | Developers | WTC Master Planning, Capital works program |
| **LAND USE** | | | |
| Facilitate the preferred land use mix consistent with the WTCPP. | City of Wanneroo | Developers, Business owners | WTCPP provisions, DPS 2 and development assessment |
| Concentrate higher intensity uses within the Town Centre core and activity corridors. | Developers | City of Wanneroo, | WTCPP sub-precinct provisions, development assessment |
| Support mixed-use development and adaptable building design. | Developers/city of Wanneroo | Design Review Panel | WTCPP Part 1 provisions, development assessment |
| Manage land use transitions to surrounding residential areas and sensative uses | City of Wanneroo | Developers | WTCPP land use and built form provisions, development assessment |
| Protect and reinforce civic and community uses within the WTC. | City of Wanneroo | State agencies | WTCPP provisions, collaboration with State agencies and future planning initiatives |

| ACTION/INITIATIVE | PRIMARY RESPONSIBILITY | STAKEHOLDER | DELIVERY MECHANISM |
|---|---|---|---|
| Enable employment growth and economic activation. | City of Wanneroo | Developers | Development assessment, monitoring of commercial floorspace and employment outcomes |
| Monitor residential, employment and commercial development outcomes to inform future implementation priorities and review of the WTCPP. | | | Strategic planning reviews, development monitoring and reporting |
| **BUILT FORM** | | | |
| Apply podium-based height and interface provisions to achieve the intended built form character of each sub-precinct. | Developers | City of Wanneroo | WTCPP Part 1 provisions, development assessment |
| Encourage coordinated lot amalgamation to support efficient redevelopment outcomes | Landowners | City of Wanneroo, Developers | Pre-lodgement processes, subdivision provisions |
| Support active and engaging street frontages along key streets and public spaces. | Developers | Business owners, City of Wanneroo | WTCPP active frontage provisions, development assessment |
| Promote high-quality design outcomes at landmark sites, gateways and prominent corners. | City of Wanneroo, Developers | Landowners | Design review and development assessment process |
| Integrate landscaping, deep soil areas and urban greening within redevelopment. | Developers | City of Wanneroo | WTCPP provisions, development assessment and subdivision conditions |
| Reinforce key gateways, nodes and intersections through high-quality design and landmark built form | Developers | City of Wanneroo | WTCPP Built Form provisions, Design Review Process and development |

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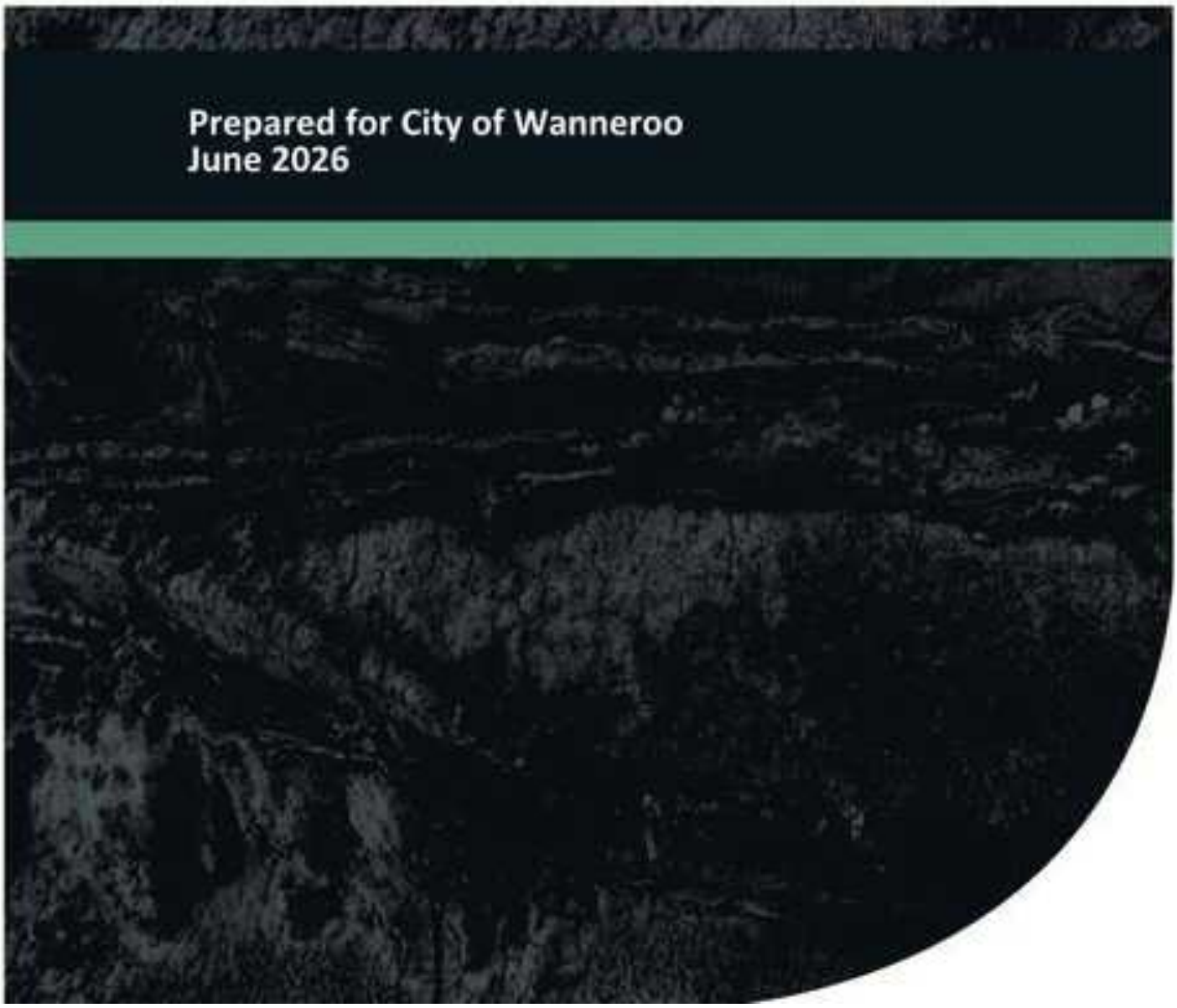
# Bushfire Management Plan

## Wanneroo Town Centre Precinct Plan

Project No: EP17-133(08)



# Document Control

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| | | | | Anthony Rowe | AJR |
| | Report issued to client. | | | | |

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This document has been prepared primarily to consider the layout of development and/or the appropriate building construction standards applicable to development, where relevant. The measures outlined are considered to be prudent minimum standards only based on the standards prescribed by the relevant authorities. The level of bushfire risk mitigation achieved will depend upon the actions of the landowner or occupiers of the land and is not the responsibility of the author. The relevant local government and fire authority (i.e. Department of Fire and Emergency Services or local bushfire brigade) should be approached for guidance on preparing for and responding to a bushfire.

Notwithstanding the precautions recommended in this document, it should always be remembered that bushfires burn under a wide range of conditions which can be unpredictable. An element of risk, no matter how small, will always remain. The objective of the Australian Standard AS 3959:2018 is to "prescribe particular construction details for buildings to reduce the risk of ignition from a bushfire" (Standards Australia 2018). Building to the standards outlined in AS 3959 does not guarantee a building will survive a bushfire or that lives will not be threatened by the effects of bushfire attack.

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# Executive Summary

The City of Wanneroo (the proponent) is seeking to progress the Wanneroo Town Centre Precinct Plan (herein referred to as 'the Precinct Plan'), which will guide future development of the Wanneroo town centre (herein referred to as 'the site'). The site comprises an area of land within Wanneroo, zoned as 'Centre' under the City of Wanneroo District Planning Scheme (DPS) No. 2, in addition to the adjoining portion of Wanneroo Road.

The site is approximately 55 hectares (ha) in area and is generally bounded predominantly by existing residential development to the east, west and south, with Lake Joondalup further to the west. To the north the site is bounded by Lot 9000, which consists of dense remnant native forest vegetation. Currently, the site consists of existing mixed-use built-up land uses which forms the Wanneroo town centre.

A small northern portion of the site is located within 'Area 2' (designated Bush Fire Prone) under the state-wide *Map of Bush Fire Prone Areas* prepared by the Office of Bushfire Risk Management (OBRM 2025), and as a result State Planning Policy 3.7 Bushfire (SPP 3.7) (WAPC 2024b) applies.

The identification of the site as bushfire prone requires further assessment of the bushfire risk in accordance with Australian Standard 3959:2018 Construction of buildings in bushfire prone areas (AS 3959), and the required risk treatments through compliance of the proposal with the policy measures described in the Planning for Bushfire Guidelines - For the implementation of State Planning Policy 3.7 Bushfire (the Guidelines) (WAPC 2024a).

The policy intent for SPP 3.7 is:

> *"to implement effective, risk-based land use planning and development which in the first instance avoids the bushfire risk, but where unavoidable, manages and/or mitigates the risk to people, property and infrastructure to an acceptable level. The preservation of life and the management of bushfire impact are paramount."*

The proposed Precinct Plan will facilitate the creation of land parcels for residential development, education, public open space (POS), drainage, and associated infrastructure, consistent with the approved *Wanneroo Town Centre Structure Plan No. 2*. As a Precinct Plan application, this proposal is assessed against the requirements of *Bushfire Protection Criteria 5: Structure plans and subdivision applications* (BCP 5), as detailed in the Guidelines.

This Bushfire Management Plan (BMP) has followed the Department of Planning Lands and Heritage (DPLH) *Bushfire Management Plan Manual November 2024 - Bushfire Management Plan Structure Plans and Subdivisions*. Accordingly, it provides a Bushfire Attack Level (BAL) assessment involving the classification of vegetation and effective slope in accordance with AS 3959, extending 150 m from the site in accordance with the Guidelines.

Forest (Class A) vegetation identified both externally and internally to the site. External vegetation (Plot 1) is located to the north within Lot 9000, with a minor encroachment onto the St Anthony's Primary School lot. Internal vegetation (Plot 2) is located within the densely vegetated areas of the

northern portion of Bert Tongo Park and the Wanneroo Police Station lot. As both of these areas are assumed to remain in their current state in perpetuity, they will pose a permanent bushfire risk to the northern interface and internal development areas, respectively.

As part of assessing the long-term bushfire risk to the site, vegetation classifications have been detailed for the post-development scenario (in accordance with AS 3959). The Precinct Plan is not proposing a redesign of the existing site conditions, therefore, existing residential lots, road reserves, and recreational POS areas that are currently modified to achieve a low-threat standard (in accordance with Section 2.2.3.2 (e) or (f) of AS 3959) are assumed to remain low-threat. Specific internal conservation and drainage areas are assumed to retain their existing classifications. Nature strips associated with road reserves can be low threat, without management, following AS 3959 Section 2.2.3.2 (f). Areas of land identified as low threat that are external to the site are assumed to continue to be managed in accordance with existing land management practices.

**Compliance assessment**

The bushfire protection criteria (BPC) provided in the Guidelines represent the risk treatment acceptable solutions applicable to achieving the intent and outcomes listed in SPP 3.7. The BPC are divided into five criteria, with each having four elements aligning to an outcome. In this instance, the relevant criteria (category) is *Criteria 5: Structure plans and subdivision applications*. Compliance with each element (as a risk treatment) is required to demonstrate to the decision maker that the risk is within an acceptable level, either by compliance with the acceptable solution or by an outcome (alternate solution).

This BMP demonstrates that compliance with the acceptable solution at each element in BCP 5 can be achieved and is summarised below:

This includes:

- **Element 1 Location:** As the site has been identified as being within an 'Area 2' bushfire prone area under the state-wide Map of Bush Fire Prone Areas prepared by the Office of Bushfire Risk Management (OBRM 2025), an assessment against Element 1 is necessary. On this basis, and in accordance with the Guidelines, a Broader Landscape Assessment has been completed, resulting in a point score of 4. This designates the site as Broader Landscape Type A, which is acceptable for development.
- **Element 2 Siting and Design:** The BAL assessment indicates that the Precinct Plan layout enables every proposed lot to contain a development site capable of achieving a maximum rating of BAL-29. Where lots abut permanent hazards, separation can be achieved through existing public roads or sufficient lot depth to accommodate internal asset protection zones (APZs). No temporary staging buffers are required as the Precinct Plan does not propose classifiable vegetation clearing or phased subdivision.
- **Element 3 Vehicular Access:** The majority of the site currently consists of an existing integrated urban road network, with Wanneroo Road (Primary Distributor Road) providing the main access to two different destinations (north and south of the site). The site contains an existing no-through road (Servite Terrace) which is compliant with the Guidelines as it is less than 200 m in length and contains a turn-around which meets the required standards.

- **Element 4 Water:** The site is currently equipped with permanent and reticulated water supply to support onsite firefighting requirements, and if required hydrants will be installed in accordance with water authority requirements.

The management/mitigation measures to be implemented through the proposed development of the site have been outlined as part of this BMP.

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# Appendices

**Appendix A**

Precinct Plan

# Abbreviation Tables

*Table A1: Abbreviations – General terms*

| General terms | |
|---|---|
| AS | Australian Standard |
| APZ | Asset Protection Zone |
| BAL | Bushfire Attack Level |
| BMP | Bushfire Management Plan |
| BPAD | Bushfire Planning and Design |
| CCW | Conservation Category Wetland |
| ESA | Environmentally Sensitive Area |
| FDI | Fire Danger Index |
| UFI | Unique Feature Identifier |
| BEP | Bushfire Emergency Plan |
| BPC | Bushfire Protection Criteria |

*Table A2: Abbreviations – Organisations*

| Organisations | |
|---|---|
| DBCA | Department of Biodiversity, Conservation and Attractions |
| DFES | Department of Fire and Emergency Services |
| DWER | Department of Water and Environmental Regulation |
| DPLH | Department of Planning, Lands and Heritage |
| OBRM | Office of Bushfire Risk Management |
| WAPC | Western Australia Planning Commission |

*Table A3: Abbreviations – Legislation and policies*

| Legislation | |
|---|---|
| AS 3959 | *Australian Standard 3959:2018 Construction of buildings in bushfire prone areas* |
| Guidelines | *Planning for Bushfire Guidelines - For the implementation of State Planning Policy 3.7 Bushfire (WAPC 2024a)* |
| SPP 3.7 | *State Planning Policy 3.7 Planning in Bushfire Prone Areas* (WAPC 2024b) |

*Table A4: Abbreviations – Planning and building terms*

| Planning and building terms | |
|---|---|
| LPS | Local Planning Scheme |
| DPS | District Planning Scheme |
| DSP | District Structure Plan |
| MRS | Metropolitan Region Scheme |

*Table A4: Abbreviations – units of measurement*

| Units of measurement | |
|---|---|
| ha | hectare |
| m | metre |
| $m^2$ | square metre |
| m AHD | m in relation to the Australian height datum |

# 1 Introduction

## 1.1 Background

The City of Wanneroo (the proponent) is seeking to progress the Wanneroo Town Centre Precinct Plan (the 'Precinct Plan'), which will guide future development of the Wanneroo town centre (herein referred to as 'the site'). The site comprises an area of land within the City of Wanneroo zoned as 'Centre' under the City of Wanneroo District Planning Scheme (DPS) No. 2, in addition to the adjoining portion of Wanneroo Road. The indicative structure plan is provided in **Appendix A**.

The site is situated approximately 23 km north-west of the Perth Central Business District and is approximately 55 hectares (ha) in area. The site is generally bounded predominantly by existing residential development to the east, west and south, with Lake Joondalup further to the west. To the north the site is bounded by Lot 9000, consisting of remnant native forest vegetation. Currently, the site comprises the existing Wanneroo town centre, encompassing a mixed-use built environment that includes residential, commercial, public open space (POS), recreation, education, and civic services. The location of the site and cadastral boundaries are shown in **Figure 1**.

The site is primarily zoned 'Urban' under the Metropolitan Region Scheme (MRS), with the portion north of Dundebar Road zoned 'Urban Deferred', and Wanneroo Road reserved as a 'Primary Regional Road'. Locally, the site is zoned 'Centre' under the City of Wanneroo District Planning Scheme (DPS) No. 2. The proposed Precinct Plan provides a framework to guide the provision of future land uses, facilitating ongoing subdivision and development within the site.

The site is partially located within 'Area 2' (designated bushfire prone) under the state-wide *Map of Bush Fire Prone Areas* prepared by the Office of Bushfire Risk Management (OBRM 2025), as shown in **Plate 1**. The identification of the site within 'Area 2' bushfire prone requires further assessment of the determined bushfire risk in accordance with *Australian Standard 3959:2018 Construction of buildings in bushfire prone areas* (AS 3959), and the satisfactory compliance of the proposal with the policy measure described in *State Planning Policy 3.7 Bushfire* (SPP 3.7) (WAPC 2024b) and the *Planning for Bushfire Guidelines - For the implementation of State Planning Policy 3.7 Bushfire* (the Guidelines) (WAPC 2024a).

The policy intent for SPP 3.7 is:

> *"to implement effective, risk-based land use planning and development which in the first instance avoids the bushfire risk, but where unavoidable, manages and/or mitigates the risk to people, property and infrastructure to an acceptable level. The preservation of life and the management of bushfire impact are paramount."*



*Plate 1: Areas within and surrounding the site, identified as 'bushfire prone areas' (under the state-wide Map of Bush Fire Prone Areas (OBRM 2025), is indicated in purple*

## 1.2 Aim of this report

The purpose of this Bushfire Management Plan (BMP) is to assess bushfire hazards both within the site and nearby and demonstrate that the threat posed by any identified hazards can be appropriately mitigated and managed as development progresses within the site. This BMP has been prepared in accordance with SPP 3.7 (WAPC 2024b), the Guidelines (WAPC 2024a) and AS 3959 (Standards Australia 2018). The document includes:

- An assessment of the existing classified vegetation in the vicinity of the site (within 150 m) and consideration of bushfire hazards that will exist in the post-development scenario **(Section 3)**.
- Commentary on how the future development can achieve *Bushfire Protection Criteria (BCP) 5: Structure Plans and subdivision applications* outlined within the Guidelines, including an indication of Bushfire Attack Level (BAL) ratings likely to be applicable to future habitable buildings **(Section 5)**.
- An outline of the roles and responsibilities associated with implementing this BMP (see **Section 6**).

## 1.3 Statutory policy and framework

The following key legislation, policies and guidelines are relevant to the preparation of a bushfire management plan:

- *Bush Fires Act 1954*
- *Fire and Emergency Services Act 1998*
- *Planning and Development Act 2005* and associated regulations
- *Building Act 2011* and associated regulations
- *State Planning Policy 3.7 Bushfire (WAPC 2024b)*
- *Planning for Bushfire Guidelines – For the implementation of State Planning Policy 3.7 Bushfire (WAPC 2024a)*
- *Australian Standard AS 3959 – 2018 Construction of buildings in bushfire prone areas* (Standards Australia 2018)

## 1.4 Description of the proposed development

A Precinct Plan has been prepared for the site and is provided in **Appendix A**. The Precinct Plan provides a framework for the provision of future land use and will formalise future development goals within the site, without a major redesign. The following land uses are proposed within the site:

- Residential areas, including areas of medium and higher densities.
- Education
- Civic and community
- Mixed uses
- Public open space (POS) areas for vegetation conservation and recreation
- Existing internal road layout with connections to the existing external road network.

The proposed land uses within the site are consistent with the Metropolitan Region Scheme (MRS) zoning across the site, with the majority of the site zoned 'Urban', the area to the north of Dundebar Road zoned 'Urban deferred' and Wanneroo Road reserved as a 'Primary regional road', as shown in **Plate 2**. The 'Urban deferred' zone across the northern portion of the site was established to maintain suitable separation from urban areas and the Ingham's poultry processing facility to the north, preventing encroachment of sensitive land uses into adjacent areas. However, following the closure of this facility and recent urban development of this area, it is likely that the 'urban deferred' zoning can now be lifted to enable urban development of this land (including the northern portion of the site).

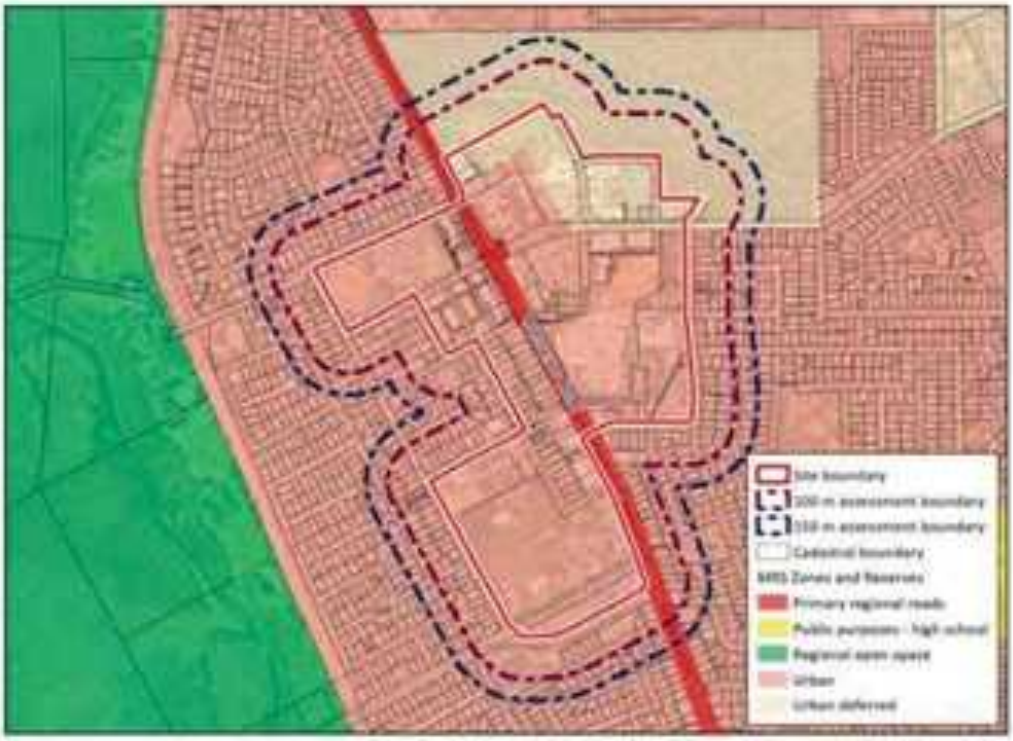


*Plate 2: Metropolitan Region Scheme Zones and Reserves, in and surrounding the site.*

## 1.5 Description of land characteristics

A review of historical aerial imagery indicates the majority of the site was cleared between 1965 and 1974 to facilitate development of the Wanneroo town centre (Landgate 2025).

The site is characterised by undulating terrain but generally slopes down toward Lake Joondalup to the west of the site. The maximum elevation of the site is 75 metres Australian Height Datum (m AHD) in its north-eastern extent, whilst the minimum elevation of the site is 29 m AHD in its southern-most extent (**Figure 2**).

The site currently supports a range of existing land uses, including:

- Civic buildings and open space areas
- A number of commercial shopping centres and associated commercial premises.
- Two primary schools
- Sporting clubs and grounds, including football, lawn bowls and cricket ovals.
- A number of service stations
- Road reserves.

# 2 Environmental Considerations

In accordance with the *Bushfire Management Plan (BMP) Manual (DPLH and WAPC 2024)* this BMP has considered whether there are any environmental values that may require specific consideration through either protection, retention, or revegetation. It is based on the features relevant to the location of the site. To support this, a review of publicly available databases and supporting structure plan documentation has been undertaken, with particular reference to the Shared Location Information Platform (SLIP) databases. A summary of the search results has been provided in **Table 1**.

Due to the historic degradation of the site, it contains limited environmental values of conservation significance.

*Table 1: Summary of potential environmental considerations that may be associated with the site.*

| Key environmental feature (information in brackets refers to mapping data source) | Yes / no / potentially occurring within the site | If yes / potentially, describe value that may be impacted |
|---|---|---|
| Conservation category wetlands and buffer (Geomorphic wetlands, Swan Coastal Plain (DBCA-019)) | No | A review of the *Geomorphic Wetlands of the Swan Coastal Plain* dataset indicates that no conservation category wetland (CCW) occurs within the site. Lake Joondalup, a conservation category wetland is located approximately 470 m to the west of the site. |
| RAMSAR wetlands (DBCA-010) | No | No RAMSAR wetlands are identified as occurring within the site or in close proximity. |
| Threatened and priority flora (DBCA-036) | No | Not Applicable. No Threatened and Priority Flora are identified as occurring within the site. |
| Threatened and priority fauna (DBCA-037) | Yes | A review of SLIP databases identifies Threatened and Priority Fauna within the site. However, no remnant vegetation remains within the site, and the proposed structure plan is not proposing a major redesign of the site, rather formalising future development goals. Consequently, the implementation of the management strategies outlined within this BMP will not impact any Threatened and Priority Fauna. |
| Threatened ecological communities (DBCA-038) | Yes | The site is located within the mapped buffer of a Threatened Ecological Community (TEC). However, no remnant vegetation remains within the site, and the proposed structure plan is not proposing a major redesign of the site, rather formalising future development goals. Consequently, the implementation of the management strategies outlined within this BMP will not impact any TEC. |
| Bush Forever areas (DPLH-019) | No | The site is not identified as a Bush Forever area. |
| Clearing regulations – Environmentally sensitive areas (DWER-046) | No | No Environmentally sensitive areas were identified within the site. |
| Swan Bioplan Regionally Significant Natural Areas 2010 (DWER-070) | No | Not applicable. No Regionally Significant Natural Areas are identified within the site or nearby. |

## 2.1 Native vegetation – modification and clearing

The vast majority of the site has been previously cleared and now comprises either planted/ non-native trees or scattered native trees and shrubs, particularly within POS areas, road reserves, and education precincts.

As previously mentioned, the majority of vegetation (native regrowth and weeds) within the site and has been historically cleared and/or modified to achieve a low threat state as per Section 2.2.3.2 of AS 3959. Therefore, no clearing or modification of remnant native vegetation is proposed as part of this Precinct Plan. External to the site and within 100 m, Lot 9000 contains dense remnant native vegetation classified as forest (Class A) and is assumed to continue as per existing conditions.

Where clearing of native vegetation is undertaken in accordance with a subdivision approval under the *Planning and Development Act 2005*, it is exempt from requiring a clearing permit under Schedule 6 of the *Environmental Protection Act 1986* (EP Act), regardless of the presence of an ESA. Additionally, a clearing permit will not be required where other exemptions pursuant to Schedule 6 of the EP Act exist, such as Section 33 of the *Bush Fires Act 1954*. Additionally, a clearing permit would not be required where vegetation is not considered 'native vegetation' pursuant to Division 2 Section 51A of the EP Act, including trees that have been sown, planted or propagated such as within the site.

## 2.2 Revegetation and landscape plans

No revegetation is proposed as part of this Precinct Plan; however, this will be confirmed in subsequent planning stages as the structure plan and subdivision design is further refined.

Landscape treatments are proposed to be associated with future public open space areas, residential gardens and verge planting within road reserves. These areas will be able to achieve low threat in accordance with Section 2.2.3.2 of AS 3959, based on standard treatments for urban areas and the requirements of the City of Wanneroo notice.

Where identified as 'low-threat', landscape treatments within the site will be provided and maintained in accordance with Section 2.2.3.2 of AS 3959. This is likely to include:

- Irrigation of grass and garden beds (where required).
- Regular removal of weeds and built-up dead material (such as fallen branches, leaf litter etc.)
- Low pruning of trees (branches below 2 m in height removed where appropriate).
- Application of ground/surface covers such as mulch or non-flammable materials as required.
- Regular mowing/slashing of grass to less than 100 mm in height.

Areas may also qualify as low threat due to their size and proximity, as set out in AS 3959. These areas do not require ongoing management to maintain a low-threat classification.

# 3 Bushfire Assessment Results

Bushfire risk for the site has been appropriately considered with regard to the potential impact upon the site using AS 3959 and the Guidelines. The objective of AS 3959 is to reduce the risk of ignition and loss of a building to bushfire. It provides a consistent method for determining a radiant heat level (radiant heat flux) as a primary consideration of bushfire attack. AS 3959 measures the Bushfire Attack Level (BAL) as the radiant heat level ($kW/m^2$) over a distance of 100 m. AS 3959 also prescribes deemed-to-satisfy construction responses that can resist the determined radiant heat level at a given distance from the fire. It is based on six Bushfire Attack Level (BAL) ratings: BAL-LOW, BAL-12.5, BAL-19, BAL-29, BAL-40, and BAL-FZ.

A BAL contour plan has been prepared in accordance with Appendix A.3 of the Guidelines and Method 1 of AS 3959 to determine the BAL ratings likely to be applicable to future buildings. This has been based on the vegetation classifications and the effective slope under the vegetation (post-development scenario).

## 3.1 Assessment inputs

A BAL assessment was undertaken using Method 1 of AS 3959. The relevant vegetation classifications and effective slopes are outlined below and shown in **Figure 2** (pre-development) and **Figure 4** (post-development). The resulting BAL Contour Plan, shown in **Figure 5**, is based on the assumed developed condition of the site in accordance with Appendix A.3 of the Guidelines. The site inspection was completed on 19 March 2026.

### 3.1.1 Inputs and assumptions

The BAL assessment is based on the following inputs and assumptions:

- **Designated Fire Danger Index (FDI):** 80
- **Flame temperature:** 1090 K
- **Vegetation classification:** Forest (Class A), see **Figure 2** and **Figure 4**
- **Effective slope beneath classified vegetation:** flat/upslope (see **Figure 2** and **Figure 4**)
- The Precinct Plan is not proposing a major redesign of the existing site conditions, therefore, existing residential lots, road reserves, and recreational POS areas that are currently modified to a low-threat standard (in accordance with Section 2.2.3.2(e) or (f) of AS 3959) are assumed to remain low-threat post-development.
- Vegetation to be retained within the site that is currently assessed as classified vegetation (e.g., Plot 2 within the northern portion of Bert Tongo Park and the Wanneroo Police Station lot) is assumed to remain in its current state and will therefore continue to be a bushfire hazard to development.
- Areas of land identified as low threat (Clause 2.2.3.2(e) and (f)) that are external to the site are assumed to continue to be managed in accordance with existing land management practices and the City of Wanneroo Fire Mitigation Notice in the long-term (unless stated otherwise).
- All other classified vegetation that has been identified outside of the proponent's landholdings and has been assumed to remain in its current state and will therefore continue to be a bushfire hazard to development within the site.

- Areas containing scattered trees with a foliage cover of less than 10% have been excluded from classification.

### 3.1.2 Vegetation classification

All vegetation within 150 m of the site was classified in accordance with Section 2.2.3 of AS 3959. The assignment of vegetation classifications is based on an assessment of vegetation structure, including consideration of the various fuel layers of different vegetation types, as outlined in **Plate 3**. Each distinguishable vegetation plot is described in **Table 2** and shown in **Figure 2**.

Not all vegetation is a classified bushfire risk. Vegetation and ground surfaces that are exempt from classification as a potential hazard are identified as a low threat under Section 2.2.3.2 of AS 3959. Low threat vegetation includes the following:

a. *Vegetation of any type that is more than 100 m from the site.*
b. *Single areas of vegetation less than 1 ha in area and not within 100 m of other areas of vegetation being classified.*
c. *Multiple areas of vegetation less than 0.25 ha in area and not within 20 m of the site, or each other or of other areas of vegetation being classified.*
d. *Strips of vegetation less than 20 m in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20 m of the site or each other, or other areas of vegetation being classified.*
e. *Non-vegetated areas, that is, areas permanently cleared of vegetation, including waterways, exposed beaches, roads, footpaths, buildings, and rocky outcrops.*
f. *Vegetation regarded as low threat due to factors such as flammability, moisture content or fuel load. This includes grassland managed in a minimal fuel condition, mangroves, and other saline wetlands, maintained lawns, golf courses (such as playing areas and fairways), maintained public reserves and parklands, sporting fields, vineyards, orchards, banana plantations, market gardens (and other non-curing crops), cultivated gardens, commercial nurseries, nature strips and wind breaks.*




*Plate 3: The five fuel layers in a forest environment that could be associated with fire behaviour (Gould et al. 2007)*

*Table 2: AS 3959 vegetation classifications (refer to **Figure 2**)*

| | | | |
|---|---|---|---|
| Photo ID: 1 | Plot: 1 |  |
| Vegetation classification or exclusion clause (and effective slope) | | |
| Class A - Forest (Flat/upslope) | | |
| Description / Justification for Classification | | |
| Forest (Class A) vegetation has been identified externally to the north of the site within existing lot 9000. Comprising tall mature trees 10 to 15 m in height with greater than 30% foliage cover over a dense understorey of shrubs and grasses. This vegetation is assumed to remain post-development of the site. | | |
| Photo ID: 2 | Plot: 1 |  |
| Vegetation classification or exclusion clause (and effective slope) | | |
| Class A - Forest (Flat/upslope) | | |
| Description / Justification for Classification | | |
| Forest (Class A) vegetation has been identified externally to the north of the site within existing lot 9000. Comprising tall mature trees 10 to 15 m in height with greater than 30% foliage cover over a dense understorey of shrubs and grasses. This vegetation is assumed to remain post-development of the site. | | |
| Photo ID: 3 | Plot: 1 |  |
| Vegetation classification or exclusion clause (and effective slope) | | |
| Class A - Forest (Flat/upslope) | | |
| Description / Justification for Classification | | |
| Forest (Class A) vegetation has been identified externally to the northeast of the site within existing lot 9000. Comprising tall mature trees 10 to 15 m in height with greater than 30% foliage cover over a dense understorey of shrubs and grasses. This vegetation is assumed to remain post-development of the site. | | |

*Table 2: AS 3959 vegetation classifications (refer to **Figure 2**)(continued)*

| | | | |
|---|---|---|---|
| Photo ID: 4 | Plot: 1 |   |
| Vegetation classification or exclusion clause (and effective slope) | | | |
| Class A - Forest (Flat/upslope) | | | |
| Description / Justification for Classification | | | |
| Forest (Class A) vegetation has been identified externally to the north (west) of the site within existing lot 9000. Comprising tall mature trees 10 to 15 m in height with greater than 30% foliage cover over a dense understorey of shrubs and grasses. This vegetation is assumed to remain post-development of the site. | | | |
| Photo ID: 5 | Plot: 2 |   |
| Vegetation classification or exclusion clause (and effective slope) | | | |
| Class A - Forest (Flat/upslope) | | | |
| Description / Justification for Classification | | | |
| Forest (Class A) vegetation has been identified within the eastern portion of the site and within the densely vegetated Bert Tongo Park. Comprising tall mature trees 10 –to 15 m in height with greater than 30% foliage cover over a dense understorey of shrubs and grasses. This vegetation is assumed to remain post-development of the site. | | | |
| Photo ID: 6 | Plot: 2 |   |
| Vegetation classification or exclusion clause (and effective slope) | | | |
| Class A - Forest (Flat/upslope) | | | |
| Description / Justification for Classification | | | |
| Forest (Class A) vegetation has been identified within the eastern portion of the site and within the densely vegetated Bert Tongo Park. Comprising tall mature trees 10 to 15 m in height with greater than 30% foliage cover over a dense understorey of shrubs and grasses. This vegetation is assumed to remain post-development of the site. | | | |

*Table 2: AS 3959 vegetation classifications (refer to **Figure 2**)(continued)*

| | | | |
|---|---|---|---|
| Photo ID: | 7 | Plot: | 3 |
| Vegetation classification or exclusion clause (and effective slope) | | | |
| Exclusion 2.2.3.2 (e) and (f) – non-vegetated and low threat vegetation | | | |
| Description / Justification for Classification | | | |
| Non-vegetated areas (2.2.3.2 Exclusion (e)) and managed low threat vegetation (2.2.3.2 Exclusion (f)) in the form of mixed use built up areas including roads, infrastructure, maintained road verges and urban landscape gardens, both within and external to the site. This image is a view of the intersection of Wanneroo Rd and Dundebar Rd. | | | |




| | | | |
|---|---|---|---|
| Photo ID: | 8 | Plot: | 3 |
| Vegetation classification or exclusion clause (and effective slope) | | | |
| Exclusion 2.2.3.2 (e) and (f) – non-vegetated and low threat vegetation | | | |
| Description / Justification for Classification | | | |
| Non-vegetated areas (2.2.3.2 Exclusion (e)) and managed low threat vegetation (2.2.3.2 Exclusion (f)) in the form of mixed use built up area including roads, infrastructure, maintained road verges and urban landscape gardens, both within and external to the site. This image, at the eastern portion of the site is a view of the carpark accessed by Yagan Pl and Windan Way. | | | |




| | | | |
|---|---|---|---|
| Photo ID: | 9 | Plot: | 3 |
| Vegetation classification or exclusion clause (and effective slope) | | | |
| Exclusion 2.2.3.2 (e) and (f) – non-vegetated and low threat vegetation | | | |
| Description / Justification for Classification | | | |
| Non-vegetated areas (2.2.3.2 Exclusion (e)) and managed low threat vegetation (2.2.3.2 Exclusion (f)) in the form of mixed use built up area including roads, infrastructure, maintained road verges and urban landscape gardens, both within and external to the site. This image at the southern extent of the site, is a view along Ariti Avenue facing northeast. | | | |



*Table 2: AS 3959 vegetation classifications (refer to **Figure 2**)(continued)*

| | | | |
|---|---|---|---|
| Photo ID: | 10 | Plot: | 4 |
| Vegetation classification or exclusion clause (and effective slope) | | | |
| Exclusion clause 2.2.3.2 (f) (Low threat vegetation) | | | |
| Description / Justification for Classification | | | |
| This image shows low-threat vegetation under exclusion clause 2.2.3.2(f), located within the southern portion of Bert Tongo Park on the site. At the time of inspection, the grass was mown to less than 100 mm, dead material had been removed, and tree branches had been pruned to suitable heights. It is assumed that POS areas such as this will continue to be maintained by the City of Wanneroo in accordance with the City of Wanneroo Fire Mitigation Notice. | | | |




| | | | |
|---|---|---|---|
| Photo ID: | 11 | Plot: | 4 |
| Vegetation classification or exclusion clause (and effective slope) | | | |
| Exclusion clause 2.2.3.2(f) (Low threat vegetation) | | | |
| Description / Justification for Classification | | | |
| This image shows low-threat vegetation under exclusion clause 2.2.3.2(f), located within Memorial Park on the site. At the time of inspection, the grass was mown to less than 100 mm, dead material had been removed, and tree branches had been pruned to suitable heights. It is assumed that POS areas such as this will continue to be maintained by the City of Wanneroo in accordance with the City of Wanneroo Fire Mitigation Notice. | | | |




| | | | |
|---|---|---|---|
| Photo ID: | 12 | Plot: | 4 |
| Vegetation classification or exclusion clause (and effective slope) | | | |
| Exclusion clause 2.2.3.2(f) (Low threat vegetation) | | | |
| Description / Justification for Classification | | | |
| This image shows low threat vegetation in accordance with exclusion clause 2.2.3.2(f), located internal to the site, at the north western portion and within the sports oval at Wanneroo Primary School. At the time of inspection grass was mowed to less than 100mm, dead material removed and tree branches pruned to suitable heights. It assumed to be continually maintained in perpetuity in accordance with the City of Wanneroo Fire Mitigation Notice. | | | |



*Table 2: AS 3959 vegetation classifications (refer to **Figure 2**)(continued)*

| Photo ID: | 13 | Plot: | 4 |
|---|---|---|---|
| Vegetation classification or exclusion clause (and effective slope) | | | |
| Exclusion clause 2.2.3.2(f) (Low threat vegetation) | | | |
| Description / Justification for Classification | | | |
| This image shows low threat vegetation in accordance with exclusion clause 2.2.3.2(f), located internal to the site, at the south western portion and within the sports oval at the Wanneroo sports complex. At the time of inspection grass was mowed to less than 100mm, dead material removed and tree branches pruned to suitable heights. It assumed to be continually maintained in perpetuity in accordance with the City of Wanneroo Fire Mitigation Notice. | | | |



## 3.2 Assessment outputs

The vegetation classifications determined in **Section 3.1** are summarised in **Table 3** and shown in **Figure 2** (pre-development) and **Figure 4** (post-development) and incorporate the known changes to vegetation post-development within the site and the determined effective slope.

*Table 3: AS 3959 vegetation classification and effective slope applicable to the site*

| Plot | Applied vegetation classification | Effective slope |
|---|---|---|
| 1 | Class A – Forest | Flat/upslope |
| 2 | Class A – Forest | Flat/upslope |
| 3 | Exclusion 2.2.3.2(e & f) | N/A |
| 4 | Exclusion 2.2.3.2(f) | N/A |

To establish the baseline risk context, a pre-development Bushfire Hazard Level (BHL) assessment was undertaken, as depicted in **Figure 3**. The BHL assessment demonstrates that the vast majority of the site is currently subject to a Low bushfire hazard level. Localised areas of Moderate and Extreme bushfire hazard levels are present in the northern portion of the site, directly associated with the classified Forest (Class A) vegetation and its applicable buffer.

The post development BAL contour plan is shown in **Figure 5**. It is based on the minimum distance outlined in Table 2.5 of AS 3959 for the applicable vegetation classifications and effective slope and a post development vegetation classification map shown in **Figure 4**. The relevant setback distances for the BAL ratings have been summarised for ease of reference in **Table 4.**

The BAL assessment indicates that all lots will be able to achieve BAL-29 or below. The majority of lots within the site will be subject to BAL-12.5 or BAL-LOW.

*Table 4: Setback distances based on vegetation classification and effective slope and Table 2.5 of AS 3959, as determined by the method 1 BAL assessment.*

| Plot number (see Figure 2) | Vegetation classification (see Figure 2) | Effective slope (see Figure 2) | Distance to vegetation (from Table 2.5 of AS 3959) | BAL rating |
|---|---|---|---|---|
| Plot 1 & 2 | Forest (Class A) | Flat/upslope | < 16 m | BAL-FZ |
| | | | 16 - < 21 m | BAL-40 |
| | | | 21 - < 31 m | BAL-29 |
| | | | 31 - < 42 m | BAL-19 |
| | | | 42 - < 100 m | BAL-12.5 |
| | | | > 100 m | BAL-LOW |

# 4 Identification of Bushfire Hazard Issues

From a bushfire hazard management perspective, based on the requirements of SPP 3.7 and the Guidelines with consideration for potential hazards, future development is likely to require the following management and/or consideration:

- Provision of appropriate separation distances from classified bushfire hazards (specifically Plot 1 to the north and Plot 2 within Bert Tongo Park) to ensure a maximum BAL rating of BAL-29 or less can be achieved at buildings (built form).
- Ensuring that the site has access to a road network that supports egress to multiple suitable destinations, and that temporary no-through roads as a result of the staging of development are less than 200 m long with suitable turn-around areas or are provided with temporary emergency access ways.
- Ensuring that the public open space areas within the site (where assumed to be low threat as per Clause 2.2.3.2(f) of AS 3959) are designed, implemented, and managed to a achieve low threat standard in perpetuity to reduce the impact of bushfire and the risk of fires starting onsite.
- Ensuring that the provision of water for firefighting is sufficient and accessible by firefighting services, which will be achieved via the existing urban reticulated water supply and hydrant network in accordance with water authority specifications and Element 4 of the Guidelines.

## 4.1 Permanent hazards

The land surrounding the site comprises a variety of established urban uses, including existing residential areas and urban mixed-use zones associated with the Wanneroo Town Centre.

Classified vegetation that will be applicable to the site on an ongoing basis includes forest (Class A) vegetation which has been identified both externally and internally to the site. External vegetation (Plot 1) is located to the north within Lot 9000, with a minor encroachment onto the St Anthony's Primary School lot. Internal vegetation (Plot 2) is located within the densely vegetated areas of the northern portion of Bert Tongo Park and the Wanneroo Police Station lot. As both of these areas are assumed to remain in their current state in perpetuity, they will pose a permanent bushfire risk to the northern interface and internal development areas, respectively.

## 4.2 Temporary hazards

The Precinct Plan does not propose the removal of any classifiable vegetation or a major spatial redesign of the site. Therefore, no temporary or staging related hazards are anticipated as part of the implementation of the Precinct Plan.

## 4.3 Vulnerable land use

The definition of a vulnerable land use is where occupants are less able to respond in an emergency. The types of land uses considered vulnerable include *"facilities that, due to the building design or use, or the number of people accommodated, are likely to present evacuation challenges."* This generally includes (but is not limited to) schools, hospitals, aged care facilities and similar. The identification of a land use as a vulnerable use is at the discretion of the decision maker.

A high-risk land use is one where practices that occur within the site may lead to a potential ignition and spread of a fire from the site or could prolong the duration or intensity of a bushfire should a fire arrive from outside the site.

The Precinct Plan contains zoning in the area that allows for the potential of vulnerable land uses such as 'Education', 'Private Community Purpose' and 'Mixed Use'. The specific requirements for these uses can be addressed at future planning stages where applicable. The Precinct Plan allows for acceptable location and access considerations, as shown on the Precinct Plan in **Appendix A**.

# 5 Assessment Against the Bushfire Protection Criteria

## 5.1 Bushfire protection criteria

The bushfire protection criteria provided in the Guidelines represents the risk treatments applicable to achieving the intent and the objectives listed in SPP 3.7. The bushfire protection criteria vary depending upon the stage of the planning process and development type and are divided into four subsystems (elements). Each subsystem is provided with an outcome, or an acceptable solution method (predetermined solution). Compliance with each subsystem (as a risk treatment) is required to demonstrate to the decision-maker that the risk is within acceptance.

The bushfire protection criteria identified in the Guidelines and addressed as part of this BMP are:

- Element 1: Location
- Element 2: Siting and design of the development
- Element 3: Vehicular access
- Element 4: Water supply.

Bushfire Protection Criteria 5 (BCP 5): Structure plans and subdivision applications has been considered for the proposed Precinct Planning of the site. The assessment demonstrates that the Precinct Plan and future development can achieve the objectives of SPP 3.7 and addresses BCP 5 through acceptable solutions detailed in the Guidelines, as summarised in **Table 5**.

*Table 5: Assessment against the bushfire protection criteria from the Guidelines*

| Bushfire protection criteria | Proposed bushfire management strategies |
|---|---|
| **Element 1: Location** | |
| A1.1a Broader Landscape Type | The site is located within 'Area 2' (designated bushfire prone) on the state-wide *Map of Bush Fire Prone Areas* prepared by the Office of Bushfire Risk Management (OBRM 2025), as shown in **Plate 1**. Therefore, a broader landscape assessment, in accordance with Appendix A of the Guidelines, has been undertaken for the site and is outlined in **Table A1.1** below, with a detailed breakdown of the assessment provided in **Section 5.2**. This assessment shows the site is a Broader Landscape Type A and therefore satisfies BCP 5 A1.1a. The proposal complies with **A1.1a**. |

***Table A1.1**: Landscape assessment in accordance with Appendix A Table 3 of the Guidelines*

| Criteria | Assessment | Points |
|---|---|---|
| *Proximity of the planning proposal to a suitable destination* | A suitable destination is <1 km. By road, the site acts as a suitable destination. | 1 |
| *The road pattern from the planning proposal to a suitable destination* | The road pattern is simple and/or direct, as shown in **Figure 6**. | 1 |
| *The predominant vegetation pattern* | Predominantly cleared vegetation for urban uses, as shown in **Figure 6**. | 1 |
| *Exposure of the planning proposal to an identified external bushfire hazard (excluding grassland)* | No landscape scale bushland surrounds the site | 1 |
| **Total points** | | **4** |
| **Landscape type** | | **A** |

*Table 5: Assessment against the bushfire protection criteria from the Guidelines (continued)*

| Bushfire protection criteria | Proposed bushfire management strategies |
|---|---|
| **Element 2: Siting and design** | |
| A2.1 Siting and design | To establish the baseline risk context, a pre-development BHL assessment was undertaken (**Figure 3**). This assessment demonstrated that while the majority of the site is subject to a Low or Moderate bushfire hazard, localised areas of Extreme bushfire hazard exist in the northern portion of the site, directly associated with the classified forest (Class A) vegetation and its applicable buffer.<br><br>The BAL assessment conducted as part of this BMP (**Figure 5**) indicates that the proposed Precinct Plan layout enables all future habitable buildings to achieve sufficient separation from classified vegetation to achieve BAL-29 or below. Separation from permanent bushfire hazards (Plot 1 and Plot 2) is provided within the Precinct Plan through the strategic placement of public roads and portions of managed public open space (as shown in **Figure 7**) and the provision of deeper lots at subdivision to accommodate in-lot setbacks.<br><br>Overall, the development cells within the site are suitability sized, in combination with the public road network and the POS areas, to accommodate the minimum separation distances (outlined in **Table 4** and shown in **Figure 5**).<br><br>As established in **Section 4.2**, the Precinct Plan does not propose major spatial redesign or classifiable vegetation clearing that would trigger the need for staged temporary low-threat management buffers.<br><br>The proposal complies with **A2.1**. |
| A2.2 Asset Protection Zone (APZ) | Future habitable buildings will be surrounded by an APZ that is implemented and maintained to a low-threat standard in accordance with Clause 2.2.3.2(e) and (f) of AS 3959.<br><br>The dimensions of the provided APZ are sufficient to achieve BAL-29 or less at future habitable buildings is to be provided. In the long-term development scenario, APZs will be primarily contained within individual lot boundaries but will also incorporate adjacent permanent low threat areas such as managed road reserves and POS areas.<br><br>As established in **Section 4.2**, no temporary staging buffers are required for this Precinct Plan.<br><br>The proposal can comply with **A2.2** |
| A2.3 Clearing of native vegetation | As outlined in **Section 2.1**, The subject Precinct Plan does not propose the removal of any classifiable vegetation or a major redesign of the site.<br><br>The proposal complies with **A2.3**. |
| **Element 3: Vehicular access** | |
| A3.1 Public roads | The Precinct Plan area is serviced by an established and highly interconnected urban public road network. This existing network ensures that future residents and emergency services have safe and efficient access and egress to multiple suitable destinations in multiple directions.<br><br>No structural changes are proposed or required to the established existing public road network within the site for this proposed Precinct Plan.<br><br>The proposal complies with **A3.1**. |

*Table 5: Assessment against the bushfire protection criteria from the Guidelines (continued)*

| Bushfire protection criteria | Proposed bushfire management strategies |
|---|---|
| **Element 3: Vehicular access** | |
| A3.2 Access routes. | The Precinct Plan benefits from an established, highly interconnected internal public road network that provides multiple egress options to the broader district network. The layout ensures that all future lots have access to at least two different vehicular access routes, providing egress in two different directions to multiple suitable destinations. Specifically, the internal network connects to Wanneroo Road (classified as a Primary Distributor) via multiple access points, facilitating continuous and safe egress to the north and south into the wider urban matrix and away from the identified hazard areas.<br><br>The proposal complies with **A3.2**. |
| A3.3a No-through roads | The site contains an existing road (Servite Terrace) with a portion of it being a no-through road. This portion is less than 200 m (115 m) and contains a suitable turn-around, which meets the standards required in the Guidelines.<br><br>The proposal can comply with **A3.3a**. |
| A3.3b No-through road requirements | As identified above, the internal road contains one existing no-through road, being Servite Terrace located in the northern portion of the site. The portion of no-through road is less than 200 m (115 m) and meets the minimum technical standards for a public road as detailed in Table 10, Column 2 of Appendix B.3 of the Guidelines (**Plate 4**) as well as adhering to the turnaround area/head standards outlined in Figure 30 of the Guidelines.<br><br>The proposal complies with **A3.3b**. |
| A3.4 Emergency access way | No permanent emergency access ways (EAW) are proposed as the interconnected public road network satisfies the primary access requirements.<br><br>The proposal can comply with **A3.4**. |
| A3.5a Perimeter roads | The proposed Precinct Plan seeks to largely formalise the existing centre to facilitate ongoing orderly development within the established urban footprint. As such, the construction of additional perimeter roads does not form part of this proposal.<br><br>Notwithstanding this, the majority of the identified permanent bushfire hazards (Plot 1 and Plot 2) already interface directly with the existing public road network. Where a direct public road interface is not present, areas of low threat vegetation or established firebreaks are provided. These areas deliver the necessary hazard separation functions and ensure appropriate Asset Protection Zones (APZ) are achieved, in accordance with the requirements addressed under Acceptable Solution A2.2.<br><br>The Precinct Plan will continue to rely on the existing, highly interconnected public road network to facilitate emergency service access and community egress, as demonstrated under Acceptable Solutions A3.1 and A3.2.<br><br>The proposal complies with **A3.5a**. |
| A3.5b Fire service access route | Not applicable. No fire service access routes (FSARs) are proposed or required for this Precinct Plan. Emergency service vehicles will utilize the existing public road network and hardstand areas to access the hazard interfaces.<br><br>The proposal complies with **A3.5b**. |

*Table 5: Assessment against the bushfire protection criteria from the Guidelines (continued)*

| Bushfire protection criteria | Proposed bushfire management strategies |
|---|---|
| **Element 3: Vehicular access** | |
| A3.6 Battle-axe access legs | Not applicable. No battle-axe access is indicated at this stage of the planning process. As part of the future stages of the site, while battle-axe access legs should be avoided where possible within designated bushfire prone areas if proposed as part of future development, their inclusion will need to be justified and will need to address the minimum standards outlined in Appendix 8.3 of the Guidelines which includes technical requirements in Table 10 (reproduced in **Plate 4**).<br><br>The proposal complies with **A3.6.** |
| **Element 4: Water** | |
| A4.1 Water supply for structure plans | The Precinct Plan is serviced by an existing reticulated water supply and fire hydrants network which are in accordance with the specifications of the relevant water supply authority (Water Corporation).<br><br>The proposal complies with **A4.1**. |
| A4.3 Water supply for existing habitable building(s) | As the Precinct Plan is located within the existing Wanneroo town centre, the entire site consists of habitable buildings which are currently and will remain serviced by an existing reticulated water supply and fire hydrants network which are in accordance with the specifications of the relevant water supply authority (Water Corporation).<br><br>The proposal complies with **A4.3.** |

Table 10: Vehicular access technical requirements

| | 1 | | 2 | | 3 | | 4 | | 5 | |
|---|---|---|---|---|---|---|---|---|---|---|
| **TECHNICAL REQUIREMENTS** | **PERIMETER ROADS** | | **PUBLIC ROADS** | | **EMERGENCY ACCESS WAY[1]** | | **FIRE SERVICE ACCESS ROUTE[1]** | | **BATTLE-AXE & PRIVATE DRIVEWAYS[1]** | |
| **MAP OF BUSH FIRE PRONE AREAS DESIGNATION** | **Area 2** | **Area 1** | **Area 2** | **Area 1** | **Area 2** | **Area 1** | **Area 2** | **Area 1** | **Area 2** | **Area 1** |
| Minimum trafficked carriageway (metres) | 7.2 | 6 | See note 5 | | 3.5 | 6 | 3.5 | 6 | 6 | |
| Minimum vertical clearance (metres) | 4.5 | | | | | | | | | |
| Minimum weight capacity (tonnes) | 15 | | | | | | | | | |
| Maximum grade crowned road[2] | See note 3 | | See note 3 | | 1:10 (10% or 6°) | | | | | |
| Maximum grade sealed road[2,3] | | | | | 1:7 (14.3% or 8°) | | | | | |
| Maximum average grade sealed road | | | | | 1:10 (10% or 6°) | | | | | |
| Minimum inner radius of road curves (metres) | | | | | 8.5 | | | | | |

Notes:
1. Driveways and battleaxe legs to comply with the Residential Design Codes and Development Control Policy 2.2 Residential Subdivision where not required to comply with the widths in the Appendix to the Guidelines.
2. One must have no more than a 1 in 8 (12.5% - 7.1 degrees) entry and exit angle.
3. To have crossfalls between 2 per cent and 5 per cent.
4. For sealed roads only the maximum grade of no more than 1 in 5 (20 per cent) (11.3 degrees) for no more than 50 metres is permissible, except for short constrictions no 3.5 metres for no more than 20 metres in length where an obstruction cannot be reasonably avoided or removed.
5. As outlined in the Institute of Public Works Engineering Australasia (IPWEA) subdivision guidelines, Liveable Neighbourhoods, Australian Standards. Main Roads standard, supplement, policy or guideline and/or any applicable or relevant local government standard or policy.

*Plate 4: Excerpt of Table 10 from Appendix 8.3 of The Guidelines outlining vehicle access requirements*

## 5.2 Broader Landscape Assessment

As established under the assessment against Element 1: Location **(Section 5.1, Table 5)**, a BLA was undertaken for the site in accordance with Appendix A.1 of the Guidelines. The assessment area extended approximately 2 km from the site boundaries, as depicted in **Figure 6**. The purpose of the BLA is to quantify the landscape characteristics influencing the potential for, and impact of, a landscape-scale bushfire. The assessment resulted in a score of 4 points, designating the site as Broader Landscape Type A. A detailed breakdown of the points allocated for each criterion (referencing Table 3 of the Guidelines) is provided below:

**Proximity of the planning proposal to a suitable destination: Score: 1**

The site is located immediately adjacent (less than 1 km by road) to existing established urban residential areas to the south, west and east. These areas constitute development outside of designated bushfire prone areas and contain essential services and infrastructure, thus qualifying as a 'suitable destination'. As an existing built-up area, the majority of the site itself qualifies as a 'suitable destination', however, this has not been taken into consideration for this assessment. As the distance by road falls within the 1km range, a score of 1 point is assigned.

**The road pattern from the planning proposal to a suitable destination: Score: 1**

Access from the site to the suitable destination (adjacent urban areas) is immediate and direct via the existing and proposed road network. Furthermore, the site contains Wanneroo Road, a primary distributor road, providing simple and direct routes away from the site towards other suitable destinations within the broader region. This represents a 'Simple and/or direct' road pattern. Therefore, a score of 1 point is assigned.

**The predominant vegetation pattern: Score: 1**

Within the 2 km assessment area **(Figure 6)**, the vegetation pattern reflects the site's location within an existing residential area where development is progressing. This includes existing residential development, proposed areas under approved structure plan, the site itself, and areas of rural residential lots within the north-eastern Precinct Plan. The overall pattern within the 2 km radius is heavily fragmented by existing and planned development rather than being dominated by large, continuous tracts of hazardous vegetation. Thus, a score of **1 point** for a predominantly cleared pattern is appropriate.

**Exposure of the planning proposal to an identified external bushfire hazard (excluding Class G Grassland): Score: 1**

Analysis of the broader landscape within the 2 km assessment radius **(Figure 6)** does not indicate significant areas of external classifiable vegetation. This reflects the site's location within an existing residential area consisting predominantly of residential and rural residential lots to the north, west and south. A large area of the combined eastern Precinct Plan features Lake Joondalup, which as a body of water is a non-vegetated area. Therefore, in accordance with Table 3 of the Guidelines, a score of 1 point is assigned.

On the basis of the above assessment the total score achieved is: **1 + 1 + 1 + 1 = 4 points**. With a total score of 4 points, the site falls within the 0-11 point range, confirming its classification as Broader Landscape Type A. This indicates that the broader landscape surrounding the site presents a

manageable level of bushfire risk for the proposed structure plan, satisfying the requirements of Element 1: Location under BPC 5.

## 5.3 Additional management strategies

### 5.3.1 Future approval considerations

The BAL assessment presented in this BMP assesses the potential bushfire risk to future habitable buildings within the site based on the proposed Precinct Plan layout and the assumptions outlined in **Section 3**. It demonstrates that each proposed lot contains a suitable development site where future habitable buildings can achieve a BAL rating of BAL-29 or less. No lots will be titled that cannot provide a development site (building location) achieving BAL-29 or less.

Following the creation of individual lot titles through the subdivision process, a building permit will be required from the City of Wanneroo before any construction can commence. For Class 1, 2, 3, and associated 10a buildings located within designated bushfire prone areas and subject to a BAL rating of BAL-12.5 or higher, construction must comply with the relevant standards outlined in the National Construction Code (NCC), which references AS 3959: Construction of buildings in bushfire-prone areas.

### 5.3.2 Vegetation management

#### 5.3.2.1 Within the site

**Lots**

Individual residential lots must be managed by the respective landowners to a low-threat standard in accordance with Section 2.2.3.2(e) (non-vegetated) and (f) (low threat vegetation, e.g., managed gardens, lawns) of AS 3959. This ongoing management is crucial for maintaining the validity of the BAL assessment and ensuring compliance with the City of Wanneroo's Fire Mitigation Notice.

**Road reserves**

Road pavements are considered non-vegetated (AS 3959 Clause 2.2.3.2(e)). Nature strips (verges) within public road reserves are typically considered low threat under AS 3959 Clause 2.2.3.2(f) without requiring specific management beyond standard local government practices. These areas will be maintained by the City of Wanneroo.

**Public open space**

Areas designated for recreational use within POS are required to be established, landscaped, and maintained by the proponent initially, and subsequently by the City of Wanneroo, to achieve and maintain a low-threat standard in accordance with Section 2.2.3.2(f) of AS 3959. Management practices will likely include regular mowing/slashing of grassed areas to maintain low heights (e.g., <100mm), irrigation, weed control, removal of dead material, and appropriate pruning of trees.

#### 5.3.2.2 Surrounding the site

Where indicated as a low threat in **Figure 2**, it is assumed that areas surrounding the site will be managed by the applicable landowners/land managers in accordance with existing maintenance regimes and where relevant City of Wanneroo's Fire Mitigation Notice (as published).

Where indicated as classified vegetation in **Figure 2**, areas have been assumed to remain a bushfire hazard and are not subject to fuel load management

### 5.3.3 City of Wanneroo Fire Mitigation Notice

The City of Wanneroo releases a Fire Mitigation Notice annually (or as required) to provide a framework for bushfire management within the City. The City of Wanneroo is able to enforce this order in accordance with Section 33 of the Bush Fires Act 1954, and the proponent / future landowners will need to ensure compliance with the fire control notice, as published, or any directions provided by the City of Wanneroo.

All landholders of residential landholdings are required to comply with the requirements of the City of Wanneroo Fire Mitigation Notice relevant to their landholding size, including maintaining grasses and inflammable materials specified in the Notice. The most current Fire Mitigation Notice should be referred by the lot owners for the most up-to-date requirements.

### 5.3.4 Public education and preparedness

Community bushfire safety is a shared responsibility between individuals, the community, government, and fire agencies. DFES has an extensive Community Bushfire Education Program including a range of publications, a website, and Bushfire Ready Groups. The DFES website (https://www.dfes.wa.gov.au/bushfire/prepare/) provides a range of materials to help the community prepare for and survive the bushfire season.

The City of Wanneroo provides bushfire advice to residents available from their website [illegible]. Professional, qualified consultants also offer bushfire safety advice and relevant services to residents and businesses in high-risk areas in addition that that provided in this BMP.

In the case of a bushfire in the area, advice would be provided to residents by Department of Fire and Emergency Services (DFES), Department of Biodiversity Conservation and Attractions (DBCA), and/or the City of Wanneroo on any specific recommendations with regard to responding to the bushfire, including evacuation if required.

# 6 Responsibilities for Implementation and Management of Bushfire Measures

**Table 6** outlines the future responsibilities of the proponent (the City of Wanneroo) and the Local Government Authority (also the City of Wanneroo) associated with implementing the proposed Precinct Plan with reference to future mitigation measures, by owners, to be accommodated as part of subdivision.

The Italicised text is for information only.

Table 6: Responsibilities for the implementation of this BMP

| City of Wanneroo (Proponent) – to support structure plan and future subdivision | | |
|---|---|---|
| **No.** | **Implementation and Management actions** | **Timing** |
| 1 | Make a copy of the BMP available to relevant decision-makers to support the statutory consideration and approval of the Precinct Plan. | To support the Precinct Plan approval process |
| 2 | The Precinct Plan promotes as part of the subdivision process, the provisions for:<br>• A suitable public road network that provides egress to at least two different destinations and meets the technical requirements of Appendix B.3 of the Guidelines and the associated Table 10 (or as otherwise determined by a bushfire consultant and relevant approval authority).<br>• The avoidance of no through roads and battle-axe lots as part of the spatial layout. *If these are proposed as part of future development, these will need to be justified from a planning/development perspective and be consistent with the minimum requirements outlined in Appendix B.3 of the Guidelines (or as otherwise determined by a bushfire consultant and relevant approval authority). This includes the provision of suitable turn-around areas.*<br>• Ensure future habitable buildings are able to be located in an area subject to BAL-29 or less. The minimum separation distances between habitable buildings and classified vegetation to achieve BAL-29 should be in accordance with **Table 4** in this BMP or as specified in subsequent BAL assessments. *These separation distances can be accommodated by locating public roads and/or managed POS between the habitable building/s and classified vegetation and/or ensuring proposed residential lots are adequately sized to ensure in-lot setbacks can be accommodated to achieve BAL-29 at the future dwelling.*<br>• Provide a water supply dedicated to firefighting purposes in the form of a reticulated network of water hydrants. *Alternatively, the City of Wanneroo may agree to a strategically located static water supply (i.e., water tank).* | To support future subdivision |
| 3 | Following approval of the structure plan, if required prepare a BMP or bushfire statement in accordance with SPP 3.7, the Guidelines and AS 3959 to support subdivision within portions of the site that are designated as bushfire prone areas under the *Map of Bush Fire Prone Areas*. The BMP should consider the proposed spatial layout of the development. | To support future subdivision |
| 4 | Maintaining fuel loads in existing public road reserves and public open space (under their management) to appropriate standards to minimise fuel loads. | Advisory note: Ongoing, as required |
| 5 | Monitoring vegetation fuel loads in private landholdings against the requirements of the City's Firebreak and Hazard Reduction Notice (and/or existing maintenance regimes outlined in this BMP) and liaising with relevant stakeholders to maintain fuel loads at minimal/appropriate fuel levels, in accordance with the City's responsibilities under the *Bush Fires Act 1954*. | Advisory note: Ongoing, as required. |

# 7 Applicant Declaration

## 7.1 Accreditation

This assessment has been prepared by Emerge Associates who have been providing bushfire risk management advice for more than 12 years, undertaking detailed bushfire assessments (and associated approvals) to support the land use development industry. Emerge Associates have a number of team members who have undertaken Bushfire Planning and Design (BPAD) Level 1 and Level 2 training and are Fire Protection Association of Australia (FPAA) accredited practitioners.

Anthony Rowe is a FPAA Level 3 BPAD accredited practitioner [BPAD No. 36690] in accordance with clause 6.12 of the Guidelines.

## 7.2 Declaration

I declare that the information provided is true and correct to the best of my knowledge.

Reviewer signature:



**Name:** Anthony Rowe

**Company:** Emerge Associates/Envision Bushfire Planning

**Date:** 03/06/2026

**BPAD Accreditation:** BPAD No. 36690

# 8 References

## 8.1 General references

The references listed below have been considered as part of preparing this document.

Department of Biodiversity, Conservation and Attractions (DBCA) 2017, *Ramsar Sites (DBCA-010)*.

Department of Biodiversity, Conservation and Attractions (DBCA) 2022a, *Geomorphic Wetlands, Swan Coastal Plain (DBCA-019)*, Western Australia, <https://catalogue.data.wa.gov.au/dataset/geomorphic-wetlands-swan-coastal-plain>.

Department of Biodiversity, Conservation and Attractions (DBCA) 2022b, *Threatened Ecological Communities (DBCA-038)*, Perth, Western Australia <https://catalogue.data.wa.gov.au/dataset/threatened-ecological-communities>.

DPLH 2017, *Local Government Guidelines for Subdivisional Development* Perth, Western Australia.

Department of Planning, Lands and Heritage (DPLH) 2019, *Bush Forever Areas 2000 (DPLH-019)*, <https://catalogue.data.wa.gov.au/org/department-of-planning-lands-and-heritage>.

Department of Planning, Lands and Heritage, and Western Australian Planning Commission (DPLH and WAPC) 2024, *Bushfire Management Plan (BMP) Manual*.

Department of Water and Environmental Regulation (DWER) 2021, *Clearing Regulations - Environmentally Sensitive Areas (DWER-046)*, <https://catalogue.data.wa.gov.au/dataset/clearing-regulations-environmentally-sensitive-areas-dwer-046>.

Gould, J., McCaw, W., Cheney, N., Ellis, P. and Matthews, S. 2007, *Field Guide: Fuel Assessment and Fire Behaviour Prediction in Dry Eucalypt Forest*, CSIRO and Department of Environment and Conservation, Perth, Western Australia.

Landgate 2025, *Map Viewer Plus*, <https://map-viewer-plus.app.landgate.wa.gov.au/index.html>.

Office of Bushfire Risk Management (OBRM) 2025, *Map of Bush Fire Prone Areas*, Department of Fire and Emergency Services, <https://maps.slip.wa.gov.au/landgate/bushfireprone/>.

Standards Australia 2018, *AS 3959:2018 Construction of buildings in bushfire-prone areas*, Sydney.

Western Australian Planning Commission (WAPC) 2024a, *Planning for Bushfire Guidelines*, Perth.

Western Australian Planning Commission (WAPC) 2024b, *State Planning Policy 3.7 Bushfire*, Perth.

## Online references

The online resources that have been utilised in the preparation of this report are referenced in **Section 8.1**, with access date information provided in **Table R-1**.

*Table R 1 Access dates for online references*

| Reference | Date accessed | Website or dataset name |
|---|---|---|
| Landgate 2026 | 23.03.2026 | https://map-viewer-plus.app.landgate.wa.gov.au/index.html |
| (OBRM 2024) | 20.03.2026 | Bush Fire Prone Areas |
| (DBCA 2022a) | 24.03.2026 | Geomorphic Wetlands, Swan Coastal Plain |
| (DBCA 2017) | 24.03.2026 | Ramsar Sites |
| (DBCA 2022b) | 24.03.2026 | Threatened ecological communities |
| (DWER 2021) | 24.03.2026 | Environmentally Sensitive Areas |
| (DPLH 2019) | 24.03.2026 | Bush Forever areas |

# Figures

*Figure 1: Site Location and Environmental Features*

*Figure 2: Pre Development AS 3959 Vegetation Classification and Effective Slope*

*Figure 3: Pre Development Bushfire Hazard Level Assessment*

*Figure 4: Post Development AS 3959 Vegetation Classification and Effective Slope*

*Figure 5: Post Development Bushfire Attack Level Contour Plan*

*Figure 6: Broader Landscape Assessment*

*Figure 7: Spatial Representation of Bushfire Management Strategies*

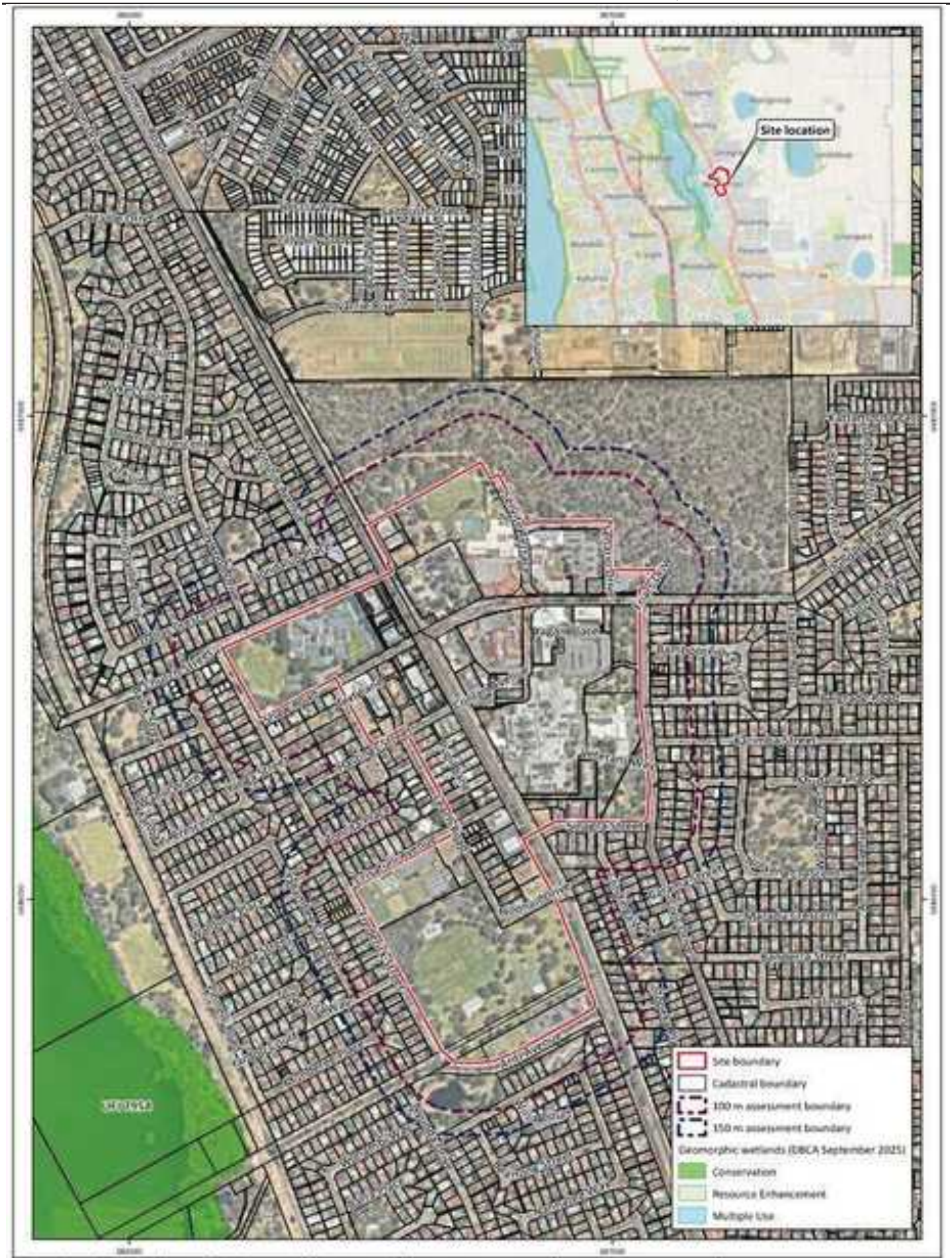


**Figure 1: Site Location and Environmental Features**

| | |
|---|---|
| Project: | Bushfire Management Plan<br>Wanneroo Town Centre Structure Plan |
| Client: | City of Wanneroo |

Plan Number: EP17-118088-#26
Drawn: IBM
Date: 08/04/2026
Checked: DW
Approved: EPW
Date: 08/04/2026

N

0 100 200
Metres
Scale: 1:10,000@A4
GDA 2020 MGA Zone 50

emerge ASSOCIATES

While emerge Associates makes every attempt to ensure the accuracy and completeness of data, emerge accepts no responsibility for externally sourced data used. © Landgate (2025). Basemap imagery date: 31/01/2026

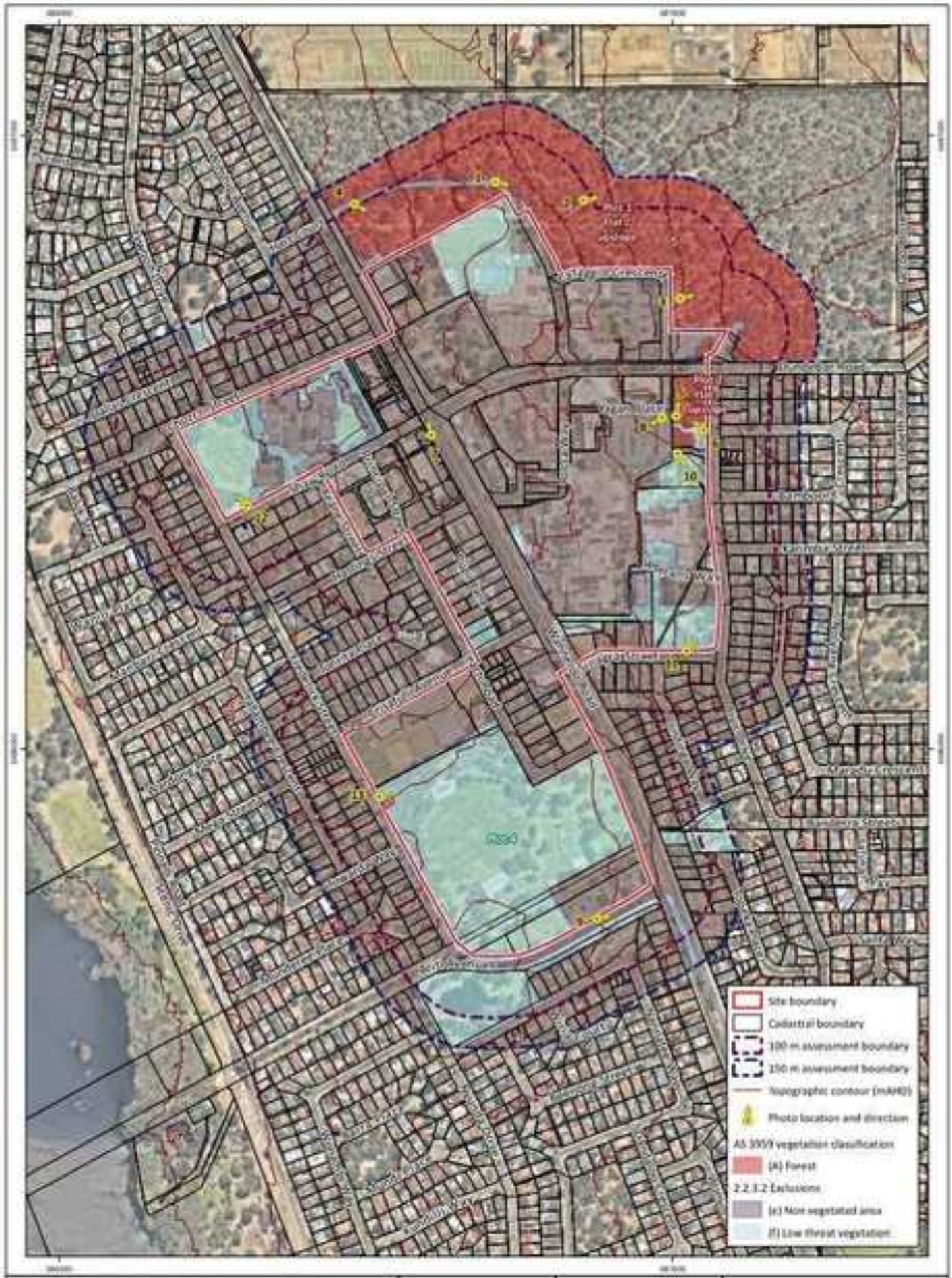


**Figure 2:** Pre Development AS 3959 Vegetation Classification and Effective Slope

| | |
|---|---|
| Project: | Bushfire Management Plan<br>Wanneroo Town Centre Structure Plan |
| Client: | City of Wanneroo |

Plan Number: EP17-133(08)-#27
Drawn: LMM
Date: 09/04/2026
Checked: CNV
Approved: CPW
Date: 09/06/2026

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© Copyright (2026). Aerial image imagery date: 25/03/2026

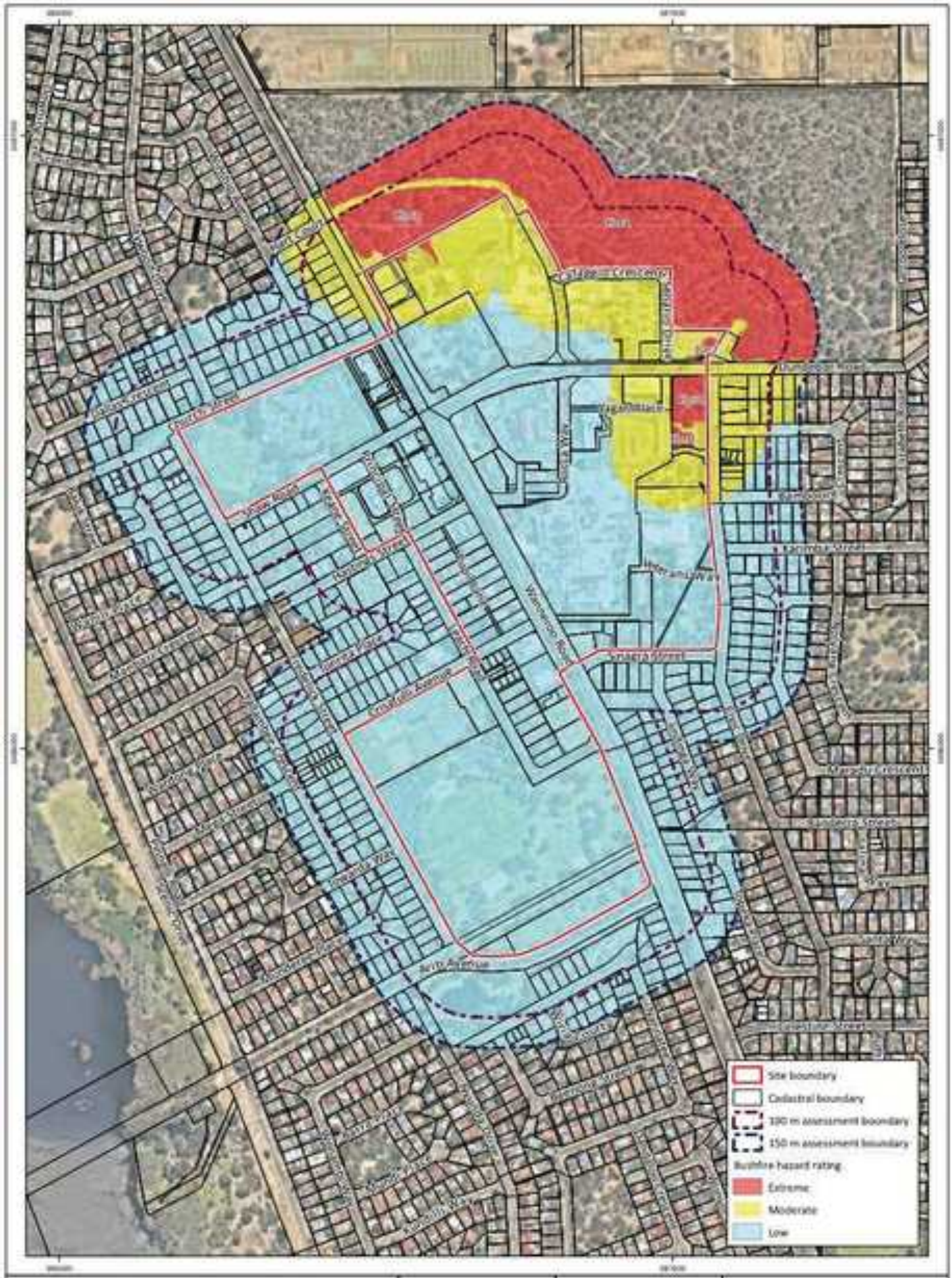


**Figure 3:** Pre Development Bushfire Hazard Level Assessment

| | |
|---|---|
| Project: | Bushfire Management Plan<br>Wanneroo Town Centre Structure Plan |
| Client: | City of Wanneroo |

Plan Number: SP17-133(08)-f1b
Drawn: LMM
Date: 05/04/2018
Checked: CNV
Approved: CPW
Date: 05/04/2018

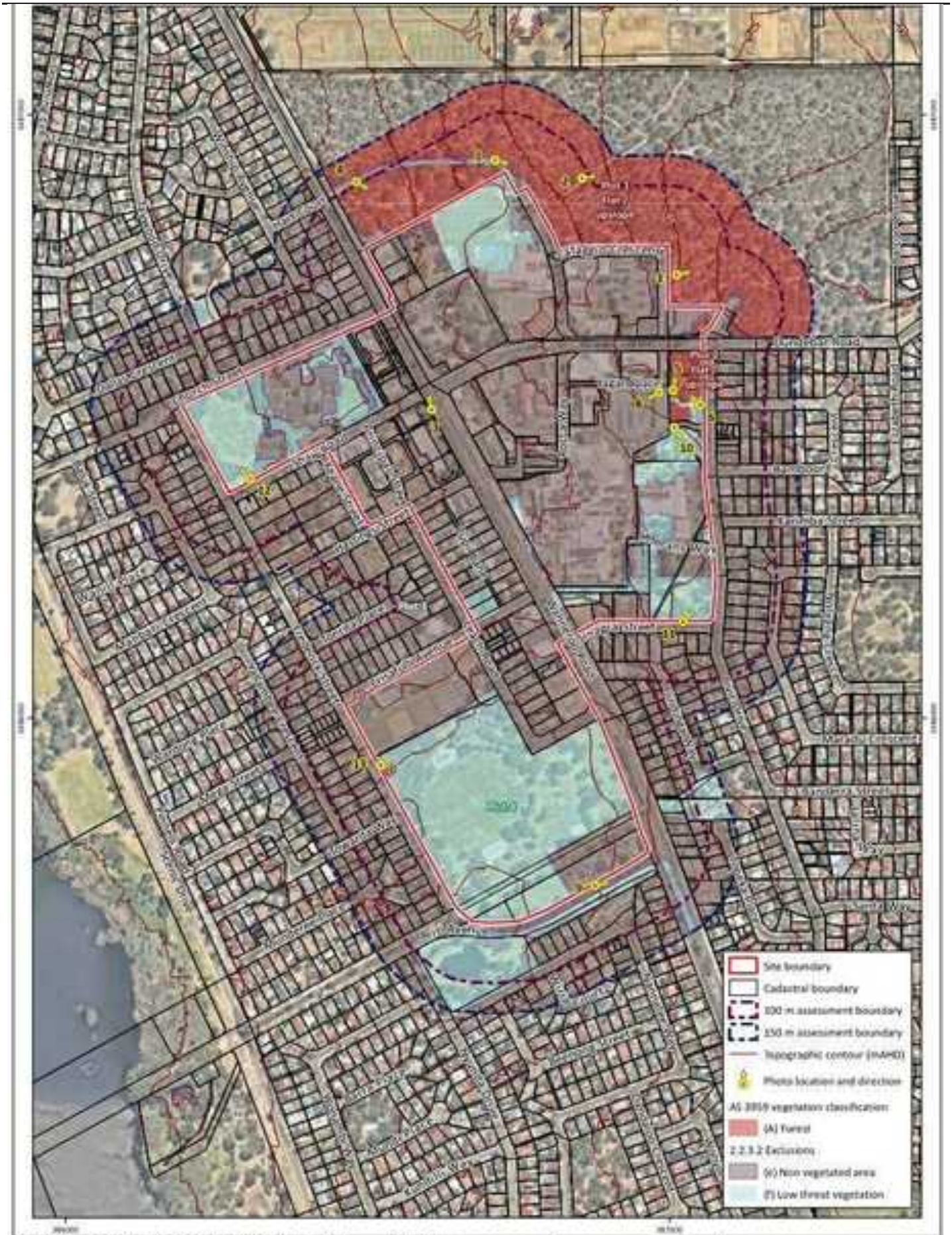


**Figure 4:** Post Development AS 3959 Vegetation Classification and Effective Slope

**Project:** Bushfire Management Plan
Wanneroo Town Centre Structure Plan

**Client:** City of Wanneroo

Plan Number: EP17-120(08)-#29
Drawn: LAM
Date: 09/06/2026
Checked: CMV
Approved: CPW
Date: 09/06/2026

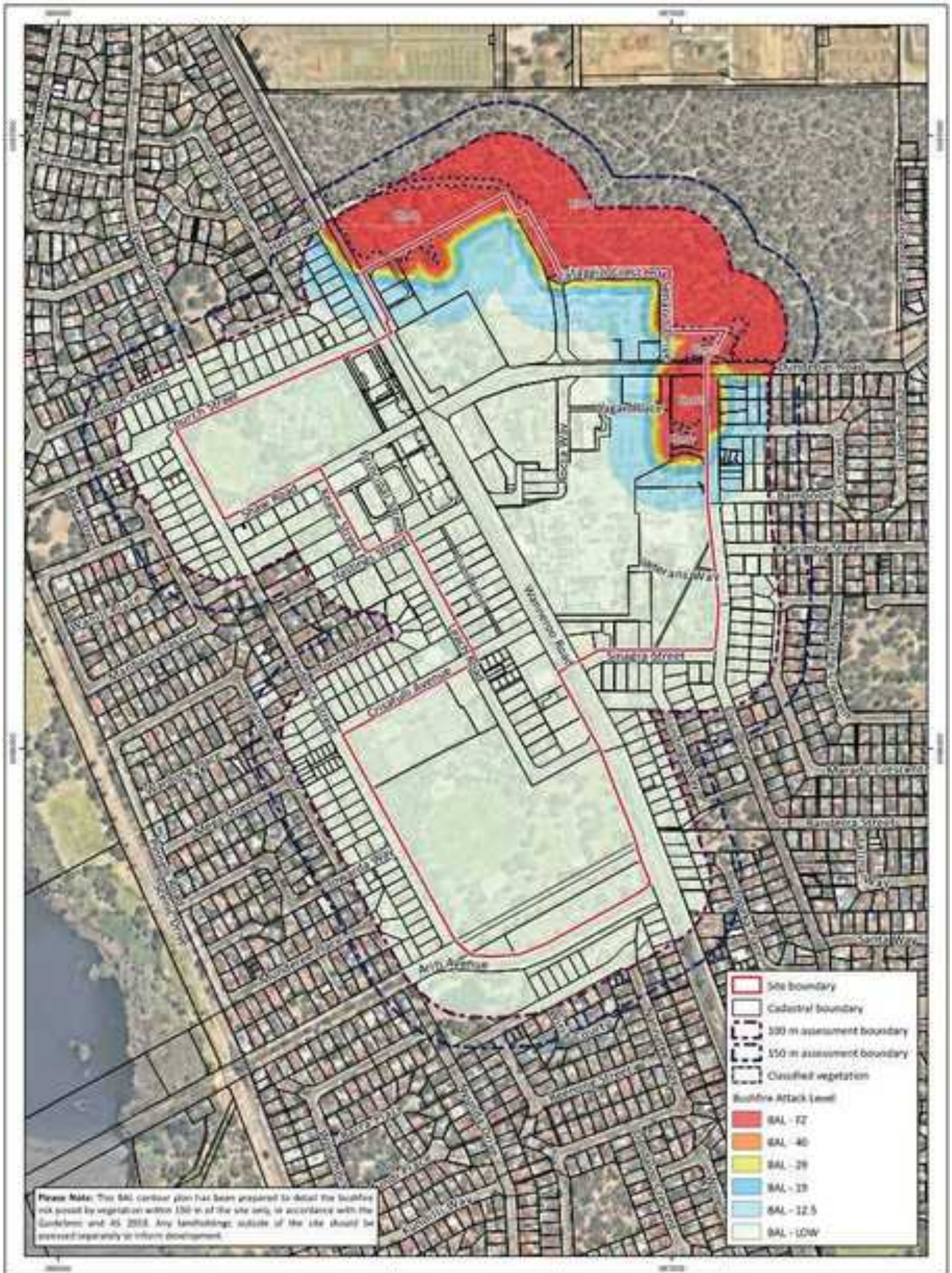


**Figure 5: Post Development Bushfire Attack Level Contour Plan**

| | |
|---|---|
| Project: | Bushfire Management Plan<br>Wanneroo Town Centre Structure Plan |
| Client: | City of Wanneroo |

Plan Number: EPS7-13808[-#]30
Drawn: LAM
Date: 05/04/2026
Checked: CNV
Approved: CPW
Date: 05/04/2026

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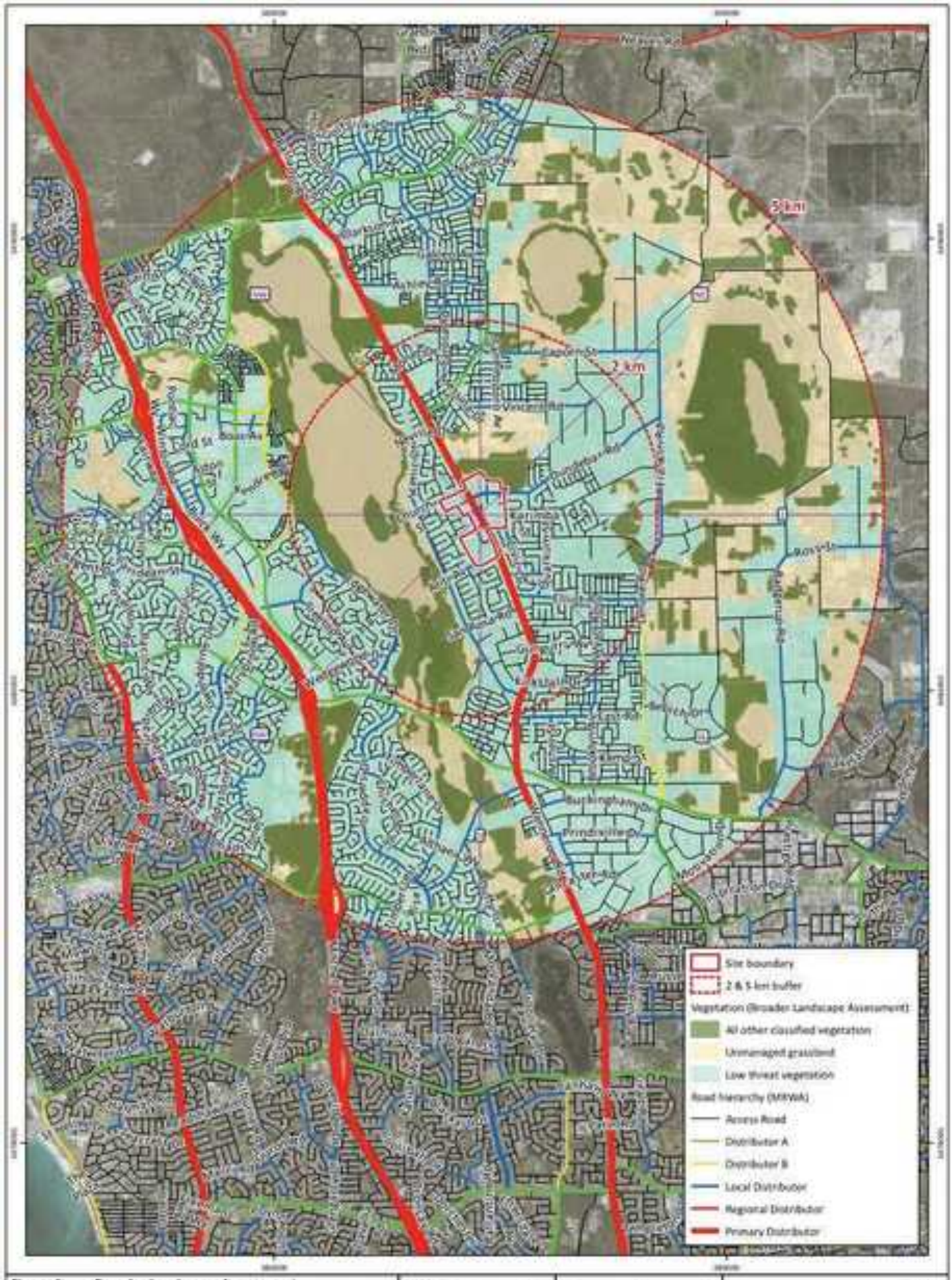


**Figure 6: Broader Landscape Assessment**

| | |
|---|---|
| Project: | Bushfire Management Plan<br>Wanneroo Town Centre Structure Plan |
| Client: | City of Wanneroo |

Plan Number: EP17-133(08)-#31
Drawn: LAM
Date: 09/04/2026
Checked: CNV
Approved: CPW
Date: 09/04/2026

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**Development Location:**
All future habitable development is to be sited such that it
is subject to a maximum radiant heat impact of BAL-29.

**Asset Protection Zone:**
All future residential lots, road reserves, and temporary staged buffers are to be established and proactively maintained as an Asset Protection Zone (APZ) to a lowthreat
standard in accordance with Clause 2.2.3.2(f) of AS 3959:2018.

**Through Roads**
The existing road layout ensures
that every lot has access to through routes for traffic. The structure plan demonstrates this with only one existing no-through road being Servite Terrace.

**Access to Water**
The area is currently integrated with a reticulated water supply, ensuring a reliable and consistent source of water for firefighting purposes.

**Lot Siting**
No habitable Lots should exceed BAL- 29 (determined in accordance with AS 3959).

**Figure 7: Spatial Representation of Bushfire Management Strategies**

| | |
|---|---|
| Project: | Bushfire Management Plan<br>Wanneroo Town Centre Structure Plan |
| Client: | City of Wanneroo |

Plan Number:
EP17-135(08)--F11
Drawn: LAM
Date: 05/04/2026
Checked: CMV
Approved: LPW
Date: 06/04/2026

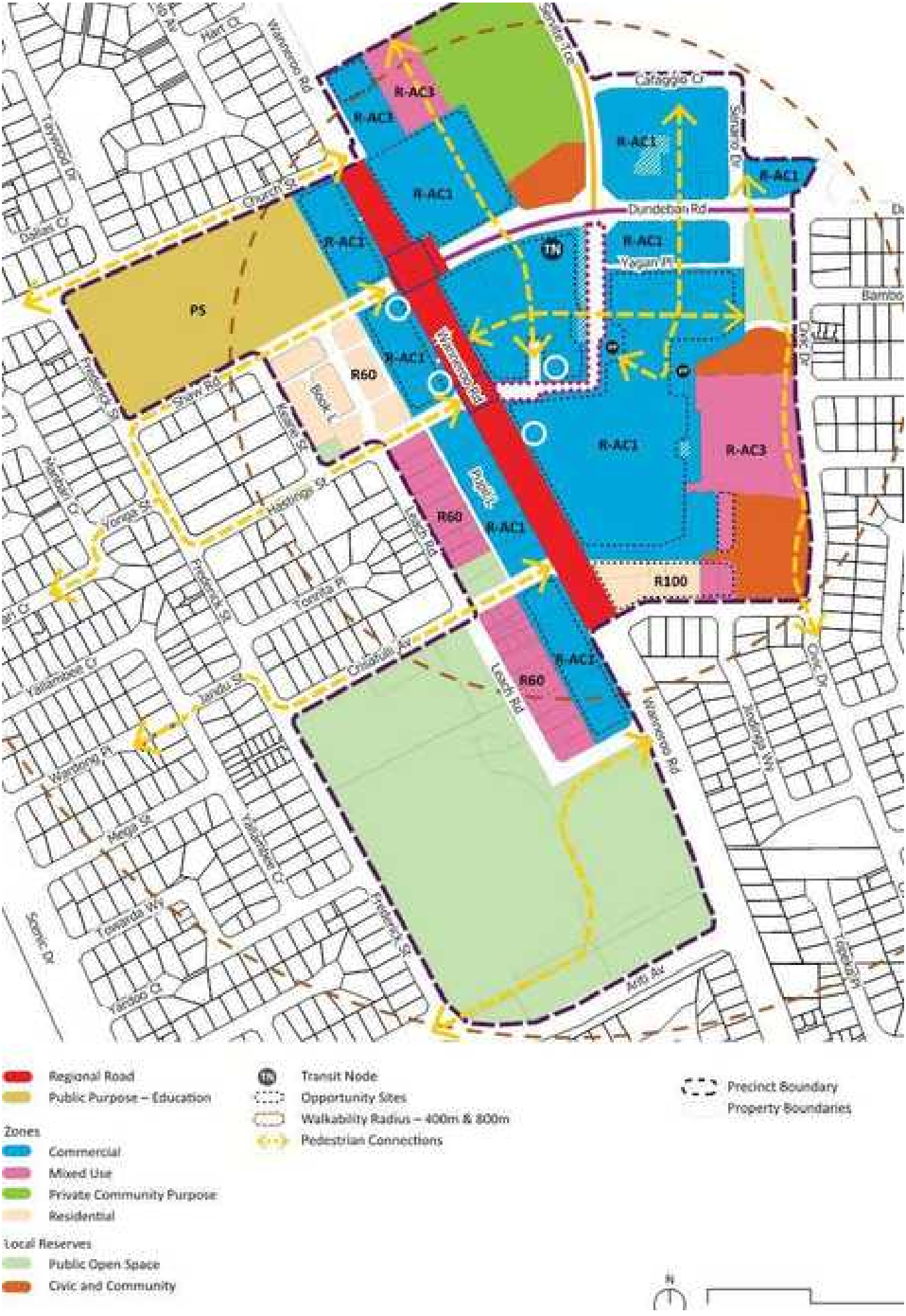
N

0 100 200 300
Metres
Scale: 1:10,000@A4
GDA 1994 MGA Zone 50

emerge ASSOCIATES

# Appendix A

Precinct Plan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R-AC3
PS
R60
R100
Wanneroo Rd
Dundebar Rd
Yagan Pl
Hart Ct
Chard St
Shiraz Ct
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Sauvignon Ct
Shiraz Dr
Clarendon Ct
Shiraz Rd
Merlot Ct
Merlot Dr
Yonga St
Hastings St
Leach Rd
Tranmere Pl
Chiverton Dr
Yallambee Ct
Jandu St
Waterperry Pl
Mega St
Tamblin Way
Yandoo Ct
Scenic Dr
Acres Rd
Civic Dr
Regional Road
Public Purpose – Education
Zones
Commercial
Mixed Use
Private Community Purpose
Residential
Local Reserves
Public Open Space
Civic and Community
Transit Node
Opportunity Sites
Walkability Radius – 400m & 800m
Pedestrian Connections
Precinct Boundary
Property Boundaries

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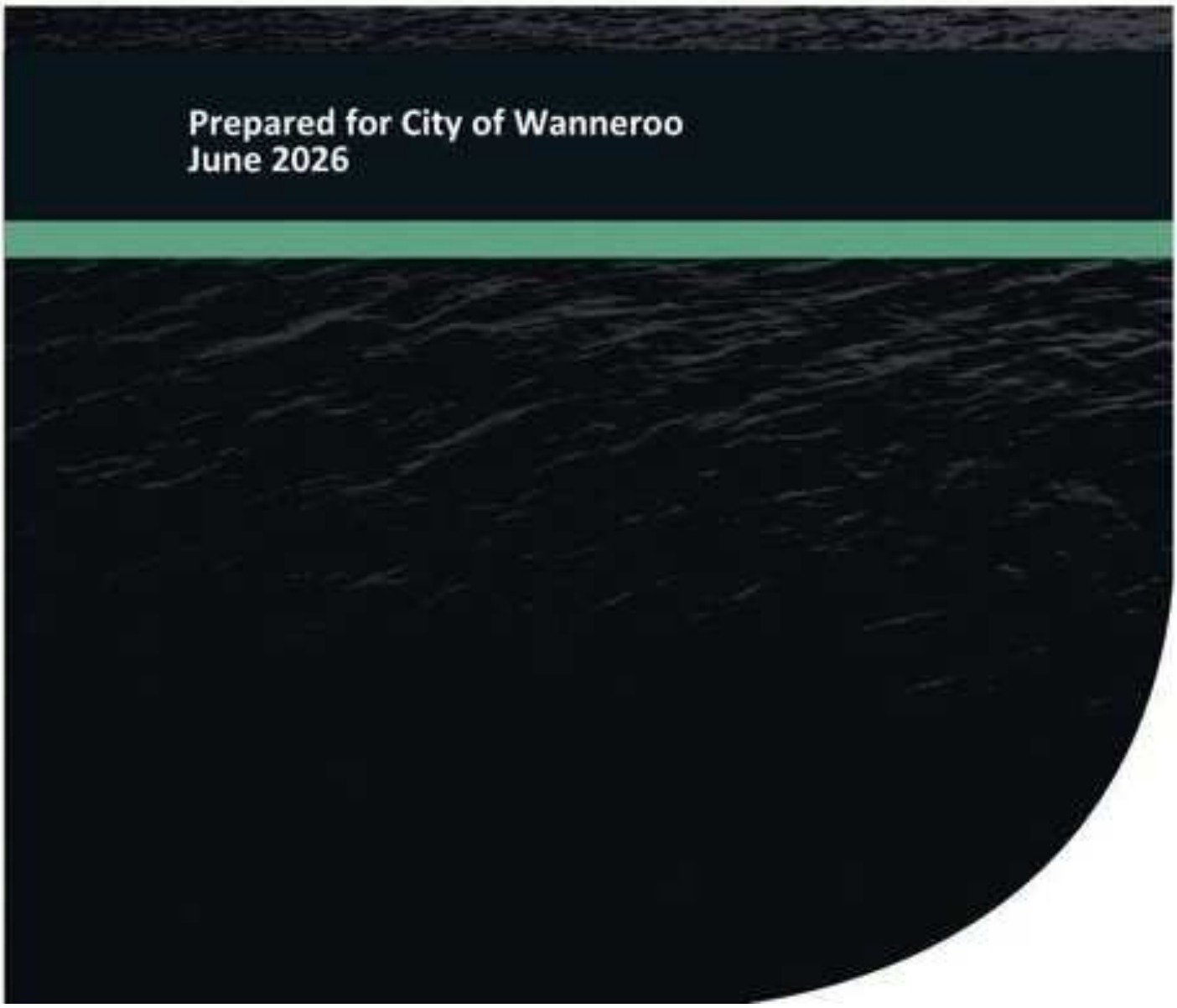
Integrated Science & Design

# Local Water Management Report

## Wanneroo Town Centre

Project No: EP17-133(02)



# Document Control

| Doc name: | Local Water Management Report<br>Wanneroo Town Centre | | | | |
|---|---|---|---|---|---|
| Doc no.: | EP17-133(02)—003A MGB | | | | |
| Version | Date | Author | | Reviewer | |
| 1 | October 2018 | Marley Butler | MB | Aisha Chalmers | ASC |
| | | | | Rachel Evans | RLE |
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# Executive Summary

The Wanneroo Town Centre (WTC) structure plan area (herein referred to as the 'site') covers approximately 54.56 ha within the City of Wanneroo (CoW). The site is located approximately 23 km north of Perth Central Business District and includes the existing WTC and areas adjacent to Wanneroo Road.

The site is zoned 'urban' and 'urban deferred' under the Metropolitan Region Scheme and 'centre' under the CoW *Town Planning Scheme No. 2*. The site largely consists of retail, commercial and community infrastructure as well as a large area of remnant vegetation to the north that has remained undeveloped. Several major community and commercial assets are located within the site including Wanneroo Central Shopping Centre, Wanneroo Primary School, Wanneroo Showgrounds and the CoW government office.

Wanneroo Town Centre Structure Plan (SP) has been prepared to support and guide the proposed redevelopment and land-use changes within the Wanneroo Town Centre. The Wanneroo Town Centre SP project vision is to revitalise the town centre and development of high density lots. The WTC will be rezoned to incentivise the establishment of land uses appropriate to an expanding secondary centre

This local water management report (LWMR) details the water management approach to support the Wanneroo Town Centre SP and is intended to satisfy the requirement to prepare a LWMR in accordance with State Planning Policy 2.9.

Water will be managed using an integrated water cycle management approach. The first step in applying integrated water cycle management in urban catchments is to establish agreed environmental values for receiving waters and their ecosystems. In summary, the environmental investigations conducted to date indicate that:

- Current land uses within the existing Wanneroo Town Centre (WTC) area include commercial, retail, residential, POS and civic spaces. A large section of remnant native vegetation is located to the north of the site.
- The site receives an average annual rainfall of 784.5.8 mm with the majority of the rainfall received between the months of May and September.
- Topography of the site ranges from 29 m Australian height datum (AHD) in the west to 70 m AHD in the northeast.
- Regional geological mapping indicates that soils beneath the site are likely to be sand derived from Tamala Limestone (S7). Sand derived from Tamala Limestone (S7) is understood to have a high PRI (i.e. 11).
- Site-specific infiltration rates are not available. Infiltration rates measured immediately adjacent to the northern boundary of the site shows range between 40 and 62 m/day.
- The site is classified as having 'no known risk' of acid sulfate soils (ASS) occurring within 3 m of natural soil surface.
- Stormwater runoff from road reserves within the WTC area is conveyed by the existing pit and pipe network or via overland flow towards a number of locations, mostly beyond the site.

- The area to the west of Wanneroo Road is within a P3 Public Drinking Water Source Area (PDWSA).
- Maximum groundwater level (MGL) across the site ranges between 22.5 m AHD near the western boundary and 38.0 m AHD in the northeast of the site, with MGL ranging from 0 m to 32 m below ground level (BGL).
- There are no geomorphic wetlands within or immediately adjacent to the site.

The overall objective for integrated water cycle management for urban development is to minimise pollution and maintain an appropriate water balance. The design objectives presented in this LWMR seek to deliver best practice outcomes using a water sensitive design (WSD) approach, including detailed management objectives for:

- Water supply, conservation and wastewater
- Stormwater quantity and quality management
- Groundwater management.

The overall approach to water supply is to utilise scheme water from the Water Corporation's Wanneroo Gravity Scheme and implement water conservation measures (e.g. water efficient fixtures and appliances (WEFA), waterwise gardening (WWG) principles, rainwater tanks (RWT)) to reduce water requirements.

Stormwater management focuses on maintaining the current drainage network within the WTC area, with the addition of WSD structures to be considered as part of any redevelopment.

Similarly, groundwater management focuses on the use of structural and non-structural measures to achieve groundwater quality design criteria. Achieving minimum clearances to MGLs through the use of sand fill in some areas and/or appropriate design within lots is also considered.

The water management design criteria identified for the site, and the manner in which they are proposed to be achieved are presented in **Table E 1**. This table provides a readily auditable summary of the required outcomes which can be used in the future detailed design stage to demonstrate that the agreed objectives for water management for the development have actually been achieved.

This LWMR demonstrates that, by following the recommendations detailed in the report, the site is capable of being developed.

*Table E.1 Water management criteria and compliance summary*

| Management aspect | Criteria number | Criteria description | Manner in which compliance will be achieved | Responsibility for implementation | Timing of implementation |
|---|---|---|---|---|---|
| Water conservation | WC1 | Use fit for purpose water sources throughout the development. | Lots will be provided with potable water through the Water Corporation's Wanneroo Gravity Scheme. | Proponent / Water Corporation | Detailed civil design |
| | | | Groundwater will continue to be utilised to irrigate existing and proposed public open space (POS) areas within the WTC. | CoW | Ongoing |
| | | | RWTs can be utilised for irrigation and to supplement internal building, non-potable uses. | Lot developer | Lot and building design |
| | | | Greywater can be utilised for sub-surface irrigation and internal non-potable uses. | Proponent | Detailed civil design and landscape design |
| | | | | Lot developer | Lot and building design |
| | WC2 | Adopt appropriate water conservation strategies. | Mandated use of water efficient fixtures and fittings. | Lot developer | Building design |
| | | | Promotion of RWTs, WEFA, greywater systems and WWG principles for use within lots. | Lot developer | Lot and building design |
| | | | Education of the community through the Waterwise Council Program, Switch Your Thinking and/or specific educational materials. | Proponent | During lot sales |
| | | | | CoW | Ongoing |
| | WC3 | Maintain an average irrigation rate of 6,750 kL/ha/year. | Use of WWG principles within POS. | Proponent / CoW | Landscape design |
| | | | No establishment or ongoing irrigation will be required for conservation POS areas. | Proponent / CoW | Landscape design |
| | | | POS areas will be limited to an irrigation rate of 6,750 kL/ha/year. | Proponent / CoW | Landscape design |

*Table E 1 Water management criteria and compliance summary (continued)*

| Management aspect | Criteria number | Criteria description | Manner in which compliance will be achieved | Responsibility for implementation | Timing of implementation |
|---|---|---|---|---|---|
| Stormwater management | SW1 | Maintain the existing drainage network within the Wanneroo Town Centre. | Runoff from road reserves will discharge into the existing pit and pipe network utilising the current drainage network. | Lot developer | Lot and building design |
| | SW2 | Finished floor levels to have a minimum of 300 mm clearance above the major rainfall event in road reserves and 500 mm clearance from the major rainfall event in FSAs. | Localised and minor sand fill may be required to ensure finished floor levels of habitable buildings meet the required clearances. | Proponent | Detailed civil design and landscape design |
| | SW3 | Ensure minor roads remain passable in the minor rainfall event. | The use of a pit and pipe network will ensure roads remain passable in the minor rainfall event. | Proponent | Detailed civil design |
| | SW4 | Retain and treat the small rainfall event runoff as close to source as possible. | Lots will treat the small rainfall event runoff on site. A number of on-lot treatment options can be considered including landscaped areas, vegetated treatment structures, subsurface soakage/soakwells etc. | Lot developer | Lot and building design |
| | | | Treatment structures within road reserves and/or POS will be utilised to treat the small rainfall event within the site. | Proponent | Detailed civil design and landscape design |
| | SW5 | Utilise best management practices to reduce nutrient loads within stormwater. | Utilise WWG practices in POS and in the drainage infrastructure. | Proponent | Detailed civil design and landscape design |
| | | | Minimising fertilisers use to establish and maintain vegetation | Proponent | Ongoing |
| | | | Maintenance of POS and drainage infrastructures | Proponent / CoW | Ongoing |
| | | | Street sweeping to remove accumulated sediments | Proponent / CoW | Ongoing |
| | | | Education of residents on use of WWG and fertilisers. | CoW | Ongoing |

*Table E 1 Water management criteria and compliance summary (continued)*

| Management aspect | Criteria number | Criteria description | Manner in which compliance will be achieved | Responsibility for implementation | Timing of implementation |
|---|---|---|---|---|---|
| Groundwater management | GW1 | Maintain or improve the groundwater water quality beneath the site. | Treating runoff in WSD structures including bio-pockets, tree pits, swales and basins. | Proponent | Detailed civil design and landscape design |
| | | | Street sweeping on a regular basis. | Proponent / CoW | Ongoing |
| | | | Maintenance of WSD features. | Proponent / CoW | Ongoing |
| | | | Minimising fertiliser use to establish and maintain vegetation within POS and landscaped areas (e.g. within verge, lot etc). | Proponent / CoW | Ongoing |
| | | | Utilising drought tolerant plant species that require minimal water and nutrients. | Proponent / CoW | Landscape implementation |
| | | | If utilised, turf species will be drought tolerant and require minimal water and nutrients. | Proponent / CoW | Landscape implementation |
| | | | | Proponent | During lot sales |
| | | | Education of lot owners, residents and tenants regarding fertiliser application and the use of nutrient absorbing vegetation. | CoW | Ongoing |
| | GW2 | New stormwater management structures to have a minimum clearance of 500 mm above the MGL. | Localised and minor sand fill may be required to ensure stormwater management structures meet the required clearances. | Proponent | Detailed civil design and landscape design |

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# Appendices

**Appendix A**

Structure Plan

**Appendix B**

Existing Pit and Pipe Network

# Abbreviation Tables

*Table A1: Abbreviations – general terms*

| General terms | |
|---|---|
| AHD | Australian height datum |
| ASS | Acid sulfate soils |
| BMP | Best management practice |
| BRA | Bioretention area |
| SPP | State Planning Policy |
| CBD | Central Business District |
| FSA | Flood storage area |
| LWMR | Local water management report |
| MGL | Maximum groundwater level |
| NDA | Northern development area |
| PDWSA | Public Drinking Water Source Area |
| POS | Public open space |
| PRI | Phosphorus retention index |
| REW | Resource enhancement wetland |
| RWT | Rainwater tanks |
| SP | Structure plan |
| WMR | Water management report |
| WEFA | Water efficient fixtures and appliances |
| WSD | Water sensitive design |
| WTC | Wanneroo Town Centre |
| WWG | Waterwise gardens |

*Table A2: Abbreviations – organisations*

| Organisations | |
|---|---|
| ABS | Australian Bureau of Statistics |
| ANZECC | Australian and New Zealand Environment and Conservation Council |
| BoM | Bureau of Meteorology |
| CoW | City of Wanneroo |
| DBCA | Department of Biodiversity, Conservation and Attractions |
| DPLH | Department of Planning, Lands and Heritage |
| DWER | Department of Water and Environmental Regulation |
| EPA | Environmental Protection Authority |
| WAPC | Western Australian Planning Commission |

*Table A3: Abbreviations – units of measurement*

| Units of measurement | |
|---|---|
| ha | Hectare |
| kL | Kilolitre |
| kL/annum | Kilolitres per annum |
| kL/ha/annum | Kilolitres per square metre per annum |
| km | Kilometre |
| m | Metre |
| m AHD | Metres in relation to the Australian height datum |
| m/day | Metres per day |
| $m^2$ | Square metre |
| $m^3$ | Cubic metre |
| mm | Millimetre |
| mg/L | Milligrams per litre |
| µg/L | Micro-grams per litre |
| °C | Degrees centigrade |
| % | Percentage |
| mS/cm | Millisiemens per centimetre |

# 1 Introduction

## 1.1 Background

The Wanneroo Town Centre (WTC) structure plan (SP) area (herein referred to as the 'site') covers approximately 54.56 ha within the City of Wanneroo (CoW). The site is located approximately 23 km north of Perth Central Business District (CBD) and includes the existing WTC and areas adjacent to Wanneroo Road. The site is surrounded by existing residential development and a large area of remnant vegetation to the north of the site.

The site largely consists of retail, commercial and community infrastructure. Several major community and commercial assets are located within the site including Wanneroo Central Shopping Centre, Wanneroo Primary School, Wanneroo Showgrounds and the CoW government office.

The location and extent of the site is shown in **Figure 1**.

## 1.2 Town planning context

The site is zoned 'urban' and 'urban deferred' under the Metropolitan Region Scheme (WAPC 2023) and 'centre' under the CoW *Town Planning Scheme No. 2* (DPLH 2023)

## 1.3 Purpose of this report

Wanneroo Town Centre Structure Plan (SP) has been prepared to support and guide the proposed redevelopment and land-use changes within the Wanneroo Town Centre (see **Appendix A**). Following the approval of the Wanneroo Town Centre SP, redevelopment will be achieved through subdivision approvals and/or development approvals (DAs), in accordance with the Wanneroo Town Centre SP layout. This local water management report (LWMR) details the water management approach to support the Wanneroo Town Centre SP and is intended to satisfy the requirement to prepare a LWMR in accordance with State Planning Policy 2.9 (SPP 2.9) (DPLH 2025b)

## 1.4 Policy framework

There are a number of State Government policies of relevance to the site. These policies include:

- *State Planning Policy 2.9 – Water* (DPLH 2025b)
- *State Planning Policy 2.9 Planning for Water Guidelines* (DPLH 2025a)
- *State Water Strategy* (Government of WA 2003)
- *Statement of Planning Policy No. 3: Urban Growth and Settlement* (WAPC 2006b)
- *State Water Plan* (Government of WA 2007)
- *Liveable Neighbourhoods (4th Edition)* (WAPC 2007, 2015)
- *Guidance Statement No. 33: Environmental Guidance for Planning and Development* (EPA 2008)
- *Local Planning Policy 4.4: Urban Water Management* (CoW 2013)
- *Local Planning Policy 4.3: Public Open Spaces* (CoW 2016).

In addition to the above policies, there are a number of published guidelines and standards available that provide direction regarding the water discharge characteristics that urban developments should aim to achieve. These are key inputs that relate either directly or indirectly to the site and include:

- *Australian Rainfall and Runoff* (Engineers Australia 2016)
- *National Water Quality Management Strategy* (ANZECC and ARMCANZ 2000)
- *Stormwater Management Manual for Western Australia* (DoW 2007a)
- *Decision Process for Stormwater Management in Western Australia* (DWER 2017)
- *Development Design Specification WD5: Stormwater Drainage Design* (CoW 2015).

The guidance documents listed indicate a need for accurate baseline information prior to urban development. This will ensure that any future development is able to fulfill the stormwater management requirements of Department of Water and Environmental Regulation (DWER) and engineering standards specified by CoW, but will also ensure that realistic water management criteria that are practically achievable are adopted.

## 1.5 LWMR objectives

In the absence of any overarching water management studies or documentation, this LWMR has been developed based on the objectives outlined in SPP 2.9 (DPLH 2025b). It is intended to support the Wanneroo Town Centre SP, and is further based on the following major objectives:

- Maintain the existing hydrological regime.
- Provide a broad level stormwater management framework to support future urban development.
- Develop a water conservation strategy for the site that will ensure the efficient use of all water resources.
- Minimise construction costs for the Wanneroo Town Centre SP, which will result in reduced land costs for future owners.
- Incorporate appropriate best management practices (BMPs) into the drainage system that address the environmental and stormwater management issues identified.
- Ensure that sufficient land area is set aside in the Wanneroo Town Centre SP to manage urban runoff.
- Minimise ongoing operation and maintenance costs for the land owners and CoW.
- Gain support from DWER and CoW for the proposed method to manage stormwater within the site.

Detailed design criteria for water management within the site are further discussed in **Section 4.**

# 2 Proposed Development

The Wanneroo Town Centre SP project vision is to revitalise the town centre and the redevelopment of existing commercial, residential, and civic land within the established town centre, as shown on the precinct structure plan (**Appendix A**). The project will also facilitate the development of high-density residential areas within the town centre. The overall vision is to develop the WTC into a vibrant, progressive and prosperous secondary centre comprising of a range of high density residential, commercial/retail, educational, community and recreational spaces.

The proposed Wanneroo Town Centre SP is included in **Appendix A**. The existing WTC area (see **Figure 1**) will be rezoned to incentivise the establishment of land uses appropriate to an expanding secondary centre. Redevelopment will allow the expansion of Wanneroo Central Shopping Centre, the expansion of public open space (POS) / urban space, the accommodation of mixed-use areas throughout the WTC, redevelopment of the high density residential, the retention of key civic and community assets and the provision for retail frontage.

# 3 Pre-development Environment

## 3.1 Sources of information

The following sources of information were used to provide a broad regional environmental context for the site:

- *Acid Sulfate Soil Risk Map - Swan Coastal Plain* (DWER 2025a)
- *Contaminated Sites Database* (DWER 2026a)
- *Geomorphic Wetland Database – Swan Coastal Plain* (DBCA 2026)
- *Perth Metropolitan Region 1:50 000 Environmental Geology Series* (Gozzard 1986)
- *Public Drinking Water Source Area Protection Zones* (DWER 2025c)
- *Water Register* (DWER 2026d)
- *Water Information Reporting* (DWER 2026c)
- *Landgate Aerial Photography* (WALIA 2026)
- *Perth Groundwater Map* (DWER 2026b)
- *Weather and Climate Statistics Data* (BoM 2026)

## 3.2 Historical and current land uses

A review of historical images from 1965 onwards indicates that the town site was established prior to the earliest available imagery. Some grouped buildings as well as recreational areas are visible, including the relatively unchanged Wanneroo Showgrounds oval and tennis courts and the Wanneroo Primary School oval. The areas immediately adjacent to the town site had also been cleared prior to 1965. Significant clearing and urbanisation occurred between 1965 and 1974 and reached the extent of the current day residential sprawl by around 1977.

Current land uses within the WTC area include commercial, retail, residential, POS and civic spaces. This area is surrounded by existing residential lots. In addition to the school and showground noted above, notable land uses include:

- Wanneroo Central Shopping Centre and various retail providers along Conlan Avenue
- A commercial strip to the west of Wanneroo Road
- Bert Togno, Memorial Park and other POS
- Aquamotion, Limelight Theatre, Museum and Community Centre
- CoW and Department of Biodiversity, Conservation and Attractions (DBCA) offices
- St Anthony's School and Catholic Church
- Police station.

## 3.3 Climate

The site experiences a Mediterranean climate which is characterised by warm dry summers and cool wet winters. Long term climatic averages (BoM 009105) indicate that the site is located in an area of moderate to high rainfall, receiving 784.5 mm on average annually with majority of the rainfall occur between May and September (BoM 2026). The region experiences rainfall (>1 mm) on 81 days annually (on average).

## 3.4 Geotechnical conditions

### 3.4.1 Topography

The site is characterised by irregular changes in elevation throughout the existing WTC, generally sloping to the west and south. Topography ranges in height from approximately 29 m Australian height datum (AHD) to 70 m AHD The highest elevations occur in the north-east of the site, with the lowest elevations at the western boundaries. Topographic contours are shown in **Figure 2**.

### 3.4.2 Soils and geology

The site is situated within the coastal belt of the Swan Coastal Plain, within the Spearwood Dunes geomorphological unit (Gozzard 1986). The regional pre-development geology of the site consists entirely of pale and olive yellow, medium to coarse grained, moderately sorted sand derived from Tamala Limestone (S7). This geological region typically displays medium permeability, some ability to attenuate pollutants due to small clay content and usually a considerable depth to the water table. The Phosphorous Retention Index (PRI) of the Spearwood Dune soil types are understood to be high (11) Geological mapping is provided in **Figure 3**.

### 3.4.3 Infiltration testing

Site-specific infiltration testing has not been conducted, as the majority of the site is already developed. However, four infiltration tests were conducted by Emerge Associates in September 2018 within the undeveloped area immediately adjacent to the site's northern boundary. Infiltration results ranged from 40 to 89 m/day with an average of 62 m/day across the four test locations. The locations of the infiltration testing are shown in **Figure 3**.

### 3.4.4 Contaminated lands and acid sulfate soils

The *Acid Sulfate Soil Risk Map* (DWER 2025a) classifies the entire site as having 'no known risk' of acid sulphate soils (ASS) occurring within 3 m of natural soil surface.

A search of the *Contaminated Sites Database* (DWER 2026a) found there to be no classified contaminated sites within or adjacent to the site, the nearest contaminated site is approximately 3 km to the south west.

## 3.5 Surface water

Stormwater runoff from road reserves within the WTC area is conveyed by the existing pit and pipe network (as shown in **Appendix B**) or via overland flow (e.g. Crisafulli Avenue and Leach Road). Stormwater runoff is directed to a number of locations, many beyond the site. These include (but are not restricted to) a sump north of Servite Terrace, POS within the Wanneroo Showgrounds adjacent to Leach Avenue, the Wanneroo Primary School oval, and the Wanneroo Dunk Pond location to the south of the site.

## 3.6 Public drinking water source areas

The section of the site to the west of Wanneroo Road is classified as being a Priority 3 (P3) public drinking water source area (PDWSA) (DWER 2025c). P3 areas are designated to protect water sources from pollution in areas of development (DoW 2009). The remainder of the site to the east of Wanneroo Road is not within a PDWSA. There are no wellhead protection zones (WHPZ) within or downstream of the site (DWER 2025c). The location and extent of the P3 PDWSA is shown in **Figure 2**.

## 3.7 Groundwater

The *Perth Groundwater Map* (DWER 2025b)indicates that the regional historic maximum groundwater level (MGL) across the site ranges from approximately 22.5m AHD to 38 m AHD, flowing from east to west, as shown in **Figure 2**.

Depth to historic MGL ranges from 0 m to approximately 36 m below ground level (BGL). Groundwater clearance is generally shallower along the western boundary, particularly towards the southernmost boundary of the site, and highest along the north-eastern boundary of the site. The areas with the lowest depth to groundwater are located within the existing Wanneroo Showground, which is not proposed to be redeveloped. The clearance to regional historic MGL within areas designated for redevelopment is lowest at the corner of Leach Road and Noonan Drive at approximately 3.6 m BGL. Clearance from regional historic MGL within redevelopment areas is generally > 5 m, with the exclusion of areas within the immediate vicinity of the Wanneroo Showground.

Groundwater elevations have been measured at a DWER monitoring bore (site reference number 61610683) located adjacent to Bert Tongo Park from 1975 to the current day (DWER 2026c). This data set indicates that the measured MGL of 38 m AHD (28 m BGL) was reached in 1975. Measured MGL at this bore is consistent with regional mapping; therefore, the regional historic maximum groundwater mapping is considered an appropriate estimate of MGL for the purposes of structure planning. The location of the monitoring bore is shown in **Figure 2**.

There is no groundwater quality data available within the site.

## 3.8 Wetlands

A review of the *Geomorphic Wetlands, Swan Coastal Plain (DBCA-019)* dataset indicates that there are no geomorphic wetlands within or adjacent to the site (DBCA 2026). The nearest conservation category geomorphic wetland is Lake Joondalup approximately 570 m to the west of the site.

## 3.9 Summary of existing environment

In summary, the environmental investigations conducted to date indicate that:

- Current land uses within the existing Wanneroo Town Centre area include commercial, retail, residential, POS and civic spaces. A large section of remnant native vegetation is located to the north of the site.

- The site receives an average annual rainfall of 784.5.8 mm with the majority of the rainfall received between the months of May and September.
- Topography of the site ranges from 29 m AHD in the west to 70 m AHD in the northeast.
- Regional geological mapping indicates that soils beneath the site are likely to be sand derived from Tamala Limestone (S7). Sand derived from Tamala Limestone (S7) is understood to have a high PRI (i.e. 11).
- Site-specific infiltration rates are not available. Infiltration rates measured immediately adjacent to the northern boundary of the site shows range between 40 and 62 m/day.
- The site is classified as having "no known risk" of ASS occurring within 3 m of natural soil surface.
- Stormwater runoff from road reserves within the Wanneroo Town Centre area is conveyed by the existing pit and pipe network or via overland flow towards a number of locations, mostly beyond the site.
- The area to the west of Wanneroo Road is within a P3 PDWSA.
- MGL across the site ranges between 22.5 m AHD near the western boundary and 38.0 m AHD in the northeast of the site, with MGL ranging from 0 m to 32 m BGL.
- There are no geomorphic wetlands within or immediately adjacent to the site.

# 4 Design Criteria and Objectives

This section outlines the objectives and design criteria that the LWMR and future management plans must achieve. The water management strategy includes water conservation, groundwater management and stormwater management

## 4.1 Integrated water cycle management

State Planning Policy for Water 2.9 (DPLH 2025b) endorses the promotion of integrated water cycle management and application of WSD principles to provide improvements in the management of stormwater, and to increase the efficient use of other existing water supplies.

The key principles of integrated water cycle management include:

- Integrating water use with natural water processes
- Considering all water sources, including wastewater, stormwater and groundwater
- Integrating water and land use planning
- Allocating and using water sustainably and equitably
- Adopting a whole catchment integration of natural resource use and management.

Integrated water cycle management addresses not only physical and environmental aspects of water resource use and planning, but also integrates other social and economic concerns. Water management design objectives should therefore seek to deliver better outcomes in terms of:

- Water conservation.
- Stormwater management.
- Groundwater management.

The first step in applying integrated water cycle management in urban catchments is to establish agreed environmental values for receiving environments. The existing environmental context of the site has been discussed in **Section 3** of this document. Guidance regarding environmental values and criteria is provided by a number of national and state policies/guidelines and site-specific studies undertaken in and around the site. These were detailed in **Section 1.4**

## 4.2 Water conservation

Water conservation design criteria have been determined in line with the guidelines presented in SPP 2.9 (DPLH 2025b). This LWMR proposes the following water conservation criteria:

**Criteria WC1** Use fit for purpose water sources throughout the development.

**Criteria WC2** Adopt appropriate water conservation strategies.

**Criteria WC3** Maintain an average irrigation rate of 6,750 kL/ha/year.

The manner in which this objective will be achieved is further detailed in **Section 5.**

## 4.3 Stormwater management

The principle behind stormwater management at the site is to mimic the pre-development hydrological conditions. This principle and the guidance documents discussed in **Section 1.4** and have guided the stormwater management criteria, which include:

**Criteria SW1** Maintain the existing drainage network within the Wanneroo Town Centre.

**Criteria SW2** Finished floor levels to have a minimum of 300 mm clearance above the major rainfall event in road reserves and 500 mm clearance from the major rainfall event in flood storage areas (FSA).

**Criteria SW3** Ensure minor roads remain passable in the minor rainfall event.

**Criteria SW4** Retain and treat the small rainfall event runoff as close to source as possible.

**Criteria SW5** Utilise best management practices to reduce nutrient loads within stormwater.

The manner in which these objectives will be achieved is further detailed in **Section 6.**

## 4.4 Groundwater management

The principle behind the groundwater management strategy is to maintain the existing groundwater conditions, which is based on infiltration of most rainfall at source. The groundwater management criteria for the site include:

**Criteria GW1** Maintain or improve the groundwater water quality beneath the site.

**Criteria GW2** New stormwater management structures to have a minimum clearance of 500 mm above the MGL.

The manner in which the groundwater management objectives will be achieved is further detailed in **Section 7**

# 5 Water Source Allocation, Infrastructure and Fit-for-Purpose Use

## 5.1 Fit-for-purpose water

Conservation of water through fit-for-purpose use and best management practices (BMPs) is encouraged so that waste of scheme water is mitigated and includes scheme water, groundwater, rainwater tanks (RWT) and greywater. Fit-for-purpose principles have been utilised in the water conservation strategy for the site and will help to achieve **Criteria WC1, WC2** and **WC3**.

### 5.1.1 Scheme water

Scheme water will be utilised within lots for all potable water uses and some non-potable water uses, should an alternative source not be available.

The site is well served with scheme water via Water Corporation's Wanneroo Gravity Scheme given the proximity of the Wanneroo Reservoir. There are many trunk, distribution and larger reticulation mains that run through and nearby the existing WTC. In general terms, any new development can be connected to this system by extensions and upgrades to the Wanneroo Gravity Scheme served by the Wanneroo Reservoir (TCG 2018).

### 5.1.2 Groundwater

The *Water Register* (DWER 2026d) indicates that most of the site is located within the Perth groundwater area and that all aquifers within this area are fully allocated. The Superficial Swan and confined Leederville aquifers beneath this area are fully allocated. The confined Yarragedee North aquifer has 'limited information', but is generally considered too deep to be a practical water source for non-potable uses (e.g. irrigation).

There are three existing groundwater licences within the site, all for the Superficial Swan aquifer and include:

- GWL 155312: 11,250 kL/year, Department of Education
- GWL 108572: 19,500 kL/year, The Roman Catholic Archbishop of Perth Corporation Sole
- GWL 159997: 1,568,405 kL/year, City of Wanneroo

### 5.1.3 Rainwater tanks

Harvest of runoff from roof surfaces can be undertaken, with this water stored within RWT for later use. This water is of high quality and can be used to substitute non-potable water requirements. Harvested rainwater may be used for irrigation requirements however this will need to be supplemented with scheme water towards the end of the summer period. During the higher rainfall months, the majority of the stored rainwater can be used to supplement internal building, non-potable uses.

### 5.1.4 Greywater

Greywater can be described as all the wastewater from the dwelling besides that from toilets and kitchens. This water has moderate concentrations of solids and nutrients. Greywater can be used for sub-surface irrigation and, if treated appropriately, for internal non-potable uses. Residential greywater systems must be approved by the CoW and potentially the Department of Health.

## 5.2 Water conservation approach

### 5.2.1 Water efficient fixtures, fittings and appliances

A significant reduction in potable water consumption can be achieved with the use of water efficient fixtures and appliances (WEFA). The water conservation strategy for the site proposes that all commercial buildings implement WEFA. Water efficient fixtures and fittings will be mandated through the building license, while uptake of water efficient appliances will be encouraged by State and Government rebates. Based on typical uptake rates informed by Australian Bureau of Statistics (ABS) reports (ABS 2013), 40% of residential dwellings will utilise water efficient appliances.

The above measures will assist in achieving **Criteria WC1** and **WC2**.

### 5.2.2 Waterwise gardens

Employing WWG measures can significantly reduce total water usage within residential lots. Water use can also be reduced within landscaped areas of mixed use, civic and commercial lots and within verges and POS areas. WWG principles will be utilised in all POS areas and assumed to be used within 50% of private residential lots (as informed by ABS studies (ABS 2013)).

A variety of methods and approaches will be considered including any or all of the following:

- Improve soil with conditioner certified to Australian Standard AS4454 to a minimum depth of 50 mm where turf is to be planted and a minimum depth of 75 mm for garden beds.
- Minimise the amount of turf areas where possible and adopt xeriscaped gardens (garden beds are landscaped using 'waterwise plants').
- Mulch garden beds to 75 mm with a product certified to Australian Standard AS4454.
- Design and install the irrigation system according to best water efficient practices:
  - Control systems must be able to irrigate different zones with different irrigation rates.
  - Emitters must disperse coarse droplets or be subterranean.
  - Irrigation will not be utilised during winter months and rain sensors may be utilised.
- Implementation of hydrozoning design practices, which will group plant species with similar irrigation requirements.
- Retain remnant native trees and vegetation within POS where possible. This will provide shade and reduce water requirements during POS establishment.
- Garden beds within POS will utilise 'waterwise' plants, which are (where possible) locally native species or plants from regions with similar climates. These plants require less water input than exotic species.
- Minimise water requirements for POS maintenance. This will be achieved by implementing an appropriate management and maintenance program for POS.

### 5.2.3 Education

CoW has committed to participate in the Water Corporation's 'Waterwise Council Program' and is a 'Switch Your Thinking' partner. Consequently, the community (including businesses, community groups and individuals) already have access to special events, information and rewards regarding water conservation and sustainable living.

Further to the above, future subdivision developers can provide educational material to lot purchasers on water efficiency and quality protection measures that they can implement within lots. Specific water conservation and protection topics that should be addressed include:

- Reducing water use behaviours
- Water efficient technologies
- Plant species
- Fertiliser and pesticide use
- WWG practices.

## 5.3 Water use

### 5.3.1 Water use within WTC area

POS within the WTC area will continue to be serviced by the groundwater allocations outlined in **Section 5.1.2**. Additional POS / urban spaces to be provided in the WTC as part of the SP will need to be irrigated by the CoW within their existing license allocations.

For example, a new POS area (approximately 2,000 $m^2$) is proposed to be built at the intersection of Leach Road and Crisafulli Avenue. Similarly, another POS area (approximately 690 $m^2$) is proposed at the intersection of Hastings Street and Keane Street. These areas would require approximately 1,850 kL/year for ongoing irrigation, though it is anticipated that the area required to be irrigated will be lower given the urban form of these POS areas. It is anticipated that redevelopment of these areas would be completed by the CoW and therefore, the design will appropriately reflect the CoW existing license allocations and conservation efforts in other areas to make allocation available for these changes where required.

The above measures will assist in achieving **Criteria WC3**.

## 5.4 Wastewater

The site is currently served by gravity sewer, which flows to the Ariti Avenue Wastewater Pumping Station. From here, wastewater is pumped to the Beenyup Wastewater Treatment Plant. Future Water Corporation planning shows that the area north of Dundebar Road is in the Neerabup sewer district however there is missing sewer infrastructure that is preventing this from occurring.

## 5.5 Water conservation design criteria compliance

A summary of the proposed water conservation design criteria and how these are addressed within the site is provided in **Table 1**.

*Table 1: Water conservation compliance summary*

| Criteria number | Criteria description | Manner in which compliance will be achieved |
|---|---|---|
| WC1 | Use fit for purpose water sources throughout the development. | Lots will be provided with potable water through the Water Corporation's Wanneroo Gravity Scheme. |
| | | Groundwater will continue to be utilised to irrigate existing and proposed POS within the existing WTC. |
| | | RWTs can be utilised for irrigation on lots and to supplement internal building, non-potable uses. |
| | | Greywater can be utilised for sub-surface irrigation and internal non-potable uses within lots. |
| WC2 | Adopt appropriate water conservation strategies. | Mandated use of water efficient fixtures and fittings. |
| | | Promotion of RWTs, WEFA, greywater systems and WWG principles for use within lots. |
| | | Education of the community through the Waterwise Council Program, Switch Your Thinking and/or specific educational materials. |
| WC3 | Maintain an average irrigation rate of 6,750 kL/ha/year. | Use of WWG principles within POS. |
| | | No establishment or ongoing irrigation will be required for conservation POS areas. |
| | | POS area will be limited to an irrigation rate of 6,750 kL/ha/year. |

# 6 Stormwater Management Strategy

The principle behind the stormwater management strategy for the site is to maintain the existing hydrology. Within the Wanneroo Town Centre area this is achieved by maintaining the existing drainage network and, where possible, introducing water sensitive design (WSD) features for the treatment of small event runoff.

The stormwater management strategy consists of two main components:

- Lot drainage
- Existing drainage network

The stormwater management strategy for the Wanneroo Town Centre SP has been developed in accordance with the guidance documents detailed in **Section 1.4**, in consideration of the existing environment (see **Section 3**) and proposed land uses (see **Section 2**). Each WSD structure has been designed to achieve the objectives and criteria stated in **Section 4.3**.

## 6.1 Lot drainage

### 6.1.1 Treatment of small rainfall event runoff

All lots are required to self retain and treat stormwater runoff up to the small rainfall event (first 15 mm) at source, thereby mimicking pre-development hydrology. A number of strategies are available to assist in achieving this criteria. Strategies may include but are not limited to:

- Surface areas designed to infiltrate runoff during the small event such as:
  - Pervious vegetated garden areas
- Subsurface soakage/soakwells where there is sufficient clearance to MGL. The invert of soakage structures must be at or above MGL.

The invert of treatment structures should be set such that a minimum clearance of 500 mm from MGL is achieved.

Some lots may choose to implement a rainwater harvesting and storage system. In this case, runoff from roof areas may be directed to RWTs for internal and external uses or to be used as on-lot stormwater runoff storage (as discussed in **Section 5.1.3**). Excess runoff from RWTs is to be directed to additional on-lot retention systems. Where RWTs are used as part of the stormwater management system for lots, a low flow outlet must be provided to ensure adequate storage capacity is available following rainfall events.

The implementation of on-lot treatment is the responsibility of the lot owner and should be designed in consideration of individual lot characteristics. The design of lot drainage will be submitted to the CoW at the DA stage. Treating small event runoff at source will assist in achieving Criteria **GW1**, **SW1**, and **SW4**.

## 6.2 Wanneroo Town Centre existing drainage

The Wanneroo Town Centre existing drainage system incorporates a pit and pipe network and overland flow paths which discharge into various sumps and POS areas, as discussed in **Section 3.5** and shown on **Figure 4.**

All the commercial areas will retain runoff up to 1% AEP rainfall event. Runoff from road reserves will discharge into the existing pit and pipe network maintain the current drainage network. The runoff from a Northeastern portion of the Wanneroo Town Centre will be discharged into the existing basin located at the end of Servite Terrace, as shown in **Figure 4.** The runoff from Southwest of the site will be discharged into POS located within Wanneroo Showgrounds and an existing sump located at Nyunda Park as shown in **Figure 4**. The runoff from Northwest portion of the site will discharge into the POS located within Wanneroo Primary School.

Any runoff not retained within the upper catchment will ultimately discharge into the Lake Joondalup Nature Reserve via existing flow pathways, located approximately 570 m west of the site, as shown in **Figure 4.** Road reserves and POS proposed within the SP (see **Appendix A**) are generally equivalent to the existing WTC area. Minor differences include the realignment and/or construction of some minor roads, laneways and easements and the conversion of what is currently empty lots to POS and urban spaces. Land use changes due to the implementation of the SP are not anticipated to increase the extent of impervious areas and therefore drainage requirements for the WTC area remain unchanged. Hence, the drainage strategy for the Wanneroo Town Centre area is to maintain the current drainage network.

Redevelopment of any road reserves within the Wanneroo Town Centre area presents an opportunity to retrofit WSD measures. Given the space restrictions expected when upgrading any existing road reserves, the most appropriate WSD measures include bio-pockets, swales and tree pits. Retrofitting WSD will provide at source treatment of road reserve runoff, thereby reducing the nutrient load within existing downstream basins such as Nyunda Park.

The above measures will assist in achieving **Criteria SW1, SW3** and **SW4**.

## 6.3 Non-structural water quality measures

The structural measures proposed within the site provide both a storage and treatment function to stormwater runoff, as detailed in **Sections 6.1**, **6.2** and **6.3**. Guidance for the development and implementation of non-structural water quality improvement measures is provided within the *Stormwater Management Manual for Western Australia* (DoW 2007b). A number of non-structural measures will be implemented within the site to help reduce nutrient loads within stormwater runoff. These measures include:

- Street sweeping on a regular basis.

- Maintenance of WSD features.
- Minimising fertiliser use to establish and maintain vegetation within POS and landscaped areas (e.g. within verge, lots etc).
- Utilising drought tolerant plant species that require minimal water and nutrients.
- If utilised, turf species will be drought tolerant and require minimal water and nutrients.
- Education of lot owners, residents and tenants regarding fertiliser application and the use of nutrient absorbing vegetation.

## 6.4 Stormwater design criteria compliance

The proposed stormwater design criteria and how these are addressed are summarised in **Table 2**.

*Table 2: Stormwater management compliance summary*

| Criteria number | Criteria description | Manner in which compliance will be achieved |
|---|---|---|
| SW1 | Maintain the existing drainage network within the Wanneroo Town Centre. | Runoff from road reserves will discharge into the existing pit and pipe network maintaining the current drainage network. |
| SW2 | Finished floor levels to have a minimum of 300 mm clearance above the major rainfall event in road reserves and 500 mm clearance from the major rainfall event in FSAs. | Localised and minor sand fill may be required to ensure finished floor levels of habitable buildings meet the required clearances. |
| SW3 | Ensure minor roads remain passable in the minor rainfall event. | The use of a pit and pipe network will ensure roads remain passable in the minor storm event. |
| SW4 | Retain and treat the small rainfall event runoff as close to source as possible. | Lots will treat the small rainfall event runoff on site. A number of on-lot treatment options can be considered. |
| | | Treatment structures within road reserves and/or POS will be utilised to treat the small rainfall event within the site. These include bio-pockets, tree-pits, swales and BRAs. |
| SW5 | Utilise best management practices to reduce nutrient loads within stormwater. | Utilise WWG practices in POS and in the drainage infrastructures. |
| | | Minimising fertilisers use to establish and maintain vegetation |
| | | Maintenance of POS and drainage infrastructures |
| | | Street sweeping to remove accumulated sediments |
| | | Education of residents on use of WWG and fertilisers. |

# 7 Groundwater Management Strategy

The principle behind groundwater management is to maintain the existing hydrology across the site, provide appropriate protection from groundwater inundation, and maintain or improve the existing groundwater quality.

## 7.1 Groundwater quality management

The main objective for the management of the groundwater quality is to maintain or improve the existing groundwater quality. This can be achieved by treating surface runoff prior to infiltration via application of appropriate WSD measures, thereby reducing the total nutrient load into the groundwater that originates from the development.

The reduction of nutrient load to the groundwater will be achieved by:

- Treating runoff in WSD structures (discussed in **Section 6**).
- Street sweeping on a regular basis.
- Maintenance of WSD features.
- Minimising fertiliser use to establish and maintain vegetation within POS and landscaped areas (e.g. within verge, lot etc).
- Utilising drought tolerant plant species that require minimal water and nutrients.
- If utilised, turf species should be drought tolerant and require minimal water and nutrients.
- Education of lot owners, residents and tenants regarding fertiliser application and the use of nutrient absorbing vegetation.

The above measures will improve the quality of the water prior to it infiltrating into the underlying groundwater, and will assist in achieving **Criteria GW1**.

## 7.2 Groundwater level management

**Criteria GW2** stipulates that stormwater management structures are required to achieve a minimum clearance of 500 mm between their inverts and the MGL. For the majority of the site, depth to MGL is greater than 5 m and is therefore not considered a constraint. As noted in **Section 3.7**, depth to MGL is shown to be less than 5 m from the surface level (to within 3.6 m BGL) within a small portion of the site adjacent to the Wanneroo Showgrounds. The MGL must be considered during stormwater management design within this area to ensure compliance to **Criteria GW2**. All stormwater management features will be designed to achieve a minimum clearance of 500 mm from MGL as stipulated by **Criteria GW2**.

## 7.3 Groundwater criteria compliance summary

A summary of the proposed groundwater design criteria and how these are addressed is given in **Table 3**.

*Table 3: Groundwater management compliance summary*

| Criteria number | Criteria description | Manner in which compliance will be achieved |
|---|---|---|
| GW1 | Maintain or improve the groundwater water quality beneath the site. | Treating runoff in WSD structures. |
| | | Street sweeping on a regular basis. |
| | | Maintenance of WSD features. |
| | | Minimising fertiliser use to establish and maintain vegetation within POS and landscaped areas (e.g. within verge, lot etc). |
| | | Utilising drought tolerant plant species that require minimal water and nutrients. |
| | | If utilised, turf species should be drought tolerant and require minimal water and nutrients. |
| | | Education of lot owners, residents and tenants regarding fertiliser application and the use of nutrient absorbing vegetation. |
| GW2 | New stormwater management structures to have a minimum clearance of 500 mm above the MGL. | Localised and minor sand fill may be required to ensure stormwater management structures meet the required clearances. |

# 8 Subdivision Water Management Reports

The requirement to undertake preparation of more detailed water management plans to support subdivision is generally imposed as a condition of subdivision. The development of any future WMR should follow the guidance provided in SPP 2.9 (DPLH 2025b)

Development of areas progressed under DA may not be required to prepare additional water management reports (i.e. WMR) to support the application. In this case, detailed designs presented in DAs should be reviewed by the CoW in conjunction with the design criteria presented in this LWMR to ensure the appropriate elements of the water management strategy discussed herein are implemented.

While strategies have been provided within this LWMR that address planning for water management within the site, future development stages will need to clarify details not provided within this LWMR. The main areas that will require further clarification include:

- Confirmation of irrigation sources and conceptual landscape design
- Modelling, design and configuration of drainage structures
- Lot drainage
- Implementation of water conservation strategies
- Non-structural water quality improvement measures
- Management and maintenance requirements
- Construction period management strategy
- Monitoring and evaluation program.

These are further detailed in the following sections. Ongoing monitoring of groundwater will be detailed in the WMR or DA applications (where no subdivision is proposed to occur), however in this LWMR is also outlined broadly in **Section 9**.

## 8.1 Confirmation of irrigation sources and conceptual landscape design

POS within the Wanneroo Town Centre area will continue to be serviced by the current groundwater allocations outlined in **Section 5.1.2**. Additional POS / urban spaces will need to be irrigated by the CoW within their existing license.

All irrigation sources should be confirmed and detailed within future WMRs.

## 8.2 Modelling, design and configuration of drainage structures

It is acknowledged that the drainage strategies documented in this LWMR are based upon broad-scale assumptions. These assumptions are considered adequate for conceptual development of drainage structures that meet the design criteria proposed in this LWMR. However, if the site structure plan is refined then verification of proposed subdivision drainage designs will need to be undertaken by modelling the catchments serviced by the drainage network. Such modelling will allow verification that the development undertaken within the structure planning area is consistent with this LWMR.

## 8.3 Lot drainage

The stormwater management strategy requires that all lots will treat the small rainfall event. It is the lot owner's responsibility to ensure that the appropriate storage is provided within lot. Lot designs, including stormwater drainage, are to be approved by CoW at building approval or DA stage prior to construction.

## 8.4 Implementation of water conservation strategies

A number of potential measures to conserve water have been presented within this LWMR. These water conservation strategies will be incorporated into the design and the ongoing maintenance of all POS, landscaped areas and within the built form throughout the site. Design measures that will be incorporated into the water conservation strategy will be further detailed within future WMRs or DAs for individual lot development.

## 8.5 Non-structural water quality improvement measures

Guidance for the development and implementation of non-structural water quality improvement measures is provided within the *Stormwater Management Manual for Western Australia* (DoW 2007a).

Some measures will be more appropriately implemented at a local government level, such as street sweeping. Many can be implemented relatively easily within the design and maintenance of the drainage network, including swales and detention areas. Others are more appropriately managed by individual lot owners (e.g. fertiliser application on landscaped areas). It is expected that the future WMRs/DAs will provide a list of appropriate non-structural measures including timing and responsible parties.

## 8.6 Management and maintenance requirements

The management measures to be implemented to address surface water quality (e.g. the use of vegetation within treatment structures) will require ongoing maintenance. Therefore, it is expected that future WMRs will set out the design (e.g. landscape surface treatments) maintenance actions (e.g. nutrient application), timing (e.g. how often it will occur), locations (e.g. exactly where it will occur) and responsibilities (e.g. who will be responsible for carrying out the actions). Alternatively, these actions could be specified within a dedicated management plan, whichever is most appropriate. Given that approval from the CoW will be sought for the proposed measures, it is anticipated that consultation with CoW will be undertaken and reference to guiding policies and documents will be made.

## 8.7 Construction period management strategy

It is anticipated that the construction stage will require some management of various aspects (e.g. dust, surface runoff, noise, traffic etc.). The management measures undertaken for construction management will be addressed in future WMRs, DAs or a separate construction management plan. Given the existing WTC area, it is possible that road design and implementation will need to be

undertaken by the CoW. In this case the appropriate construction measures and their implementation will be the responsibility of the CoW.

## 8.8 Monitoring and evaluation program

It will be necessary to confirm that the management measures that are implemented are able to fulfill their intended management purpose, and are in a satisfactory condition at a point of management handover to the CoW. A post-development monitoring program will be developed to provide this confirmation, and it will include details of objectives of monitoring, relevant issues and information, proposed methodology, monitoring frequency and reporting obligations. These monitoring programs are discussed in **Section 9** of this LWMR and will be further detailed at the WMR or DA stage.

# 9 Monitoring and Maintenance

Given that there will be no surface water discharge from the site during a small rainfall event it will be very difficult to collect a water quality sample for treated surface runoff. Further, groundwater quality is unlikely to be representative of the management practices of the site above due to the depth to groundwater across the site.

As the drainage strategy within the Wanneroo Town Centre area is not proposed to be modified (with the exception of considering installation of WSD structures during the upgrade of road reserves), it is unlikely that a monitoring program will be required within the existing WTC. This should be confirmed with the CoW during design and construction of any WSD structures within the existing WTC.

## 9.1 Condition monitoring

It is proposed that the overall condition of additional WSD structures in the Wanneroo Town Centre be monitored on a bi-annual basis. It should begin following completion of the civil and landscaping works, and will continue for a period of two years to ensure that the functionality is maintained.

A visual assessment will be undertaken to monitor the condition, with the aim to ascertain that the maintenance activities (as detailed in **Section 8.6**) are achieving the objectives of the management plan. The parameters that will be monitored and remedial actions that will be implemented if required are detailed in **Table 4**.

*Table 4: Condition monitoring parameters and remedial actions*

| Parameter | Trigger for remedial action | Remedial action |
|---|---|---|
| Gross pollutants | If present | Remove gross pollutants and dispose of at approved facility |
| Sediments | If present | Remove sediments |
| Terrestrial weeds | Excessive weed growth | Manually remove weeds |
| | | Apply herbicide at manufacturer's recommended rate |
| Irrigation | Evidence of damage to irrigation system (if any) | Repair irrigation system (if any) |
| Vegetation density | If significant number of plant deaths/thefts occur | Remove dead plants |
| | | Conduct infill planting to maintain species densities |
| Paths, benches, walkways, play equipment and other infrastructure | Damage to, theft or vandalism of infrastructure adjacent to WSD structures | Repair or replace damaged infrastructure |

# 10 Implementation

The LWMR is a key supportive document for the SP of the site. The development of the LWMR has been undertaken with the intention of providing a structure within which subsequent development can occur consistent with an integrated water cycle management approach. It is also intended to provide overall guidance to the general stormwater management principles for the area and to guide the development of future WMRs/DAs and individual lot development.

## 10.1 Roles and responsibility

The LWMR provides a framework that the CoW can utilise to assist in establishing stormwater management methods that have been based upon site-specific investigations and which are consistent with relevant State and Local Government policies.

The responsibility for working within the framework established within the LWMR rests with the CoW (where they are the proponent, and will need to upgrade any of the roads and construct associated drainage infrastructure), future subdivision developers, and lot owners/lot developers. The roles are summarised in **Table 5** below. Responsibilities related to non-structural measures will be detailed in future WMRs / DAs, as indicated in **Section 8.5**.

*Table 5: Roles and responsibility*

| Role | Responsibility |
|---|---|
| Implement and maintain lot drainage strategy | Lot owner/lot developer |
| Provision of lot drainage connection points | Subdivision developer (where subdivision occurs in a coordinated manner) or CoW (e.g. where the CoW choose to redevelop car parks within the existing WTC area) |
| Construct and maintain WSD structures | |

In order to support any future subdivisions, it is anticipated that WMRs will be developed in consultation with the CoW and in consideration of other relevant policies and documents. Where DA applications are prepared these should be undertaken consistent with this LWMR and in close consultation with CoW.

## 10.2 Funding

Funding for lot drainage infrastructure will be the responsibility of the lot owner.

The Wanneroo Town Centre area is more likely to progress through DAs for individual lots, with road upgrades and the redevelopment of some areas into additional POS likely to be progressed by the CoW. Funding for works within individual lots will be the responsibility of the lot owner/developer. The construction and maintenance of any drainage infrastructure within public road reserves and/or POS within the existing Wanneroo Town Centre will be the responsibility of the CoW.

## 10.3 Review

It is not anticipated that this LWMR will be reviewed, unless additional land parcels/lots are added to the SP, or the SP undergoes significant change post-lodgment of the LWMR. If additional areas are required to be covered by the LWMR it is most likely that an addendum to cover these areas could be prepared. If the SP is substantially modified surface runoff modelling undertaken for this LWMR will need to be reviewed and the criteria proposed revised to ensure that all are still appropriate.

## 10.4 Conclusions and recommendations

The recommended approach to water management for the Wanneroo Town Centre SP site includes:

- Connecting to the integrated water supply system and reticulated sewer network.
- Promotion of water conservation measures and alternative water supply options for use within lots and education of the community.
- Treatment of the small rainfall event and retention of the major rainfall event within lots.
- Use of WWG principles within POS areas.
- Use of WSD structures to treat small rainfall event from road reserves
- Maintain the existing drainage network within the Wanneroo Town Centre.
- Implementation of non-structural measures to ensure surface water and groundwater quality objectives are achieved.

This LWMR demonstrates that, by following the recommendations detailed above, the Wanneroo Town Centre are able to be revitalised and developed for residential, commercial/retail, educational, community and recreational uses.

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## 11.2 Online references

The online resources that have been utilised in the preparation of this report are referenced in **Section 11.1**, with access date information provided in **Table R 1**.

*Table R 1 Access dates for online references*

| Reference | Date accessed | Website or dataset name |
|---|---|---|
| (BoM 2026) | 4 March 2026 | Climate data online |
| (DWER 2025b) | 4 March 2026 | Perth groundwater map |
| (DWER 2026d) | 4 March 2026 | Water Register |
| (DBCA 2026) | 6 March 2026 | *Geomorphic Wetland Database – Swan Coastal Plain* |
| (DWER 2025c) | 6 March 2026 | *Public Drinking Water Source Area Protection Zones* |
| (WALIA 2026) | 6 March 2026 | *Landgate Aerial Photography* |
| (DWER 2026c) | 6 March 2026 | *Water Information Reporting* |
| (DWER 2025a) | 6 March 2026 | *Acid Sulfate Soil Risk Map - Swan Coastal Plain* |
| (DWER 2026a) | 6 March 2026 | *Contaminated Sites Database* |

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# Figures

*Figure 1: Location Plan.*

*Figure 2: Topographic and Groundwater Levels.*

*Figure 3: Geological Mapping.*

*Figure 4: Stormwater Management Plan*




**Figure 1: Site Location**

| | |
|---|---|
| Project: | Local Water Management Report<br>Wanneroo Town Centre |
| Client: | City of Wanneroo |

| | |
|---|---|
| Plan Number: | EP19-130831-449 |
| Drawn: | MJC |
| Date: | 18/09/2019 |
| Checked: | WM |
| Approved: | RPC |
| Date: | 03/06/2020 |

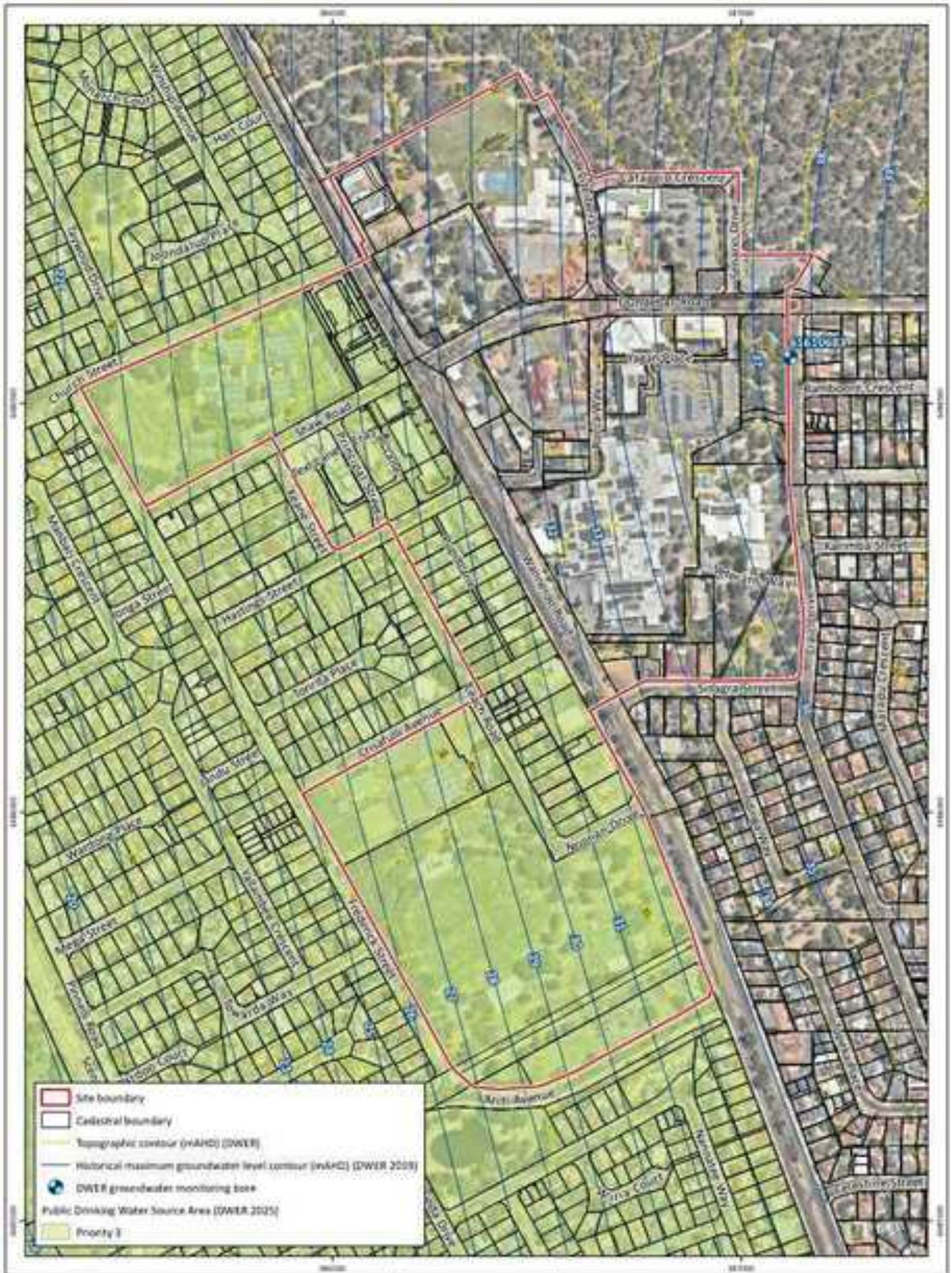



**Figure 2: Topography and Groundwater Levels**

| | |
|---|---|
| Project: | Local Water Management Report<br>Wanneroo Town Centre |
| Client: | City of Wanneroo |

| | |
|---|---|
| Plan Number: | EP19-130(07)-450 |
| Drawn: | MDC |
| Date: | 18/09/2019 |
| Checked: | WM |
| Approved: | RPC |
| Date: | 03/06/2026 |




**Figure 3: Environmental Geology and Soils**

| | |
|---|---|
| Project: | Local Water Management Report<br>Wanneroo Town Centre |
| Client: | City of Wanneroo |

| | |
|---|---|
| Plan Number: | EP19-130831-#51 |
| Drawn: | MDC |
| Date: | 18/09/2019 |
| Checked: | WM |
| Approved: | RPC |
| Date: | 03/06/2020 |

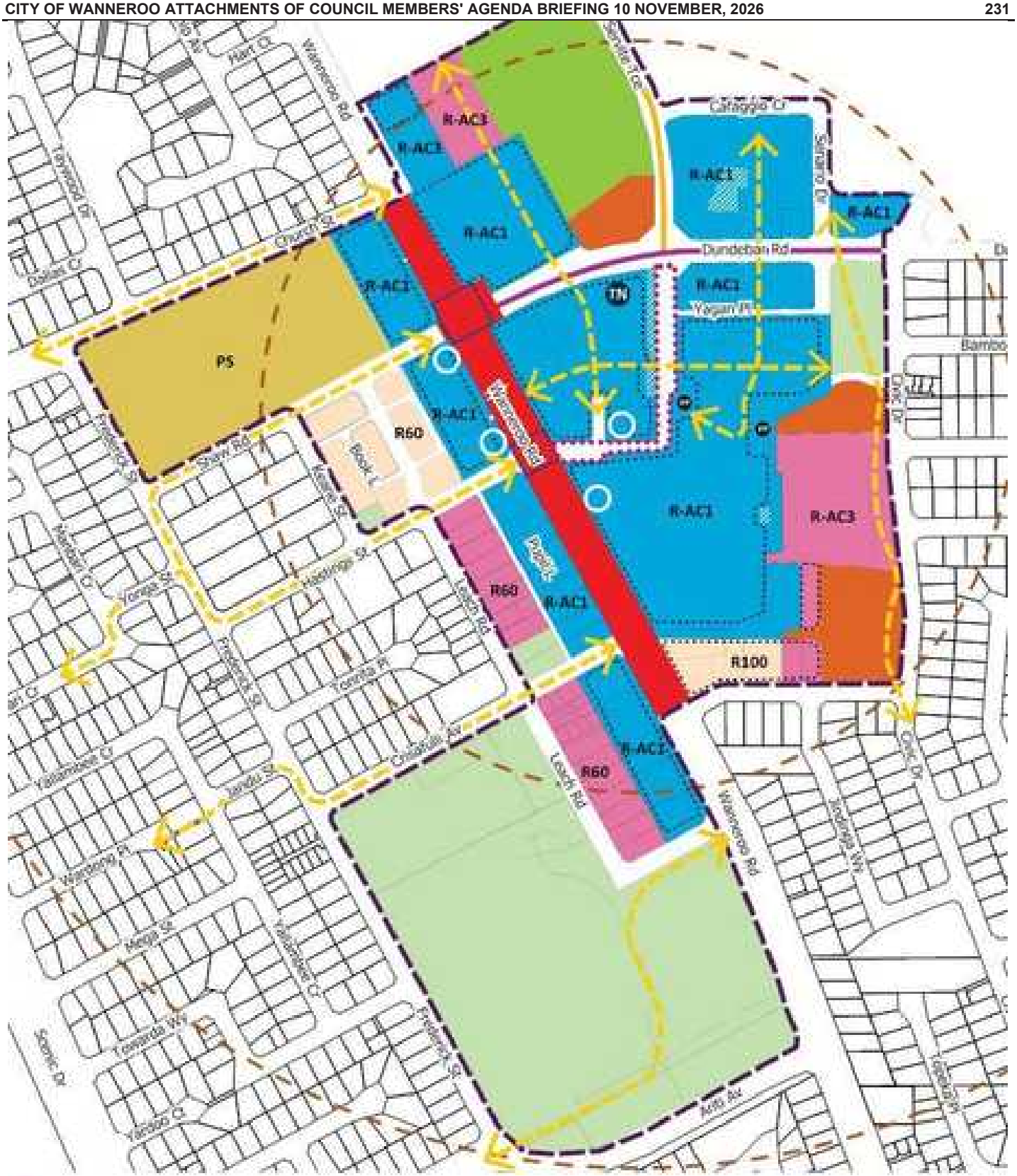



**Figure 4: Stormwater Management Plan**

| | |
|---|---|
| Project: | Local Water Management Report<br>Wanneroo Town Centre |
| Client: | City of Wanneroo |

# Appendix A

Structure Plan


R-AC3
R-AC1
R-AC2
R60
R100
PS
TN
Wanneroo Rd
Dundebar Rd
Yogun Pl
Shenton Dr
Caringa Ct
Church St
Shaw Rd
Highrange St
Yonga St
Tonga Pl
Leach Rd
Cockburn Rd
Jandor St
Warrong Pl
Mega St
Yallambee Ct
Tennessee Way
Scenic Dr
Hart Ct
Tennessee Pl
Dalton Ct
Mallee Ct
Yaroo Ct
Civic Dr
Bamboo Dr
Motif Av
Frederick Ct
Yallambee Way
Yallambee Cl
Yallambee Pl
Yallambee Rise
Yallambee Wk
Yallambee Cres
Yallambee Ln
Yallambee Gr
Yallambee Ct
Yallambee Cir
Yallambee Ct
Yallambee Ct
Yallambee Ct

# Appendix B

Existing Pit and Pipe Network



pracsys.

# Wanneroo Town Centre Needs Assessment and Economic, Retail and Employment Strategy

City of Wanneroo

July 2026

| Document Control | | | | |
|---|---|---|---|---|
| Document Version | Description | Prepared By | Approved By | Date Approved |
| v1.0 | First Draft | Nimrah Sarwar<br>Jason Cook | Jason Cook | 13/07/2026 |
| V2.0 | Final Report | Nimrah Sarwar | Jason Cook | 03/08/2026 |
| | | | | |

**Disclaimer**

This report has been prepared for the **City of Wanneroo**. The information contained in this document has been prepared with care by the authors and includes information from apparently reliable secondary data sources which the authors have relied on for completeness and accuracy. However, the authors do not guarantee the information, nor is it intended to form part of any contract. Accordingly, all interested parties should make their own inquiries to verify the information and it is the responsibility of interested parties to satisfy themselves in all respects.

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# 1 EXECUTIVE SUMMARY

The City of Wanneroo (the City) is currently developing a Precinct Plan for the Wanneroo Town Centre (WTC) acting on guidance from the Department of Planning, Lands and Heritage (DPLH). This new iteration will supersede the 2018 draft Structure Plan.[1]

Pracsys authored the foundational Economic, Retail and Employment Strategy in 2018. This update refreshes the core data sets and ensures the strategy aligns with the latest legislative requirements such as State Planning Policy (SPP) 4.2 Activity Centres and other relevant policy shifts that have occurred over the last eight years.

The following Needs Assessment and Economic, Retail and Employment (ERE) Strategy has been prepared according to SPP4.2 and SPP7.2, respectively. The supportable levels of Shop/Retail floorspace that can be located at WTC have been estimated using retail gravity modelling and benchmarked floorspace productivity estimates. This methodology ensures future floorspace estimates are supportable, the level of provision for future populations is accounted for and that future floorspace estimates will not impact the vitality of the activity centre hierarchy. The supportable level of Non-Shop/Retail floorspace has been estimated using a floorspace per person provision ratio analysis. This method identifies current gaps that need to be addressed, then uses changes in retail floorspace to estimate increased demand over the assessment period.

The following acronyms are used throughout the document:

- State Planning Policy – Activity Centres **(SPP4.2)**
- Western Australian Planning Commission's **(WAPC)**
- Employment Self-Sufficiency **(ESS)**
- Knowledge-Intensive Producer Services **(KIPS)**
- Land Use and Employment Survey **(LUES)**
- Department of Planning, Lands and Heritage **(DPLH)**
- Planning Land Use Categories **(PLUC)**
- WA Standard Land Use Categories **(WASLUC)**
- Shop/Retail **(SHP)**
- Non-Shop/Retail **(Non-SHP)**

Shop-Retail (SHP) floorspace and employment refers to PLUC Shop/Retail. Non-Shop/Retail (Non-SHP) floorspace and employment refers to all other commercial PLUCs. Further definitions and explanations can be found in Appendix 1: Land Use Glossary.

[1] It excludes the undeveloped Lot 9000 Wanneroo Road in Sinagra, which remains under EPA review.

## 1.1 Demographic & Economic Analysis

Key demographic and economic factors impacting WTC and the City have been analysed in accordance with the requirements of SPP4.2 and SPP7.2. A description of the analysis and key findings for commercial demand have been outlined in the following table (Figure 1).

**Figure 1. Demographic and Economic Analysis Summary**

| Factors | Description and Findings |
|---|---|
| Population Forecast | The trade area will experience a high growth rate of 2.82% from 2021 to 2051. By 2051, the trade area population is expected to more than double, with approximately 82,000 additional residents. This indicates that WTC will need to provide additional commercial floorspace to support a rapidly growing population. |
| Age Profile | 22% of residents are aged 0-14 years and 29% are aged 35-54 (prime working age), compared to Greater Perth's 19% and 28%, respectively. This suggests strong demand for family-oriented services, schools, childcare, and children's recreational amenities.<br>Age forecasts indicate that the trade area will experience an increase in the concentration of young working age adults which will support the extent of expenditure on typical household items. |
| Family Composition | The trade area has a higher proportion of households with children compared to Greater Perth (54% versus 47%), indicating a more family-oriented community. This concentration of younger families and school-aged children is likely to drive increased demand for family-oriented services, including childcare and schooling infrastructure. |
| Cultural Diversity | The trade area is less culturally diverse than Greater Perth, with a higher concentration of locally born residents at 63%. This may influence service needs, language diversity, and cultural infrastructure compared to more multicultural parts of Perth. |
| Educational Attainment | The trade area has a lower share of higher education qualifications compared to Greater Perth (4% postgraduate and 16% bachelor-level), while mid-level qualifications such as Certificate III & IV and diplomas account for a greater share. This indicates a more vocationally trained workforce, aligning with trades, technical roles, and service-based employment. |
| Occupation | The trade area has fewer professionals and managers than Greater Perth (Professionals: 19% versus 24%), while technicians and trades workers are more prominent. This more blue-collar workforce composition suggests commercial floorspace demand will be oriented towards population-serving and trade-related uses rather than knowledge-intensive office uses. |
| Business Entries and Exits | Total business entries in the City have increased by 12% per year on average since 2019 while exits have decreased marginally, indicating a net expansion of business activity. Growth was strongest in health care and social assistance (11% per year), other services (10%) and arts and recreation services (9%). As a Secondary Centre, WTC is well-positioned to provide office space to cater to the growing number of smaller businesses in the City. |
| Commercial Vacancies | Vacant floorspace within WTC increased from 1,753m$^2$ (2015/17 LUES) to 2,551m$^2$ (2022/24), lifting the vacancy rate from approximately 3% to 4%, alongside a contraction in occupied floorspace from 60,154m$^2$ to 55,025m$^2$. This |

| Factors | Description and Findings |
|---|---|
| | indicates WTC may not be sustaining previous levels of visitation and expenditure. However, the City retains a low level of vacant floorspace (0.13m² per person) relative to the benchmark average (0.36m²), suggesting commercial floorspace is generally well utilised. |
| Industry of Employment | Residents predominantly work in health care and social assistance (15%), construction (12%) and retail trade (11%), while jobs in the City are concentrated in construction (16%), education and training (13%) and retail trade (13%). The City provides proportionally more jobs than resident workers in construction and manufacturing, presenting an opportunity for WTC to cater services to trade and industrial workers, capitalising on its proximity to the Wangara industrial area. |
| Employment Quality | The City has notably lower levels of knowledge-intensive consumer and producer services than Greater Perth (KIPS at 8% versus 15%), with higher levels of consumer services (37% versus 31%) and producer services (39% versus 31%). This profile reflects an economy oriented toward population-serving activity rather than strategic employment, characteristic of a fast-growing outer-metropolitan area. |
| Retail Trends | A review of current retail trends highlights the fast-changing nature of retail that businesses need to adapt to, including cost of living pressure, ecommerce and omnichannel retail, retailtainment, small-format and speciality retail, and buying local. Planning for WTC should allow for flexibility in uses and floorspace areas so the Centre can respond to these trends as activation and development opportunities arise. |
| Employment Self-Sufficiency and Self-Containment | Several of the City's largest resident industries perform relatively poorly against ESC metrics while performing comparatively better against ESS metrics, including health care and social assistance (34% ESC), retail trade (58%) and construction (66%).<br>This indicates residents are opting to travel outside the City for work despite jobs in the same industries being provided locally. WTC could look to attract consumer services and knowledge-intensive service businesses, relevant to retail, entertainment, health, and office-type floorspace, to improve employment self-containment. |

Source: ABS Census 2021, Pracsys 2026

For further demographic analysis please see Section 3, Demographic & Socio-Economic Analysis. For further economic analysis please see Section 4, Economic & Employment Analysis.

## 1.2 Floorspace Gaps

Floorspace gap analysis is a critical tool in urban planning that helps identify and address gaps in the supply and demand for floorspace within a given area. By comparing the current supply of floorspace to benchmark areas, gaps can be identified, and appropriate strategies can be developed to address them.

Gaps were identified for the trade area and compared to key benchmark LGAs. Details regarding the floorspace gaps in the trade area can be found in Section 5, Floorspace Gap Analysis.

Commercial WASLUC gaps have been aligned with broader floorspace categories to provide an estimated mix of uses that could eventuate at WTC to address the relative need of the community (Figure 2). Details on the implementation of floorspace gaps into the needs assessment can be found in Section 6.5, Non-Shop/Retail Floorspace Projections.

**Figure 2. Town Centre Non-Shop/Retail Gap Allocation**

| PLUC | Allocated Gap ($m^2$) | Assumption |
|---|---|---|
| ENT | 4,417 | WTC's role as a Secondary Centre indicates that it should provide a significant quantum of ENT floorspace to support its district-serving function. ENT currently comprises approximately 24% of the WTC's Non-Shop/Retail floorspace, the largest single component of its commercial composition. This share has been applied to the balance of the allocated gap to determine an appropriate uplift consistent with WTC's classification. |
| HEL | 2,882 | HEL is an important use for meeting the needs of the local population. While WTC is not expected to play strategic role such as providing a hospital, WTC could co-locate health services with other key civic and commercial services.<br>WTC holds approximately 23% of the City's total HEL floorspace, the second-highest share of any PLUC. The trade area gap of 12,690$m^2$ has been apportioned to WTC on this basis, and represents an opportunity to expand health and community service provision at a scale that services the surrounding catchment. |
| OFF | 12,367 | OFF is the largest identified gap and represents a significant opportunity for WTC to expand its office-based land uses, particularly population-driven professional services, real estate and administrative functions.<br>WTC holds approximately 20% of the City's total OFF floorspace, the highest share of any commercial PLUC, reflecting its established administrative role. The significant gap for the trade area (60,941$m^2$) has been apportioned to WTC on this basis. |
| RES | 3,276 | WTC currently records negligible RES floorspace, at approximately 0.4% of the City's total. While the identified trade area gap of 25,329$m^2$ indicates substantial latent demand, WTC does not currently have sufficient developable land or floorspace to accommodate the quantum of RES uses that would ordinarily be expected of a Secondary Centre. However, consolidation of WTC's carparking or eventual rezoning of Lot 9000 could generate sufficient land to support these additional RES uses[2]. |

[2] RES floorspace as recorded in the LUES relates to commercial residential uses (the gap identified at the WASLUC level comprises retirement and nursing accommodation with extended care, hotels and other transient lodging) and excludes private dwellings. The capacity constraint noted above therefore reflects WTC's current land use pattern and the land available for those commercial residential uses under the existing planning framework. It is not a constraint on the dwelling yield tested through the WTCPP, which is addressed in Section 7.2.

| PLUC | Allocated Gap (m²) | Assumption |
|---|---|---|
| | | The allocation has accordingly been adjusted to reflect WTC's practical capacity and represents an opportunity to introduce food and beverage uses that support activation and extend trading hours. |
| **Total** | **22,941** | |

Source: Pracsys 2026

## 1.3 Floorspace Projections

The Needs Assessment included retail demand and supply from a 10.5km radial catchment, taking into account natural and built barriers. The City's activity centres within the trade area include an estimated 138,100m² of Shop/Retail floorspace, approximately 33% of the total Shop/Retail supply within the trade area. WTC accounts for an estimated 19,600m² of Shop/Retail floorspace currently, approximately 5% of the trade area supply.

The trade area includes a wide range of retail offerings, from the Joondalup Strategic Centre and secondary centres such as Ocean Keys, Whitford City, Warwick Grove and Wanneroo Central, to various district, neighbourhood and local level centres. For more details regarding the supply included in the analysis, see Section 6.2, Supply Analysis.

The demand component of the needs assessment for the City's activity centres was based on dwelling forecast scenarios for the trade area. Three scenarios have been developed for inclusion in the analysis:

- Scenario 1 is an outcome of the WA Tomorrow medium-growth (Central Band) forecasts
- Scenario 2 is an outcome of the forecast.id dwelling projections provided by the City
- Scenario 3 is an outcome of the WA Tomorrow high-growth (Upper Band) forecasts

Projections indicate that WTC can support between 27,000m² and 33,300m² Shop/Retail floorspace by 2046 (Figure 3). This is an increase of between 7,300m² and 13,600m² Shop/Retail floorspace by 2046 to meet community need.

**Figure 3. WTC Shop/Retail Floorspace Projections (m²)**

| Scenario | 2026 | 2031 | 2036 | 2041 | 2046 |
|---|---|---|---|---|---|
| Scenario 1 | 19,632 | 19,632 | 21,227 | 23,821 | 26,941 |
| Scenario 2 | 19,632 | 20,653 | 24,189 | 27,667 | 30,170 |
| Scenario 3 | 19,632 | 20,608 | 24,200 | 28,269 | 33,279 |

Source: Pracsys 2026

With the inclusion of floorspace gaps, projections indicate that WTC can support between 71,500m² and 82,900m² of Non-Shop/Retail floorspace by 2046 (Figure 4). This is an increase of between 36,100m² and 47,500m² Non-Shop/Retail floorspace by 2046 to meet current and future community need.

**Figure 4. WTC Non-Shop/Retail Floorspace Projections (m²)**

| Scenario | 2026 | 2031 | 2036 | 2041 | 2046 |
|---|---|---|---|---|---|
| Scenario 1 | 35,393 | 46,864 | 61,210 | 65,887 | 71,541 |
| Scenario 2 | 35,393 | 48,704 | 66,550 | 72,820 | 77,333 |
| Scenario 3 | 35,393 | 48,624 | 66,569 | 73,905 | 82,937 |

Source: Precys 2026

# 2 INTRODUCTION

## 2.1 Project Context

The City of Wanneroo (the City) is currently developing a Precinct Plan for the Wanneroo Town Centre (WTC) acting on guidance from the Department of Planning, Lands and Heritage (DPLH). This new iteration will supersede the 2018 draft Structure Plan.[1]

Pracsys authored the foundational Economic, Retail and Employment Strategy in 2018. This update refreshes the core data sets and ensures the strategy aligns with the latest legislative requirements such as State Planning Policy (SPP) 4.2 Activity Centres and other relevant policy shifts that have occurred over the last eight years.

The following Needs Assessment and Economic, Retail and Employment (ERE) Strategy has been prepared according to SPP4.2 and SPP7.2, respectively. This report will support the City's progression of a revised Precinct Plan for the WTC with the inclusion of:

- An analysis of the City and WTC's demographic and economic context
- An analysis of demand for population goods and services
- Analysis of local and regional industry drivers
- A strategic review of relevant local and state policies and frameworks
- A review of retail trends
- A benchmark gap analysis to inform activity centre floorspace opportunities
- A Needs Assessment to determine supportable retail, non-retail and light industrial floorspace and employment based on expected population growth scenarios

[1] It excludes the undeveloped Lot 9000 Wanneroo Road in Sinagra, which remains under EPA review.

## 2.2 Wanneroo Town Centre

The City of Wanneroo (the City) is located in the North-East Sub-region of Greater Perth, with a total residential population of 209,111.* The City has an expansive administrative area, and its diverse activity centre hierarchy provides for the needs of a large and growing population.

Most of the City's higher order activity centres are located in the north portion of the LGA to cater to new greenfield development; these include future Yanchep City Strategic Centre, and Alkimos, Two Rocks, and Clarkson Secondary Centres. Wanneroo Town Centre (WTC) is strategically located in the southern portion of the LGA to support established suburbs such as Hocking, Wanneroo, Sinagra, Ashby, Tapping and more (Figure 5).

**Figure 5. Wanneroo Town Centre Spatial Context**




Source: Pracsys 2026

WTC is also well-positioned to support significant residential development in East Wanneroo. The urbanisation of East Wanneroo is expected to occur over the next 50 years with WTC, a planned

*Source: ABS 2021 Census

Neighbourhood Centre, and a planned District Centre providing essential goods and services to a forecasted population of up to 150,000 (Figure 6).

**Figure 6. East Wanneroo District Structure Plan**

| EXPECTED GROWTH | DEVELOPMENT TIMELINE | PLANNED ACTIVITY CENTRES | COMMERCIAL IMPACT |
|---|---|---|---|
| • 50,000 dwellings<br>• 150,000 people | • Over the next 50 years | • District Centre<br>• Neighbourhood Centre[1] | • Up to 20,000 jobs<br>• 58,000m² commercial and community floorspace |

Source: DPLH 2021

As a Secondary Centre, WTC will play a unique role in supporting new development in East Wanneroo and ongoing infill throughout the surrounding established suburbs. The ideal role and characteristics of a Secondary Centre and other objectives of SPP4.2 are considered for a complete and comprehensive analysis to support the City's updated Precinct Plan for WTC.

**Figure 7. Secondary Activity Centre, Typical Roles and Characteristics**

| | |
|---|---|
| ROLE AND ATTRIBUTES | Secondary centres share some characteristics with strategic centres but serve smaller catchments and offer a more limited range of services, facilities and employment opportunities.<br>They perform an important role in the regional economy and provide essential services to their catchments. Secondary centres with a rail station should be a focus for medium and high-density housing, employment growth and diversity of land uses. |
| SERVICE POPULATION (TRADE AREA) | Up to 150,000 persons |
| TRANSPORT CONNECTIVITY | Important focus for passenger rail and/or high frequency bus network with routes to multiple destinations. |
| URBAN FORM | Medium and high-density urban area within the centre core characterised by mid to high-rise buildings that provide contiguous, activated and pedestrian-friendly street frontages and public spaces.<br>Outside the core, low to mid-rise buildings achieve a pedestrian scale at the street frontage and streetscapes retain an attractive landscaped character through street planting and landscaping of the private realm.<br>New development should create an attractive and coherent street frontage that reflects the prevailing or planned pattern of street setbacks. |
| RESIDENTIAL DENSITY | 25+ for a 400m walkable catchment<br>40+ for a 800-1,200m walkable catchment where there is an existing or proposed train station within 400m of the centre |
| DWELLING TYPE | Medium to high-rise apartments / multiple dwellings |

[1] Although not specifically outlined in the East Wanneroo DSP, proposed local structure plans for East Wanneroo Precinct 3 and Precinct 6 both include a Neighbourhood Centre with around 5,000sqm Shop Retail NLA.

| | |
|---|---|
| | Town houses / grouped dwellings - 2+ storeys |

Source: DPLH 2023

# 3 DEMOGRAPHIC & SOCIO-ECONOMIC ANALYSIS

Key demographic and socio-economic factors have been assessed in accordance with SPP4.2 and SPP7.2. Data for WTC's trade area and the City of Wanneroo were compared to Greater Perth to highlight the key unique characteristics and opportunities to inform the WTC's current and future floorspace needs.

## 3.1 Trade Area

The trade area, or catchment area, represents the spatial boundary from which WTC is expected to draw most of its regular customers, workers and visitors. The trade area has been used to assess the population and household base that generates demand for Shop/Retail and other commercial floorspace, including expenditure potential, income characteristics and the influence of competing centres.

For the Needs Assessment, demand has been assessed using a 10.5km radial trade area centred on the WTC precinct (Figure 8). The trade area includes the suburbs of Wanneroo, Joondalup, Banksia Grove, Neerabup, Burns Beach, Hillarys, Marangaroo and Gnangara.

**Figure 8. Wanneroo Town Centre Trade Area**



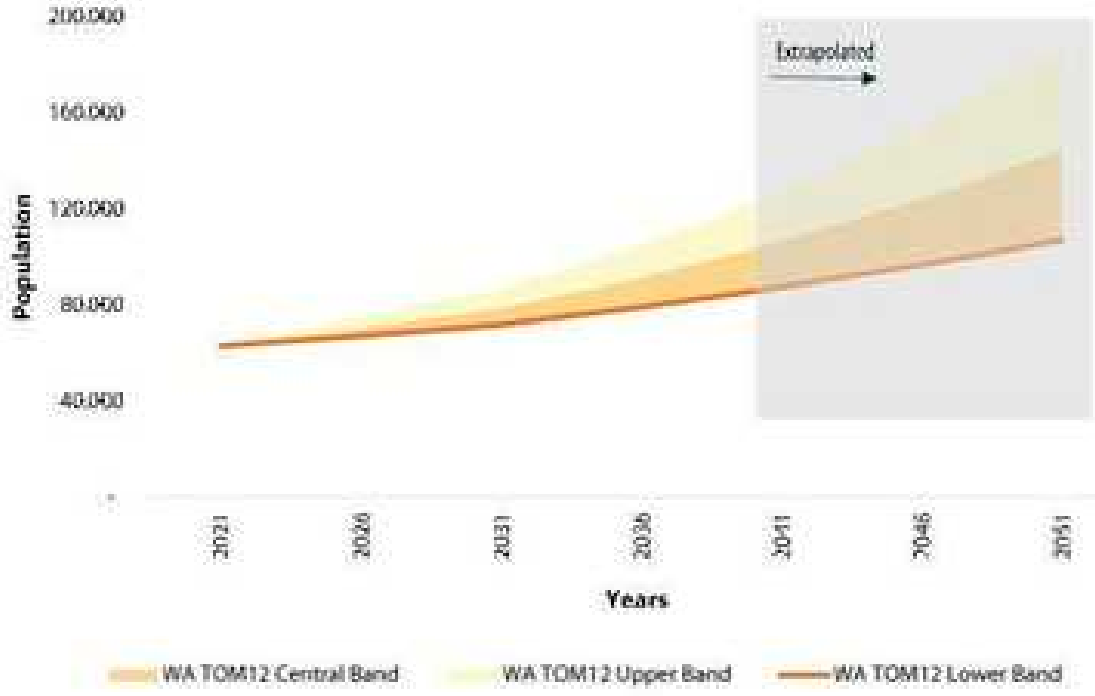

Source: Pracsys 2026

The use of a radial trade area provides a consistent spatial basis for comparing demand and supply. However, the results should be interpreted with regard to local access conditions and competitive influences. Lake Joondalup, the coastal urban corridor, Wanneroo Road and the presence of Joondalup Strategic Centre influence the direction and strength of customer movements. These factors are relevant to the gravity modelling process, as they affect the proportion of household expenditure likely to be captured by WTC.

## 3.2 Population Forecast

It is estimated that the trade area has achieved an accelerating growth rate of 12.58% from 2021 to 2026, with a compound annual growth rate of 2.82% over 30 years. It is estimated that 2031 to 2036 will see a cumulative acceleration of 16%. By 2051, the trade area population is expected to more than double, with approximately 82,000 additional residents (Figure 9).

**Figure 9. Population Forecast for the Trade Area over a 30-year period (2021-2051)**

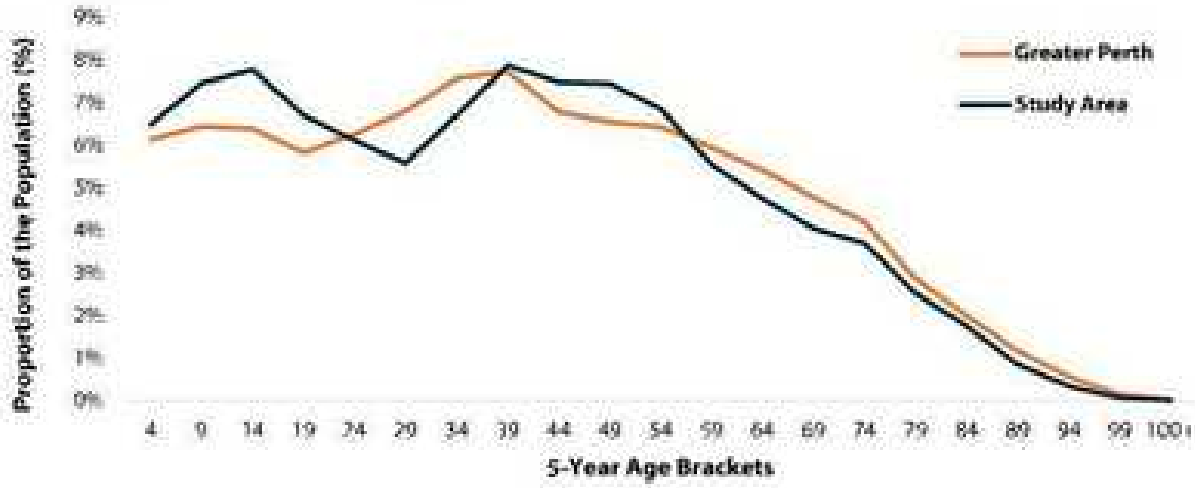



Source: WA Tomorrow 2021, ABS Census 2021, Pracsys 2026

## 3.3 Age Profile

The trade area has a younger, more family-oriented population compared to Greater Perth (Figure 10). 22% of residents are aged 0-14 years and 29% are aged 35-54 (prime working age), compared to Greater Perth's 19% and 28% respectively. Conversely, only 18% are aged 60+, compared to Greater Perth's 21%. This suggests strong demand for family-oriented services, schools, childcare, and children's recreational amenities, with lower immediate need for aged care services.

**Figure 10. Age Profile, Trade Area Compared to Greater Perth**

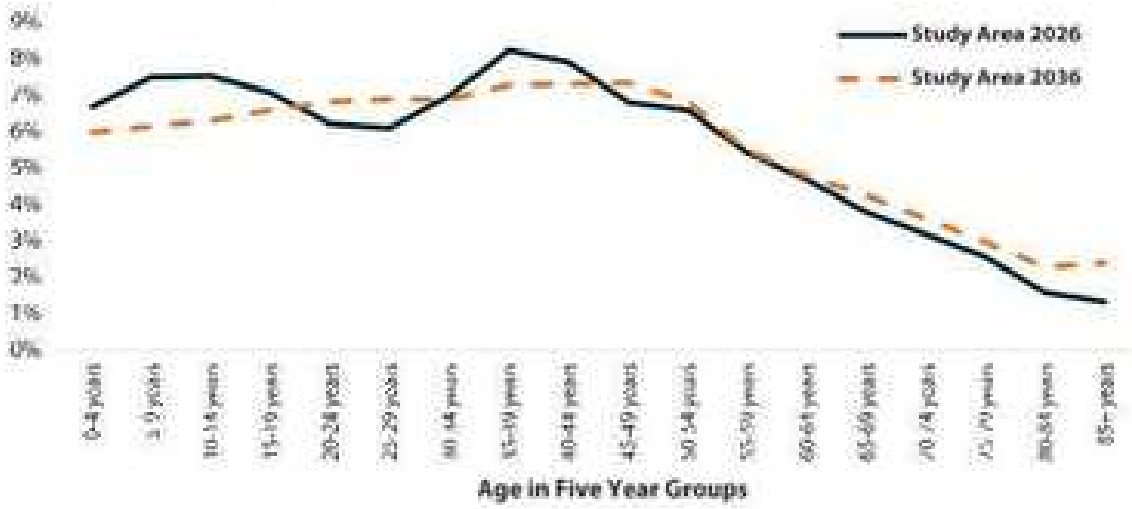



Source: WA Tomorrow 2021, ABS Census 2021, Pracsys 2026

Figure 11 demonstrates the expected change in the trade area's age profile between 2026 and 2036. It is forecasted that the trade area will experience a lower rate of growth in school-aged persons (10-14), with a slightly higher rate of growth in the young working aged population (20-35 years of age). This projection may not account for the significant quantum of new families attracted by greenfield development expected to occur in East Wanneroo.

This forecasted change in age profile may suggest greater spending capability than current patterns, as a higher proportion of working-age residents with disposable income suggests strong potential for new retail development within the catchment, particularly stores targeting higher-income consumers. The trend remains broadly similar for mature population, with the growth rates maintaining a steady decline at 50+ years of age.

**Figure 11. Forecasted Age Profile, Trade Area Compared to Greater Perth**



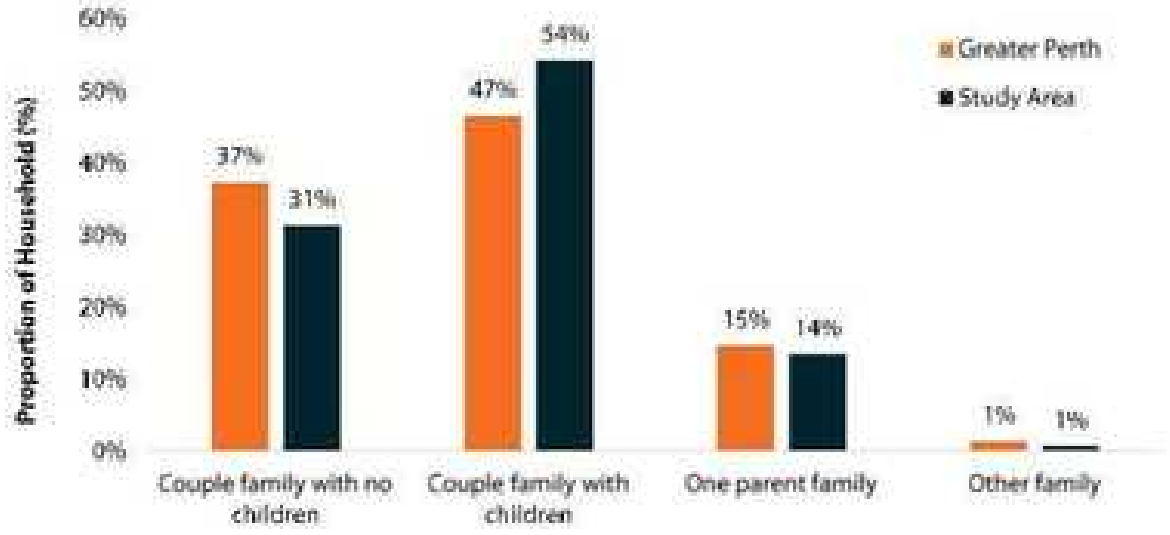

Source: ABS Census 2021, WA Tomorrow 2021

## 3.4 Family Composition

The trade area has a higher proportion of households with children compared to Greater Perth (54% versus 47%), indicating a more family-oriented community (Figure 12). In contrast, Greater Perth has a 6% higher share of couples without children, further reinforcing the family-focused nature of the trade area.

The family composition suggests a high concentration of younger families and a higher proportion of young and school-aged children, which is likely to drive increased demand for family-oriented services, including childcare and schooling infrastructure.

**Figure 12. Family Composition, Trade Area Compared to Greater Perth**

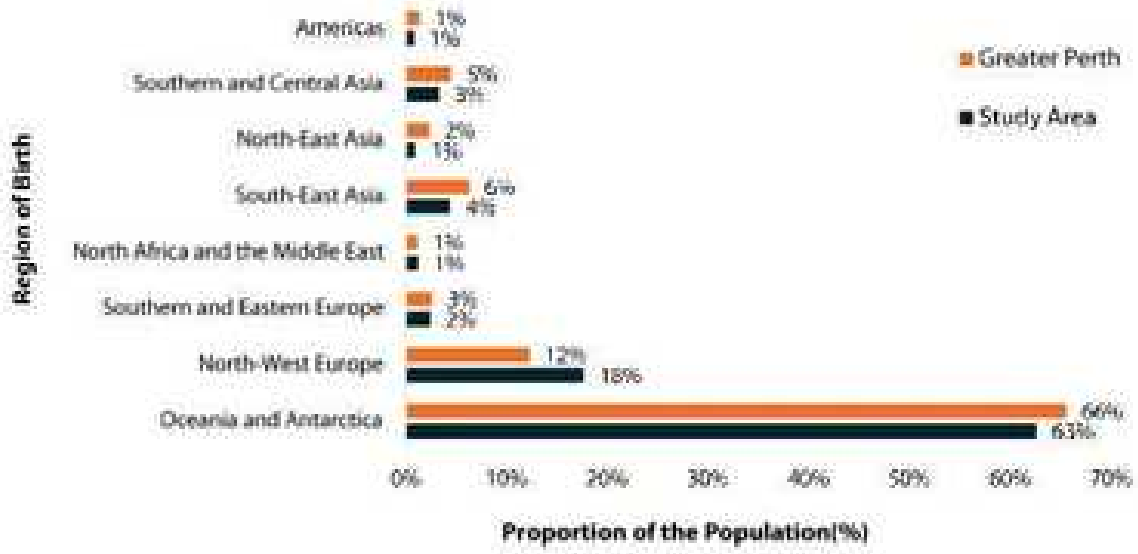



Source: ABS Census 2021

## 3.5 Cultural Diversity

The trade area is less culturally diverse than Greater Perth (Figure 13). A majority of residents are born in Oceania and Antarctica (primarily Australia), compared to smaller shares from Europe and other regions. While Greater Perth has a broader mix of overseas-born populations, the catchment shows a higher concentration of locally born residents at 63%, indicating lower diversity. This may influence service needs, language diversity, and cultural infrastructure compared to more multicultural parts of Perth.

**Figure 13. Region of Birth, Trade Area Compared to Greater Perth**



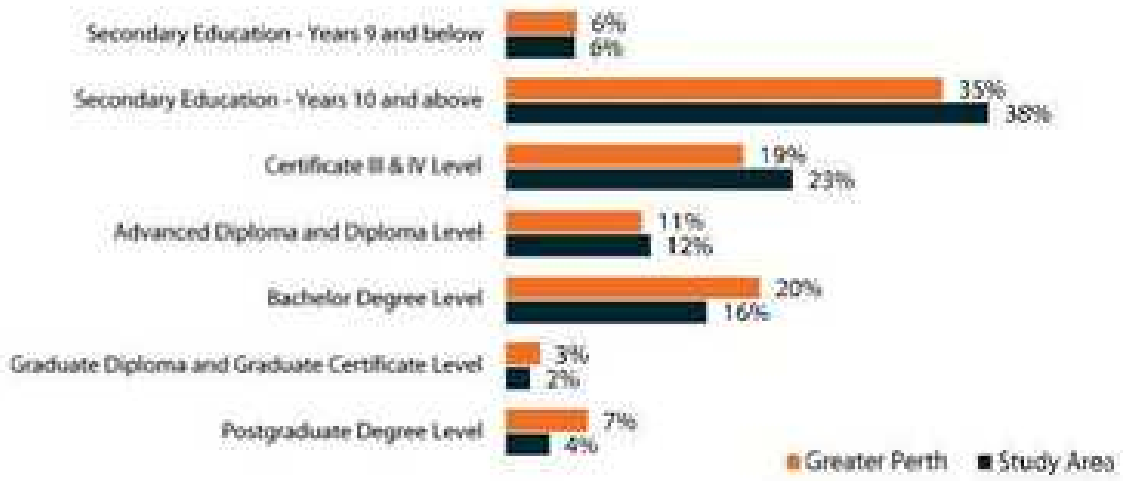

Source: ABS Census 2021

## 3.6 Educational Attainment

The trade area has a lower share of higher education qualifications compared to Greater Perth (Figure 14). For example, postgraduate and bachelor-level qualifications are smaller in the trade area (4% and 16% respectively), while mid-level qualifications such as Certificate III & IV and diplomas account for a greater share.

The catchment may contain a workforce that is more vocationally trained, aligning with trades, technical roles, and service-based employment. In contrast, Greater Perth has a greater proportion of university-educated residents, indicating more knowledge-intensive employment in the metropolitan area.

**Figure 14. Education Attainment, Trade Area Compared to Greater Perth**

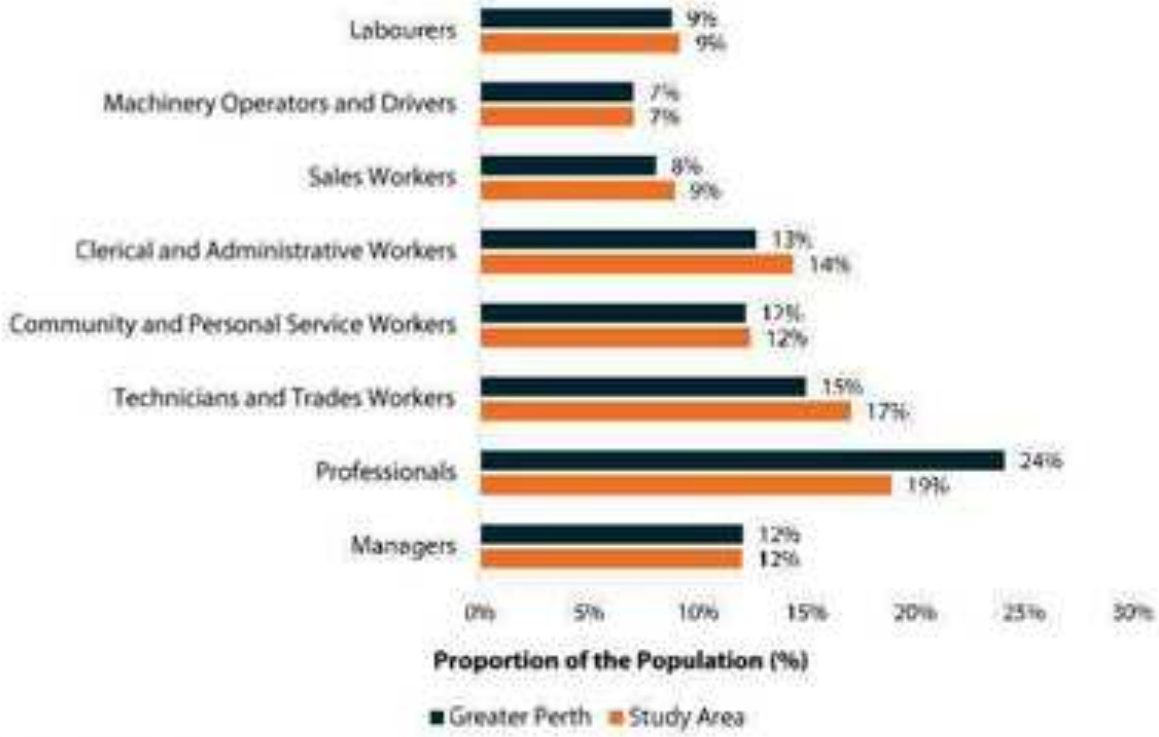



Source: ABS Census 2021

## 3.7 Occupation

The occupational structure reinforces the education trends (Figure 15). The trade area has fewer professionals and managers (e.g., Professionals: 19% in catchment versus 24% in Greater Perth), while technicians and trades workers are more prominent. This indicates a more blue-collar workforce composition in the catchment. Greater Perth, by comparison, has a higher proportion of white-collar occupations, reflecting a more diversified and knowledge-based economy.

**Figure 15. Occupation, Trade Area Compared to Greater Perth**

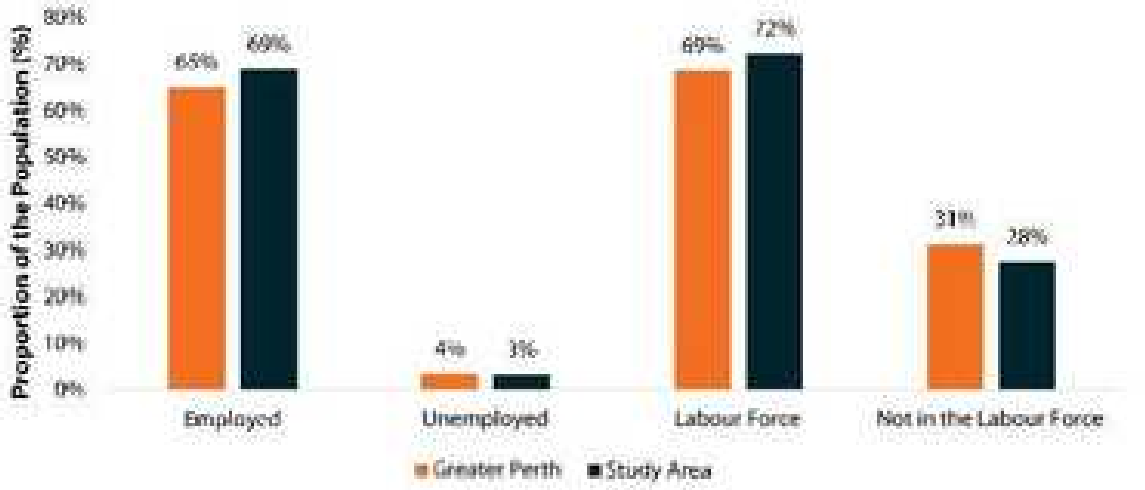



Source: ABS Census 2021

## 3.8 Labour Force Status

The trade area shows a stronger labour force engagement than the Greater Perth average, as overall employment rate is 4% higher at 69% (Figure 16). 72% of persons from the trade area are active within the labour force, compared to the proportion of people in Greater Perth, which sits at 3% lower. The proportion of people not in the labour force is lower in the trade area (28%), than in Greater Perth (31%). Unemployment rates are quite similar, with the rate being 1% lower in the trade area. This suggests that the catchment is more economically engaged, and persons may face fewer barriers to workforce participation.

**Figure 16. Labour Force Composition, Trade Area Compared to Greater Perth**




Source: ABS Census 2021

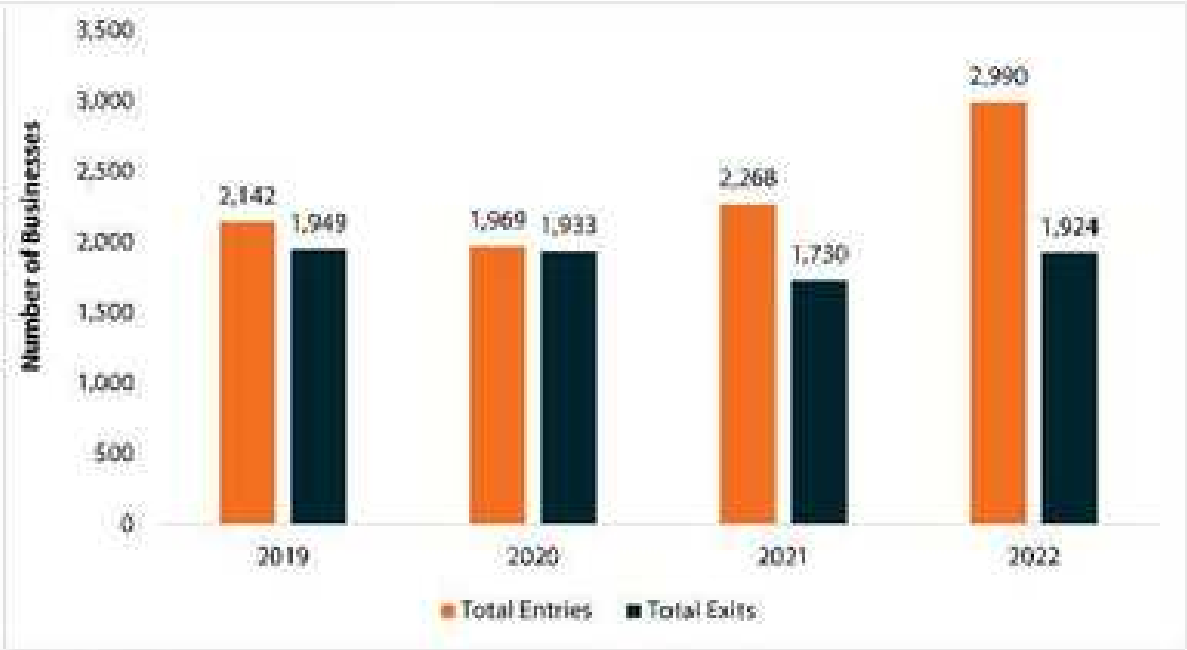
# 4 ECONOMIC & EMPLOYMENT ANALYSIS

The following sub-sections analyse key economic and employment variables in the City of Wanneroo that align with the requirements of an Economic, Retail and Employment (ERE) Strategy according to SPP7.2.

## 4.1 Business Entries and Exits

The volume of business entries and exits in the City of Wanneroo has been examined using 2023 ABS data (Figure 17). Data at the WTC-level is not available for this indicator of economic activity.

**Figure 17. Business Entries and Exits, City of Wanneroo**



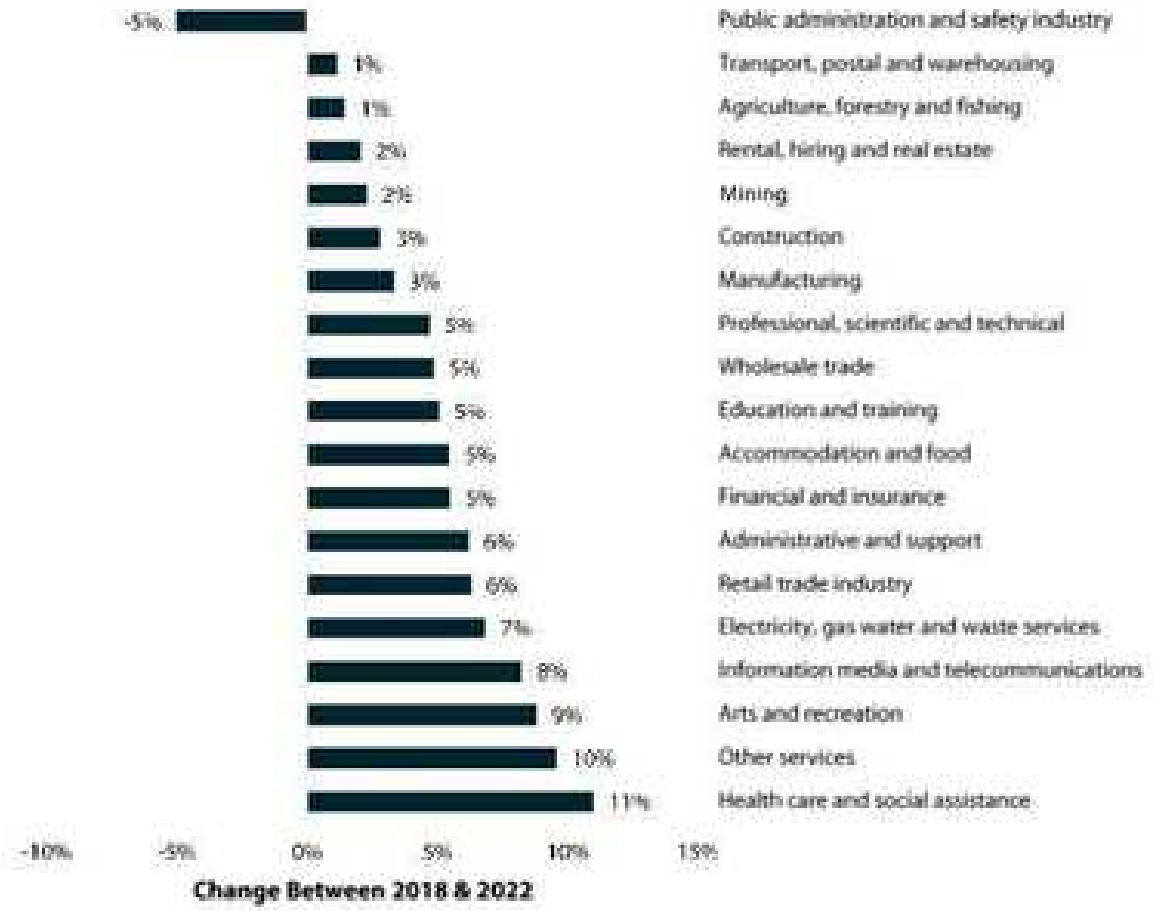

Source: ABS 2023

Total business entries have increased by 12% per year on average while business exits have decreased marginally in the City since 2019. Growth in entries has been broad-based across smaller business sizes, with non-employing business entries growing by 11% per year and entering businesses with one to four employees growing by 12% per year. Entering businesses with 20 or more employees grew by 22% per year on average, although this is from a very low base (five businesses in 2019 to nine in 2022). Exiting businesses employing 20 or more employees declined by 21% per year over the same period.

The widening gap between entries and exits indicates a net expansion of the City's number of businesses, which can generally be attributed to profitable industries signalling new businesses to enter the market. The City's rapidly growing population may also be a direct driver of increases in business activity. As a Secondary Centre, WTC is well-positioned to provide office space to cater to the growing number of smaller businesses in the City.

ABS data was utilised to examine business activity by change in the number of businesses by industry between 2018 and 2022. The analysis indicates that the strongest growth occurred in the health care and other service industries (Figure 18).

**Figure 18. Change in Number of Business by Industry (2018 to 2022), City of Wanneroo**




Source: ABS 2023

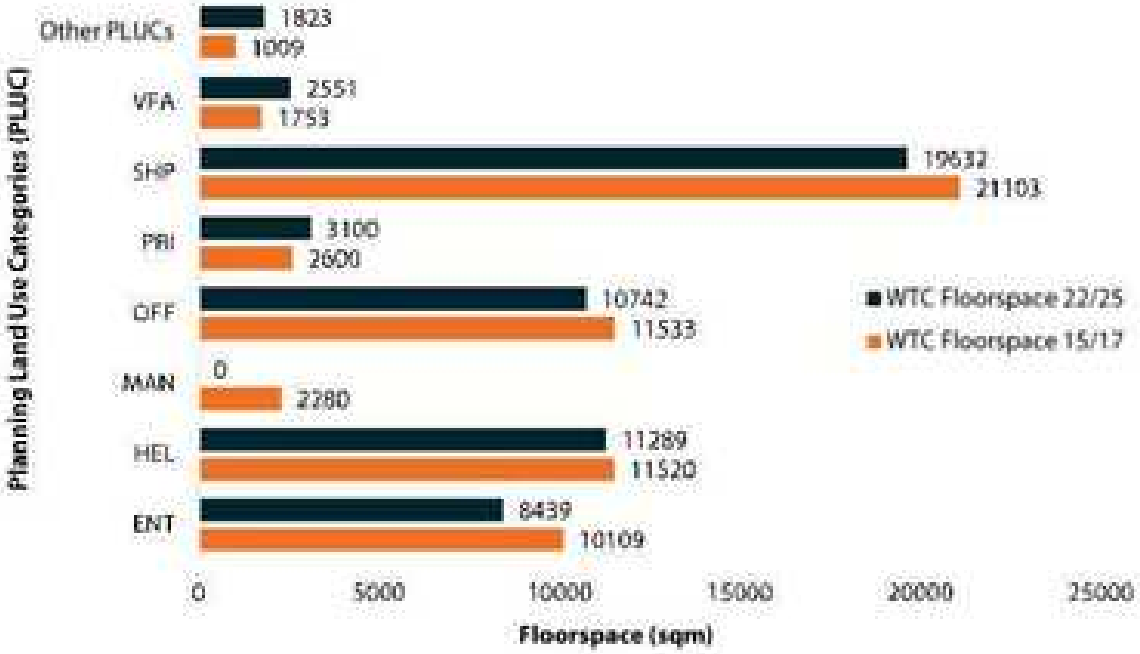
Health care and social assistance was the fastest-growing industry at 11% per year (464 businesses in 2018 to 670 in 2022), followed by other services (10%) and arts and recreation services (9%). Information media and telecommunications and electricity, gas, water and waste services also recorded strong percentage growth; however, these are of relatively low volume (90 and 50 businesses in 2022, respectively). Public administration and safety was the only industry to decline (-5% per year).

The overall change in the number of businesses by industry aligns with indications of growing business activity in the City. The growth in health care and social services aligns with WTC's expected role as a civic hub as well as a commercial centre. A supported shared/funded office space for personal and social services businesses would be ideally located in close proximity to existing civic and commercial activities in WTC. Lotteries House is an example of a specialised community and office space that supports not-for-profit and charitable organisations.

## 4.2 Commercial Vacancies

Commercial vacancies have been analysed to provide an indication of the performance and effective utilisation of activity centre land. Within WTC, vacant floorspace increased from 1,753m² in the 2015/17 LUES survey to 2,551m² in 2022/24, lifting the vacancy rate from approximately 3% to 4%. This occurred alongside a contraction in occupied floorspace from 60,154m² to 55,025m² (Figure 19).

**Figure 19. Change in Occupied and Vacant Floorspace, Wanneroo Town Centre**




Source: DPLH LUES 2015/17, 2022/24

The reductions were concentrated in WTC's largest floorspace categories: Shop/Retail declined from 21,103m² to 19,632m² and Entertainment/Recreation/Culture from 10,109m² to 8,439m². Please see Appendix 1: Land Use Glossary for the definition and examples of uses within these land use categories.

Rising vacancy alongside contracting occupied floorspace indicates that WTC may not be sustaining its previous levels of visitation and expenditure. The decline in the activity centre's performance is likely a result of a multitude of factors such as ageing infrastructure, competing centre expansions, a slowing rate of population growth and more. To counteract decreasing activity in WTC, the City should seek to improve connectivity and opportunities for pedestrian movement throughout the broader precinct (see Section 7.2, WTC Activation Analysis, for more detail).

Despite an increasing quantum of vacant floorspace, the City has a relatively low level of vacant floorspace relative to other LGAs and WTC accounts for less than 10% of the City's total. Four benchmarks have been used to compare the City's vacant commercial floorspace distribution (Figure 20). Floorspace to population

ratios (service ratios) are used to provide relative comparisons by accounting for the size of an LGA's population.

**Figure 20. Vacant Commercial Floorspace, City of Wanneroo Compared to Benchmarks**

| Components | Wanneroo | Vincent | Claremont | Bassendean | Kwinana | Average |
|---|---|---|---|---|---|---|
| Population | 209,111 | 36,537 | 11,284 | 15,932 | 45,867 | 63,746 |
| Vacant Commercial Floorspace ($m^2$) | 27,987 | 62,289 | 17,188 | 832 | 7,110 | 23,081 |
| Vacant Floorspace to Population Ratio ($m^2$) | 0.13 | 1.70 | 1.52 | 0.05 | 0.16 | 0.36 |

Source: DPLH LUIES 2022/24, ABS Census 2021

The City of Wanneroo has a low level of vacant commercial floorspace relative to the benchmark LGAs, at 0.13$m^2$ of vacant floorspace per person against a benchmark average of 0.36$m^2$. The City of Vincent and Town of Claremont record substantially higher ratios, reflecting their inner-metropolitan commercial concentrations relative to small resident populations. A low vacant service ratio suggests that the City's commercial floorspace is generally well utilised.

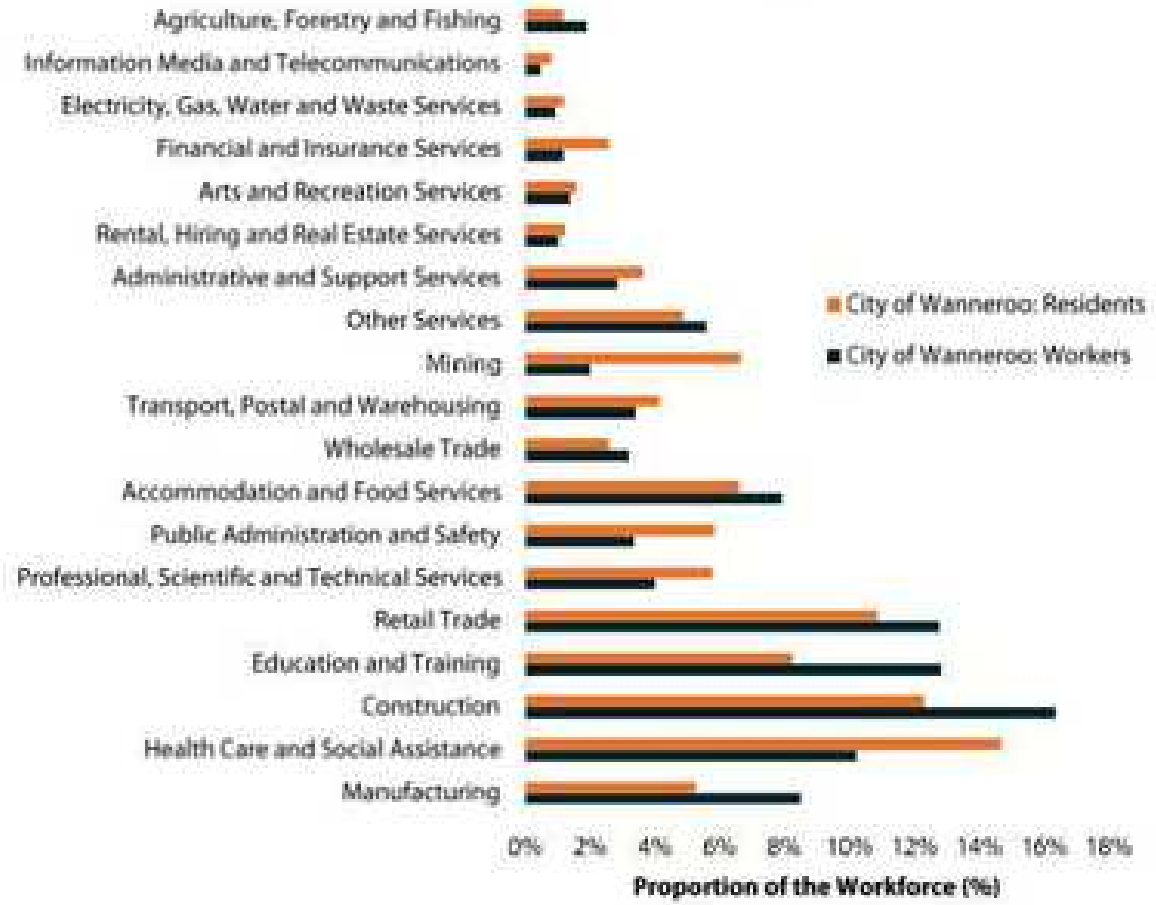
## 4.3 Industry of Employment

The industry of employment for residents of the City and those who work in the City have been compared in Figure 21. Residents predominantly work in health care and social assistance (15%), construction (12%), and retail trade (11%), with mining (7%) also a notable industry of resident employment. Those who work in the City (a mix of locals and those from other LGAs) are predominantly employed in construction (16%), education and training (13%), retail trade (13%), and health care (10%).

The distribution is broadly aligned between resident workers and available jobs in the population-driven industries, with retail trade, accommodation and food services, other services and wholesale trade each within two percentage points. The largest misalignments occur in mining, with 5% more residents than local jobs, reflecting the City's substantial fly-in fly-out workforce, and in health care (5%), public administration (3%) and professional services (2%), which together account for 10% more residents than jobs. This supports that residents of the City in these industries travel outside the City for work, likely to the Perth CBD, Joondalup and the northern health precincts, and perhaps increase the opportunity for expenditure leakage to other centres.

Conversely, the City provides proportionally more jobs than resident workers in construction (4%), education and training (5%) and manufacturing (4%). The 8% more construction and manufacturing workers than residents employed in these industries presents an opportunity for WTC. This would be to cater services to trade and industrial workers during work hours, to pursue attracting the influx of workers and capitalise on the proximity between the Wangara industrial area (where many of these workers are likely employed) and WTC.

**Figure 21. Industry of Employment for Residents versus Workers, City of Wanneroo**




Source: ABS Census 2021

## 4.4 Employment Quality

The analysis of employment quality considers industry uses and the associated required level of knowledge as per the following categories (see Appendix 2: Employment Quality for further detail) (Figure 22).

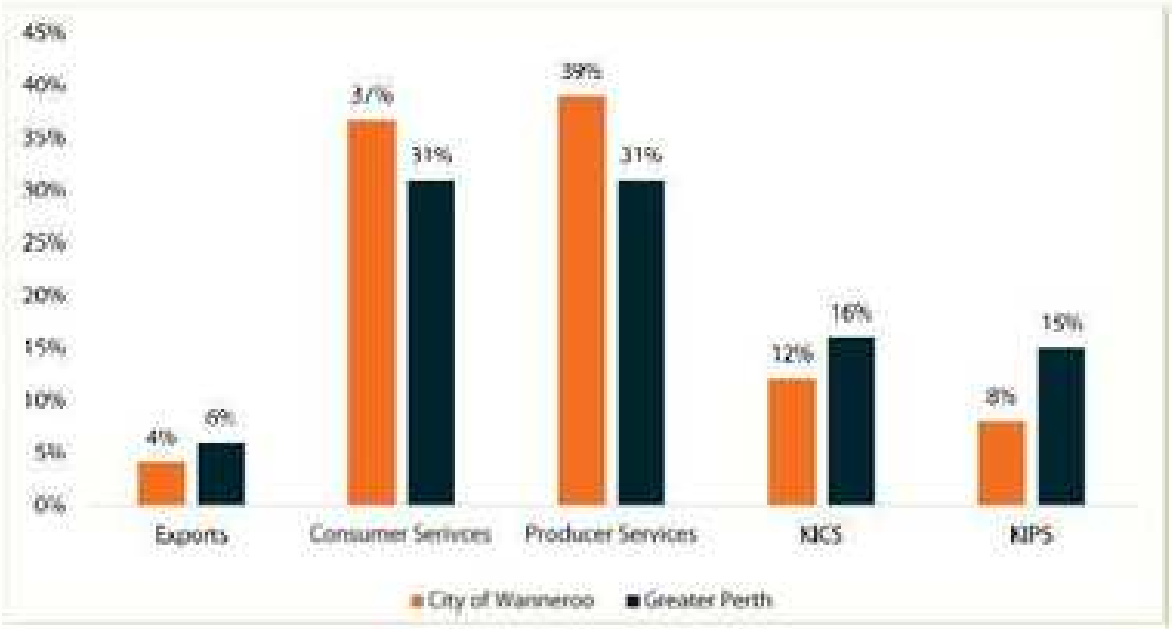
**Figure 22. Employment Quality Categories**

| | |
|---|---|
| **CONSUMER SERVICES** | Low skill population-based employment (i.e. retail) |
| **KNOWLEDGE INTENSIVE CONSUMER SERVICES (KICS)** | High skill population-based employment (i.e. Health) |
| **PRODUCER SERVICES** | Low skill or trade related business to business services (i.e. cleaning services or mechanic) |
| **KNOWLEDGE INTENSIVE PRODUCER SERVICES (KIPS)** | High skill business to business employment (i.e. engineering) |
| **EXPORTS** | Employment having to do with goods and services exported outside the country (i.e. mining) |

Source: DPLH 2021

The City's employment quality for exports and knowledge-intensive services sits below that of Greater Perth (Figure 23).

**Figure 23. Employment Quality, City of Wanneroo Compared to Greater Perth**




Source: ABS Census 2021

The City has notably lower levels of knowledge-intensive consumer and producer services (KICS and KIPS). These tend to be higher-paid occupations, and their under-representation may indicate lower levels of disposable income within the local workforce.

The City has a higher level of both consumer services (37% versus 31%) and producer services (39% versus 31%) than Greater Perth, which is likely reflective of its role in servicing a large and growing residential population rather than functioning as a strategic employment centre.

The City has a lower level of strategic employment relative to Greater Perth, with KIPS at just 8% against the metropolitan 15%; strategic employment is calculated through the combination of exports and KIPS and refers to the high-value, economically productive jobs that generate wealth for a region rather than simply servicing the local population. By extension, the provision of strategic employment is not a primary function of the City's economy, which is oriented toward population-serving activity. This profile is characteristic of a fast-growing outer-metropolitan area, where residential growth outpaces the establishment of high-value local employment.

## 4.5 Retail Trends

An activity centre should be developed in line with current retail trends to maximise expenditure and overall activation. The identified trends highlight the fast-changing nature of retail that businesses need to adapt to.

It is key to ensure that planning for activity centres allows for flexibility in uses and floorspace areas. The following trends are worth considering as activation and development opportunities arise (Figure 24).[9]

**Figure 24. Retail Trends and Drivers**

| Trend | Description | Drivers |
|---|---|---|
| Cost of Living Pressure | Cost of living pressure refers to the effect of rising goods and services expenses on households' ability to maintain a standard of living | Periods in which macroeconomic indicators are unfavourable, such as high inflation, can generate concern among households. In these scenarios, consumers seek to curtail their spending leading to less discretionary and even essential purchases. |
| Conscious Retail | Conscious retail is increasingly keeping customers loyal to a brand /distributor. | Many consumers have made a lifestyle choice to have a smaller global footprint, support brands that provide better conditions for factory workers in developing countries or support local products. Consumers are often willing to pay a premium for these products. |
| Data Retail | 'Big Data' is being used to continually monitor and respond to changing consumer desires, shortening the product cycle. | Collecting and analysing data on retail sales is being used to inform all parts of the retail sale process, from supply chain to understanding customer satisfaction with their purchase. Retailers who don't use data to inform their decisions are much less likely to understand their customer's preferences or forecast demand and may find it difficult to remain competitive with those who do. |
| International Retail | The last few years have seen an influx of international brands penetrating the Australian market. | An untapped Australian market and Australian's demanding goods they can see online but cannot purchase locally. Additionally, the ability to geoblock products and charge higher prices in the Australian market has driven demand. |
| Omnichannel Retail | Digital marketing has been used to keep customers loyal to a brand/distributor. | The emergence of digital marketing across a range of devices, platforms and applications have provided multiple channels for retailers to market their products. Physical stores need an online presence to be competitive, as a consumer may shop using both means at different times. |
| Mobile Devices | Accessing retail via mobile devices and integrating mobile devices. | Mobile devices are providing unprecedented 24/7 access to retail offerings. |
| Subscription retail | Subscription retail allows retailers to encourage increased loyalty and connection to their brand. | Retailers need a business model that 'locks in' customers to increase the threshold of switching brand |

[9]https://www.commbank.com.au/content/dam/caas/newsroom/docs/commbank-iq-cost-of-living-report-may-24.pdf; http://www.smartcompany.com.au/industries/retail/top-five-retail-trends-watch-2017/; https://www.rangeme.com/blog/6-trends-that-will-reinvent-retail-in-2017/; https://www.appearhere.co.uk/inspire/blog/the-retail-trends-with-staying-power; http://digitalmainstreet.ca/retail-trends-10-experts-share-their-predictions-for-2017/; https://www.vendhq.com/au/university/retail-trends-and-predictions-2017; https://www.digitalpulse.pwc.com.au/retail-trends-2017-paul-zahra/; https://www.forbes.com/sites/bernardmarr/2015/11/10/big data a game changer in the retail sector/#63dc4fbd9f37

| Trend | Description | Drivers |
|---|---|---|
| Fast Retail | Business models comprised of virtual stores accessible from anywhere with fast distribution networks. | Technology has enabled customers to decide when, how and where to go. Consumers are no longer beholden to opening times or physical geography, consumer desires rather than retailers are driving consumption. |
| Retailtainment | Entertainment as an integral part of the retail experience. | The popularity of online retail channels has resulted in physical retailers needing to provide a retail experience or social experience as a point of difference. Millennials integrate retail and entertainment as a single social experience. |
| Small Retail | Speciality shops and smaller floorplates are becoming more popular. | Smaller stores with more curated selections, and specialty shops with niche products and more knowledgeable staff are predicted to be more competitive than larger stores where products can be harder to find. |
| Personal Retail | Consumers are increasingly desiring products that can be personalised. | Consumers are going shopping with a strong idea of what they want, rather than shopping to see what is available and fits their needs. They want to find a product that reflects their personal brand and is tailored to their needs rather than generic and mass-produced. |
| Ethical Consumerism | Consumers are considering the ethical and environmental impact of their purchases; where the product was produced and if it reflects their values. | This has been driven by a range of factors such as COVID-19, social media raising awareness around working conditions and environmental impact, news, Oxfam and other organisations that rate brands. |
| Ecommerce | The rise of online shopping coincides with a rise in e-commerce. Online shopping provides the ability of consumers to stay home and e-commerce has revolutionised who can be a retailer. | This has been driven by fast-paced lives, the rise of social media, more people starting online businesses. Online shopping is what customers are doing and ecommerce is what businesses are doing. This also means in-store shopping has to be enticing or convenient enough to attract consumers. |
| Buying Local | Supporting local businesses and individuals | Consumers are becoming increasingly willing to purchase from small businesses and locally. This has been accelerated through COVID-19 to support small, struggling businesses and due to a lack of imported goods. |
| Open Air Shopping Experiences | People are starting to prefer outdoor malls rather than enclosed malls. | People wanting to be in nature, prefer to walk between shops outside rather than in a shopping centre, however, the trade area pull is larger for indoors than outdoors |
| Circular Fashion | More consumers are turning to be a part of a circular economy model in which they consume and give away items in a more sustainable manner. | This has been driven by second-hand ecommerce like Etsy, people both buying and selling as individuals or small 'brands' and the growth of the sharing economy. |

| Trend | Description | Drivers |
|---|---|---|
| Authenticity | Customers are increasingly wanting to feel a personal connection with brands and are becoming more aware of manipulative advertisements. | Increased availability of information is making consumers more aware of marketing tactics. This is making consumers more inclined to purchase from brands/retailers they feel are authentic. |
| Virtual Reality | Retailers are increasingly looking to differentiate themselves through the integration of technology with the customer experience. | Augmented Reality (AR) and Virtual Reality (VR) technologies have had a significant impact on the retail sector. AR and VR provide immersive and engaging experiences for customers, enabling them to visualize and interact with products in new ways such as virtual storefronts. This trend can reduce the footprint required of physical stores. |

Source: Pracsys 2024

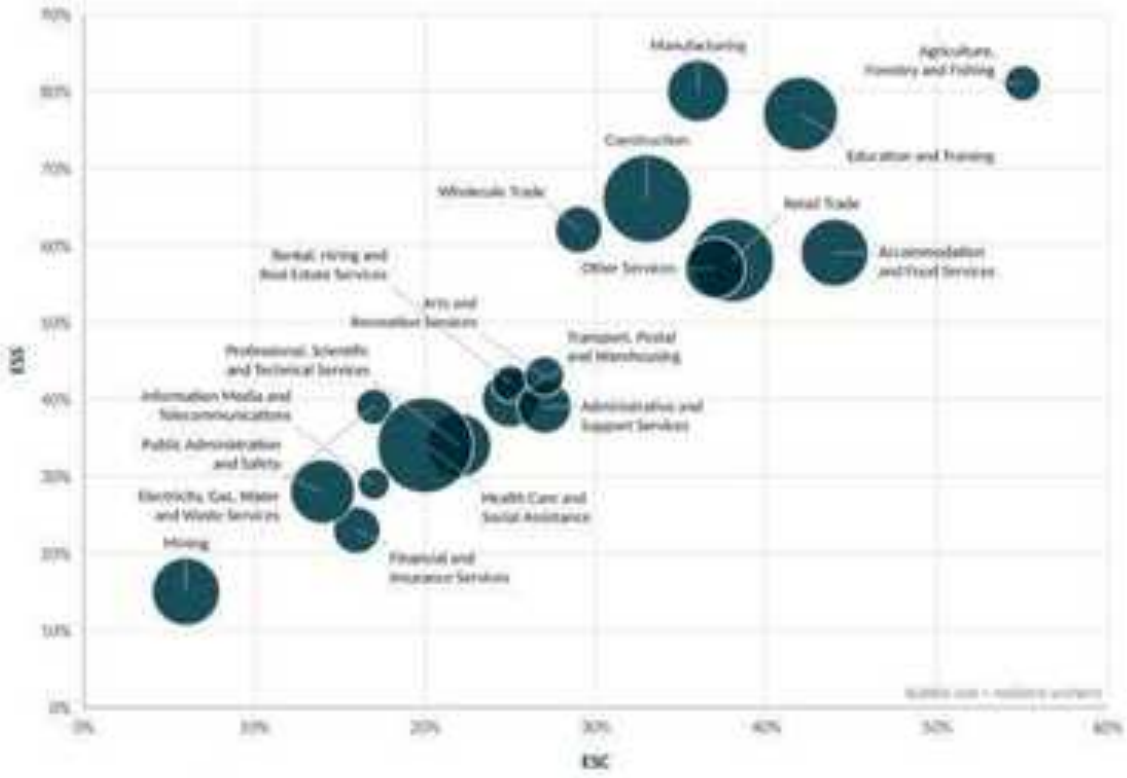
## 4.6 ESS and ESC

Employment self-sufficiency (ESS) reflects the ratio between the number of jobs available in a particular region and the number of people employed who live in the same region. It is a measure of the capacity for an economy to satisfy its own labour force. A higher ratio (closer to 100%) is therefore desirable; it can also be assessed at an industry level to reflect optimal matching between the employment skillset of an area's residents and the employment opportunities available to those residents locally.

Employment self-containment (ESC) indicates the proportion of a region's working residents who are employed within that same region, relative to the total number of working residents. It reflects the extent to which residents can both live and work locally rather than commuting elsewhere. It should be noted that ESS and ESC are primarily sub-regional concepts, best applied to employment across a whole economy relative to the workforce living within it. Measuring a localised component (e.g. Wanneroo) of a larger economy (the Central Sub-Region) in isolation does not account for that area's intended role within the wider sub-region and therefore does not fully capture the sustainability of employment across adjacent local areas.

The City's current performance against ESS and ESC metrics is illustrated in Figure 25.

**Figure 25. ESS and ESC by Industry**




Source: Pracsys 2026, ABS Census 2021

This analysis demonstrates that several of the City's largest industries including Health Care and Social Assistance, Construction, and Retail Trade, perform relatively poorly against ESC metrics while performing

comparatively better against ESS metrics. This suggests that residents are opting to travel outside of the City to work, despite jobs in the same industry being provided locally. This indicates that local jobs are relatively uncompetitive relative to those in adjacent LGAs, and that WTC could look to attract adjacent and new businesses in consumer services and knowledge-intensive service industries (which are relevant to WTC) to improve the City's employment self-containment. These types of employment are relevant to retail, entertainment, health, and office-type floorspace.

Notably, Health Care and Social Assistance is the City's single largest industry by resident workers (14,616) yet records low self-containment (34% ESC), indicating a substantial share of these residents commute elsewhere for work. Construction (12,246 residents) and Retail Trade (10,825 residents) show a similar pattern, combining large resident workforces with only moderate self-containment (66% and 58% respectively). By contrast, Agriculture, Forestry and Fishing (81% ESC), Manufacturing (80%), and Education and Training (77%) achieve high self-containment, though these represent smaller shares of the resident workforce. Mining stands out with a very large resident workforce (6,599) but the lowest self-sufficiency (6% ESS) and self-containment (15% ESC), reflecting a workforce that lives in the City but is almost entirely employed elsewhere.

# 5 FLOORSPACE GAP ANALYSIS

The floorspace gap analysis is a critical tool in urban planning that helps identify and address gaps in the supply and demand for floorspace within a given area. By comparing the current supply of floorspace to benchmark areas, gaps can be identified, and appropriate strategies can be developed to address them.

In this section, we will conduct a floorspace gap analysis to understand the current state of floorspace supply and demand in the City. We will explore different types of floorspace based on the Department of Planning, Lands and Heritage (DPLH) Planning Land Use Categories (PLUC) and WA Standard Land Use Categories (WASLUC). Please see Appendix 1: Land Use Glossary for definitions and examples of PLUC and WASLUC.

Four benchmark Local Government Areas have been identified with the City's officers to assess potential gaps in the City of Wanneroo:

- Town of Bassendean
- Town of Claremont
- City of Kwinana
- City of Vincent

These LGAs have been chosen for the following reasons:

- Each LGA's highest order activity centre is a Secondary Centre
- Each LGA's Secondary Centre is bounded by similar transportation networks
- Each LGA's economic profile is driven by population-based industries

Of the benchmarked regions, the Town of Bassendean most closely reflects the current land use mix of the WTC's trade area (see Section 3.1, Trade Area, for the definition of WTC's trade area). The Cities of Vincent and Kwinana function as aspirational benchmarks, representing a more advanced stage of activity centre development with a greater concentration of residential and office land uses. Notably, while the Town of Claremont presents a broadly comparable land use composition, it demonstrates a greater provision of retail and population-driven floorspace.

The identified floorspace gaps will be apportioned to WTC based on its share of commercial floorspace in the City of Wanneroo's activity centre hierarchy. Floorspace to population ratios (service ratios) are used to provide relative comparisons and quantify potential gaps.

## 5.1 Current Commercial Supply by PLUC

DPLH LUES 2022/24 data contains thirteen commercial land use categories (PLUCs) and depicts a total commercial floorspace of 201,083m² for the total trade area (Figure 26). WTC contains approximately 10% of the total catchment's Shop/Retail (SHP) floorspace.

**Figure 26. Commercial Floorspace by PLUC, Trade Area and WTC**

| PLUC | Trade Area Floorspace (m²) | WTC Floorspace (m²) | WTC Proportion (%) |
|---|---|---|---|
| RET | 20,818 | 470 | 2% |
| ENT | 28,085 | 8,439 | 30% |
| SER | 13,766 | 628 | 5% |
| OFF | 26,051 | 10,742 | 41% |
| VEA | 7,605 | 2,551 | 34% |
| SHP | 58,239 | 19,632 | 34% |
| RES | 13,220 | 350 | 3% |
| MAN | 60 | 0 | 0% |
| STO | 11,841 | 75 | 1% |
| UTE | 650 | 300 | 46% |
| HEL | 17,648 | 11,289 | 64% |
| PRI[1] | 3,100 | 3,100 | 100% |
| **Total** | **201,083** | **57,576** | **29%** |

Source: DPLH LUES 2022/24, Pracsys 2026

WTC has the largest amount of floorspace in the following categories:

- SHP – Shop/Retail
- ENT – Entertainment/Recreation/Cultural
- HEL – Health/Welfare/Community Services

In contrast WTC accounts for the largest proportion of the trade area's floorspace across the following categories:

- UTE – Utilities/Communications
- PRI Primary/Rural
- SHP – Shop/Retail

The analysis also indicates that WTC supports a high concentration of Office (OFF) floorspace; this can largely be attributed to the presence of a local government office at the Wanneroo Civic Centre. As such, it is not an indication of a high level of commercial office space in WTC.

[1] Potentially understated in the Trade Area

## 5.2 Commercial PLUC Gaps

PLUC gaps have been estimated based on a comparison of the trade area's activity centre floorspace (commercial complexes in LUES) to the benchmark LGA's supply of activity centre floorspace. Cells that are highlighted in grey represent an oversupply in floorspace while those not highlighted represent an undersupply/gap (Figure 27). The trade area has the largest gap in Office floorspace.

**Figure 27. Floorspace Gaps by PLUC, Trade Area Compared to Benchmark LGAs**

| PLUC | Trade Area Floorspace Gaps (m²) | Ranked Gaps |
|---|---|---|
| RET | -3,883 | - |
| SER | -928 | - |
| MAN | 5,720 | 10 |
| STO | 7,336 | 9 |
| PRI | 10,810 | 8 |
| HEL | 12,690 | 7 |
| ENT | 13,039 | 6 |
| UTE | 18,504 | 5 |
| RES | 25,329 | 4 |
| VFA | 44,194 | 3 |
| SHP | 50,544 | 2 |
| OFF | 60,941 | 1 |

Source: DPLH LUES 2022/24, Pracsys 2026

The trade area records a greater concentration of floorspace per person in Other Retail (RET) and Service Industry (SER) categories compared to the benchmark LGAs, evident in a total surplus of approximately 4,800m² .

Relative to the benchmark LGAs, the trade area records significant commercial gaps in the provision of multiple PLUC categories, indicating that there is an under provision of these uses. The most significant gaps recorded are in the provision of OFF, SHP, VFA, RES, and UTE floorspace categories.

The trade area has an OFF floorspace gap totalling 60,941m²; OFF floorspace relates to the provision of administrative, commercial and professional services.[1] A significant gap is also recorded in the SHP floorspace category, at approximately 50,544m². This suggests that retail floorspace provision is below the level expected when compared with benchmark activity centres, indicating unmet demand for retail services and centre-based commercial activity. Expanding the provision of OFF floorspace to address the gap in the trade area is

[1] City of Vincent contains a significant state government office presence, which has been excluded from the OFF floorspace category for the purposes of this analysis. As the Wanneroo Town Centre catchment does not have the scale or function to support large state government office uses, retaining this floorspace in the comparison would misrepresent the relative performance of the OFF category and reduce the accuracy of the benchmark analysis.

an opportunity for WTC as office space is an ideal land use for a Secondary-level Activity Centre. Commercial office space would also benefit from close proximity with the City's offices and other supporting amenity such as the supermarket and high transport connectivity.

The delivery of SHP floorspace is one of the primary roles of Activity Centres in Western Australia. The trade area's floorspace gap in this land use could be appropriately addressed by WTC; this opportunity is further examined in Section 6, Needs Assessment, with further analysis specific to Shop/Retail floorspace.

Unlike other categories, a gap in VFA is not indicative of an undersupply of a service or land use. The gap in VFA may indicate that the trade area is outperforming the benchmark LGAs regarding active utilisation of existing floorspace. This may also be an indication of latent demand, as WTC might not have the appropriate capacity to meet additional demand; latent demand refers to the demand that exists within a population but is currently unmet due to supply constraints. This aligns with an opportunity to expand the provision of commercial uses at WTC.

Residential floorspace, which captures both commercial and non-commercial dwelling types, also records a significant gap. Secondary Centres such as WTC are expected to provide medium to high-rise apartments and multiple dwellings alongside commercial residential floorspace such as hotels and aged care. In this sense, WTC is well-positioned to address the trade area's undersupply of RES floorspace[9].

A detailed assessment of the gaps at a WASLUC level has been undertaken to refine relevant gaps to WTC.

[9] The gap identified at the WASLUC level (Figure 28) comprises commercial residential uses (retirement and nursing accommodation with extended care, hotels and other transient lodging) rather than private dwellings, which are not captured by the LUES. The dwelling capacity of the Centre is addressed separately through the residential yield analysis prepared for the WTCPP (see Section 7.2).

## 5.3 Commercial WASLUC Gaps

Commercial WASLUC gaps have been identified to provide an understanding of the potential mix of uses that could eventuate as WTC develops. WASLUC data provides a more in-depth understanding of what types of land uses are categorised within PLUCs.

The WASLUC assessment has been used to identify significant and relevant local strengths and gaps (Figure 28).

**Figure 28. Catchment WASLUC Strengths and Gaps**

| PLUC | Strengths | Gaps |
|---|---|---|
| ENT | | • Drinking Places (Alcoholic Beverages) – Hotels<br>• Other Special Training and Schooling NEC |
| RES | • Retirement Home – No Extended Care | • Retirement Home – With Extended Care<br>• Hotels NEC (Mainly Accommodation)<br>• Nursing Homes for the Aged, C Class Hospitals<br>• Other Transient Lodgings NEC |
| OFF | • Local Government Administration | • Medical or Healthcare Services – Dental and General Medical Practices<br>• Professional Services – Real Estate operators (except developers and lessors), Accounting, Auditing and Book-Keeping Services, Services to Finance and Investment NEC, Business and Management Consulting Services, Computing Services<br>• Legal Services |
| SHP | • Department Stores – Retail | • Restaurants and Cafes<br>• Beauty Salons<br>• Women's, Girls' and Infants' Wear Stores – Retail<br>• Furniture and Home Furnishings and Equipment Retail NEC<br>• Women's Hairdressers (Including Unisex)<br>• Combined Men's and Women's Clothing Stores – Retail |
| HEL | • Primary Schools | • Community Organisations NEC |
| RET | • Motor Vehicles (used and new) | • Hardware (retail)<br>• Furniture (retail) |
| SER | • Motor Vehicle Mechanical Repair Services | • Motor Vehicles (new and used retail services) |
| UTE | | • Undercover Parking<br>• Open Air Parking |

Source: DPLH LUIS 2022/24, Pracsys 2026

The trade area's strengths lie mostly in Motor Vehicle Retail, which includes the sale of both new and used vehicles, along with motor repair services. According to analysis, this sector spans across multiple PLUC codes, including the Service Industry (SER), and Other Retail (RET).

While the trade area provides some services and facilities for its ageing population, there remains a significant gap[17] in the level and type of care available when compared with benchmark LGAs. The data indicates that the trade area does not provide nursing homes or retirement accommodation with extended care. This suggests that residents approaching later stages of retirement may be unable to access the full range of support they require locally. Aged care is commonly located in and or close proximity to activity centres to ensure residents can access health care, commercial uses, and civic uses. Consolidation of WTC's carparking or eventual rezoning of Lot 9000 could generate sufficient land to support these additional RES uses.

The presence of a Local Government Administration within WTC accounts for the majority of the OFF floorspace recorded in the trade area; this means much of the office floorspace is concentrated in government-related activity rather than reflecting a broader mix of private-sector office uses, which is the case for the benchmarked regions. There is a limited provision of medical and dental services, along with other professional services such as real estate, accounting or bookkeeping, and legal services.

Commercial gaps at the WASLUC level have been grouped into broader PLUC floorspace categories to illustrate a clear and intuitive potential mix of future uses that could emerge within WTC (Figure 29).

**Figure 29. Summarised Gaps within the Study Area**

| PLUC | Gap (m²) | Summarised Category | Proportion of Total Gap (%) |
|---|---|---|---|
| ENT | 4,246 | Hotel (to serve Alcoholic Beverages) | 3% |
| OFF | 33,139 | Specialist / General Medical Practices | 27% |
| | | Professional Business / Legal Services | |
| SHP | 34,923 | Restaurants, Cafes & Function Centres | 28% |
| | | Beauty Salons | |
| | | Clothing Stores | |
| RET | 5,932 | Furniture / Hardware Retail | 5% |
| UTE | 15,778 | Parking Options (both Open Air and Undercover) | 13% |
| RES | 29,590 | Nursing and Retirement Homes (with Extended Care) | 24% |
| | | Hotels (accommodation) and Other Transient Lodgings | |
| **Total** | **123,608** | | |

Source: DPLH LUIS 2022/24, Pracsys 2026

[17] Notably, a substantial proportion of the floorspace gap can be attributed to the City of Claremont, which has a significant establishment of retirement homes and care facilities. Out of the benchmarks, this is unique only to the City of Claremont.

The summarised gaps indicate that the largest potential floorspace opportunities are concentrated in OFF and RES uses. Together, these categories account for approximately 79% of the total identified commercial gap, suggesting that the WTC's future development potential is most strongly associated with additional professional and medical office uses, and residential or accommodation-related activity.

The OFF gap, at approximately 33,139m², indicates scope for a broader office and professional services role, particularly in medical, legal and business services. This is important because existing office floorspace is understood to be influenced by government administration, rather than a broad private-sector office market.

The RES gap, at approximately 29,590m², indicates potential for accommodation and care-related uses, including nursing and retirement homes with extended care, hotels and other transient lodging. This suggests an opportunity for the City to support a more diverse mix of residential, visitor accommodation and age-related services.

# 6 NEEDS ASSESSMENT

The Needs Assessment has projected the demand for SHP and Non-SHP floorspace in activity centres over time. Two methods were used for projecting floorspace demand (Figure 30).

**Figure 30. Land Use Definitions and Methodologies**

| | |
|---|---|
| **SHOP/RETAIL (SHP)** | Shop/Retail floorspace was projected using gravity modelling. This incorporates current and known future supply with spatial data for demand based on household income and expenditure |
| **NON-SHOP/RETAIL (NON-SHP)** | All other commercial floorspace is projected based on the identified floorspace gaps apportioned across centres based on their current size. Centre floorspace is then projected based on modelled Shop/Retail floorspace growth, accounting for changing supply and demand.<br>Non-SHP Floorspace represents the summation of MAN, OFF, PRL STO, RET, SER, ENT & RES floorspace. |

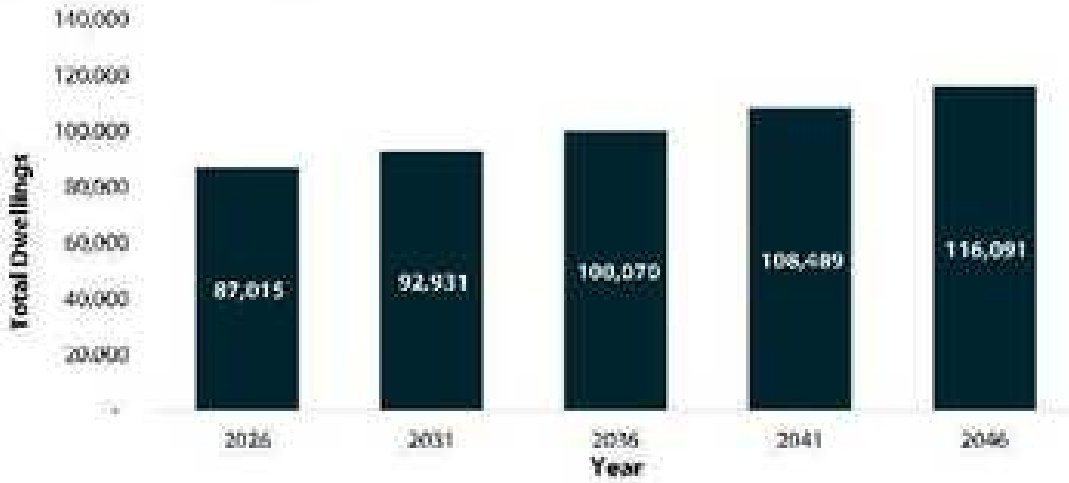
Source: Precsys 2026

## 6.1 Demand Analysis

### Dwelling Growth

The trade area is forecast to contain approximately 86,822 dwellings in 2026. Based on dwelling growth forecasts[11], the number of dwellings in the trade area is expected to increase to 92,586 dwellings in 2031, and 109,160 dwellings in 2041 (Figure 31).

**Figure 31. Forecast Dwelling Growth WAT Central Band, Trade Area**




Source: ABS Census 2021, WA Tomorrow 2021, City of Wanneroo 2026

[11] Dwelling forecasts were provided by the client for the purposes of this Needs Assessment and have been adopted as the dwelling growth scenario for the Wanneroo Town Centre trade area. Where projected growth figures were not provided, estimates were informed by WA Tomorrow Central Band population forecasts.

As the trade area continues to accommodate residential growth, this increase is expected to support higher demand for activity centre uses, including Shop/Retail, food and beverage, personal services, health, community services and other population-driven commercial floorspace.

The floorspace projections for Wanneroo Town Centre have been based on three dwelling forecast scenarios for the trade area:

- Scenario 1 is an outcome of the WA Tomorrow medium-growth (Central Band) forecasts.
- Scenario 2 is an outcome of the forecast.id dwelling projections provided by the City.
- Scenario 3 is an outcome of the WA Tomorrow high-growth (Upper Band) forecasts.

The number of dwellings projected out to 2046 for each scenario is shown in Figure 32.

**Figure 32. Dwelling Forecast Scenarios**

| Scenarios | Summary | 2046 |
|---|---|---|
| Scenario 1 | WAT Central Band | 120,067 |
| Scenario 2 | Forecast ID | 116,091 |
| Scenario 3 | WAT Upper Band | 148,606 |

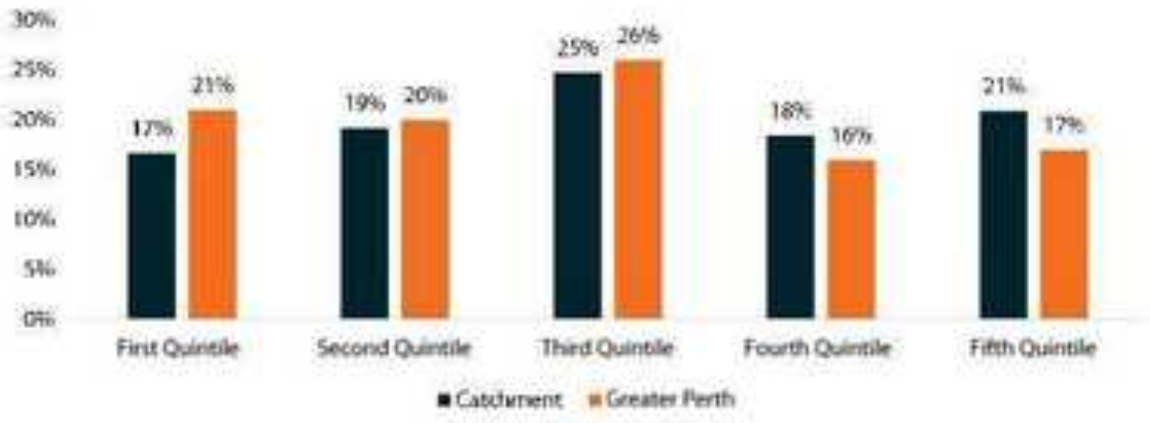
Source: WA Tomorrow 2021, Forecast ID (City of Wanneroo), ABS Census 2021

## Income

Trade area household income levels contribute directly to the success of retail developments, as the level and composition of spending on retail goods and services is primarily determined by household income. Households in the trade area have been equally distributed into five levels of weekly income. Generally, lower-income quintiles spend a higher proportion of their income on basic goods and services; upper-income quintiles have more disposable income available to spend on comparison retail items.

2021 ABS Census data has been used to assess the distribution of household income within the trade area, illustrated in Figure 33.

**Figure 33. Weekly Income Profile, Trade Area Compared to Greater Perth**




Source: ABS Census 2021

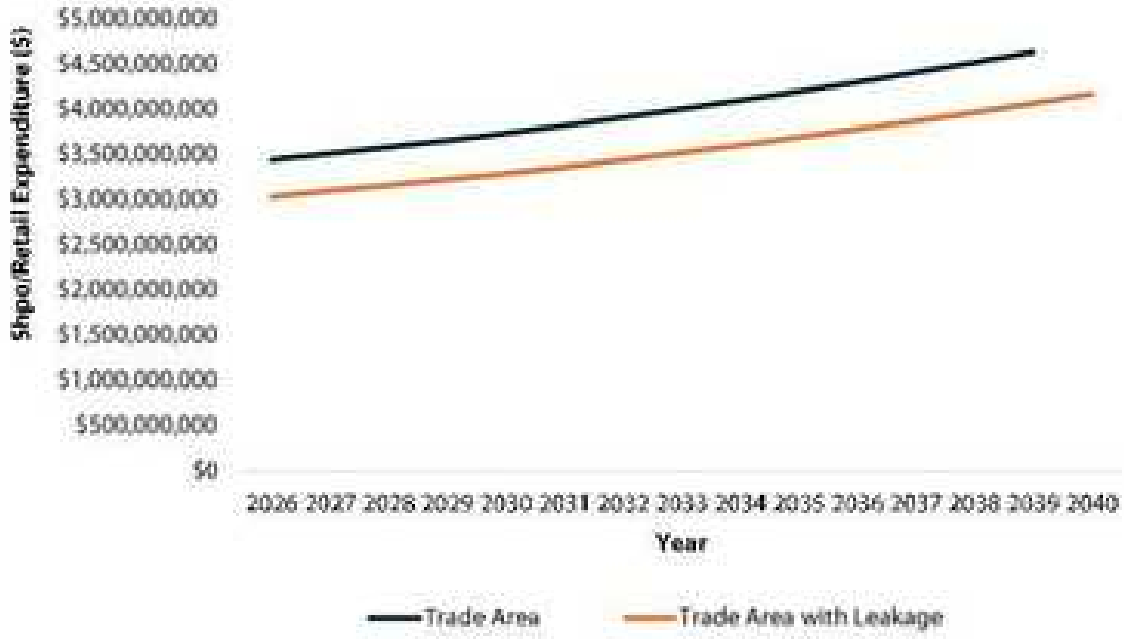
Compared to the Greater Perth benchmark, the trade area has a lower proportion of households in the lower income quintiles. The trade area contains 17% of households in the first quintile, compared to 21% for Greater Perth, and 19% of households in the second quintile, compared to 20% for Greater Perth. The third quintile is broadly comparable, with 25% of trade area households compared to 26% across Greater Perth.

The trade area has a higher concentration of households in the upper income quintiles. The fourth quintile accounts for 18% of trade area households, compared to 16% across Greater Perth, while the fifth quintile accounts for 21% of trade area households, compared to 17% across Greater Perth. This indicates that the trade area has a stronger upper-income profile than Greater Perth, with households likely to have a higher capacity for discretionary spending.

## Expenditure

ABS Household Expenditure Survey data was used to estimate the total expenditure pool of the trade area. The model combines the propensity to spend on commodities based on household income quintiles to derive the total Shop/Retail expenditure in the area (Figure 34).

**Figure 34. Shop/Retail Expenditure, Trade Area Compared to Greater Perth**




Source: ABS HHES Survey 2017/18, ABS Census 2021

Given projected household growth, Shop/Retail expenditure is estimated to increase from approximately $3.2 billion in 2026 to $3.9 billion in 2040, reflecting growth of approximately 20%. After allowing for expenditure leakage, available Shop/Retail expenditure is estimated to increase from approximately $2.9 billion in 2026 to $3.5 billion in 2040. The increase in trade area expenditure reflects the expansion in residential dwellings expected to occur over the forecast period. Some of this turnover is projected to be lost to online leakage; however, the effect of online leakage on the viability of Wanneroo Town Centre is expected to be minimal.

## 6.2 Supply Analysis

This section provides an overview of the activity centre environment within the trade area and City of Wanneroo and floorspace values for the activity centres themselves. Existing retail floorspace supply within the trade area has been derived through data from multiple sources, including:

- The Department of Planning Land Use and Employment Survey (LUES) 2022/24
- Property council shopping centre directory (2021), Shopping Centre News
- Secondary Research (various structure plans, property manager websites, etc.)

The gravity model accounts for current and known future supply. The following map depicts the location of major activity centres within the trade area (Figure 35). Notably, smaller centres are included in the analysis but excluded from the map for clarity.

**Figure 35. Select Activity Centres in the Trade Area**




Source: Precsys 2026

The City's activity centres within the trade area include an estimated 138,100m² of Shop/Retail floorspace (Figure 36), approximately 33% of the total Shop/Retail supply within the trade area. The City's activity centres include an estimated 222,300m² of Non-SHP floorspace, approximately 27% of the trade area. WTC itself accounts for an estimated 19,600m² of Shop/Retail floorspace and 37,900m² of Non-SHP floorspace, approximately 5% of the trade area supply in each category.

**Figure 36. SHP and Non-SHP Retail Supply in the Trade Area**

| Classification | Complex Name | Shopping Centre Name | SHP (m²) | Non-SHP (m²) |
|---|---|---|---|---|
| **City of Wanneroo Sub-Total** | | | **138,100** | **222,337** |
| District | KINGSWAY CITY | Kingsway City Shopping Centre | 16,955 | 8,416 |
| Other Centres[12] | CALABRESE AVENUE | Calabrese Avenue Service Precinct | 1,710 | 8,202 |
| Other Centres | BURNS BEACH ROAD | Drovers Market Place | 7,395 | 22,615 |
| Neighbourhood | THE BROADVIEW | Landsdale Forum Shopping Centre | 1,456 | 1,450 |
| Other Centres | WANGARA | Wangara Industrial Area | 834 | 44,531 |
| Other Centres | CRISAFULLI AVE | Wanneroo Sports and Social Club | 80 | 7,069 |
| Secondary | WANNEROO | Wanneroo Central | 19,632 | 37,944 |
| Neighbourhood | PEARSALL | Pearsall Shopping Centre | 1,520 | 1,150 |
| Neighbourhood | PINJAR ROAD | The Ashby Village | 2,850 | 3,055 |
| District | BANKSIA GROVE | Banksia Grove | 15,360 | 9,140 |
| Neighbourhood | ASHDALE | Darch Plaza | 2,020 | 3,060 |
| Neighbourhood | CARRAMAR | Carramar Village | 3,287 | 1,850 |
| District | GRIFFON WAY | Alexander Heights Shopping Centre | 9,884 | 2,925 |
| Secondary | CLARKSON | Ocean Keys Shopping Centre | 46,157 | 67,118 |
| District | GIRRAWHEEN PARK | Hawaiian's Newpark Shopping Centre | 8,960 | 3,812 |
| **Other Key Centre Sub-Total** | | | **185,515** | **480,939** |
| Strategic | JOONDALUP CITY | Lakeside Joondalup Shopping Centre | 89,837 | 379,390 |
| Secondary | WARWICK GROVE | Warwick Grove | 24,839 | 26,520 |
| District | CURRAMBINE MARKET PLACE | Currambine Market Place | 19,159 | 13,759 |

[12] "Other Centres" includes LUES activity complexes that are captured as commercial floorspace locations but are not formal activity centres within the SPP 4.2 hierarchy. This includes out-of-centre retail, service-commercial, recreation/community and industrial precincts. These locations contribute to the trade area's commercial floorspace supply but generally do not perform the same planned activity-centre role as Secondary, District, Neighbourhood or Local Centres.

| Classification | Complex Name | Shopping Centre Name | SHP (m²) | Non-SHP (m²) |
|---|---|---|---|---|
| Secondary | WHITFORDS CITY | Westfield Whitford City | 46,245 | 33,200 |
| District | SORRENTO QUAY | Hillarys Boardwalk | 5,435 | 34,070 |
| **Remaining Centres Sub-Total** | | | **99,656** | **131,010** |
| **Grand Total** | | | **423,271** | **834,286** |

Source: DPLH LUES 2022/24, Pracsys 2026

The trade area includes a wide range of retail and non-retail offerings, from the Joondalup Strategic Centre and secondary centres, such as Ocean Keys, Whitford City, Warwick Grove and Wanneroo Central, to various district, neighbourhood and local level centres. Lakeside Joondalup Shopping Centre represents the dominant retail destination within the trade area, containing an estimated 89,800m² of Shop/Retail floorspace, more than four times that of WTC. Within the City, Ocean Keys Shopping Centre in Clarkson is the largest single concentration of Shop/Retail floorspace at approximately 46,200m², while Kingsway City and Banksia Grove perform district-level roles of a broadly comparable scale to one another.

A desktop analysis and review of planning documentation within the trade area's LGAs was undertaken to identify any major expansions to future Shop/Retail floorspace developments in the trade area. The centres have been accounted for in the modelling based on their development timeframe (Figure 37). Data for Non-SHP retail expansions is not as readily available and is accounted for in the method for developing floorspace projections.

**Figure 37. Identified Shop/Retail Expansions in the Trade Area**

| Description | Location | Expansion (m²) | Year of Completion |
|---|---|---|---|
| Reported Expansion | Banksia Grove | 15,000 | 2031 |
| Woolworths [13] | Ocean Keys Shopping Centre | 50,000 | 2026 |
| Reported Expansion | Kingsway City Shopping Centre | 32,000 | 2031 |
| Reported Expansion | Hawaiian's Newpark Shopping Centre | 15,000 | 2031 |
| Reported Expansion | Lakeside Joondalup Shopping Centre | 155,856 | 2043 |
| Reported Expansion | Westfield Whitford City | 69,925 | 2043 |
| Reported Expansion | Warwick Grove | 35,723 | 2043 |
| Reported Expansion | Currambine Market Place | 23,929 | 2043 |
| Reported Expansion | Ocean Reef Local Commercial Node | 12,000 | 2043 |
| Reported Expansion [14] | East Wanneroo NC (PN1) | 5,000 | 2036 |
| Reported Expansion[14] | East Wanneroo DC (PD1) | 2,000 | 2036 |

Source: Pracsys 2026

[13] Assumed, as the exact floorspace is unknown. The DPLH LUES 22/24 shows the floorspace to be lower, however it is assumed the establishment of the Woolworths explains the difference in total floorspace estimates.
[14] City of Wanneroo 2024, *Needs Assessment to 2041, Appendix 3*; WAPC 2021, *East Wanneroo District Structure Plan*; Pracsys 2024, *Final East Wanneroo DDCP Funding Analysis Report*

## 6.3 Model Calibration

The Needs Assessment uses gravity modelling to estimate the expected level of productivity for each activity centre in the City and broader assessment area. The gravity model's estimates of centre turnover were calibrated against known or modelled turnover data where possible (Figure 38).

Where centres were near the border or outside of the trade area, the approximate proportion of their expenditure expected to be derived from the trade area was used to adjust their turnover (i.e. As Lakeside Joondalup would have a trade area that is greater than WTC's trade area, the total turnover was adjusted to only reflect turnover from the area that is relevant to this analysis).

**Figure 38. Identified Turnover Data**

| Shopping Centre | Turnover ($) | % from Trade Area |
|---|---|---|
| Lakeside Joondalup | $1,062,653,000 | 40% |
| Kingsway City Shopping Centre | $136,280,000 | 60% |
| Currambine Central | $137,690,000 | 100% |
| Hillarys Boardwalk | $79,000,000 | 50% |
| Warwick Grove | $300,500,000 | 30% |
| Ocean Keys Shopping Centre | $338,000,000 | 20% |
| Westfield Whitford City | $557,000,000 | 65% |

Source: Shopping Centre News 2023-2026

Where published data was not available, a scan for outliers (centres where the gravity model may have distributed too much or too little expenditure) was undertaken.

The gravity model ensures that centres in WTC will only increase in floorspace if their productivity achieves a benchmark level at a given point in time (Figure 39). Larger centres typically hold a greater mix of less productive land uses (i.e. clothing retail has a lower floorspace productivity than a supermarket) resulting in a lower benchmark floorspace productivity.

**Figure 39. Benchmark Floorspace Productivity**

| Centre Type | Benchmark Floorspace Productivity ($/m²) |
|---|---|
| Strategic | $8,512 |
| Secondary | $8,512 |
| District | $9,812 |
| Other Retail Centre (including Highway Commercial) | $7,684 |
| Local or Neighbourhood Centre | $9,576 |

Source: ABS CPI 24-26, Property Council 2021 escalated to 2026 dollars

## 6.4 Shop/Retail Floorspace Projections

Projections indicate that WTC could support between 27,000m² and 33,300m² Shop/Retail floorspace by 2046 (Figure 40). This is an increase in Shop/Retail floorspace reflects a growing need from residents in the trade area.

**Figure 40. WTC Shop/Retail Floorspace Projections (m²)**

| Scenario | 2026 | 2031 | 2036 | 2041 | 2046 |
|---|---|---|---|---|---|
| Scenario 1 | 19,632 | 19,632 | 21,227 | 23,821 | 26,941 |
| Scenario 2 | 19,632 | 20,653 | 24,189 | 27,667 | 30,170 |
| Scenario 3 | 19,632 | 20,608 | 24,200 | 28,269 | 33,279 |

Source: Pracsys 2026

Under Scenario 1, no additional Shop/Retail floorspace is supported until 2034, reflecting the requirement for WTC to achieve benchmark floorspace productivity before expansion is warranted. Scenarios 2 and 3 follow a similar trajectory to 2036, diverging thereafter as higher dwelling growth translates into additional expenditure capture.

## 6.5 Non-Shop/Retail Floorspace Projections

Non-Shop/Retail floorspace for WTC has been projected by:

1. Subtracting the Shop/Retail floorspace from total commercial floorspace to get current Non-Shop/Retail floorspace
2. Applying the relevant activity centre gaps to WTC where reasonable. It was assumed gaps would be addressed over a ten-year period
3. Using the forecast change in Shop/Retail floorspace based on gravity modelling to grow only the current floorspace provision

Non-Shop/Retail floorspace gaps have been identified in Section 5, Floorspace Gap Analysis. The total non-SHP gap identified for the trade area amounts to approximately 193,752m². Gaps that could reasonably be addressed by WTC based on size, location, existing uses and centre classification have been attributed to the activity centre (Figure 41).

**Figure 41. Town Centre Non-Shop/Retail Gap Allocation**

| PLUC | Allocated Gap (m²) | Assumption |
|---|---|---|
| ENT | 4,417 | WTC's role as a Secondary Centre indicates that it should provide a significant quantum of ENT floorspace to support its district-serving function. ENT currently comprises approximately 24% of the WTC's Non-Shop/Retail floorspace, the largest single component of its commercial composition. This share has been applied to the balance of the allocated gap to determine an appropriate uplift consistent with WTC's classification. |

| PLUC | Allocated Gap (m²) | Assumption |
|---|---|---|
| HEL | 2,882 | HEL is an important use for meeting the needs of the local population. While WTC is not expected to play strategic role such as providing a hospital, WTC could co-locate health services with other key civic and commercial services.<br>WTC holds approximately 23% of the City's total HEL floorspace, the second-highest share of any PLUC. The trade area gap of 12,690m² has been apportioned to WTC on this basis, and represents an opportunity to expand health and community service provision at a scale that services the surrounding catchment. |
| OFF | 12,367 | OFF is the largest identified gap and represents a significant opportunity for WTC to expand its office-based land uses, particularly population-driven professional services, real estate and administrative functions.<br>WTC holds approximately 20% of the City's total OFF floorspace, the highest share of any commercial PLUC, reflecting its established administrative role. The significant gap for the trade area (60,941m²) has been apportioned to WTC on this basis. |
| RES[1] | 3,276 | WTC currently records negligible RES floorspace, at approximately 0.4% of the City's total. While the identified trade area gap of 25,329m² indicates substantial latent demand, WTC does not currently have sufficient developable land or floorspace to accommodate the quantum of RES uses that would ordinarily be expected of a Secondary Centre. However, consolidation of WTC's carparking or eventual rezoning of Lot 9000 could generate sufficient land to support these additional RES uses.<br>The allocation has accordingly been adjusted to reflect WTC's practical capacity and represents an opportunity to introduce food and beverage uses that support activation and extend trading hours. |
| **Total** | **22,941** | |

Source: Precsys 2026

It is estimated that the WTC's Non-Shop/Retail floorspace could grow to 71,500m² in Scenario 1 by 2046. In Scenario 2 and 3, the WTC could reach up to 77,300m² and 83,000m² by 2046, respectively (Figure 42).

**Figure 42. WTC Non-SHP Floorspace Projections**

| Scenario | 2026 | 2031 | 2036 | 2041 | 2046 |
|---|---|---|---|---|---|
| Scenario 1 | 35,393 | 46,864 | 61,210 | 65,887 | 71,511 |
| Scenario 2 | 35,393 | 48,704 | 66,550 | 72,820 | 77,333 |
| Scenario 3 | 35,393 | 48,624 | 66,569 | 73,905 | 82,937 |

Source: Precsys 2026

Section 7, Implementation Recommendations, outlines how the City can use these projections as potential targets or guidelines to understand the need for greater services at WTC and timing for expansion.

[1] The capacity constraint noted above reflects WTC's current land use pattern and the land available for the aforementioned commercial residential uses (including retirement and nursing accommodation with extended care, hotels and other transient lodging) under the existing planning framework. It is not a constraint on the dwelling yield tested through the WTCPP, which is addressed in Section 7.2.

## 6.6 Employment Projections

The employment supported by activity centres has been estimated based on employment to floorspace ratios for Shop/Retail and Non-Shop/Retail (Figure 43).

**Figure 43. Floorspace to Employment Ratios**

| Floorspace Ratio | Floorspace to Employment Ratio | Floorspace Application |
|---|---|---|
| Current Wanneroo Shop/Retail | 24m² per job | Applied to Shop Retail Growth |
| Current Wanneroo Non-Shop/Retail | 47m² per job | Applied to Population Driven Non-Shop/Retail Growth |
| Greater Perth Non-Shop/Retail | 94m² per job | Applied to Gap in Non-Shop/Retail Floorspace |

Source: DPLH LUES 2015/17, and 2022/24

It is estimated that WTC potential Shop/Retail floorspace could support growth from approximately 809 jobs to between 1,110 and 1,371 jobs by 2046 (Figure 44). This increase in employment will support the WTC in meeting its role as a Secondary Centre to provide a diversity of employment opportunities.

**Figure 44. WTC Employment Projections by Land Use**

| Land Uses | Scenario | 2026 | 2031 | 2036 | 2041 | 2046 |
|---|---|---|---|---|---|---|
| Shop/Retail | Scenario 1 | 809 | 809 | 875 | 982 | 1,110 |
| | Scenario 2 | 809 | 851 | 997 | 1,140 | 1,243 |
| | Scenario 3 | 809 | 849 | 997 | 1,165 | 1,371 |
| Non-Shop/Retail | Scenario 1 | 1,584 | 2,323 | 3,192 | 3,401 | 3,653 |
| | Scenario 2 | 1,584 | 2,406 | 3,431 | 3,711 | 3,913 |
| | Scenario 3 | 1,584 | 2,402 | 3,431 | 3,760 | 4,164 |
| Total | Scenario 1 | 2,393 | 3,132 | 4,066 | 4,383 | 4,763 |
| | Scenario 2 | 2,393 | 3,257 | 4,427 | 4,851 | 5,156 |
| | Scenario 3 | 2,393 | 3,251 | 4,429 | 4,925 | 5,535 |

Source: DPLH LUES 2015/17, and 2022/24

### Contribution to ESS

This section provides an analysis of the City's ESS and the Town Centre's contribution to meeting the ESS target. Section 4.6, ESS and ESC, established that the City currently has an ESS of approximately 49%, compared to the North-West Sub-Regional ESS target of approximately 60% by 2050. [19] The resident labour force is projected to increase from approximately 99,500 to 208,500 by 2046. The City requires approximately 74,900 additional jobs to meet the 60% ESS target by 2050.

[19] Department of Planning, Lands and Heritage. 2018. https://www.wa.gov.au/system/files/2021-05/FUT-PP-Perth_and_Peel_Sub_Region_March2018_v2.pdf

Employment projections reveal the Town Centre could contribute to meeting this target by 2046 by providing approximately 2,064 additional jobs, representing around 3% of the additional employment required. The WTC currently supports around 2% of the total employment within the City. The establishment of other employment centres, including the Yanchep Strategic Centre, within the City will help achieve the target set.

# 7 IMPLEMENTATION RECOMMENDATIONS

The following sub-sections detail opportunities to support WTC's continued performance and role in servicing the community through an activation analysis, a framework for applying this Needs Assessment, a discussion of drivers of centre development, and insight into the City's role.

## 7.1 Support High-Performance Centres

Principles of economic activation are key to the development of vibrant and viable activity centres. Pracsys uses Six Principles of Economic Activation to assess the relative performance of centres from an economic perspective. This includes how key anchors such as supermarkets drive pedestrian traffic (activation), how businesses can benefit from this pedestrian traffic, and suitable locations for less high traffic uses such as other retail. A summary of six principles has been included that can be applied by the City when considering the suitability of potential development options (Figure 45). This is seen as a critical opportunity for improving the performance of WTC.

**Figure 45. Summary of the Six Principles of Economic Activation**

| Activation Principle | Summary |
|---|---|
| 1. 1. Purpose of Place | The role of the Centre based on its size and classification:<br>• Addresses the question – what does this place represent to its target user population (residents, workers, visitors)? This should link to the SPP4.2 identified roles of centre classifications. |
| 2. Access – Arrival Points | This refers to how centres are accessed by users (the arrival points):<br>• Decisions about access begin 5km from the place<br>• Transport networks should be planned to travel through centres (not bypass them) – ensure the design funnels people and traffic into the core<br>• Pedestrian congestion and a mix of transport nodes is beneficial to activation<br>• It is better to arrive at the "front door' of the place, not around the back or in the side |
| 3. Origins – Car Parking and Transport Nodes | Origins are nodes from which pedestrian movements begins:<br>• Parking, multi-storey development and transport nodes are the drivers of pedestrian movement<br>• Strategic distribution of car parks and transport nodes will optimise pedestrian movement<br>  ○ Location is more important than numbers<br>  ○ Space the origins around the periphery of centre<br>  ○ Street parking is important (for commercial areas)<br>  ○ Apply use fees to ensure turnover of parking but not so much that consumers do not park at all<br>  ○ Relax time limits in appropriate areas to ensure customers have time to undertake shopping trip relevant to proximate uses |

| Activation Principle | Summary |
|---|---|
| 4. Exposure – Pedestrian Movement | Exposure indicates Active Frontages that are exposed to high levels of pedestrian traffic:<br>• Economic activation is driven by the frequency and concentration of transactions<br>• Channel movements and concentrate transactions by pushing people past as many shop windows as possible<br>• Rents and sales are directly related to pedestrian traffic (e.g. a butcher will pay higher rent to be at supermarket entry)<br>• Minimise possible routes from origin to destination points (e.g. car park to main attraction) as architectural "permeability" is not always a good thing for business viability |
| 5. Destinations – Major attractions | Destinations are areas that attract high concentrations of customers/people:<br>• Identify main destination – what will bring users into the core?<br>• Assess user behaviour<br>  ○ Number of visits<br>  ○ Timing of visits (time of day, seasonality)<br>• Give major destinations special treatment<br>  ○ Understand what they need<br>  ○ Build centre around them<br>• Amplify the impact of attractions by creating support amenity and infrastructure to maximise frequency, length of stay and expenditure |
| 6. Control – Strategic Sites | Key Sites are locations that could be considered as future destinations and/or suitable sites for anchor tenants (i.e. supermarkets). Tenure control is a significant advantage for overall development success<br>• Tenure control is vital for overall development success – determine which sites (supporting what uses) must stay in public ownership<br>• Identify active frontages and take control of key sites or implement appropriate planning measures (i.e. a set of preferred uses for a site)<br>• Corner sites drive uses on either side (more appropriate for high turnover uses such as a café where there is high pedestrian traffic)<br>• Not all areas in a place need to be active – be selective |

Source: Pracsys 2026

## 7.2 WTC Activation Analysis

The six principles have been used to assess the performance of WTC based on its built form, surrounds and the 2022/24 LUES evidence base (Figure 46).

**Figure 46. Town Centre Economic Activation Analysis**

| Activation Principle | Current Urban Context | Future Urban Opportunities |
|---|---|---|
| Purpose of Place | WTC is the civic and administrative heart of the City, anchored by the City's offices, library and museum precinct, the GP super clinic and Wanneroo Central, and is identified as a Secondary centre under SPP4.2.<br>Its purpose is clearly defined but narrowing: the 2022/24 floorspace data shows occupied floorspace contracted by approximately 8% since 2015/17 while vacancy rose from approximately 3% to 4%. This may indicate that WTC's activation and performance have decreased over time.<br>The City has a degree of control through its ownership of the civic precinct and significant landholding. The draft ACP 90 remains undetermined, and the operative framework is the earlier ASP 23, with a Precinct Plan now in preparation.[17] | WTC's civic purpose should be broadened to a live-work-visit purpose ahead of the development of East Wanneroo, which will ultimately accommodate up to 150,000 residents[18] to WTC's east.<br>The delivery of the residential density at WTC as envisaged in the Activity Centre Plan (2,000–3,000)[19] is important to address key characteristics of SPP4.2 and the City's infill targets. |
| Access | Wanneroo Road remains a multi-lane arterial road that provides significant visibility but continues to sever WTC's east-west connection, with traffic volumes projected to increase further as East Wanneroo develops.[20]<br>The Wanneroo Road/Conlan Avenue connection to Rocca Way has been constructed, partially delivering the access improvements identified in 2018.<br>The Centre remains without a train station or high-frequency transit and is serviced by regular bus routes only; the transit corridor safeguarded in the East Wanneroo DSP is oriented toward the future Gnangara station rather than WTC. | There is an opportunity to work with Main Roads WA on pedestrian priority across Wanneroo Road, which remains WTC's principal activation constraint.<br>Advocating for bus network may be an opportunity to improve connection between WTC and East Wanneroo so the Centre is positioned on, rather than bypassed by future movement networks. |

[17] City of Wanneroo 2001, Wanneroo Town Centre Agreed Structure Plan No. 23 (as amended 2018), approved by the Western Australian Planning Commission 4 May 2001, expires 19 October 2028.
[18] Western Australian Planning Commission 2021, East Wanneroo District Structure Plan, August 2021
[19] City of Wanneroo 2018, Draft Wanneroo Town Centre Activity Centre Plan No. 90 Part 1: Implementation, prepared by Taylor Burrell Barnett, November 2018.
[20] Western Australian Planning Commission 2021, *East Wanneroo District Structure Plan, Appendix E: Road Planning Study Report*

| Activation Principle | Current Urban Context | Future Urban Opportunities |
|---|---|---|
| Origins | Wanneroo Central's expanded and reconfigured parking (including basement parking) has reinforced the shopping centre as the WTC's dominant origin point.<br>Parking elsewhere in WTC remains dispersed and destination-specific, encouraging separate car trips between the shopping centre, civic precinct and clinic rather than pedestrian movement between them.<br>The 2022/24 LUES records a minimal amount of Residential floorspace at WTC (350m²), noting the survey's residential category excludes private dwellings. | Future medium and high-density residential development under the Activity Centre Plan will create WTC's first substantial resident origin points, generating all-day pedestrian activity.<br>Parking consolidation toward WTC's perimeter, retained as a principle from the 2018 strategy, should be sequenced with residential delivery so that redevelopment of core car parks becomes feasible. |
| Exposure | Shop fronts separated from the street by parking remain common. This limits pedestrian movement and exposure to other commercial uses, reducing potential expenditure at shops that are not a visitor's primary destination.<br>This aligns with the decrease in both Shop/Retail and Entertainment floorspace between 2015/17 and 2022/24 while vacancy rose.[21]<br>Rocca Way remains the core north-south pedestrian spine but has not yet developed continuous active frontage. | Prioritise active frontages along Rocca Way and the interfaces between Wanneroo Central and the civic precinct, applying activation selectively rather than universally.<br>Consider centralising car parking through a multi-storey development that reduces the impact of scattered car parking interrupting pedestrian movement and exposure.<br>The green link through the northern portion of WTC identified in the draft Activity Centre Plan can function as a pedestrian exposure spine connecting future development on strategic northern sites to the core. |
| Destinations | The key destinations remain Wanneroo Central (strengthened by its expansion), the City's civic offices, schools, library and cultural centre, the GP super clinic and Aquamotion.<br>The school and City's offices in the north of the precinct are strong destinations that should create north-south movement. However, this activity is limited to the day on weekdays. The precinct potentially lacks a nighttime destination such as residential, cinema, and dining uses. | The City should support the attraction of a suitable anchor tenant in the north of the Centre to balance the attractiveness of Wanneroo Central. This would ideally be a retail or entertainment tenant that would encourage visitors to walk from/to Wanneroo Central. Creating the impetus for foot traffic between the North and South of the Centre is key to activating the core of the Centre and supporting more active frontages along Rocca Way. Shop frontages along Rocca Way should be developed with the goal of turning the core of the Centre into a destination. |

[21] Department of Planning, Lands and Heritage, *Land Use and Employment Survey 2015/17 and 2022/24*

| Activation Principle | Current Urban Context | Future Urban Opportunities |
|---|---|---|
| Control | The City can effect change on City owned land and guide future private development but cannot control when private land is developed. The Framework is a critical component of the City's control mechanisms for achieving the desired future outcome for WTC. | Carry the draft ACP's floorspace-protection provision (cl. 4.3) into the forthcoming Precinct Plan which required development applications to maintain the Centre's non-residential floorspace while enabling residential uplift. This ensures the assessment framework the draft anticipated is given effect. |

Source: Pracsys 2026

## 7.3 Apply the Evidence-Base

A number of considerations have been developed to support WTC's strategic planning frameworks and documents as evidence-based to maximise the viability and resilience of the Secondary Activity Centre (Figure 47).

**Figure 47. Activity Centre Planning Considerations**

| Number / Name | Consideration |
|---|---|
| 1 – Factors to Monitor | The floorspace projections in this analysis provide guidance for the City to understand the potential quantum of floorspace that may be demanded at a certain time point. Reaching a certain dwelling number or year does not automatically mean a centre should expand. Actual population growth should be reviewed using Small Area 2 ABS spatial areas and / or Forecast.id small areas within 5km and the City's population as a whole.<br>The City can take into account the population estimates in this analysis and will need to consider other factors affecting the activity centre hierarchy at the time of potential expansions (i.e. future developments that may not be in this analysis, changing floorspace per person requirements, etc.) in order to assess whether additional floorspace is required in future. |
| 2 – Private Interest | The floorspace and dwelling projections in the reported years (i.e. 2026, 2031, 2036, 2041, 2046) should be used to monitor the provision of uses at the centre. When a dwelling level is reached, this is an indication that further floorspace can be considered if private interest arises; even if this occurs prior to the year identified in the Needs Assessment. Interest from private industry can be an indicator of current or future potential demand and should be considered as part of the overall decision-making process.<br>This being said, private interest may undermine the activity centre hierarchy and appropriate measures should be used to ensure development applicants have demonstrated an actual need for additional goods or services (see Consideration 5). If a dwelling level does not occur by an identified year, the dwelling level should be the guiding factor for potential development and not the year. |
| 3 – Floorspace Caps vs. Targets | The Needs Assessment provides floorspace quantum estimates for WTC. These should not be treated as a strict floorspace cap but as targeted supportable floorspace with some flexibility for small under or over provisions (the under or over provision should be based on identified need at the time). |
| 4 – New Centres | It may not be possible to support all the identified floorspace at WTC; new local centres could be considered in areas where dwelling development is occurring and there is sufficient demand to support a centre (to be demonstrated by a development applicant).<br>Where new residential developments occur or where there are significant increases in residential density, the City should ensure that planning of new centres addresses the daily/weekly shopping needs of residents through an appropriate distribution of high and lower order centres. |

| Number / Name | Consideration |
|---|---|
| 5 Assessing Centre Expansions | The City should consider a number of factors when assessing the potential for a large expansion of a current centre (see SPP4.2, Table 2: Major activity centre use floorspace thresholds) or for a proposed new centre. There should be robust evidence that:<br>• There is a need (i.e. high population growth within the centre's catchment)<br>• There is alignment with SPP4.2 objectives (i.e. walkable catchment, public transport access, etc.)<br>• The development would not affect the viability of the activity centre hierarchy<br>• The proposed uses are viable (i.e. if a supermarket is proposed, the applicant's evidence must demonstrate there is sufficient demand for that offering). Where the demand for uses can be demonstrated, there should be flexibility to allow for a variety of uses across all centre types to enable operators to meet specific and potentially changing needs of consumers<br>• There are wider community benefits such as improved service, increased employment, reduced travel times, etc. |
| 6 – Full Development | A current centre in a fully developed area should not be allowed to justify an expansion solely on the basis that another centre has not expanded to the level identified in the Needs Assessment at a given timepoint. This may be reconsidered in developing areas where another centre is constrained and there has been population growth within the catchment (robust evidence should be required as per Consideration 5) |
| 7 – Expansion Constraints | New centres may be allowed to incorporate additional floorspace where a current centre cannot expand due to land or other constraints, with some caveats:<br>• The new centre should be in a location that provides suitable access to residents of the current centre's catchment<br>• The new centre needs to demonstrate the same robust evidence as above |

Source: Pracsys 2026

These considerations should allow the City the flexibility to allocate floorspace where and when it is needed. Expansion of WTC will be key to addressing need from new residents at the activity centre. The full extent of the expansion including wider trade area demand may need to be spread across the wider activity centre hierarchy should there be insufficient space at WTC. The recommendations should assist the City in deciding when development is appropriate and ensure that development benefits the community without unduly impacting its other activity centres.

## 7.4 Supporting Centre Development

It is assumed that the City of Wanneroo will facilitate employment growth through an understanding of the key drivers that attract businesses to the activity centre. Any strategy to reimagine the function, scale or use of the centre should respond to the 'felt needs' of the user groups it caters for, including:

- Activity centre users
- Enterprise developers/operators (and the workers)
- Regulators/managers

Decisions are made to benefit one or more of the user groups in the context of an overarching strategic vision (Figure 48).

**Figure 48. User Group Interactions**

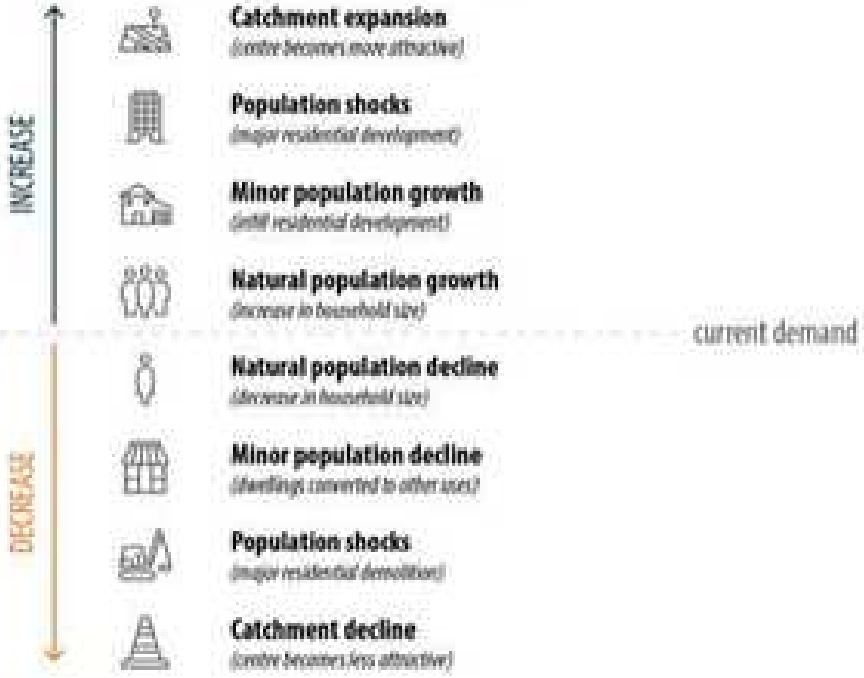



Source: Pracsys 2026

Understanding the drivers of user behaviour is required to achieve a vibrant and viable activity centre. Regulators and managers (e.g. State and Local government and other authorities) can generally only encourage or influence certain behaviours, rather than control them. Ultimately the market and centre users will decide what activity is viable for the centres, with regulators and managers able to exert influence toward the desired approach. It is therefore paramount that the planning for the activity centre aligns with desired outcomes of users and employment providers.

There are a number of key drivers for population-driven industries that need to be considered when planning for activity centres (Figure 49).

**Figure 49. Examples of Demand Drivers for Population-Driven Businesses**




Source: Pracsys 2026

A change in any of the above characteristics will promote a change in floorspace and interest from the market for redevelopment. For example, on the demand side, an increase in the level of density surrounding the centre increases the effective userbase and proportion of expenditure that is likely to be directed and captured by the centre, this will provoke a competitive response from developers in which investment will be made to capture this extra expenditure pool.

Similarly, a change in the urban fabric (on the supply side) that makes the centre more attractive will increase the trade area of the centre. This could, for example, be improved streetscaping or connectivity, activation and event strategies within the centre or improved connection to the local tourism areas. This should provoke a similar competitive response from developers wishing to take advantage of the extra expenditure pool. These types of initiatives may be implemented to encourage redevelopment of the centre by key stakeholders in order to meet the needs of planned future residents.

When considering strategic employment, the relevant industries are largely exogenous to changes in these drivers and principally rely on the comparative advantages of an area (resources, location) and individual decisions of businesses. Changes in strategic employment can be affected through promoting the unique advantages of the area to businesses, encouraging business collaboration and other business-friendly policies. Typical considerations include travel time to major employment centres and travel time to work for employees and the cost of the premises.

The role of the City in facilitating centre development and employment growth is considered in the following section.

## 7.5 The Role of the City of Wanneroo

In creating an attractive business environment within WTC and the City's other activity centres, the role of the City is to act as a central regulator, coordinator and facilitator, working to understand the challenges facing local businesses, including; linking businesses with appropriate resources, advocating on behalf of local businesses, and supporting specific projects where appropriate. The levers available to the City can be described under the following hierarchy:



**CONTROL**

Establishing local policy and regulation, directing internal resources, utilisation of local government-controlled land and assets, implementing programs and events, and supporting projects with seed funding

**INFLUENCE**



Facilitating the strengthening of networks that encourage the sharing of knowledge and investment opportunities, and supporting communication with State and Federal governments regarding the influence of wider policy, projects or funding decisions



**MONITOR**

Tracking economic performance indicators and collecting feedback from businesses regarding current issues or opportunities which relies on communication channels with industry and the broader community

Using these levers, the City can actively attract and retain businesses through an understanding of the role, strengths and weaknesses of WTC and how they relate to a business's locational preference drivers and its operational productivity (Figure 50).

**Figure 50. The Role of the City of Wanneroo**

| Lever | Application |
|---|---|
| Control | To a limited extent, the City can control the population-driven uses (i.e. Shop/Retail, Medical Offices) available in WTC through planning and policy measures and development of City controlled sites.<br>It is recommended that policy measures allow flexibility to develop based on private industry interest in the centre, particularly given the planned high density residential development. With significant density planned, there is the opportunity to improve the retail function of the centre, particularly the non-supermarket uses.<br>The six principles of activation should be used to inform future planning of movement from high density residential dwellings and the types of uses that are located on high pedestrian traffic areas. The City will also need to encourage entertainment and potentially provide additional recreation uses that support the planned population in the activity centre area. Some of these uses can be developed on City owned land and may encourage other major stakeholders to redevelop their own properties. |

| Lever | Application |
|---|---|
| | There is limited control over specific uses and their location within the Wanneroo Central specifically. The updated Precinct Plan must provide direction with regards to the principles that are to be adhered to (i.e. activation principles) and key access points to support activation and walkability. With these controls in place the internal design of major retail spaces will be developed to maximise supermarket and specialty retail viability, as it is in the best interest of the centre operator.<br>The City has less control over the attraction of strategic uses in the centre and needs to develop a planning approach that incentivises investment (allows for flexibility with regards to development considerations such as height and mix of appropriate uses). The City can use properties and boundaries it controls in the centre strategically to support economic development activities and attract desired uses (e.g. health services, education services, tourism related arts and cultural activities, etc.). The attraction of Strategic Employment is outside the scope of this analysis; however, the key opportunities to attract strategic employment lie in health, education and tourism from a high-level overview. |
| Influence | The City has an important role in influencing the development of WTC, particularly for catalyst projects and more strategic uses. The City can establish and strengthen existing networks to support the high residential development targets for the centre. The Precinct Plan will influence the final built form of the centre and define key criteria that need to be met. Road and pedestrian treatments can be used to influence the timing and design of redevelopments within the centre.<br>In addition to planning and built form, the City can influence the redevelopment of the centre through engagement with current and potential future businesses. Local governments are often facilitators of economic development. Understanding current constraints affecting businesses and identifying opportunities for economic growth through new businesses and local business growth can be powerful tools in supporting redevelopment. This approach can result in shared government and private sector objectives to drive redevelopment within the centre. |
| Monitor | Ongoing monitoring should be undertaken to ensure that the activity centre is meeting desired objectives. The Needs Assessment provides the evidence base for monitoring the change in floorspace across the centre with an understanding of population levels at different time points that may indicate the need for additional floorspace.<br>The City should ensure that it communicates with key stakeholders to understand the needs of businesses associated with WTC and the support that it can offer (e.g. information, planning/policy incentives) to facilitate business growth as the centre evolves. Increasing residential dwelling density will be critical to monitor as the current centre layout does not promote high levels of walkable access, which will both restrict development and result in poor community outcomes if residential development occurs without a suitable redevelopment of the centre. |

Source: Pracsys 2026

# 8 CONCLUSION

The Needs Assessment and Economic, Retail and Employment Strategy provides the City of Wanneroo with an evidence-based guide to support the ongoing development of the Wanneroo Town Centre and the progression of the revised Precinct Plan. The Needs Assessment can be used as a basis for planning the quantum of Shop/Retail and Non-Shop/Retail commercial floorspace at WTC.

Floorspace gaps were identified based on benchmark Local Government Areas to understand how the diversity of the centre could be improved at a high level (Planning Land Use Category level) and a more in-depth level (Western Australian Standard Land Use Classification level). Gravity modelling was used to assess the quantum and distribution of retail floorspace based on expected productivity levels. The quantum of non-retail floorspace was based on identified gaps and population growth and was distributed in line with the findings of the retail gravity model.

Three scenarios were assessed based on expected dwelling growth and the total capacity for the population within WTC's trade area. The modelling was undertaken to 2046 to provide a long-term understanding of floorspace and demand. Scenarios 1, 2 and 3 correspond with the WA Tomorrow medium-growth (Central Band) forecasts, the forecast.id dwelling projections provided by the City, and the WA Tomorrow high-growth forecasts, respectively.

Projections reveal that WTC can support between 27,000m$^2$ and 33,300m$^2$ Shop/Retail floorspace by 2046. With the inclusion of floorspace gaps, projections reveal that the centre can support between 71,500m$^2$ and 82,900m$^2$ of Non-Shop/Retail floorspace by 2046.

An economic activation analysis of the Wanneroo Town Centre's current urban form identified constraints affecting, and opportunities to improve, activation of the centre and business viability. As a Secondary Centre, WTC will need to broaden its civic purpose to a live-work-visit role, increase the quantum and diversity of commercial offerings, improve active frontages along Rocca Way, incorporate the medium to high density residential dwellings envisaged in the Activity Centre Plan and provide a high level of pedestrian accessibility to meet SPP4.2 objectives as the population increases, particularly ahead of the urbanisation of East Wanneroo, which is expected to accommodate up to 150,000 residents.

# 9 APPENDICES

## Appendix 1: Land Use Glossary

Information regarding Planning Land Use Category (PLUC) descriptions and Western Australian Standard Land Use Classification (WASLUC) can be obtained from the Department of Planning, Lands and Heritage (DPLH) Land Use and Employment Survey (LUES) Information Sheet.[77]

### PLUC Glossary

**SHP – Shop/Retail**

Any activity which involves the sale of goods from a shop located separate to, and/or in, a shopping centre other than those included in Other Retail.

**RET – Other Retail**

Many of these activities are not normally accommodated in a shopping centre. By virtue of their scale and special nature the goods of these activities separate them from the Shop/Retail category (for example car sales yard or carpet showroom).

**OFF – Office/Business**

Administrative, clerical, professional and medical offices are activities which do not necessarily require the land area/floor space or exposure of other land uses. Although offices require building and parking facilities, these needs are quite distinct from those of commercial uses and service industries.

**HEL – Health/Welfare/Community Services**

Government, government-subsidised and non-government activities that provide the community with a specific service, including hospitals, schools, personal services and religious activities.

**ENT – Entertainment/Recreation/Cultural**

Activities which provide entertainment, recreation and culture for the community and which occur in buildings and/or on land, such as passive and active sports venues, museums, amusements and gambling services.

**RES – Residential**

Includes all types of residential land use ranging from single housing to nursing homes for the aged, residential hotels, motels, other holiday housing, institutions and religious housing.

**MAN – Manufacturing/Processing/Fabrication**

[77] DPLH, 2017, *Land Use and Employment Survey Information Sheet*, Government of Western Australia, https://www.wa.gov.au/system/files/2021-07/LUES_Glossary.pdf

This category includes land use activities involving the manufacture, processing and fabrication of all general goods. Both the scale and associated environmental impact of these activities separate them from other land use categories.

**STO – Storage/Distribution**

Any land use activity which involves the storage, warehousing or wholesaling of goods usually conducted from large structures, or involving large bulk goods, but does not include activities that attract the general retail trade activities.

**SER – Service Industry**

This category includes service industries offering a range of services. The scale and environmental impact of such activities require their separation from other land uses. These services include film processing, cleaning, motor vehicle and other repair services, and other servicing activities, including some construction activities.

**UTE – Utilities/Communications**

All forms of local, state, national and international communication, transportation and other utilities (for example, electricity, gas, water, sewerage, roads, parking and other transport or communications related activities) covering the public and private sectors.

**VFA – Vacant Floor Area**

This category accounts for vacant floor areas of buildings, including both non-residential and residential.

## WASLUC Glossary

The following table contains select examples from over 700 WASLUCs across all PLUCs (Figure 51). WASLUCs are the next level of detail for PLUCs.

**Figure 51. WASLUC Examples**

| PLUC | WASLUC Example |
|---|---|
| PRI | Agricultural and Related Activities |
| PRI | Ferrous Metal Mining |
| MAN | Motor Vehicle Manufacturing |
| MAN | Cabinet Making and Shopfitting |
| STO | Clothing - Wholesale/Warehousing |
| STO | Building Materials - Retail |
| SER | Motor Vehicle Panel Beating Service |
| SER | Plumbing, Heating, and Air Conditioning Services |
| SHP | Department Stores - Retail |
| SHP | Takeaway Food |
| RET | Motor Vehicles - Retail |
| RET | Furniture - Retail |

| PLUC | WASLUC Example |
|---|---|
| OFF | Banking Services |
| OFF | Engineering Services |
| HEL | Secondary Schools |
| HEL | Churches, Synagogues and Temples |
| ENT | Gymnasiums, Health Clubs and Martial Arts Club |
| ENT | Cultural Activities |
| RES | Hotels NEC |
| RES | Housing Units |
| UTE | Communication |
| UTE | Rubbish Disposals |

Source: DPLH LUES 2015/17

Abbreviations: NEC, 'Not Elsewhere Classified' and MFG, 'Manufacturing'

# Appendix 2: Employment Quality

**Consumer services**

Consumer services have a high transaction frequency and must locate in close proximity to their customer base in order to deal directly with them. Like retail tenancies, consumer services often locate in centres to minimise trip generation and benefit from convenience good attractors. Consumer services can include real estate agents, travel agents, shoe repair, dry cleaning services and beauty salons.

**Producer services**

Producer services deal directly with other businesses, rather than consumers. Like retail; wholesale producer services must locate close to the businesses they serve, due to the frequency of transactions required. For example, the Coles distribution warehouses must occupy a central location to carry out daily delivery of goods to supermarkets. Producer service industries include manufacturing, construction, and distribution.

**Knowledge-intensive consumer services**

Knowledge-intensive consumer services are those specialist services that deal directly with consumers, yet typically have a higher productivity and lower transaction frequency. KICS provide a skilled service to consumers that usually requires a higher level of education or training. Depending on the scale of their catchment, KICS may choose to locate within major or regional centres, or larger business districts with greater soft infrastructure and amenity levels. Examples of KICS include general practitioners, accountants, veterinarians and legal services.

**Knowledge-intensive producer services**

Knowledge-intensive producer services involve businesses dealing directly with other businesses, rather than consumers. Transactions are less frequent, however generally have a higher monetary value, due to the

intellectual property or knowledge involved. KIPS businesses often locate near their client businesses, although with low transaction frequency and good communications infrastructure, they are to an extent 'footloose'. This means they can choose to locate in places with relevant physical infrastructure, high retail amenity, or soft infrastructure such as access to a solid education base. Examples of KIPS are engineers, architects, medical scientists and computer software developers.

**Export-oriented activity**

Export refers to jobs in industries in the subject area of study that have a comparative advantage - deemed strategic due to growth and development through exports and the inflow of funds. Export jobs are producer services, however they occur in strategic industries such as mining, oil and gas and defence. Export jobs are likely to be hands on, involving the physical construction of a marine vessel or operation of machinery on a mine site - as opposed to the mathematical or scientific analysis carried out by KIPS. Strategic industries tend to require physical infrastructure, such as ports, airports or universities.

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Integrated Science & Design

# Environmental Assessment and Management Strategy

## Wanneroo Town Centre Structure Plan

Project No: EP17-133(06)



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# Executive Summary

This Environmental Assessment and Management Strategy (EAMS) has been prepared on behalf of the City of Wanneroo to progress the Wanneroo Town Centre Precinct Plan (the 'Precinct Plan') which will guide future development of the Wanneroo town centre (herein referred to as 'the site').

The site is located approximately 23 km north-west of the Perth Central Business District and comprises 55 hectares (ha). The site currently comprises the existing Wanneroo town centre, characterised by a mixed-use built environment including residential, commercial, public open space (POS), recreation, education, and civic services. Under the Metropolitan Region Scheme (MRS), the majority of the site is zoned 'Urban', with the portion north of Dundebar Road zoned 'Urban Deferred', and Wanneroo Road reserved as a 'Primary Regional Road'. At a local level, the site is zoned 'Centre' under the City of Wanneroo District Planning Scheme (DPS) No. 2.

This EAMS is the key environmental document supporting the structure planning process and has been prepared to facilitate the consideration of environmental matters by relevant local and State government authorities. The EAMS provides a synthesis of environmental information relating to the site, with key relevant environmental attributes and values summarised as follows:

- The site has been extensively modified through historical clearing and urban development and now comprises an established mixed-use urban environment supporting a range of residential, commercial, recreational, educational, civic and POS land uses.
- Topography across the site ranges from 29 m Australian Height Datum (AHD) in the west to 70 m AHD in the northeast of the site.
- The site is classified by the Department of Water and Environmental Regulation as having 'no known risk' of acid sulfate soils occurring within 3 m of the natural soil surface.
- A reconnaissance flora and vegetation survey completed by Emerge in 2026 identified 2.1 ha of native vegetation remaining within the site. Three (4) native vegetation units were recorded, ranging in 'good' to 'degraded – completely degraded' condition.
- The northern portion of the site contains 0.05 ha of the Banksia woodlands TEC/PEC and 0.08 ha of the Tuart woodlands TEC/PEC, with a further 0.19 ha of vegetation determined to potentially represent Tuart woodlands TEC/PEC.
- The majority of the site comprises non-native vegetation in 'completely degraded' condition.
- Vegetation within the site provides potential habitat for threatened species of black cockatoo, including potential foraging, and potential breeding habitat associated with scattered mature trees across the site.
- Emerge conducted a Tree Survey within the site as part of a Targeted black cockatoo habitat assessment to determine tree values and retention opportunities
- Depth to historic Maximum Groundwater Level (MGL) approximately ranges from 0 m to 36 m below ground level (BGL). Groundwater clearance is generally shallower along the western boundary, particularly towards the southernmost boundary of the site, and highest along the north-eastern boundary of the site.
- The site does not contain any surface water, waterway features or geomorphic wetlands.
- The portion of the site west of Wanneroo Road is identified as a Priority 3 Public Drinking Water Source Area.

- No Registered Aboriginal Sites are known to occur within the site. Three Other Heritage Places are mapped within the site, however, do not meet the definition of a Registered Aboriginal Site under the *Aboriginal Heritage Act 1972* (AH Act), and are therefore not afforded statutory protection under the AH Act.
- Nineteen places listed in the CoW Local Heritage Survey (CoW 2025) occur within the site. Of these, three (3) are also included on the CoW Scheme Heritage List and are therefore afforded statutory protection under the *Heritage of Western Australia Act 1990* and the *Deemed Provisions of District Planning Scheme No. 2*.

The following Precinct Plan design responses have been developed with consideration to the identified environmental values of the site:

- Identification of POS areas aligning with vegetation identified to contain black cockatoo foraging and breeding habitat.
- Retention of existing land uses associated with certain identified non-indigenous heritage values, including the Wanneroo Showgrounds.

A range of recommendations regarding the future management of environmental values of the site have also been identified, including:

- Where development is proposed in areas supporting mature trees, proponents should consider retaining mature trees that provide potential habitat for Matters of National Environmental Significance (MNES) fauna (specifically black cockatoo species) as part of the subdivision design process.
- Where clearing of native vegetation and/or MNES habitat is proposed, proponents may be required to obtain relevant approvals under the *Environmental Protection Act 1986* (EP Act) and/or the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).
- Where clearing of potential fauna habitat is proposed, a Fauna Relocation Plan may be required prior to the commencement of any clearing.
- Consideration should be given to undertaking an Aboriginal heritage archaeological survey of areas supporting remnant native vegetation. Should this survey be commissioned, the findings should inform the future subdivision and development proposals, including both development design and construction methodologies.
- Future subdivision and/or development proposals that may impact dentified heritage places may require heritage assessments by discretion of the City. Such proposals may also require development approval (for heritage considerations), referral to the Heritage Council of WA (Department of Planning Lands and Heritage (DPLH)) and public consultation.

Overall, the environmental attributes and values of the site can be accommodated within the Precinct Plan design or can be managed appropriately through the future subdivision and development stages in accordance with relevant Commonwealth, State and local government legislation, policies and guidelines.

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# Appendices

**Appendix A**

Proposed Wanneroo Town Centre Structure Plan

**Appendix B**

Wanneroo Town Centre Aboriginal Heritage Desktop Assessment Report

**Appendix C**

Targeted Black Cockatoo Assessment

**Appendix D**

Conservation Significant Flora Likelihood of Occurrence

**Appendix E**

Conservation Significant Communities Likelihood of Occurrence

**Appendix F**

Conservation Significant Fauna Likelihood of Occurrence

# List of Abbreviations

*Table A1: Abbreviations – General terms*

| General terms | |
|---|---|
| AHD | Australian Height Datum |
| AHIS | Aboriginal Heritage Inquiry System |
| ASS | Acid Sulfate Soil |
| BMP | Bushfire Management Plan |
| CBC | Carnaby's Black Cockatoo |
| CCW | Conservation Category Wetland |
| DBH | Diameter at breast height |
| EAMS | Environmental Assessment and Management Strategy |
| ESA | Environmentally Sensitive Area |
| FRTBC | Forest Red-tailed Black Cockatoo |
| ha | Hectares |
| km | Kilometres |
| MNES | Matters of National Environmental Significance |
| PEC | Priority Ecological Community |
| PDWSA | Public Drinking Water Source Area |
| POS | Public Open Space |
| REW | Resource Enhancement Wetland |
| TEC | Threatened Ecological Community |
| UFI | Unique Feature Identifier |

*Table A2: Abbreviations – Legislation and policies*

| Legislation and policies | |
|---|---|
| AH Act | *Aboriginal Heritage Act 1972* |
| BC Act | *Biodiversity Conservation Act 2016* |
| EP Act | *Environmental Protection Act 1986* |
| EPBC Act | *Environment Protection and Biodiversity Conservation Act 1999* |

*Table A3: Abbreviations – Organisations*

| Organisations | |
|---|---|
| CoW | City of Wanneroo |
| DBCA | Department of Biodiversity Conservation and Attractions |
| DCCEEW | Department of Climate Change, Energy, the Environment and Water |
| DoEE | Department of the Environment and Energy (now DCCEEW) |
| DPLH | Department of Planning, Lands and Heritage |
| DWER | Department of Water and Environmental Regulation |
| EPA | Environmental Protection Authority |
| WAPC | Western Australian Planning Commission |

*Table A4: Abbreviations – Planning and building terms*

| Planning and building terms | |
|---|---|
| DPS 2 | District Planning Scheme No. 2 |
| MRS | Metropolitan Region Scheme |
| LPP | Local Planning Policy |

# 1 Introduction

## 1.1 Background

The City of Wanneroo (CoW) (the proponent) is seeking to progress the Wanneroo Town Centre Precinct Plan (the 'Precinct Plan'), which will guide future development of the Wanneroo town centre (herein referred to as 'the site').

The site is located approximately 23 km north-west of the Perth Central Business District and comprises 55 hectares (ha). The site currently comprises the existing Wanneroo town centre, characterised by a mixed-use built environment including residential, commercial, public open space (POS), recreation, education, and civic services (**Figure 1**). Under the Metropolitan Region Scheme (MRS), the majority of the site is zoned 'Urban', with the portion north of Dundebar Road zoned 'Urban Deferred', and Wanneroo Road reserved as a 'Primary Regional Road'. At a local level, the site is zoned 'Centre' under the CoW District Planning Scheme (DPS) No. 2. The indicative Precinct Plan is provided in **Appendix A**.

## 1.2 Purpose of this report

The purpose of this Environmental Assessment and Management Strategy (EAMS) is to identify the environmental values and constraints within the site. Specifically, this report:

- Identifies the existing environmental values and attributes of the site.
- Describes how the Precinct Plan design has responded to the existing environment.
- Outlines the environmental management framework and mechanisms through which environmental matters will be addressed through future planning stages.

The EAMS is the primary supporting environmental document supporting the Precinct Plan and provides the basis for the consideration of environmental matters by local and state government authorities.

## 1.3 Scope of this report

The environmental assessment documented in this EAMS is informed by a combination of site-specific investigations, and a comprehensive desktop review of the available information relating to the environmental values and conditions within and surrounding the site. This EAMS also incorporates the findings of the following technical investigations, prepared or commissioned by Emerge Associates (Emerge), to inform the preparation of the Precinct Plan:

- A Reconnaissance Flora and Vegetation Survey undertaken in March 2018 and May 2026 (incorporated into this EAMS)
- Ethnographic and Aboriginal Heritage Assessment (Horizon Heritage Management 2018) (included as **Appendix B**).
- Local Water Management Report (Emerge Associates 2026a)
- Bushfire Management Plan (Emerge Associates 2026b)
- Targeted Black Cockatoo Assessment (Emerge Associates 2026c) (included as **Appendix C**).

# 2 Environmental assessment

## 2.1 Landforms and terrestrial environment

### 2.1.1 Landforms and soils

The site is located within the Spearwood Dune System in the central portion of the Swan Coastal Plain (SCP). The Spearwood Dune system typically consists of siliceous sands over limestone, with hilly to undulating terrain (R. Salama *et al.* 2005).

Regional soil landscape mapping published by the Department of Primary Industries and Regional Development (DPIRD) indicates the site comprises sands and limestone substrates, consistent with the Spearwood Dune system, as detailed in **Table 1**. The majority of the site comprises the Karrakatta sand yellow phase.

*Table 1: Soil types occurring within the site*

| Soil type | Description |
|---|---|
| Karrakatta sand yellow phase | Low hilly to gently undulating terrain. Yellow sand over limestone at 1-2 m. |
| Karrakatta shallow soils phase | Low hills and ridges. Bare limestone or shallow siliceous or calcareous sand over limestone. |
| Spearwood sand phase | Irregular banks of karst depressions. Some limestone outcrops. Shallow brown sands. |

### 2.1.2 Acid sulfate soils

Acid sulfate soils (ASS) is the name commonly given to naturally occurring soils and sediment containing iron sulphide (iron pyrite) materials. In their natural state, ASS are generally present in waterlogged anoxic conditions and do not present any risk to the environment. However, when oxidised ASS can produce sulphuric acid, which can impart a range of impacts on the surrounding environment, infrastructure and human health.

Acid sulfate soil (ASS) risk mapping (DWER 2025a) prepared by the Department of Water and Environment Regulation (DWER) indicates that the site has no known risk of ASS occurring. The nearest identified area of land identified as having some risk of ASS occurrence is associated with Lake Joondalup, approximately 500 m west of the site. The peaty sands of Lake Joondalup vary significantly to the siliceous sands underlying the site.

### 2.1.3 Topography

The site is characterised by undulating terrain typical of the Spearwood Dune system but generally slopes down toward Lake Joondalup to the west of the site. The maximum elevation of the site is 70 metres Australian Height Datum (m AHD) in its northeastern extent, whilst the minimum elevation of the site is 29 m AHD in its southern-most extent.

## 2.2 Flora and Vegetation

### 2.2.1 Regional Context

Regional vegetation complex mapping completed by Heddle *et al.* (1980) indicates that the site is situated within the Karrakatta – Central and South vegetation complex. This complex is described a 'predominantly open forest of *Eucalyptus gomphocephala* (tuart), *Eucalyptus marginata* (jarrah) and *Corymbia calophylla* (marri), and woodland of *Eucalyptus marginata* and Banksia species. *Agonis flexuosa* (Peppermint) is co-dominant south of the Capel River.'

The EPA's *Environmental Guidance for Planning and Development Studies* (EPA 2008) states that the loss of biodiversity caused by habitat fragmentation is significantly greater once a habitat type falls below 30 % of its original extent. Statewide vegetation statistics indicate 23.5 % of the original (pre-European) extent of the Karrakatta – Central and South vegetation complex across the SCP currently remains, with 4.6 % protected for conservation purposes (Government of Western Australia 2019). The percentage of protected vegetation for conservation of these vegetation complexes falls below the 30 % retention objective, which highlights the reduced representation of this vegetation association.

Vegetation within the site was mapped as being predominantly in 'degraded' and 'degraded-completely degraded' and is therefore not representative of the historically occurring vegetation complex (discussed further in **Section 2.2.4**)

### 2.2.2 Site-specific surveys, methodology and investigations

A Reconnaissance Flora and Vegetation Survey encompassing the site and adjoining Lot 9000 to the north (hereafter 'the survey area') was completed by Emerge Associates on 23 March 2018 in accordance with the Environmental Protection Authority's (EPA's) *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA 2016a).

The survey identified intact native vegetation within the survey area was largely confined to Lot 9000, with the majority of the site having been historically cleared and developed for residential, commercial, education, community or open space land uses. Consequently, survey effort was primarily focused on remnant vegetation within Lot 9000.

#### 2.2.2.1 Survey methods

Experienced ecologists and botanists from Emerge visited the site on 10 and 14 April and 6 and 29 May 2026 to undertake a reconnaissance level field survey and targeted black cockatoo survey. The site was traversed on foot and by vehicle, with observations made regarding vegetation composition, structure and condition. Photographs and field notes were recorded to support the assessment. Consistent with the reconnaissance-level scope of works, no targeted surveys for Threatened or Priority flora species were undertaken.

No quadrat-based sampling or detailed vegetation mapping was completed. Vegetation units were identified based on field observations, vegetation structure, species composition and landform

Vegetation condition was assessed using the EPA (2016a) scale, adapted from Keighery (1994). For vegetation containing *Banksia* spp., condition was additionally assessed against the indicators

provided in the DoEE (2016) conservation advice for the 'Banksia woodlands of the Swan Coastal Plain TEC'. The vegetation condition scale applied during the survey is provided in **Table 2**.

*Table 2: Vegetation condition scale applied during the field survey*

| Category | Definition (EPA 2016a) | Indicator (DoEE 2016) | |
|---|---|---|---|
| | | Typical native vegetation composition* | Typical weed cover |
| Pristine | Pristine or nearly so, no obvious signs of disturbance or damage caused by human activities since European settlement. | Native plant species diversity fully retained or almost so | Zero or close to |
| Excellent | Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species. Damage to trees caused by fire, the presence of non-aggressive weeds and occasional vehicle tracks. | High native plant species diversity | Less than 10% |
| Very good | Vegetation structure altered, obvious signs of disturbance. Disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing. | Moderate native plant species diversity | 5-20% |
| Good | Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing. | Low native plant species diversity | 5-50% |
| Degraded | Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds at high density, partial clearing, dieback and grazing. | Very low native plant species diversity | 20-70% |
| Completely degraded | The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees and shrubs. | Very low to no native species diversity | Greater than 70% |

*relative to the expected natural diversity for that vegetation.

### 2.2.2.2 Analysis and data preparation

**Vegetation unit identification and description**

Vegetation units were identified based on field observations of vegetation structure and species composition recorded during the field survey. Vegetation units were described according to the dominant species present using the structural formation descriptions of the *National Vegetation Inventory System* (NVIS) (NVIS Technical Working Group 2017).

Spatial mapping of vegetation units and vegetation condition was subsequently undertaken using aerial imagery and field survey data.

**Threatened and priority ecological communities**

Threatened Ecological Communities (TECs) are recognised as ecological communities that are rare or under threat and therefore warrant special protection. At a Commonwealth level, TECs are protected

under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), while at the State level, TECs they are protected under the *Biodiversity Conservation Act 2016* (BC Act). Under both Acts, TECs may be listed as 'critically endangered', 'endangered' or 'vulnerable', noting listing status may be different between Commonwealth and State levels.

Priority Ecological Communities (PEC) are ecological communities recognised by the Department of Biodiversity, Conservation and Attractions (DBCA) as being poorly represented, under consideration for listing as a TEC or otherwise requiring monitoring or management. While PECs are not afforded statutory protection under the BC Act, they are considered during environmental assessment and approval processes.

Searches of the *Protected Matters Search Tool* (DCCEEW 2026) and DBCA's TEC and PEC database (reference no. 44-0326EC) identified records of seven (7) TECs and nine (9) PECs within a 10 km radius of the site (refer **Appendix E**). Following the desktop assessment and field survey, two (2) communities were recorded during the field survey and one (1) TEC and one (1) PEC were classified as having 'potential to occur'. The remaining TECs and PECs were assessed as not occurring within the site. Unreliable records were excluded from consideration. The complete likelihood of occurrence assessment is provided in **Appendix E**.

Vegetation units identified during the field survey were assessed against relevant diagnostic characteristics, vegetation condition criteria and patch size thresholds, where available (DBCA 2023). Where TEC or PEC was identified, its extent was mapped using field observations and aerial imagery.

TECs or PECs identified during the desktop assessment but not recorded during the field survey were assigned a 'likelihood of occurrence' as outlined in **Table 3**.

*Table 3: Decision matrix for likelihood of occurrence of TECs and PECs not recorded during the field survey*

| Habitat | Survey limitation | |
|---|---|---|
| | Limitation to detection | No limitation to detection |
| Suitable / marginal | Potential to occur | Nil (does not occur) |
| Unsuitable | Unlikely to occur | |

**Threatened and priority flora**

Threatened flora species are afforded statutory protection under the EPBC Act and/or the BC Act. In addition, DBCA maintains a list of Priority flora species that are considered to be poorly known, potentially threatened or otherwise of conservation interest. While Priority flora are not afforded statutory protection, they are considered during environmental assessment processes.

Searches of the *Protected Matters Search Tool* (DCCEEW 2026) and DBCA's threatened and priority flora databases (reference no. 68-0326FL) indicate there are records for 21 threatened and 25 priority flora within a 10 km radius of the site (refer **Appendix D**). Of these, two (2) threatened and six (6) priority flora were classified as having 'potential to occur' within the site based on desktop information. The remaining species were assessed as not occurring. Unreliable records were excluded from consideration.

Following the completion of the field survey threatened and priority flora identified in the desktop study but not recorded during the field survey were assigned a 'likelihood of occurrence' as outlined in **Table 4**.

*Table 4: Decision matrix for likelihood of occurrence of threatened and priority flora not recorded during the field survey*

| Habitat | Survey limitation | | |
|---|---|---|---|
| | Limitation to detection | Minor limitation to detection | No limitation to detection |
| Suitable / marginal | Potential to occur | Unlikely to occur | Nil (does not occur) |
| Unsuitable | Very unlikely to occur | | |

The complete likelihood of occurrence assessment is provided in **Appendix D**.

**Threatened and priority fauna species**

Threatened fauna species are protected under the EPBC Act and/or the BC Act. DBCA also maintains a list of Priority fauna species that, while not formally listed as threatened, are considered to warrant monitoring due to concerns regarding their conservation status.

Searches of the *Protected Matters Search Tool* (DCCEEW 2026b), DBCA's fauna database (reference no. 43-0326FA), the Atlas of Living Australia (ALA 2026), *Dandjoo* (DBCA 2026) indicate there are records for 47 threatened, 30 specially protected, one (1) marine and 19 priority fauna species within a 10 km radius of the site (*refer* **Appendix F**).

Following the desktop assessment, two (2) threatened species were classified as 'likely to occur', two (2) specially protected and seven (7) priority fauna species were classified as having 'potential to occur' within the site based on a desktop information. The remaining species were assessed as not occurring. Unreliable records were excluded from consideration.

Likelihood of occurrence assessments were informed by the availability and suitability of habitat within the site, species ecology, existing records and the level of survey effort undertaken.

The complete likelihood of occurrence assessment is provided in **Appendix F**.

### 2.2.2.3 Limitations

It is important to acknowledge any constraints associated with the assessment and extent to which these may have influenced the findings. An evaluation of the desktop study and methods applied in the current assessment against standard constraints outlined in the EPA document *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA 2016a) is provided in **Table 5**.

*Table 5: Evaluation of assessment against standard constraints outlined in EPA (2016a)*

| Constraint | Degree of limitation | Details |
|---|---|---|
| Availability of contextual information | No limitation | The broad scale contextual information available for the site is adequate to place the site and flora and vegetation in context. |
| Experience level of personnel | No limitation | This flora and vegetation assessment was undertaken by a qualified ecologists and botanist with two to 1 years of botanical experience in Western Australia. Technical review was undertaken by a senior environmental consultant with 1 years' experience in environmental science in Western Australia. |
| Suitability of timing | No limitation | In Mediterranean climates some flora species spend part of their lifecycle as underground storage organs or seed to avoid excessive heat and drought over the summer period. These species, known as 'geophytes' or 'annuals', tend to re-emerge during winter and are often most visible during spring, which is the flowering period for the majority of plant species. Therefore, spring is the optimal time to complete flora and vegetation surveys in the south-west of WA. The survey was conducted in April and early May and thus outside of the main flowering season. However, this is not considered a limitation to the reconnaissance level survey. |
| Temporal coverage | No limitation | Flora and vegetation assessments can require multiple visits, at different times of year, and over a period of a number of years, to enable observation of all species present. While it is likely that additional flora species remain undetected, this is not considered a limitation to a reconnaissance level survey. |
| Spatial coverage and access | No limitation | Site access was limited to public land (refer **Figure 3**). Private lots were assessed from adjacent public land where possible. Therefore, it is possible that additional tuart trees and associated tuart woodland TEC or areas of native vegetation occur but may not have been visible from the property boundary. However, this is considered unlikely to be the case based on review of aerial imagery. |
| Sampling intensity | No limitation | The survey focused on mapping vegetation units and condition across the site and identifying areas of habitat for threatened and priority species and ecological communities. No formal sampling or targeted searches were undertaken. Detailed vegetation sampling and targeted searches within vegetation in 'good' or better condition would be required to confirm whether threatened and priority flora species or TECs/PECs associated with a floristic community type occur. However, this is not considered a limitation to a reconnaissance level survey. |
| Influence of disturbance | No limitation | Historical ground disturbance was evident in parts of the site. The disturbance history of the site was considered when assigning vegetation units and condition. |
| Adequacy of resources | No limitation | All resources required to perform the survey were available. |

### 2.2.3 Vegetation units

Five (5) vegetation units were identified within the site, as described below in **Table 6** and shown in **Figure 3.**

*Table 6: Vegetation units within the site*

| Community | Description | Area (ha) |
|---|---|---|
| **Cc** | Open forest *Corymbia calophylla* over non-native grassland and occasional native species. | 1.67 |
| **CcEg** | Open forest *Corymbia calophylla* and *Eucalyptus gomphocephala* over non-native grassland and occasional native species. | 0.17 |
| **CcEm** | Open forest *Corymbia calophylla* and *Eucalyptus marginata* over planted garden and occasional native species. | 0.21 |
| **EmEgB** | Open forest *Eucalyptus marginata, Eucalyptus gomphocephala* over sparse woodland *Banksia attenuata* over shrubland *Macrozamia riedlei* and *Xanthorrhoea preissii* over low shrubland *Hibbertia hypericoides* and forbland *Mesomelaena pseudostygia, Alexgeorgea nitens* and *Desmocladus flexuosus*. | 0.05 |
| **Predominantly non-native vegetation** | Heavily disturbed areas comprising turf, non native vegetation, bare ground, sealed areas or buildings and occasional scattered native plants. | 52.85 |

### 2.2.4 Vegetation condition

The extent of vegetation by condition category is detailed in **Table 7** and shown in **Figure 4**.

*Table 7: Extent of vegetation condition categories within the site*

| Condition category (Keighery 1994) | Total area (ha) |
|---|---|
| Pristine | 0 |
| Excellent | 0 |
| Very good | 0.05 |
| Good | 0 |
| Degraded | 0.51 |
| Degraded - completely degraded | 1.54 |
| Completely degraded | 52.81 |

### 2.2.5 Threatened and priority flora

No threatened or priority flora species were recorded within the site.

Based on the desktop assessment and reconnaissance-level survey, the following species are considered to have potential to occur in the site, noting that survey limitations could not confirm their absence:

- *Caladenia huegelii* (endangered under the EPBC Act and threatened under the BC Act)
- *Colectasia elegans* (threatened under the BC Act)
- *Stenanthemum sublineare* (P2)
- *Sarcozona bicarinata* (P3)
- *Styphelia filifolia* (P3)
- *Anigozanthos humilis* subsp. *chrysanthus* (P4)
- *Jacksonia sericea* (P4)

- *Poranthera moorokatta* (P2)

The remaining threatened and priority flora identified in the desktop assessment were assessed as unlikely, very unlikely or not occurring within the site (**Appendix D**).

Potential suitable habitat for threatened and priority flora is limited to the **EmEgB** vegetation unit in 'very good' condition. The remainder of the site comprises highly modified vegetation and cleared areas that are unlikely to support Threatened or Priority flora species. Targeted surveys during the appropriate flowering period would be required to confirm presence or absence of the aforementioned species.

Overall, the site contains limited areas of remnant native vegetation, with potential conservation-significant flora values restricted to the **EmEgB** vegetation unit.

### 2.2.6 Threatened and priority ecological communities

The field survey confirmed the presence of the following TECs and PECs within the site:

- 'Banksia woodlands of the Swan Coastal Plain' TEC/PEC.
- 'Tuart woodlands and forest of the Swan Coastal Plain' TEC/PEC.

In addition, the following communities are considered to have potential to occur within the site, noting the survey limitations preclude confirmation of their absence:

- '*Banksia attenuata* woodlands over species rich dense shrublands' (SCP20a) TEC (critically endangered under the BC Act)
- 'Swan Coastal Plain *Banksia attenuata - Banksia menziesii* woodlands' (SCP23b) PEC (P3 in WA)

Potentially suitable habitat for the both the SCP20a TEC and the SCP23b PEC is limited to the **EmEgB** vegetation in 'very good' condition. Detailed floristic sampling would be required to determine whether either community occurs within the site.

#### 2.2.6.1 Banksia Woodlands of the Swan Coastal Plain TEC/PEC

Assessment of the structure, composition and patch size of vegetation units **EmEgB** against the diagnostic characteristics, condition thresholds and patch size requirements outlined in the Commonwealth Conservation Advice (DoEE 2016) determined that the vegetation forms part of a larger patch of the Banksia Woodlands of the Swan Coastal Plain TEC.

The result of the TEC assessment indicates that the site contains one patch of the banksia woodlands TEC, which extends over 0.05 ha as outlined in **Table 8** and shown in **Figure 5**. While the vegetation within the site does not independently satisfy the minimum patch size threshold, it is part of a larger area of native vegetation outside the site and is separated by less than 30 m from adjoining vegetation that also meets the TEC criteria. Accordingly, the vegetation is considered part of a larger qualifying TEC patch.

As the corresponding DBCA-listed PEC adopts the same diagnostic characteristics and thresholds as the Commonwealth-listed TEC, the same 0.05 ha area is also considered to represent the Banksia Woodlands of the Swan Coastal Plain PEC (**Figure 5**).

*Table 8: Criteria for determining presence of banksia woodlands of the Swan Coastal Plain TEC adapted from DoEE (2016)*

| Criteria | Requirements for meeting criteria | Site implications |
|---|---|---|
| 1. Must meet key diagnostic characteristics | A variety of factors relating to:<br>• Location<br>• Soils<br>• Structure<br>• Composition | • The site meets location and soils criteria.<br>• The **EmEg8** vegetation includes the key diagnostic feature of a tree layer of *Banksia attenuata, Banksia menziesii* and *Banksia illicifolia*.<br>• The **EmEg8** vegetation within the site also meets structure and composition criterion. |
| 2. Must meet condition thresholds | • A patch should at least meet the 'good' condition category | • The **EmEg8** vegetation is present in 'very good', which meets this criterion. |
| 3. Must meet minimum patch size | • Minimum size of patch:<br>• Pristine = no minimum size<br>• Excellent = 0.5 ha<br>• Very good = 1 ha<br>• Good = 2 ha | • The **EmEg8** vegetation in 'very good' condition comprises 0.05 ha and does not independently meet this criterion. |
| 4. Must incorporate surrounding context | • Breaks (e.g. tracks) <30 m do not separate vegetation into separate patches<br>• Buffer zones may apply (20-50 m recommended from patch edge)<br>• The site should be thoroughly sampled (2 surveys in same spring)<br>• Survey timing should be appropriate<br>• Surrounding environment should be considered (e.g. connectivity, conservation values, fauna habitat) | • Small scale tracks (<30 m wide) exist within the patch.<br>• The **EmEg8** vegetation is considered contiguous with a larger area of native vegetation representing the banksia woodland TEC as it is separated by less than 30 m. Therefore, the **EgEm8** vegetation is considered to meet criterion 3.<br>• This survey was conducted in April and May (outside of the main flowering season). For a reconnaissance level survey, the survey timing is appropriate. Further survey in spring may record additional native species but is not considered to change the results of the TEC assessment. |
| Result | The site supports 0.05 ha of the banksia woodlands of the Swan Coastal Plain TEC | |

### 2.2.6.2 Tuart Woodlands and Forests of the Swan Coastal Plain TEC/PEC

The presence of *Eucalyptus gomphocephala* (tuart) trees within the site indicated that the 'tuart (*Eucalyptus gomphocephala*) woodlands and forests of the Swan Coastal Plain' TEC could be present within the site. Assessment against the diagnostic criteria contained within the Commonwealth Conservation Advice (DoEE 2019) confirmed the presence of one TEC patch (Patch 1 located in the north-eastern portion of the site) and one potential TEC patch (Patch 2 located in the north-western portion of the site). These patches are outlined in **Table 9** and shown in **Figure 5**.

As the corresponding DBCA-listed PEC adopts the same diagnostic characteristics and thresholds as the Commonwealth-listed TEC, approximately 0.08 ha of confirmed PEC and 0.19 ha of potential PEC occur within the site (**Figure 5**).

The remainder of TECs or PECs identified in the desktop assessment are not considered to occur in the site as outlined in **Appendix E**.

*Table 9: Assessment of site conditions against the tuart (Eucalyptus gomphocephala) woodlands and forests of the Swan Coastal Plain TEC criteria (adopted from DoEE (2019))*

| Criteria | Requirements for meeting criteria | Site implications |
|---|---|---|
| 1. Must meet key diagnostic characteristics | • Located in appropriate bioregion and landform.<br>• At least 2 living established *E. gomphocephala* trees with DBH ≥15 cm present in canopy layer and with <60 m between the outer edges of canopies*.<br>• Vegetation structure is a woodland, forest, open forest, open woodland, or mallee (various forms). | • The site is located in an appropriate bioregion and landform.<br>• Both patches contain more than two living established *E. gomphocephala* trees with DBH ≥15 cm present in canopy layer and with <60 m between the outer edges of canopies.<br>• Vegetation within the patches comprises a woodland to open woodland structure. |
| 2. Must meet size threshold | • A patch must be larger than 0.5 ha#. | • Both patches are >0.5 ha in size. |
| 3. Must meet condition thresholds | • Patches >5 ha = no condition threshold.<br>• Patches ≥0.5 - <2 ha = 'very high' or 'high' condition^.<br>• Patches ≥2 ha - <5 ha = 'very high', 'high' or 'moderate' condition^. | • Patch 1 extends over at least 1.14 ha (0.08 ha within the site) and occurs in 'very high' condition and meets this criterium.<br>• Patch 2 extends over at least 2.42 ha (0.19 ha within the site) and likely occurs in at least 'moderate' condition[1]. Additionally, patch 2 occurs within <100 m of native vegetation and therefore meets this criterium. |
| 4. Must incorporate surrounding context | • Breaks (e.g. tracks) <30 m do not separate vegetation into separate patches.<br>• The site should be thoroughly sampled in the appropriate season.<br>• Survey timing should be appropriate.<br>• Surrounding environment should be considered (e.g. connectivity, conservation values, fauna habitat). | • Breaks such as tracks exist within the patch but do not separate the patch.<br>• Larger breaks such as handstand and roads were excluded from the patch.<br>• The survey timing was sufficient to determine that the patch represents the TEC.<br>• The majority of patch 1 and patch 2 lie outside of the site. |
| Result | The site supports 0.08 ha of the tuart woodlands and forest of the Swan Coastal Plain TEC and 0.19 ha of potential tuart woodlands and forest of the Swan Coastal Plain TEC. | |

*Includes dead trees. Where species of dead tree is unclear it is assumed to be *E. gomphocephala* if its canopy is within 30 m of an identified *E. gomphocephala* tree. #Note that a patch comprises a 30 m buffer around the canopy of each *E. gomphocephala* tree, may extend beyond a lot boundary and may include areas of bare ground, waterbodies and hardscape. ^Using the condition scale provided in (DoEE 2019).

## 2.3 Terrestrial Fauna

### 2.3.1 Regional context

The site forms part of a larger regional urban corridor generally cleared of remnant vegetation. Notwithstanding this, these urban areas are interspersed with large natural features which provide fauna habitat values, including regional lakes and wetlands (e.g. Lake Joondalup, Jandabup Lake, Lake Mariginiup), as well as large areas of intact native vegetation (such as that comprising Lot 9000

1 The condition could not be confirmed due to access limitations during the current survey but was surveyed during the Emerge survey in 2018 and was predominantly mapped as ranging from 'very good' to completely degraded' (bare areas) condition.

immediately north of the site). In addition, urban tree canopies also provide habitat for fauna species.

### 2.3.2 Site specific surveys and investigations

In conjunction with the 2026 reconnaissance flora and vegetation survey, Emerge Associates (Emerge Associates 2026c) completed a targeted black cockatoo assessment of the site on 10 and 14 April and 6 May 2026. The assessment was completed with reference to the *Environment Protection and Biodiversity Conservation Act* black cockatoo referral guidelines (DAWE 2022). The full survey methodology is available in the attached **Appendix C**.

### 2.3.3 Fauna habitat

Two (2) general fauna habitat types were determined within the site from the results of the reconnaissance flora and vegetation survey completed by Emerge in 2018, as follows:

- Parkland cleared areas with mixed native and exotic overstorey species.
- Urban canopy and street trees.

As with vegetation values, fauna habitat values were largely restricted to Lot 9000, which contained potential foraging, roosting and nesting habitat for Carnaby's black cockatoo (CBC) and Forest Red-tailed Black cockatoos (FRTBC). The fauna habitat values outside of Lot 9000 were restricted to scattered mature trees across the survey area which were determined to potentially provide CBC and FRTBC habitat of a comparatively lower quality.

### 2.3.4 Threatened and priority fauna species

No occurrences of threatened, specially protected or priority fauna species were recorded within the site.

The following threatened, specially protected and priority fauna species are considered 'likely' or to have 'potential to occur' in the site as the survey limitations preclude confirmation of their absence:

- *Hesperocolletes douglasi* (Douglas's broad-headed bee) (critically endangered [CR] under the EPBC Act and BC Act)
- *Zanda latirostris* (Carnaby's black cockatoo) (endangered [EN] under the EPBC Act and BC Act)
- *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo) (vulnerable [VU] under the EPBC Act and BC Act)
- *Apus pacificus* (pacific swift) (migratory [MI])
- *Falco peregrinus* (peregrine falcon) (other specially protected [OS])
- *Austrosaga spinifer* (spiny katydid) (priority 2)
- *Hylaeus globuliferus* (woollybush bee) (priority 3)
- *Idiosoma sigillatum* (Swan Coastal Plain shield-backed trapdoor spider) (priority 3)
- *Leioproctus contrarius* (a short-tongued bee) (priority 3)
- *Neelaps calonotos* (black-striped snake) (priority 3)
- *Isoodon fusciventer* (quenda) (priority 4)
- *Synemon gratiosa* (Graceful sun-moth) (priority 4).

Pacific swift (MI) and peregrine falcon (OS) are highly mobile species that may opportunistically fly over or forage in the site for short periods of time as part of a much larger home range. Neither of these species would breed within the site. Any occurrence of pacific swift or peregrine falcon in the site would likely be in the air space and largely independent from terrestrial habitat.

Quenda (P4) are known to occur in the local area and occupy a variety of habitats but prefer shrubby, dense and often swampy vegetation and are often found in developed areas. Quenda may potentially utilise areas of the site where shrubby understorey or dense grassland are present, this may include both areas of native vegetation or non-native/planted vegetation.

The remainder of the aforementioned species require relatively intact and undisturbed native vegetation to persist. Therefore, any occurrence of *Hesperocolletes douglasi* (Douglas's broad-headed bee) (CR), *Austrosaga spinifer* (spiny katydid) (P2), *Hylaeus globuliferus* (woollybush bee) (P3), *Idiosoma sigillatum* (Swan Coastal Plain shield-backed trapdoor spider) (P3), *Leioproctus contrarius* (a short-tongued bee) (P3), *Neelaps calonotos* (black-striped snake) (P3) and *Synemon gratiosa* (Graceful sun-moth) (P4) would be limited to vegetation unit **EmEgB** in 'very good' condition and immediately adjacent areas.

#### 2.3.4.1 Black cockatoo habitat

A desktop assessment determined that CBC and FRTBC may occur and breed in the site, but the site lies outside of the modelled distribution range of Baudin's black cockatoo.

The site contains 170 potential nesting trees, as shown in **Figure 6**. As such, the site does not currently provide suitable breeding habitat for species of black cockatoo.

No roosts or evidence of roosting were observed within the site during the survey. Many tall trees in the site may provide roosting habitat for black cockatoos.

A total of 4.82 ha of foraging habitat for CBC and 4.45 ha for FRTBC was recorded in the site as shown on **Figure 7** and **Figure 8** respectively. The extent of foraging habitat by value category is detailed in **Table 10**.

*Table 10: Black cockatoo foraging habitat within the site*

| Foraging habitat | Black cockatoo species and area of foraging habitat (ha) | |
|---|---|---|
| | CBC | FRTBC |
| Native primary | 3.66 | 3.62 |
| Native secondary | 0.82 | 0.55 |
| Non-native primary | 0.04 | 0.04 |
| Non-native secondary | 0.30 | 0.25 |
| Total | 4.82 | 4.46 |

## 2.4 Hydrology and inland waters

### 2.4.1 Groundwater

The *Perth Groundwater Map* (DWER 2026a) indicates that the regional historic maximum groundwater level (MGL) across the site ranges from approximately 22.5 m AHD to 38 m AHD, flowing from east to west.

Depth to historic MGL approximately ranges from 0 m to 36 m below ground level (BGL). Groundwater clearance is generally shallower along the western boundary, particularly towards the southernmost boundary of the site, and highest along the north-eastern boundary of the site.

### 2.4.2 Surface water and waterways

The site does not contain any surface water or waterway features. Stormwater runoff from road reserves across the remainder of the site is conveyed by the existing pit and pipe network or via overland flow.

### 2.4.3 Wetlands

A review of the *Geomorphic Wetlands, Swan Coastal Plain* (DBCA-019) dataset indicates that there are no geomorphic wetlands within or adjacent to the site (DBCA 2025). The nearest conservation category geomorphic wetland is Lake Joondalup approximately 440 m to the west of the site.

## 2.5 Land use planning mechanisms

### 2.5.1 Conservation areas and reserves

The site is not identified within any areas or reserves identified for conservation land uses, including:

- MRS 'Parks and Recreation' reserves
- MRS Bush Forever sites
- CoW DPS No. 2 'Conservation' reserves
- National Parks

### 2.5.2 Local natural areas

The *CoW Local Biodiversity Plan 2018/19-2023/34* (LBP) (CoW 2018) defines natural areas as physical areas containing native species or ecological communities in a relatively natural state and hence contain biodiversity. Local natural areas (LNAs) are defined as all unprotected natural areas over which the CoW can exercise the most control through its decision-making powers, policies and reserve management. The CoW LBP provides long term goals for the protection, retention and management of biodiversity within the CoW.

### 2.5.3 Ecological linkages

The site does not occur within any mapped regional or local ecological linkages, as identified in the CoW LBP (CoW 2018). Notwithstanding this, the large area, contiguous coverage and intact condition of vegetation immediately north of the site suggests this vegetation would likely provide ecological

linkage functionality, particularly given its situation between regionally significant natural areas such as Lake Joondalup, Mariginiup Lake and Jandabup Lake.

### 2.5.4 Environmentally sensitive areas

No mapped environmentally sensitive areas (ESA) are mapped by DWER as occurring within or directly adjacent to the site. The nearest mapped ESA to the site is situated approximately 350 m to the west associated with Lake Joondalup.

### 2.5.5 Public drinking water source areas

The portion of the site situated west of Wanneroo Road is identified as a Priority 3 Public Drinking Water Source Area (PDWSA), associated with the Perth Coastal and Gwelup Underground Water Pollution Control Area (DWER 2025b). There are no wellhead protection zones (WHPZ) within or downstream of the site (DWER 2025b).

PDWSAs are proclaimed by the DoW to protect identified drinking water sources, which can be surface water or groundwater sources (DoW 2009). They are proclaimed under the *Metropolitan Water Supply, Sewerage and Drainage Act 1909* or the *Country Areas Water Supply Act 1947* as Water Reserves, Catchment Areas or Underground Water Pollution Areas. PDWSAs provide Western Australia with the majority of its drinking water supplies and can be vulnerable to contamination from a range of land uses and water-based activities. Once an area is identified as a PDWSA, consideration needs to be given to the intended land use and associated activities to ensure that they are appropriate in meeting the water protection quality objectives of the area.

## 2.6 Heritage

### 2.6.1 Aboriginal heritage

An *Aboriginal Heritage Desktop Assessment* (Horizon Heritage Management 2018) has been completed for the site and is provided in **Appendix B**. Based on a review of the Department of Planning, Lands and Heritage (DPLH) *Aboriginal Heritage Inquiry System* (AHIS), no Registered Aboriginal Sites are mapped as occurring within the site. However, three (3) Other Heritage Places are mapped within the site, all of which are associated with modified trees. The recorded details of these Heritage Places are summarised in **Table 11** and their locations are shown in **Figure 2**.

*Table 11: Heritage Places identified within the site (DPLH 2026)*

| DPLH ID | Name | Status | Description |
|---|---|---|---|
| 16058 | Shaw Road, Wanneroo | Historic | Modified/scar tree |
| 20054 | Wanneroo Primary School Scarred Tree #1 | Historic | Modified/scar tree |
| 20055 | Wanneroo Primary School Scarred Tree #2 | Historic | Modified/scar tree |

The Aboriginal Heritage Desktop Assessment (Horizon Heritage Management 2018) included a review of the relevant site assessment and survey reports for each of the identified Other Heritage Places. Based on this review, historical technical investigations determined that the scars on each of

the modified trees were unlikely to be caused by Aboriginal activity, but more likely by natural processes or due to fire.

Whilst no Registered Aboriginal Sites were identified within the site, a number are located in close proximity, including Lake Joondalup (DPLH 3740) and Wanneroo Scarred Tree (DPLH 3657), demonstrating the wider locality and urbanised areas still support important Aboriginal cultural sites.

The Aboriginal Heritage Desktop Assessment determined that highly developed areas of the site are unlikely to support surface expressions of cultural material (Aboriginal artefacts), due to historical disturbances to the natural environment.

### 2.6.2 Non-indigenous heritage

The following databases were reviewed to determine if any non-indigenous heritage values are recorded as occurring within the site:

- World Heritage List
- National Heritage List
- Commonwealth Heritage List
- Register of National Estate
- State Register of Heritage Places (inHerit database)
- City of Wanneroo Scheme Heritage List
- City of Wanneroo Local Heritage Survey.

Based on this review, 19 places listed in the CoW Local Heritage Survey (CoW 2025) occur within the site (detailed on **Table 12**). Places identified in the Local Heritage Survey are recognised by the City as places of important local heritage but are not afforded statutory protection (CoW heritage management category 3 or lower).

Of these eight 19 places, three (3) are also listed on the CoW Scheme Heritage List (CoW heritage management category 2 or higher) and are therefore afforded statutory protection under the *Heritage of Western Australia Act 1990* and the *Deemed Provisions of District Planning Scheme No. 2*. However, none of these places are listed as State Registered Places by DPLH.

The approximate locations of these identified heritage places are shown in **Figure 2**.

*Table 12: CoW Local Heritage Survey (CoW 2025) places within the site*

| Place name | inHerit ID | CoW ID | CoW category | Description and current status |
|---|---|---|---|---|
| Wanneroo Show Grounds* | 9500 | 62 | 2 | Existing urban open space area which first hosted Wanneroo Agricultural show in 1909. |
| Wanneroo War Memorial* | 13045 | 70 | 2 | Existing single monument constructed in 1921 and relocated multiple times. |
| Wanneroo Shire Offices (fmr)* | 9499 | 92 | 2 | The original Wanneroo Road Board's Road, Health and Vermin Office (1960), located on the Wanneroo War Memorial site (1952–1980), and Memorial Rose Garden (c.1962 to 1980) |

*Table 12: CoW Local Heritage Survey (CoW 2025) places within the site (continued)*

| Place name | InHerit ID | CoW ID | CoW category | Description and current status |
|---|---|---|---|---|
| Aquamotion | 27713 | 69 | 3 | Existing indoor fitness and leisure centre opened in 1980. |
| CALM Forestry House (fmr) | 17525 | 75 | 3 | Existing single building constructed in 1960 for use by the Forestry Department. |
| CALM School Classroom (fmr) | 17526 | 75 | 3 | Existing single building constructed c1910 for use as a primary school building. |
| City of Wanneroo Administration, Council Chambers, Library, Museum and Cultural Centre | 27723 | 77 | 3 | Existing CoW Administration, Council Chambers, Library, Museum and Cultural Centre developed in 2001. |
| Saint Anthony of Padua | 27685 | 76 | 3 | Existing church constructed in 1997. |
| Wanneroo Sports and Social Club | 27704 | 73 | 3 | Existing community sports club developed in 1962. |
| Wanneroo Central Shopping Centre | 27706 | 93 | 3 | Existing shopping centre in the heart of the Wanneroo townsite, constructed in 2009. |
| Wanneroo Community Centre, Wanneroo Civic Precinct (fmr), Shire Hall (fmr) | 9516 | 71 | 3 | Existing Community Centre constructed in the 1960s. |
| St Anthony's Catholic Church (fmr) | 9498 | 98 | 4 | Former site of the first church build in Wanneroo, demolished in 1998. |
| Villanova Shopping Centre | 27743 | 95 | 4 | Existing shop that supplies provision and services to the community. |
| Wanneroo Road Board Office and Agricultural Hall | 27759 | 91 | 4 | Wanneroo Road Board office and agricultural hall (1904–1965) |
| Dennis Centenary Hall and Garage (site), Crisafulli Pictures (site) | 27586 | 94 | 4 | Culturally significant site of historic buildings. |
| Original Townsite Boundary NORTH | 27710 | 97 | 4 | Boundary of the original Wanneroo townsite, now incorporated into the Wanneroo Town Centre. |
| World War Two Plane Spotting Hut (site) and Togno Delicatessen (site) | 27724 | 96 | 4 | Historic site of culturally significant buildings, The site is now occupied by a service station and shops |

**Those places afforded statutory protection are highlighted (CoW heritage management category 2 or higher)*

## 2.7 Land use considerations

### 2.7.1 Historic and existing land uses

Based on a review of historical aerial imagery published by Landgate, land uses within the site have progressively developed and intensified over time. Some of the key changes in land uses over time within the site include:

- Early 1970s, widespread clearing and residential subdivision of the locality commences, as well as the construction of the first portion of the primary central shopping complex.
- Late 1970s, major widening of Wanneroo Road and further clearing of remnant vegetation to facilitate expansion of central shopping complex.
- Early 1980s, clearing to facilitate expansion of open space area associated with current playing fields of St Anthony's School.
- 1990s, increase in number of commercial premises along Wanneroo Road and establishment of various civic buildings, including leisure centre.
- Early 2000s, significant clearing of northern portion of site to facilitate construction of St Anthony's School and new CoW council buildings on Dundebar Road. Continued expansion of commercial premises along Wanneroo Road.
- Mid 2000s, construction of Wanneroo Primary School, continued expansion of central shopping centre complex and increase of commercial premises along Wanneroo Road.
- 2010s, residential subdivision of Lot 500 Shaw Road precinct and continued expansion and general increase in extent of central commercial premises.

The site currently supports a range of existing land uses, including:

- Civic buildings and open space areas
- A number of commercial shopping centres and associated commercial premises
- Two primary schools
- Sporting clubs and grounds, including football, lawn bowls and cricket ovals.
- A number of service stations
- Road reserves.

### 2.7.2 Potential contamination

No known contaminated sites are identified on the DWER *Contaminated Sites Database (DWER 2026b)* as occurring within the site. As such, none of the following classifications affect any land parcels within the site:

- Contaminated – remediation required
- Contaminated – restricted use
- Remediated for restricted use.

However, the publicly available *Contaminated Sites Database* does not identify any land parcels which may have been reported as potentially contaminated but are awaiting classification.

A number of existing land uses within the site are identified as potentially contaminating land uses in the document *Assessment and management of contaminated sites: Contaminated sites guidelines* (DER 2014), including:

- Automotive repair workshops
- Service stations and fuel storage facilities.

### 2.7.3 Surrounding land uses

The site is surrounded by existing residential land uses to the west, south, east and northwest. A large area of intact remnant vegetation (Lot 9000) occurs directly north of the site.

Wanneroo Road runs through the center of the site and will require consideration of transport noise and management/mitigation in line with the State Planning Policy (SPP) 5.4 *Road and Rail Noise*. The majority of the site falls within the SPP 5.4 area (as shown on **Plate** 1) and, given the proposed urban land use, will require further consideration regarding potential noise impacts and management.



*Plate 1: SPP 5.4 areas*

## 2.8 Other considerations

### 2.8.1 Bushfire hazards

A small northern portion of the site is located within a 'bushfire prone area' on the state-wide *Map of Bush Fire Prone Areas* prepared by the Office of Bushfire Risk Management (OBRM 2025), as shown on **Plate 2** below.

SPP 3.7 *Planning in Bushfire Prone Areas* (WAPC 2024) and the associated Guidelines require strategic planning proposals, including structure plans, to be supported by a bushfire hazard level assessment. Emerge Associates (Emerge Associates 2026b) have prepared a Bushfire Management Plan (BMP) for the site to address this requirement, and examines the various responses to the identified bushfire risk (following development) that will make the ultimate use of the land suitable for its intended purpose.

The BMP identified a variety of bushfire hazards within and external to the site associated with dense vegetation along and adjacent to the northern boundary of the site. Further information is provided in the BMP (Emerge Associates 2026b), which also provides an assessment of how future development within the site can satisfy the policy measures of SPP 3.7.



*Plate 2: Bushfire prone areas*

# 3 Proposal

## 3.1 Historical planning and environmental assessment context

The site comprises the following MRS zones and reserves:

- 'urban' across the majority of the site, encompassing existing urbanised areas.
- 'urban deferred' in the northern portion, to the north of Dundebar Road.
- 'primary regional roads' across the Wanneroo Road reserve.

The portions of the site zoned 'urban' under the MRS are zoned 'Centre' under the CoW DPS No. 2.

The site is not known to have been subject to any historical scheme amendments (either to the MRS or DPS No. 2). As such, no referrals of scheme amendments to the EPA under Section 48 of the EPA Act directly applicable to the site are known to have occurred.

The site is subject to the existing *Wanneroo Town Centre Structure Plan*, which was adopted by the CoW in 2001 and proposed the following land uses:

- Business land uses along Wanneroo Road
- Commercial land uses associated with expansion of the central shopping complex
- Civic and cultural land uses associated with the new council chambers
- Extension of primary school along Church Street

The existing *Wanneroo Town Centre Structure Plan* has been subject to a range of amendments since it was first adopted by the CoW and will be replaced by the proposed Precinct Plan.

## 3.2 Proposed structure plan

### 3.2.1 Layout and land uses

The proposed Precinct Plan is provided in **Appendix A** and proposes the following land uses across the site:

- Residential
- Public Purpose - Education
- Civic and community
- Commercial
- Private Community Purpose
- Mixed uses
- POS.

A range of existing land uses across the site are proposed to continue into the future (such as the Wanneroo Showgrounds and Wanneroo Primary School), whilst other areas have been identified for intensification or modification to their existing land use.

### 3.2.2 Design response to environmental values

Based on the environmental assessment completed across the site, the following key environmental values were identified:

- Vegetation within the site contains habitat for MNES fauna, specifically CBC and FRTBC.
- The site supports 0.05 ha of the Banksia woodlands TEC/PEC.
- The site supports 0.08 ha of Tuart woodlands TEC and 0.19 ha of potential Tuart woodlands TEC.
- The potential for Aboriginal heritage values to occur within areas of site supporting remnant vegetation, given they have not been historically disturbed and the locality is known to support significant Aboriginal heritage values.
- Non-indigenous heritage values, including heritage places identified on the CoW Local Heritage Survey.

The proposed Precinct Plan responds to these key environmental values through:

- Identification of POS areas throughout the site, aligning with locations of potential black cockatoo habitat trees and vegetation containing black cockatoo foraging habitat values.
- Proposed continuation of existing land uses for some identified non-indigenous heritage values, including the Wanneroo Showgrounds.
- Retention of mature trees that provide natural canopy and fauna habitat values within road reserves.

### 3.2.3 Consultation

Preparation of the Precinct Plan has involved consultation with a range of stakeholders including the CoW, state government agencies, servicing authorities, relevant landowners and the general public.

With specific regard to environmental considerations, the proposed Precinct Plan design has been discussed with the CoW's Strategic Land Use Planning and Environment team, in addition to the CoW Land Development Team. This consultation did not raise any significant concerns regarding the design of the proposed Precinct Plan and has informed its finalisation and provided an understanding of CoW's expectations regarding the desired environmental outcomes.

## 3.3 Future planning process

Subject to approval and endorsement of the proposed Precinct Plan by the CoW and the WAPC, urban and commercial development the site will likely be progressed through a combination of subdivision and development approvals. Given the site comprises a large number of land parcels of varying ownership, it is likely that a range of proponents will drive the future subdivision and development process (and thus implement the Precinct Plan).

It is likely that future subdivision and development approvals issued by CoW and/or WAPC to facilitate implementation of the proposed Precinct Plan will incorporate conditions to manage relevant environmental considerations, where needed.

# 4 Environmental Management Strategies

## 4.1 Flora and vegetation

### 4.1.1 Management objective

In the context of environmental impact assessments, the EPA's objective for flora and vegetation is '*to protect flora and vegetation so that biological diversity and ecological integrity are maintained*'. Where a proposal may potentially impact upon flora and vegetation values, the avoid, minimise and offset mitigation hierarchy should be applied to minimise potential impacts.

The CoW *Local Planning Policy* (LPP) *4.3: Public Open Space* also provides guidance on the planning, provision, location, design, development and interim maintenance of POS areas, to be considered through the planning process. LPP 4.3 include a range of provisions relating to POS requirements, of which the most relevant to the proposed Precinct Plan include:

- A minimum of 10 % of a gross sub-divisible area is to be ceded as POS. However;
  - Greater than 10 % may be considered acceptable or necessary where there are specific environmental, cultural or historic values that require protection to enhance of the character of the local area.
  - Less than 10 % may be considered appropriate in 'centre' zones where higher densities are proposed, subject to 10 % being provided in the wider catchment and cash in lieu payments.
- A minimum of 3 % of a gross sub-divisible area shall be provided as POS for the purpose of conservation and recreation, when following significant natural assets exist, such as (but not limited to) TECs or PECs, TF or PF, wetlands, conservation significant fauna species, matters of national environmental significance listed pursuant to the EPBC Act, vegetation complexes with less than 30 % of their original extent remaining.

The CoW *Urban Forest Strategy* (UFS) (CoW 2022) provides guidance relating to the protection and enhancement of vegetation providing natural canopy cover within urban areas. The following objectives are outlined within the *Urban Forest Strategy*:

- Achieve no net loss of canopy cover in established suburbs
- Progressively increase total canopy cover for the City within a range of 15-20 % by 2040
- Progressively increase canopy cover to a minimum of 5 % for identified suburbs in 2040
- Progressively increase canopy cover on City managed land to approximately 10 % by 2040.

### 4.1.2 Structure plan response

Mature trees were assessed as part of a targeted black cockatoo assessment (**Appendix C**), which also aligns with the requirements of a 'significant tree survey' as outlined in the *Urban Forest Strategy* (CoW 2022). Avoidance and minimisation of impacts to flora and vegetation values has been achieved through the strategic location of POS areas and wider road reserves, to align with areas of existing remnant native trees. Existing trees are proposed to be retained wherever possible.

Additionally, POS areas as shown on the Precinct Plan have been strategically placed for the potential retention of up to 1.92 ha of native vegetation comprising **Cc**, **CcEg** and **CcEm** vegetation units in 'degraded' and 'degraded - completely degraded' conditions.

### 4.1.3 Future management requirements

The proposed Precinct Plan sets out the proposed land uses of the site and the indicative development layout. It is a high-level statutory plan which, subject to its approval, will guide the future subdivision and development process across the site. Given the site incorporates a number of land parcels of varying ownership, the future implementation of the proposed Precinct Plan through subdivision and development will be undertaken by individual proponents and landholders, who will be responsible for addressing the future environmental management requirements of the site, where applicable.

The following flora and vegetation considerations will need to be addressed by proponents as part of the future subdivision and development process:

- Based on consultation with the CoW Strategic Land-use Planning and Environment team undertaken prior to lodgment of the proposed Precinct Plan, the City has identified the retention of significant trees across the site as a high priority.
- Where native vegetation is proposed to be cleared to facilitate development, individual proponents will need to attain a clearing permit approval under Part V of the EP Act, or alternatively qualify for an applicable exemption (such as a subdivision approval). The extent of vegetation proposed to be cleared, as well as any impact avoidance, mitigation or offset commitments are to be determined by individual proponents to support this approvals process.
- Similarly, where MNES values (such as black cockatoo habitat and TEC occurrences) are proposed to be impacted to facilitate development, individual proponents should consider their obligations for potential referral under the EPBC Act. The extent of vegetation proposed to be cleared, as well as any impact avoidance, mitigation or offset commitments are to be determined by individual proponents to support this approvals process.

## 4.2 Terrestrial fauna

### 4.2.1 Management objective

In the context of environmental impact assessment, the EPA's objective for terrestrial fauna is "*to protect terrestrial fauna so that biological diversity and ecological integrity are maintained*". The application of the mitigation hierarchy should be applied to avoid or minimise impacts to terrestrial fauna where possible.

The EPBC Act also provides protection for listed 'threatened' species, including black cockatoos, with potential habitat identified within the site. Any proposed action which is considered likely to result in a 'significant' impact upon these species, identified by the Department of Climate Change, Energy, the Environment and Water (DCCEEW) as MNES, should be referred to the DCCEEW.

#### 4.2.2 Structure plan response

Fauna habitat values within the site are generally limited to native and exotic mature trees. The Precinct Plan layout demonstrates the potential for retention of 117 black cockatoo habitat trees within POS reserves. An additional seven (7) habitat trees are identified within road reserves and have potential to be retained. Retention of these trees also aligns with the *Urban Forest Strategy* (CoW 2022).

#### 4.2.3 Future management requirements

Where clearing of fauna habitat (including intact native vegetation or mature trees) is proposed, a *Fauna Relocation Plan* (or similar) is likely to be required to be prepared and implemented, prior to the commencement of any clearing. The aim of this plan should be to appropriately manage the fauna habitat clearing process such that direct impacts to fauna species are avoided.

Where MNES habitat values (such as black cockatoo habitat) are proposed to be impacted to facilitate development, proponents should consider their obligations for potential referral under the EPBC Act. The extent of vegetation proposed to be cleared, as well as any impact avoidance, mitigation or offset commitments are to be determined by individual proponents to support this approvals process. The EPBC Act Referral guideline for three WA threatened black cockatoo species (DCCEEW 2022), provide referral thresholds that can be applied to determine proposed actions that are likely to pose a high risk of significant impacts.

### 4.3 Aboriginal heritage

#### 4.3.1 Management objective

Registered Aboriginal Sites, whether known or unknown, are protected under the *Aboriginal Heritage Act 1972* (AH Act). Permission under Section 18 of the AH Act is required to impact or disturb any Registered Aboriginal heritage site.

#### 4.3.2 Structure plan response

No Registered Aboriginal Sites are identified are known to occur within the site. Whilst three Other Heritage Places are mapped within the site, they do not meet the definition of a Registered Aboriginal Site for the purpose of the AH Act, and as such are not afforded statutory protection under the AH Act.

On this basis, the proposed Precinct Plan does not include in specific land uses or design features which respond to Aboriginal heritage within the site.

#### 4.3.3 Future management requirements

The *Aboriginal Heritage Desktop Assessment* determined that remnant vegetation immediately north of the site could potentially contain Aboriginal heritage values such as modified trees or surface expressions of cultural material, given there has been limited disturbance to the natural environment and given significant Aboriginal heritage values are known to occur in the wider locality.

As vegetation within the site has been historically disturbed and is in 'degraded' to 'completely degraded' condition, the site is not considered likely to contain any significant Aboriginal heritage values.

## 4.4 Non-indigenous heritage

### 4.4.1 Management objective

At state level, the *Heritage of Western Australia Act 1990* provides for the protection of non-indigenous heritage values and *'provides for and encourages the conservation of places which have significance to the cultural heritage of the State'*. Where proposals involve modification to any State Registered Places listed under the Act, they may require referral to the State Heritage Council (part of DPLH) for their consideration and advice. It is noted that whilst a new *Heritage Act 2018* has been passed by parliament in September 2018, it is yet to be proclaimed and such is not yet in effect.

At a local level, the CoW DPS No. 2 and associated *Deemed Provisions of District Planning Scheme No. 2* provides for the *'identification of places and areas of heritage value so that development in the Scheme can, as far as possible, be consistent with the conservation of heritage values'*. Part 3 of the Deemed Provisions relates to heritage protection and outlines that where a development proposal relates to a heritage place listed under the CoW Scheme Heritage List (i.e. CoW heritage category 2 or high), the City may require a heritage assessment to be completed. Such proposals would also require planning approvals (for heritage considerations), referral to the Heritage Council of WA (DPLH) and public consultation.

### 4.4.2 Structure plan response

The proposed Precinct Plan identifies a variety of land uses across the site, including continuation of some existing uses (and boundaries), in addition to some changes to existing land use in specific areas. A summary of each existing non-indigenous heritage place identified within the site in the context of its existing land use and the proposed future land use identified in the Precinct Plan is detailed below in **Table 13**. This includes an assessment of the potential for impacts to existing heritage places as a result of future development proposals associated with any proposed changes in land use identified in the Precinct Plan.

*Table 13: Summary of future land uses proposed in the Precinct Plan and potential impacts on heritage places*

| Place name | CoW category | Proposed Precinct Plan land use | Potential impacts |
|---|---|---|---|
| Wanneroo Show Grounds* | 2 | Continuation of existing 'open space' land use proposed. | Unlikely |
| Wanneroo War Memorial* | 2 | Proposed intensification to accommodate future 'civic and community', with the exception of the western portion of the existing parkland, which is proposed to be intensified to accommodate future 'mixed use' development. | Potentially due to intensification. |

*Table 13: Summary of future land uses proposed in the Precinct Plan and potential impacts on heritage places (continued)*

| Place name | CoW category | Proposed Precinct Plan land use | Potential impacts |
|---|---|---|---|
| Wanneroo Shire Offices (fmr)* | 2 | Modification of existing land uses to facilitate 'commercial' land uses. | Potentially due to modification / redevelopment. |
| Aquamotion | 3 | Proposed intensification to accommodate future 'mixed uses' land use | Potentially due to intensification. |
| CALM Forestry House (fmr) | 3 | Intensification of existing low-density land use to facilitate 'commercial' land uses. | Likely due to intensification |
| CALM School Classroom (fmr) | 3 | Intensification of existing low-density land use to facilitate 'commercial' land uses. | Likely due to intensification |
| CoW Administration, Council Chambers, Library, Museum and Cultural Centre | 3 | Modification of existing land use to facilitate 'commercial' land uses. However, future proposals may involve redevelopment. | Potentially due to modification/ redevelopment. |
| Saint Anthony of Padua | 3 | Continuation of existing land uses. | Unlikely |
| Wanneroo Sports and Social Club | 3 | Modification of existing land uses to facilitate 'open space' land uses. | Likely due to modification / redevelopment. |
| Wanneroo Central Shopping Centre | 3 | Continuation of existing land uses to facilitate 'commercial' land uses. | Unlikely |
| Wanneroo Community Centre, Wanneroo Civic Precinct (fmr); Shire Hall (fmr) | 3 | Continuation of the existing 'mixed use' land use proposed. However, future proposals are likely to involve intensification and/or redevelopment of this land. | Likely due to intensification/ redevelopment. |
| St Anthony's Catholic Church (fmr) | 4 | Intensification of existing vacant land uses to facilitate 'commercial' land uses. | Likely due to intensification/ redevelopment. |
| Villanova Shopping Centre | 4 | Continuation of existing 'commercial' land uses. | Unlikely |
| Wanneroo Road Board Office and Agricultural Hall | 4 | Continuation of existing 'commercial' land uses. | Unlikely |
| Dennis Centenary Hall and Garage (site), Crisafulli Potures (site) | 4 | Intensification of existing land uses to facilitate 'commercial' land uses. | Potentially due to intensification. |
| Original Townsite Boundary NORTH | 4 | Intensification of existing land uses to facilitate 'commercial' land uses. | Likely due to intensification/ redevelopment. |
| World War Two Plane Spotting Hut (site) and Togno Delicatessen (site) | 4 | Continuation of existing 'commercial' land uses. However, future proposals may involve redevelopment of this land | Potentially due to redevelopment. |

### 4.4.3 Future management requirements

Consistent with the requirements of the CoW DPS No. 2 (and associated deemed provisions) outlined in **Section 4.4.1**, proponents of future subdivision and/or development proposals which may impact upon identified heritage places afforded statutory protection (CoW management category 2 or

higher), may be required to undertake heritage assessments by discretion of the City. In addition, such proposals would also require planning approvals (for heritage considerations), referral to the Heritage Council of WA (DPLH) and public consultation.

Given there are no State Registered Places located within the site, all non-indigenous heritage requirements are likely to be managed through the CoW under the DPS No. 2. Notwithstanding this, this may still involve or require interaction with State government agencies such as DPLH.

## 4.5 Surrounding land uses

### 4.5.1 Management objectives

In the context of environmental impact assessment, the EPA's objective for social surroundings (which includes consideration of impacts to amenity from factors such as noise) is *'to protect social surroundings from significant harm'* and includes the *'ability for people to live and recreate within their surroundings without any unreasonable interference with their health, welfare, convenience and comfort'* (EPA 2016b).

The majority of the site is mapped on the *State Planning Policy 5.4 Rail and Noise* noise level contour map as occurring within 300 m of a strategic freight and/or major traffic route associated with Wanneroo Road, meaning an assessment must be undertaken to determine the likely level of transport noise and mitigation required.

### 4.5.2 Structure plan response

The primary consideration for the site in regard to surrounding land uses is noise generated by transport travelling on Wanneroo Road. Given the site already supports urban development and is adjacent to existing residential development that has already been developed for residential purposes next to Wanneroo Road, it is assumed that traffic noise can be managed through the typical urban/residential development process.

### 4.5.3 Future management requirements

Under SPP 5.4, there is a requirement to undertake a noise assessment where SPP 5.4 areas extend into the site. A noise assessment will determine if noise levels are compatible with the proposed land use, and if future mitigation strategies such as screening walls are required as part of development.

It is expected that future subdivision approval conditions will ensure appropriate management of noise in accordance the relevant standards.

# 5 Conclusions

## 5.1 Key environmental values

Based on the environmental assessment completed across the site, the following key environmental values were identified:

- The site contains 170 potential black cockatoo nesting trees, none of which currently contain hollows suitable for breeding by black cockatoos.
- The northern portion of the site contains 0.05 ha of the Banksia woodlands TEC/PEC and 0.08 ha of the Tuart woodlands TEC/PEC, with a further 0.19 ha of vegetation determined to potentially represent Tuart woodlands TEC/PEC
- Non-indigenous heritage values, including heritage places identified on the CoW Local Heritage Survey.

## 5.2 Structure plan responses to environment

The proposed Precinct Plan responds to these key environmental values through:

- Proposed continuation of existing land uses for some identified non-indigenous heritage values, including the Wanneroo Showgrounds.
- The identification and potential retention of significant trees containing MNES fauna habitat within POS areas and road reserves.

## 5.3 Future environmental management requirements

Given the site incorporates a number of land parcels of varying ownership, the future implementation of the proposed Precinct Plan through subdivision and development will be undertaken by individual proponents and landholders, who will be responsible for addressing the future environmental management requirements of the site, where applicable.

A range of recommendations regarding the future management of environmental values have been proposed.

- Where development is proposed in areas supporting mature trees, proponents should undertake additional Tree Retention surveys to assess tree health, structure and retention feasibility, and the results should be used to inform the subdivision design process and prioritise significant tree retention.
- Where the clearing of native vegetation and/or MNES habitat is proposed, individual proponents will need to attain appropriate approvals pursuant to the EP Act and EPBC Act.
- Where clearing of fauna habitat (including intact native vegetation or mature trees) is proposed, a Fauna Relocation Plan (or similar) may be required prior to the commencement of any clearing.
- Where clearing of any black cockatoo habitat trees containing hollows potentially suitable for breeding is proposed, an internal hollow inspection (in addition to any other required fauna spotting requirements) must be undertaken prior to the commencement of any clearing.

- Proponents of future subdivision and/or development proposals which may impact upon identified heritage places afforded statutory protection (CoW management category 2 or higher), may be required to undertake heritage assessments by discretion of the City. In addition, such proposals would also require planning approvals (for heritage considerations), referral to the Heritage Council of WA (DPLH) and public consultation.
- Bushfire management requirements under SPP 3.7 *Planning in Bushfire Prone Areas* (WAPC 2024) are to be managed in accordance with the BMP (Emerge Associates 2026b).

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*Figure 1: Location Plan*

*Figure 2: Heritage Places*

*Figure 3: Vegetation Units*

*Figure 4: Vegetation Condition*

*Figure 5: Threatened and Priority Ecological Communities*

*Figure 6: Black Cockatoo Habitat Trees*

*Figure 7: Carnaby's Black Cockatoo Foraging Habitat*

*Figure 8: Forest Red-tailed Black Cockatoo Foraging Habitat*

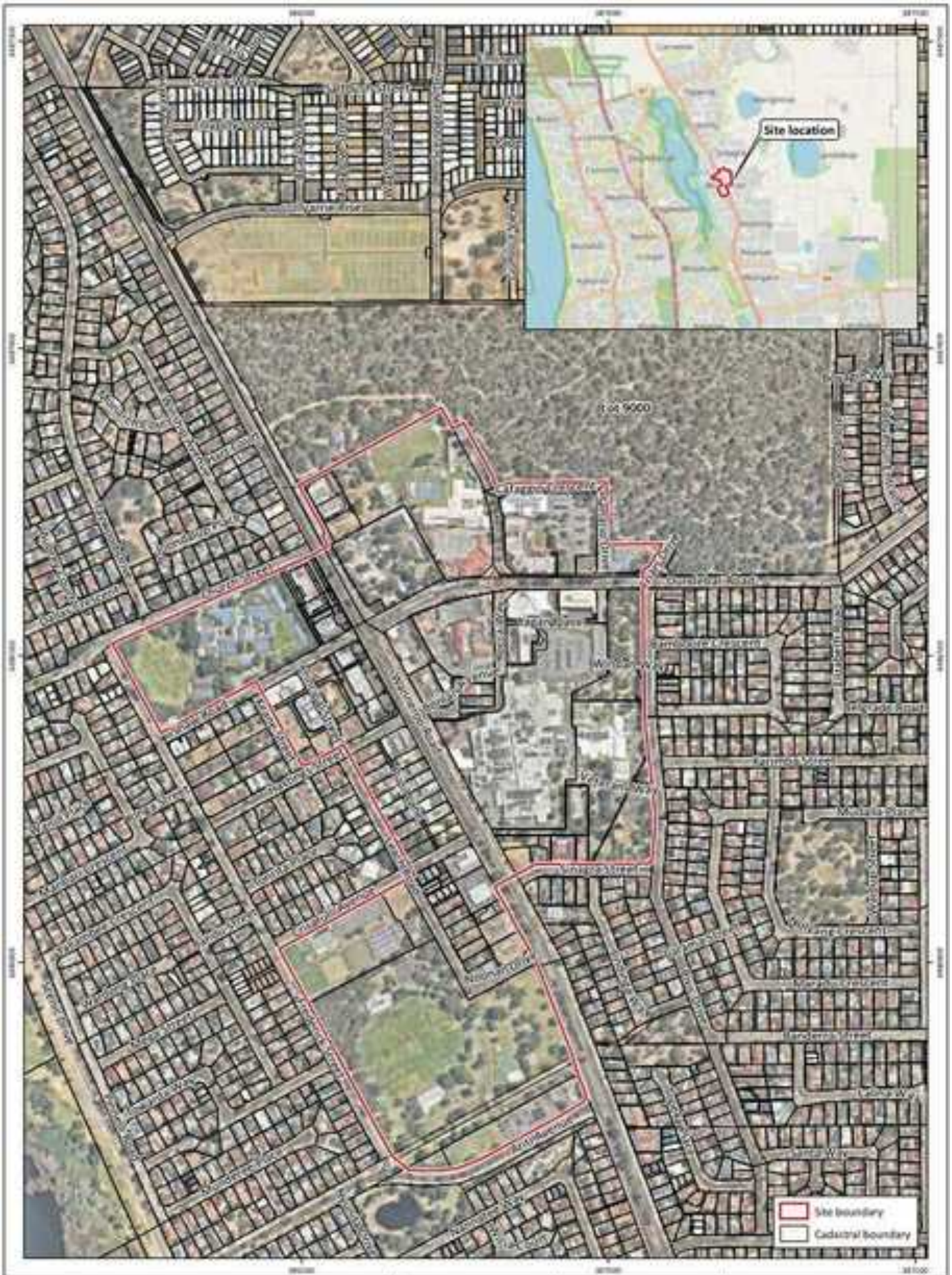


**Figure 1: Location Plan**

| | |
|---|---|
| Project: | Environmental Assessment and Management Strategy Wanneroo Town Centre |
| Client: | City of Wanneroo |

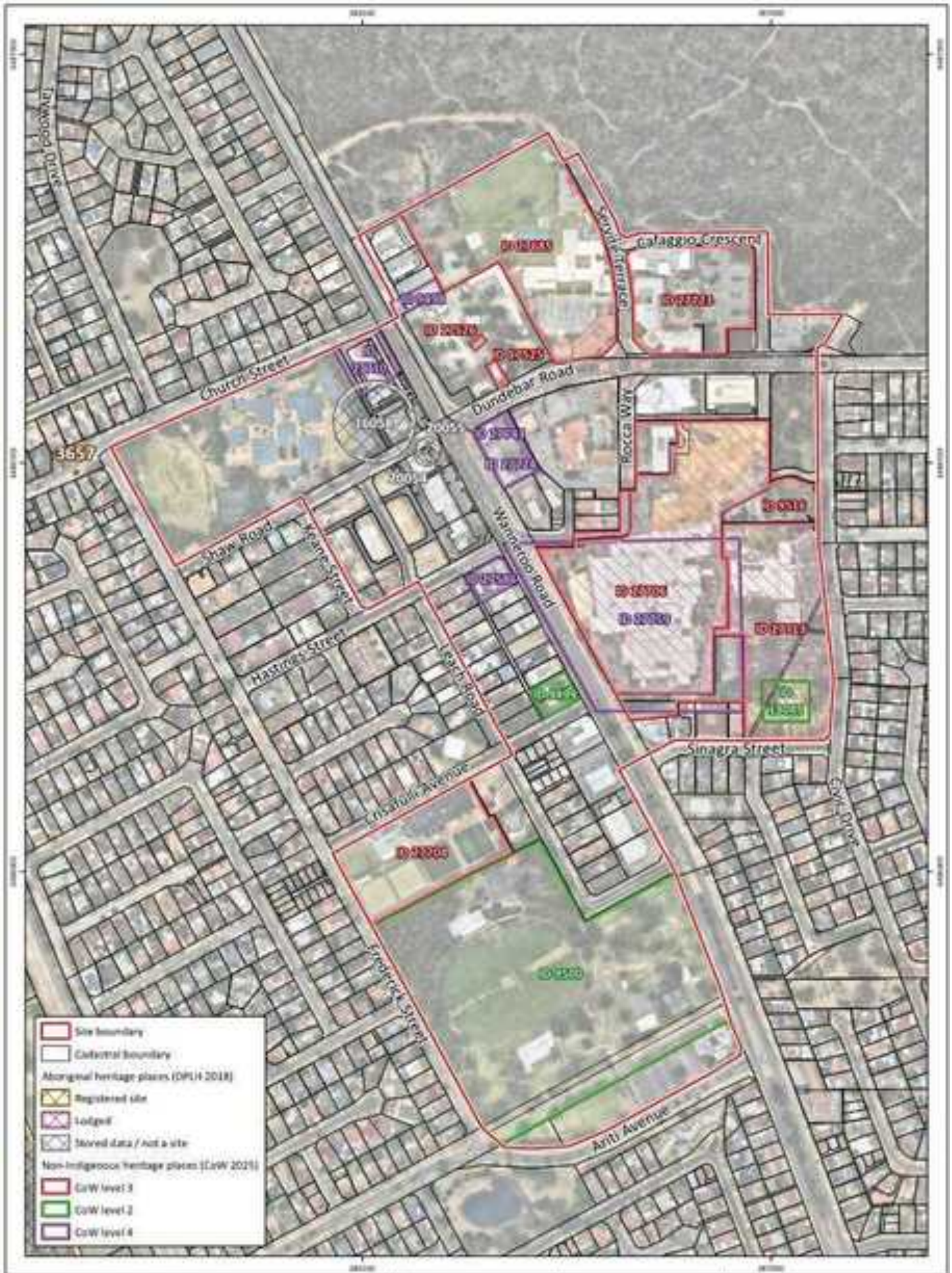


**Figure 2: Heritage Places**

| | |
|---|---|
| Project: | Environmental Assessment and Management Strategy Wanneroo Town Centre |
| Client: | City of Wanneroo |

Plan Number: EPLF 133(26)-046
Drawn: KC
Date: 12/05/2026
Checked: LFF
Approved: DAW
Date: 24/06/2026

N

0 50 100 150 Metres

Scale: 1:6,000@A4

GDA 1994 MGA Zone 50

emerge ASSOCIATES

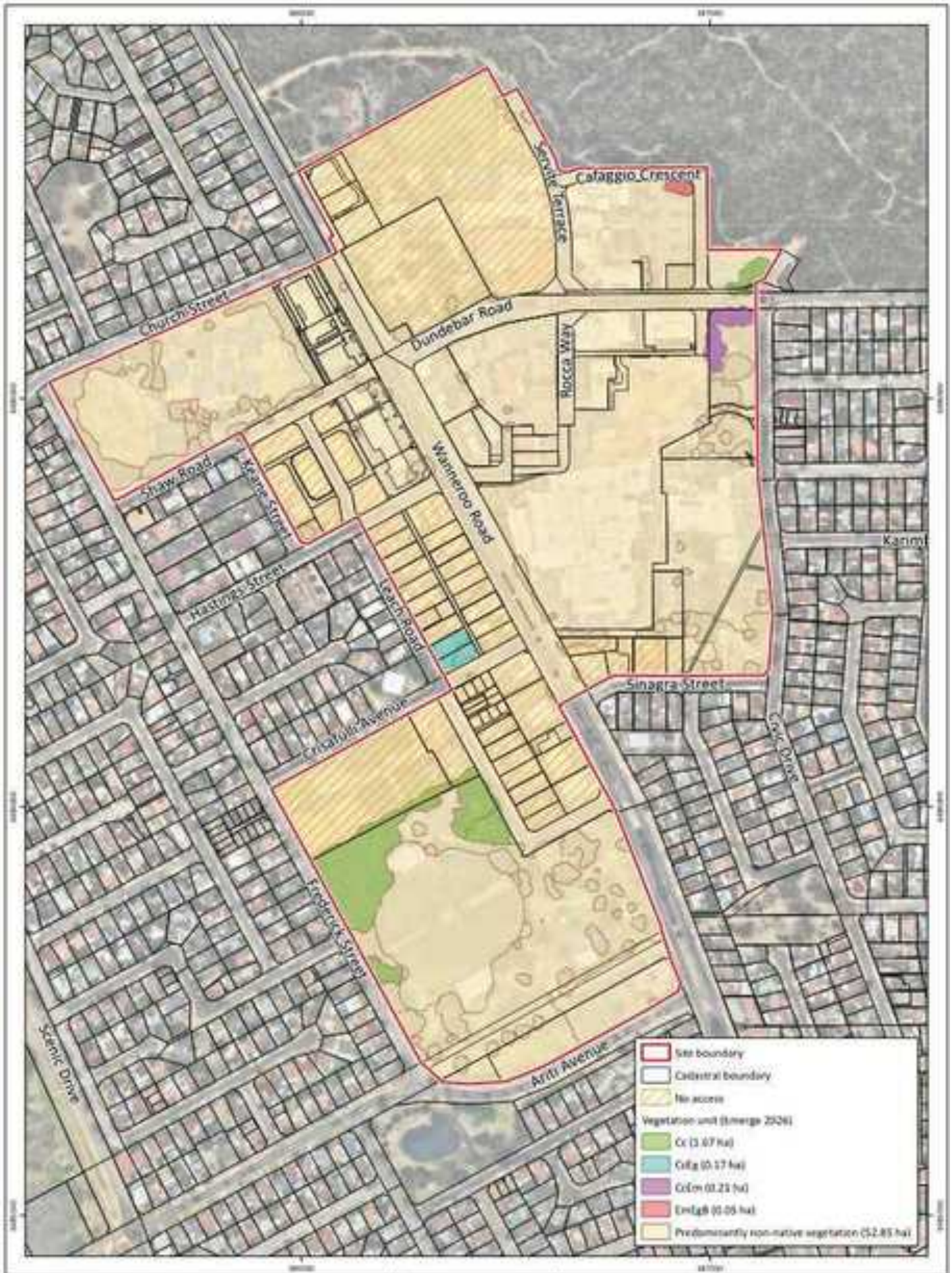


**Figure 3: Vegetation Units**

| | |
|---|---|
| Project: | Environmental Assessment and Management Strategy Wanneroo Town Centre |
| Client: | City of Wanneroo |

Plan Number: EPLF 133(26)-441
Drawn: KC
Date: 7/05/2026
Checked: LFF
Approved: DAW
Date: 24/06/2026

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Scale: 1:6,000@A4

GDA 1994 MGA Zone 50

emerge ASSOCIATES

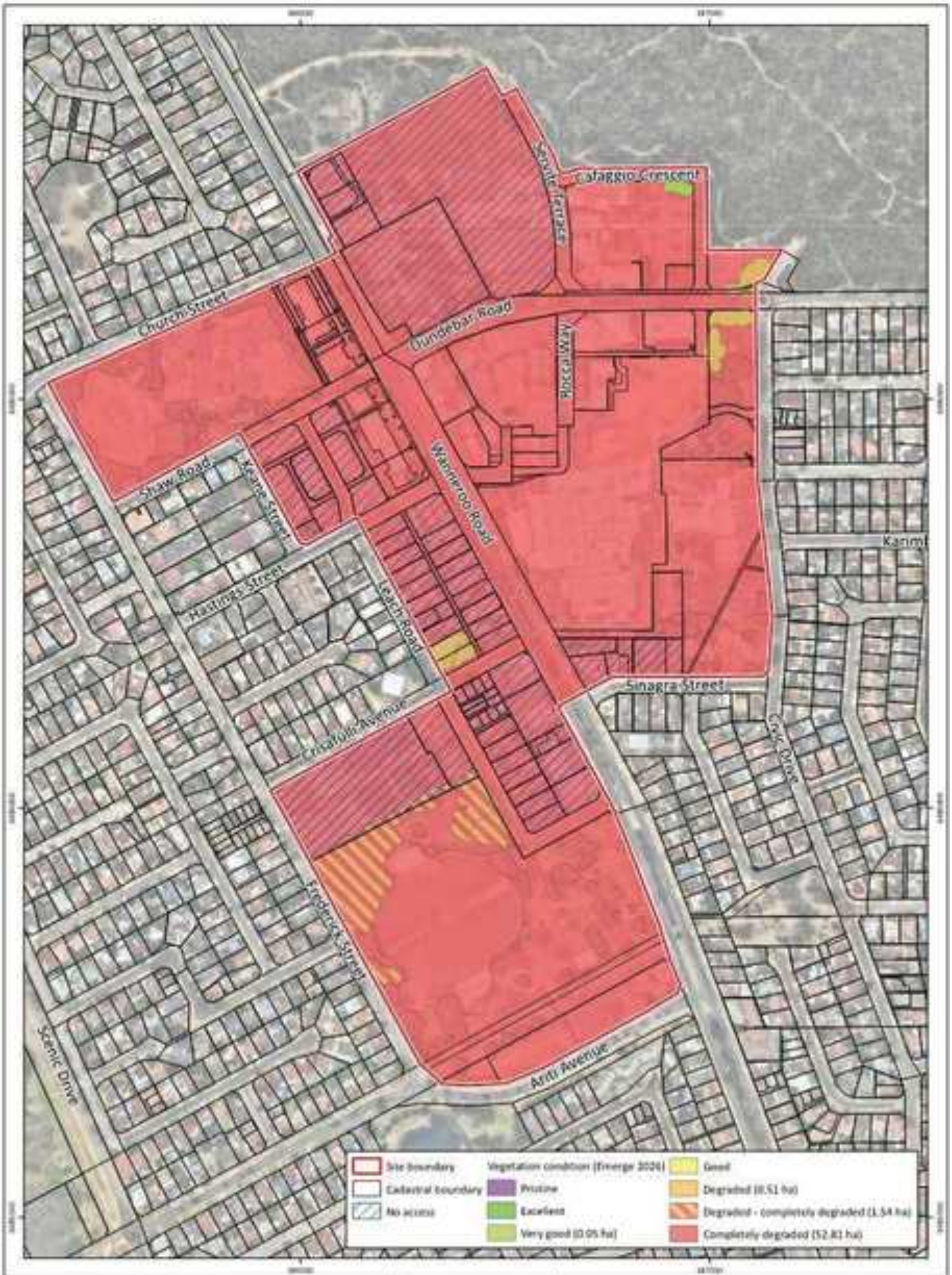



**Figure 4: Vegetation Condition**

Project: Environmental Assessment and Management Strategy
Wanneroo Town Centre
Client: City of Wanneroo

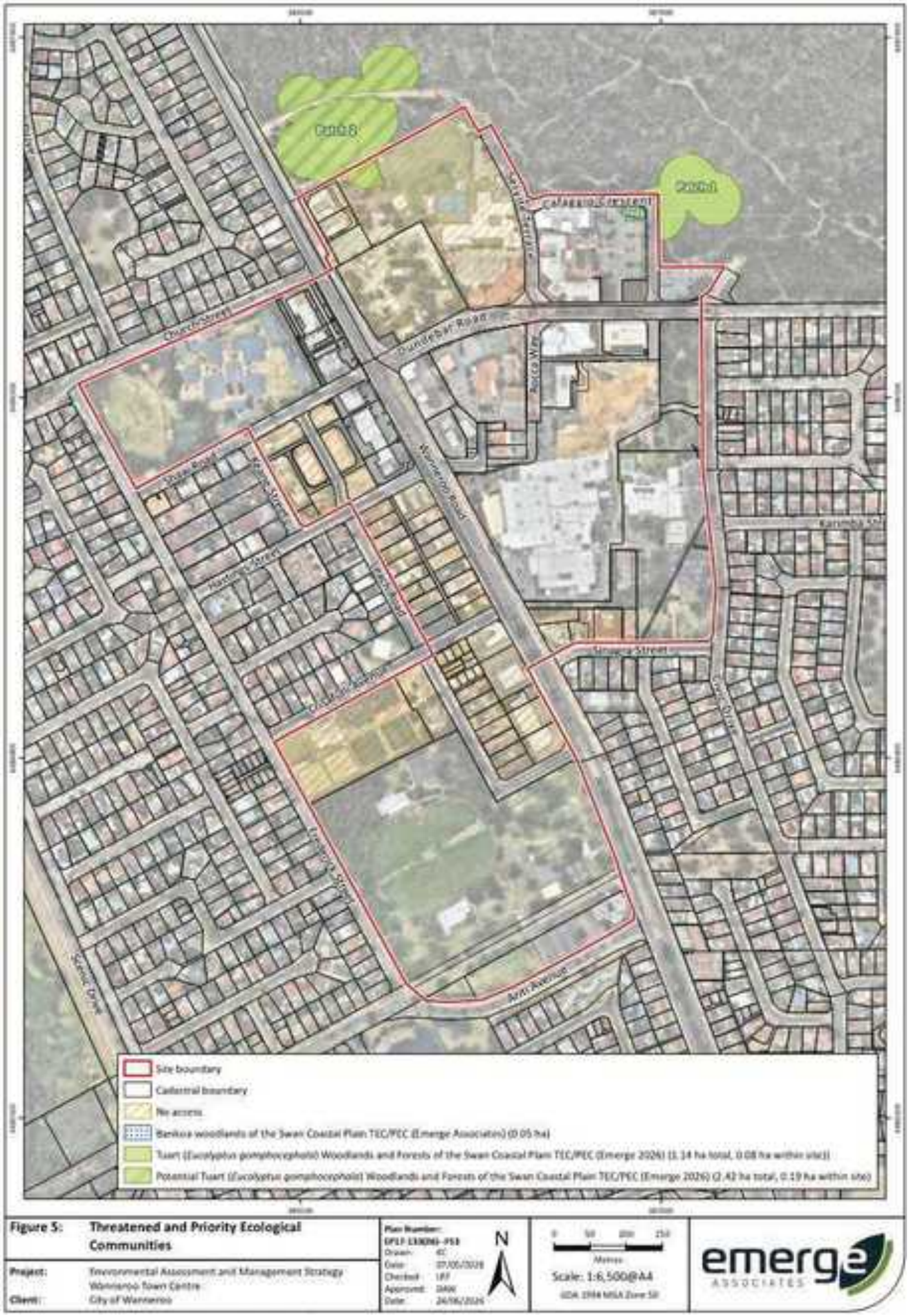



**Figure 5: Threatened and Priority Ecological Communities**

Project: Environmental Assessment and Management Strategy Wanneroo Town Centre
Client: City of Wanneroo




**Figure 6: Black Cockatoo Habitat Trees**

| | |
|---|---|
| Project: | Environmental Assessment and Management Strategy Wanneroo Town Centre |
| Client: | City of Wanneroo |

| | |
|---|---|
| Plan Number: | EPLF 133(M)-#43 |
| Drawn: | KC |
| Date: | 07/05/2026 |
| Checked: | LFF |
| Approved: | DMW |
| Date: | 24/06/2026 |




**Figure 7: Carnaby's Black Cockatoo Foraging Habitat**

| | |
|---|---|
| Project: | Environmental Assessment and Management Strategy Wanneroo Town Centre |
| Client: | City of Wanneroo |

Plan Number: EPLF 133(M)-044
Drawn: KC
Date: 07/05/2026
Checked: LFF
Approved: DMW
Date: 24/06/2026

N

0 50 100 150
Metres
Scale: 1:6,000@A4
GDA 1994 MGA Zone 50

emerge ASSOCIATES



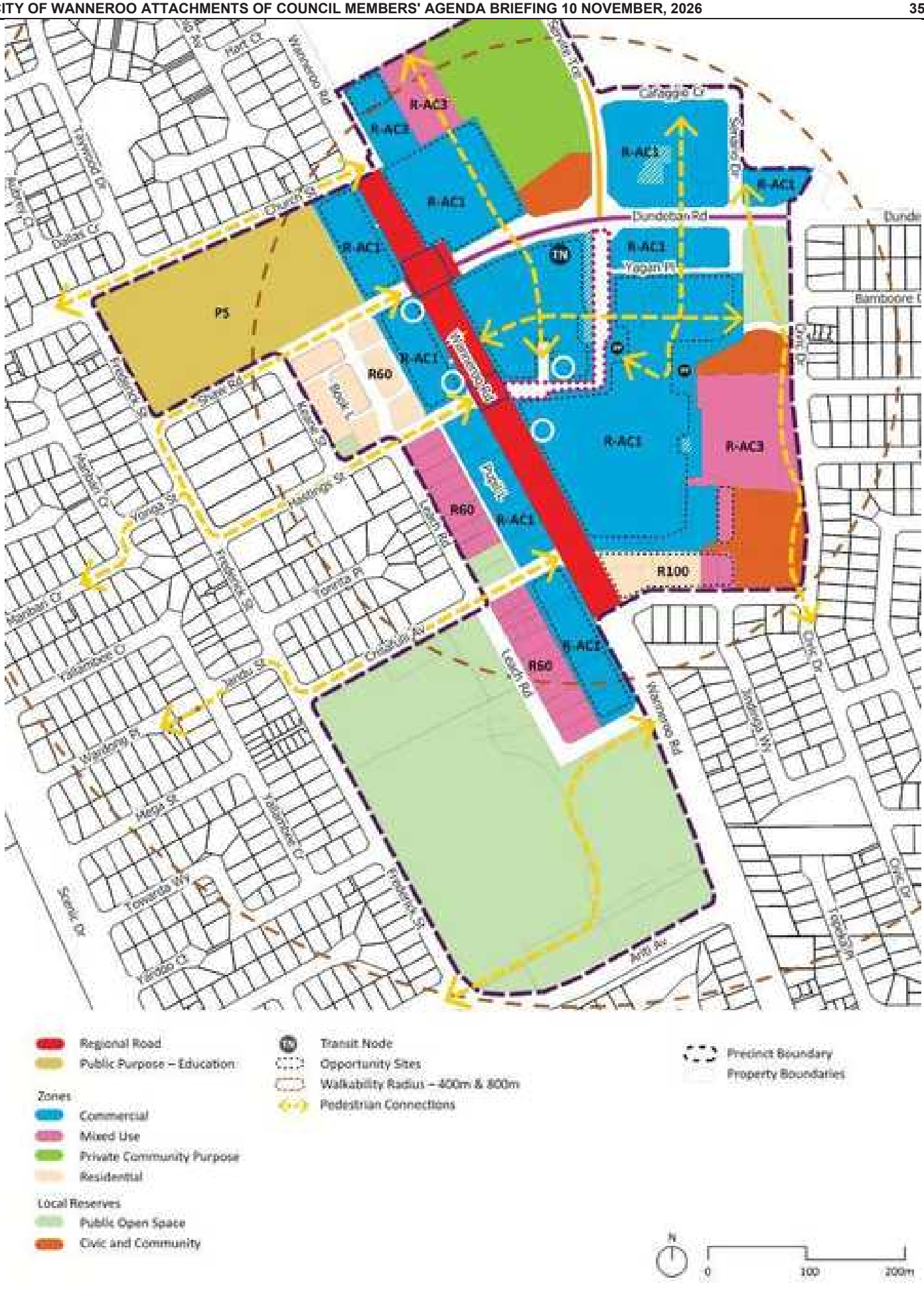

**Figure 8:** Forest Red-tailed Black Cockatoo Foraging Habitat

**Project:** Environmental Assessment and Management Strategy Wanneroo Town Centre

**Client:** City of Wanneroo

# Appendix A

## Proposed Wanneroo Town Centre Structure Plan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R-AC1
R-AC0
P5
R60
R100
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Dundebar Rd
Yagan Pl
Gnangara Rd
Lloyd St
Hastings St
Yorrete Pl
Yanchep Dr
Yanchep Way
Civic Dr
Scenic Dr
Frederick St
Loach Rd
Regional Road
Public Purpose – Education
Zones
Commercial
Mixed Use
Private Community Purpose
Residential
Local Reserves
Public Open Space
Civic and Community
Transit Node
Opportunity Sites
Walkability Radius – 400m & 800m
Pedestrian Connections
Precinct Boundary
Property Boundaries
N
0
100
200m

# Appendix B

Wanneroo Town Centre Aboriginal Heritage Desktop Assessment Report

HORIZON
HERITAGE MANAGEMENT

OPEN REPORT

# Wanneroo Town Centre Aboriginal Heritage Desktop Assessment Report

October 2018

*Damien Lafrentz*

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*Horizon Heritage Management acknowledges and pays respect to the Whadjuk Noongar Traditional Owners and community.*

# 1 PROJECT BRIEF

Horizon Heritage Management was engaged to undertake a desktop assessment in order to understand the extent and characteristics of any known and likely Aboriginal heritage values in proximity to the Wanneroo Town Centre.

# 2 DPLH RESEARCH

A search of the Department of Planning, Lands and Heritage (DPLH) online register of Aboriginal sites; the Aboriginal Heritage Inquiry System (AHIS) was conducted on the 8th of September, 2018. This search was used to provide contextual Aboriginal heritage information for inclusion and evaluation within the Wanneroo Town Centre Planning Framework.

The research determined both the registered ethnographic and archaeological sites and other heritage places within the project area and the nature and frequency of Aboriginal heritage surveys undertaken. In turn, the potential impact of the Wanneroo Town Centre Planning Framework upon these sites and places and the likelihood of identifying additional sites and heritage issues were assessed in preparation of this desktop research.

## 2.1 DPLH Aboriginal Heritage Inquiry System Results

There are no (0) registered Aboriginal sites and three (3) Other Heritage Places identified on the DPLH AHIS as being located within the Wanneroo Town Centre project area. These are DPLH 16058 Shaw Road, Wanneroo, DPLH 20054 Wanneroo Primary School Scarred Tree #1 and DPLH 20055 Wanneroo Primary School Scarred Tree #2.

## DPLH Other Heritage Places:

The following are the Other Heritage Places located within the Wanneroo Town Centre project desktop area:

**Table 1: DPLH Other Heritage Places located within the desktop area**

| DPLH ID | PLACE NAME | TYPE | STATUS | LOCATION | COMMENTS |
|---|---|---|---|---|---|
| 16058 | Shaw Road, Wanneroo | Modified Tree | Stored Data / Not A Site, No Restrictions | 386514mE 6486549mN Zone 50 Reliable | Not the result of Aboriginal activity |
| 20054 | Wanneroo Primary School Scarred Tree #1 | Modified Tree | Stored Data / Not A Site, No Restrictions | 386578mE 6486510mN Zone 50 Reliable | Not the result of Aboriginal activity |
| 20055 | Wanneroo Primary School Scarred Tree #2 | Modified Tree | Stored Data / Not A Site, No Restrictions | 386580mE 6486515mN Zone 50 Reliable | Not the result of Aboriginal activity |

***DPLH 16058 Shaw Road, Wanneroo***

This modified tuart tree was recorded in 1999 by Noongar informants and Madge Schwede. It was described as being located in a vacant block at the corner of Shaw Road and Wanneroo Road. It is about 10-15 m from the corner. It is a direct line with the Church Road scarred tree. The block was heavily vegetated with numerous zamia palms and xanthorrea trees.

The scar is located on the eastern side of the tree facing Wanneroo Road. The scar is approximately 2.5-3 m high, rising as a point, from a 0.5 m incision at the bottom. A secondary cut has been made on the southern side of the scar.

It was assessed by the Aboriginal Cultural Materials Committee (ACMC) and determined to not be a site within the meaning of section 5 of the *Aboriginal Heritage Act (1972)* at ACMC meeting id 404 on the 8th February, 2000.

This tree was removed during land clearing for a mixed business development that had building approval in 2000. Photographic images of the tree and the general area featuring the tree were assessed by Quatermaine Consultant archaeologists post its removal to determine if any other trees displayed scar modifications. Along with examining photographs of the original tree, several still standing trees were assessed with the archaeologists conclusion that although not certain, the scars are likely natural or non-Aboriginal in origin or perhaps a combination of the two. This was deemed highly likely due to the age of the tree (50 – 100 years) and the surrounding European development of the area as firstly a market garden and then as a school site.

***DPLH 20054 Wanneroo Primary School Scarred Tree #1***

This modified marri tree was recorded by Noongar People and Wayne Glendenning in 2003. It is located at the Wanneroo Primary School near to the intersection of Shaw Road and Wanneroo Road. It bears an elliptical scar on the eastern side of the trunk, which may be due to removal of bark for use a shield. The scar is located 0.35 m above the ground level and is approximately 1.5 m in length. At its widest the scar measures 0.5 m., with scar regrowth of 10 cm indicating a lengthy period of time from when the tree was scarred. The tree is approximately 5 m southwest of Wanneroo Primary School Scarred Tree #2. Another scarred tree (DPLH 16058) several metres to the north of Wanneroo Primary School Scarred Tree #1 it is claimed was destroyed due to development.

This tree and Wanneroo Primary School Scarred Tree #2 were appraised by Dr Barrie Machin for the WA Department of Education and Training in October 2005. It was his conclusion that the wounds were not the results of Aboriginal activity but rather from damage caused by fire. He recommended that the trees be removed from the register of Aboriginal sites.

***DPLH 20054 Wanneroo Primary School Scarred Tree #2***

This modified tuart tree was recorded by Noongar People and Wayne Glendenning in 2003. It is located at the Wanneroo Primary School near to the intersection of Shaw Road and Wanneroo Road. The tree is approximately 5 m northeast of Wanneroo Primary School Scarred Tree #1. The scar is at the base of the tree on the northeastern side of the trunk and

is in general the shape of a triangle. The scar measures approximately 0.8 m wide by 1.5 m high. There is some evidence of old regrowth over the scar.

This tree and Wanneroo Primary School Scarred Tree #1 were appraised by Dr Barrie Machin for the WA Department of Education and Training in October 2005. It was his conclusion that the wounds were not the results of Aboriginal activity but rather from damage caused by fire. He recommended that the trees be removed from the register of Aboriginal sites.

## DPLH Registered Aboriginal Sites:

*These two sites have been chosen for inclusion in this desktop to demonstrate that important Aboriginal cultural sites, features and materials are still found within heavily developed and urbanised residential areas.

The following are two significant Whadjuk Aboriginal sites located adjacent to but outside the Wanneroo Town Centre project desktop area:

**Table 2: DPLH Registered Aboriginal sites adjacent to the desktop area**

| DPLH SITE ID | SITE NAME | SITE TYPE | STATUS | LOCATION |
|---|---|---|---|---|
| 3657 | *Wanneroo Scarred Tree | Modified Tree | Registered Site | Outside Survey Area |
| 3740 | *Lake Joodalup | Mythological, Camp, Hunting Place | Registered Site | Outside Survey Area |

### *DPLH 3657 Wanneroo Scarred Tree*

This site is a modified tree located on the corner of Church Street and Fredrick Street in Wanneroo, approximately 500m east of Lake Joondalup. It is described as an old Jarrah tree with two scars near its base of which one shows evidence of a metal axe indicating the scars to be relatively modern. This site is located marginally outside the desktop area.

### *DPLH 3740 Lake Joondalup*

Lake Joondalup is a permanent lake in the northern suburb of Joondalup in Perth. It is known to have been a favoured Noongar camping area in traditional and more recent times. It was also a resource area where turtle and wildfowl were hunted. The area around Lake Joondalup was called *Joondol* (crayfish) and the area was a significant place mainly because there was plenty of food and covering for winter. A Noongar story is also associated with Malup Island within Lake Joondalup. Lake Joondalup is approximately 500 m west of the desktop area.

## DPLH Heritage Survey Reports:

There are fourteen heritage survey reports lodged with the DPLH which relate to the Other Heritage Places and Registered Sites discussed above. Only *three (3) heritage survey reports are related to the three modified tree places (DPLH 16058, 20054 & 20055) found within the Wanneroo Town Centre desktop area.

**Table 3: DPLH Heritage Survey Reports**

| DPLH HSR ID | REPORT TITLE | AUTHOR |
|---|---|---|
| *18458 | Report on a preliminary archaeological assessment of an Aboriginal scarred tree site Lots 1 and 152, Shaw Road, Wanneroo | Quartermaine, G |
| 21909 | Study of groundwater - related Aboriginal Cultural Values on the Gnangara Mound, Western Australia | McDonald, E |
| 21910 | Study of groundwater - related Aboriginal Cultural Values on the Gnangara Mound, Western Australia : Volume 1 restricted report | McDonald, E |
| 21911 | Study of groundwater - related Aboriginal Cultural Values on the Gnangara Mound, Western Australia : Volume 2 inventory of registered sites restricted report for Department of Environment | McDonald, E |
| *22144 | An ethnographic appraisal of a Tuart and Marri Tree at the junction of Shaw Road and Wanneroo | Machin, B |
| *22146 | Report of an archaeological survey of the Wanneroo Primary School development site | Glendenning, W |
| 22599 | Report on an Aboriginal Heritage Investigation under the Aboriginal Heritage Act 1972 to support a public submission on the draft East Wanneroo Land Use and Water Management Strategy | Australian Interaction Consultants |
| 22781 | Site Identification survey of the proposed closure of several caves in Yellagonga Regional Park, Joondalup, WA | Australian Interaction Consultants |
| 101370 | Final Report: Cultural Significance of Aboriginal Sites in the Wanneroo Area : 1998 | Kauler, Lily Bhavna. |
| 104314 | Report of an archaeological and ethnographic survey for Aboriginal sites Neerabup Wanneroo | Murphy, A |
| 104512 | Report of an archaeological and ethnographic survey for Aboriginal sites on the northern suburbs rail line Ocean Reef Road to Burns Beach Road | Smith, J |
| 104620 | Yellagonga Regional Park: city of Wanneroo position paper | Brittain, R |
| 105116 | Lake Joondalup regional open space north – west portion: landscape master plan | James, B |
| 106162 | A report of an archaeological survey of Beenyup Waste Water Treatment Plant Craigie, Western Australia | Allen, C |

## 2.2 Summary Discussion

Very few Aboriginal heritage surveys have been conducted within the Wanneroo town centre desktop area. The increased rate of urbanisation in the Perth area and connected developments has resulted in great disturbance to the original environmental contexts. This directly affects the likelihood of locating further surface Aboriginal cultural material (archaeological). The natural environment has been heavily disturbed with vegetation clearing and the development of the Wanneroo area.

Despite this, an indication of potential Aboriginal heritage within the vicinity of the development may be derived from looking at the local environment and ascertaining what sites have previously been reported from such land units, as well as what previous research conducted in the surrounding area has reported.

Lake Joondalup as a prominent water body, especially as a fresh water source, was of vital importance to Whadjuk Noongar people as it is to all Aboriginal people across Australia. The rivers, pools and wetlands were a consistent source of food and water which also often linked campsites along walking tracks and places of mythological and spiritual significance.

In the South West of Western Australia the Rainbow Serpent or *Wougal* is central to Noongar cultural beliefs. Noongars believe that the *Wougal* is both a creative force, shaping the landscape during *Nyittiny* (creation times) and a retributive force having the ability to harm, particularly against those who offend it by not carrying out their cultural responsibilities in protecting country, especially water sources. Creation time stories remain in the oral tradition of many Whadjuk Noongar families. It is these set of associations in particular that concern contemporary Whadjuk Noongar people.

Lake Joondalup (OPLH 3740) as a natural feature and mythological associations with the *Wougal* makes it a highly significant place. Its maintenance and protection is vital to help preserve Whadjuk Noongar cultural heritage values. The rivers, pools and wetland areas of the Perth metropolitan area were part of an extensive communication network that linked Aboriginal groups across the Swan Coastal Plain with other Noongar groups to the north (Yued), south (Gnaala Karla Boodja) and east (Ballardong).

The fresh water lake systems and their surrounding land found in the broader Wanneroo Joondalup areas were exploited by the Whadjuk Noongar People in pre-contact times and by both Whadjuk Noongar People and Europeans in the years following contact. Several possible modified trees (DPLH 3657, 16058, 20054 & 20055) have previously been identified within or adjacent to the desktop area. Modified trees (those that display signs of deliberate removal of bark or wood) are associated with natural resource utilisation and it has been suggested are often found near to or linked with traditional Noongar campsites. The lack of any surface expression artefacts or stone tools is not surprising considering the development of the Wanneroo area.

The contentious nature of determining whether a tree has been modified by natural processes (fire, disease or storm) or deliberate human activities has seen the majority of the possible modified trees (16058, 20054 & 20055) found within the Wanneroo Town centre

desktop area deemed to not be of Aboriginal origin. There is an area in the north of the Wanneroo Town Centre desktop area that appears to be natural bush vegetation. Due to the previously identified modified trees within the developed area of the Wanneroo Town Centre desktop area; examination and assessment of this natural area for mature (Tuart & Marri) trees that could have modifications associated with Whadjuk Noongar cultural practices should be considered as a cultural heritage management strategy.

Whadjuk Noongar people have concerns that their culture cannot continue if the natural environment is destroyed. Natural resources are integral to the maintenance, continuance and transmission of Whadjuk Noongar culture. The Whadjuk Noongar's close connection with *booja* (country) forms the foundation for much of their culture, spirituality and identity.

# 3 WHADJUK PEOPLE

## 3.1 Identification of key Aboriginal Stakeholder Group

The existence of a native title claim (NTC) is seen as sufficient to establish an Aboriginal person's 'right to speak' about heritage issues.

### Identified Stakeholder Group

The table below outlines the Whadjuk (Noongar) people:

**Table 4: Aboriginal group identified as a key stakeholder in the Wanneroo Town Centre desktop**

| NTC GROUP | NTC | CONTACT |
|---|---|---|
| Whadjuk People | WC2011/009<br>WAD242/2011 | SWALSC |

### Whadjuk People

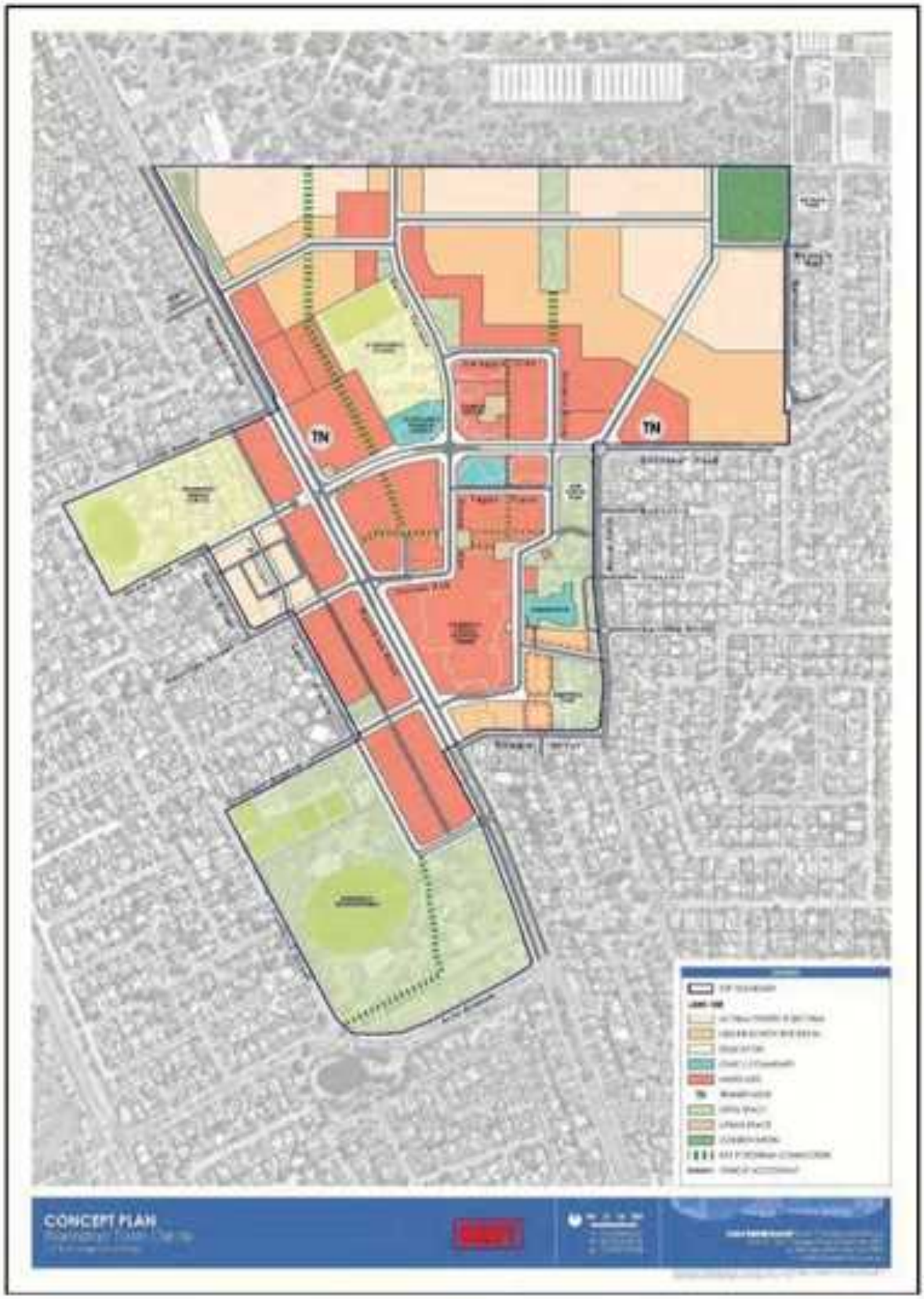
The Whadjuk People have had a registered Native Title Claim since 2011 which covers the: City Of Armadale, City Of Bayswater, City Of Belmont, City Of Canning, City Of Cockburn, City Of Fremantle, City Of Gosnells, City Of Joondalup, City Of Melville, City Of Nedlands, City Of Perth, City Of South Perth, City Of Stirling, City Of Subiaco, City Of Swan, City Of Vincent, City Of Wanneroo, Shire Of Beverley, Shire Of Chittering, Shire Of Gingin, Shire Of Kalamunda, Shire Of Mundaring, Shire Of Northam, Shire Of Peppermint Grove, Shire Of Toodyay, Shire Of York, Town Of Bassendean, Town Of Cambridge, Town Of Claremont, Town Of Cottesloe, Town Of East Fremantle, Town Of Mosman Park and the Town Of Victoria Park.

# 4 DESKTOP CONCLUSIONS AND RECOMMENDATIONS

Horizon Heritage Management makes the following conclusions and recommendations:

- Limited Aboriginal heritage surveys have been undertaken within the Wanneroo Town Centre desktop area.
- No (0) registered Aboriginal sites; afforded protection under the WA *Aboriginal Heritage Act (1972)*, are located within the Wanneroo Town Centre desktop area.
- Important landscape features connected with mythological associations are absent within the Wanneroo Town Centre desktop area. Lake Joondalup is such a feature and is located outside of the desktop area to the west.
- The majority of the Wanneroo Town Centre desktop area has been so highly developed and disturbed from its original natural environment that is unlikely any surface expressions of cultural material (artefacts) would be present. However, potential modified trees could be present as demonstrated by those previously identified near the Wanneroo Primary School within the Wanneroo Town Centre desktop area.
- Within the northern portion of the Wanneroo Town Centre desktop area a section of remnant native bushland remains which could potentially contain Aboriginal heritage values such as modified trees or surface expressions of cultural material (artefacts).
- The key Aboriginal stakeholder group for the Wanneroo Town Centre desktop area is the Whadjuk People.
- The City of Wanneroo should consider undertaking heritage consultation with the Whadjuk People of the Wanneroo Town Centre structure plan and consider commissioning an Aboriginal heritage archaeological survey of the remnant native bushland identified in the northern portion of the structure plan.

**Figure 1: Wanneroo Town Centre Concept Plan Map**



# Appendix C

## Targeted Black Cockatoo Assessment

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Emerge contact: Rachel Weber

29 May 2026

Attention: Amanda Fox
City of Wanneroo
Locked Bag 1, Wanneroo WA 6946

*Delivered by email to: Amanda.Fox@wanneroo.wa.gov.au*

Dear Amanda

# TARGETED BLACK COCKATOO ASSESSMENT – WANNEROO TOWN CENTRE STRUCTURE PLAN

## 1 INTRODUCTION AND SCOPE OF WORK

Emerge Associates (Emerge) were engaged by the City of Wanneroo to undertake a targeted black cockatoo assessment over the Wanneroo Town Centre Structure Plan area in Wanneroo as shown in **Figure 1** (hereafter referred to as the 'site').

The purpose of the assessment was to provide information on habitat within the site for threatened species of black cockatoo.

As part of this scope of work, the following tasks were undertaken:

- Desktop study to provide contextual information relevant to the assessment of black cockatoos and black cockatoo habitat within the site.
- Field survey to record habitat for black cockatoos.
- Analysis and mapping of contextual information, black cockatoo breeding, roosting and foraging habitat (if present).
- Documentation of the desktop study, methods, results, discussion and conclusions.

## 2 DESKTOP STUDY

Three threatened species of black cockatoo occur in the south-west of WA (referred to herein collectively as 'black cockatoos'):

- *Zanda*[1] *latirostris* (Carnaby's black cockatoo) which is listed as 'endangered' under the EPBC Act and the BC Act.
- *Zanda*[1] *baudinii* (Baudin's black cockatoo) which is listed as 'endangered' under the EPBC Act and the BC Act.
- *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo) which is listed as 'vulnerable' under the EPBC Act and the BC Act.

[1] Previously *Calyptorhynchus*

Black cockatoo habitat is conventionally separated into breeding, roosting and foraging categories. **Breeding habitat** refers to 'habitat trees' which consist of native trees of a suitable species that either contain nesting hollows or have a large enough diameter at breast height[2] (DBH) to develop a nesting hollow over time(DAWE 2022). Black cockatoos typically utilise breeding habitat within their defined breeding season: August to March for Baudin's black cockatoo, July to December for Carnaby's black cockatoo breed and throughout the year for forest red-tailed black cockatoo, with peaks in April – June and August – October (DAWE 2022). **Roosting habitat** consists of a stand of tall trees (>8 m) within 6 km of water and food resources and 12 km of additional foraging resources where black cockatoos rest overnight (DAWE 2022; Glossop *et al.* 2011; Le Roux 2017; Shah 2006). **Foraging habitat** is vegetation that black cockatoos are known to feed on, which varies between black cockatoo species (DAWE 2022; Groom 2011; Johnstone *et al.* 2011). A full range of foraging plants and their foraging category assigned by Emerge Associates is available in **Appendix A**.

A review of black cockatoo datasets was undertaken as outlined in **Table 1** and shown in **Figure 2**. Counts for all known black cockatoo roosts within 10 km are available in **Appendix B**.

*Table 1: Summary of black cockatoo background review*

| Category | Black cockatoo site context | | | Source |
|---|---|---|---|---|
| | Carnaby's | Baudin's | Forest red-tailed | |
| Site located within species distribution | Yes | No | Yes | (DAWE 2022) |
| Site in known breeding distribution | Yes# | N/A | Yes* | (DAWE 2022; DBCA 2026) |
| Confirmed or possible breeding hollows within 10 km^ | Yes | N/A | No | (DBCA 2025; Glossop *et al.* 2011) |
| Site located in important bird area | Yes | N/A | N/A | (BirdLife International 2024; DPaW 2013) |
| Known roosts occur within site^ | 0 | N/A | 0 | (BirdLife International 2024) |
| Known roosts occur within 10 km of site^ | 24 | N/A | 7 | |
| Potential foraging habitat within site | No | N/A | No | (Emerge Associates 2021; Forest Products Commission 2020) |
| Potential foraging habitat in local area (including pine plantations) | Yes | N/A | Yes | |

#The site is located close to but outside of the modelled breeding range of Carnaby's black cockatoo, the presence of confirmed breeding hollows close to the site and also outside of the modelled breeding range suggests that breeding could occur in the local area.

*Whilst no datasets of breeding distributions are available for forest red-tailed black cockatoos, they are known to nest across the Swan Coastal Plain (Johnstone *et al.* 2013b).

^Results from DBCA database search.

^White-tailed black cockatoo roosts can be Carnaby's black cockatoo and/or Baudin's black cockatoo.

## 3 METHODS

### 3.1 Field survey

Ecologists from Emerge visited the site on 10 and 14 April and 29 May 2026 to conduct the field survey. The presence of potential black cockatoo breeding, night roosting and foraging habitat was recorded. If observed, the presence of black cockatoos within or near the site was noted.

#### *3.1.1.1 Breeding habitat*

All native eucalypts within the site with a DBH ≥50 cm were recorded. Occasionally, native eucalypts were encountered that met DBH requirements but did not contain a trunk/branch of a sufficient size to support a hollow suitable for use by black cockatoos. For example, the tree may have been less than 3 m tall or had a trunk that forked between 1.3 m and 3 m in height and after the fork no limbs

[2] ≥50 cm or ≥30 cm for wandoo or salmon gum

had a diameter of ≥50 cm. These trees were not recorded as habitat trees as the likelihood they would form a suitable hollow was low.

Hollows that appeared potentially suitable for use by a black cockatoo from the ground were further inspected using a drone and/or a pole-mounted camera. During the hollow inspection the internal dimensions of the hollow were confirmed if possible and an assessment was made for signs of use such as chew marks around the hollow entrance, nesting material, eggs, feathers or the presence of birds within the hollow.

To be suitable for use as breeding habitat by black cockatoos it was considered a hollow must:

- have an entrance opening of at least 10 cm but preferably 20-30 cm (Groom 2010; Johnstone *et al.* 2013a; Saunders *et al.* 1982)
- be located at least 3 m from the ground (Groom 2010; Johnstone and Storr 1998; Saunders 1979b, 2014)
- be located in a trunk or branch that is generally large enough to contain a hollow that has a floor diameter of at least 40 cm and depth of 50-200 cm such that it could house an adult black cockatoo and nestlings (DPaW 2015; Johnstone and Storr 1998; Saunders 1979a; Saunders 2014)
- have vertical or near vertical orientation (Johnstone *et al.* 2013a; Johnstone and Kirkby 2008).

Each habitat tree was assigned to a category listed in **Table 2** based on current black cockatoo guidelines (DAWE 2022).

*Table 2: Habitat tree categories (DAWE 2022)*

| Category | Specifications |
|---|---|
| Known nesting tree | Trees (live or dead but still standing) which contains a hollow where black cockatoo breeding has been recorded or which demonstrates evidence of breeding (i.e. showing evidence of use through scratches, chew marks or feathers). |
| Suitable nesting tree | Trees with suitable nesting hollows present^, although no evidence of use. Note that any species of tree may develop suitable hollows for breeding. |
| Potential nesting tree | Trees that have a suitable DBH to develop a nest hollow, but do not currently have suitable nesting hollows. Trees suitable to develop a nest hollow in the future are 300-500 mm DBH. Note that many species of eucalypt may develop suitable hollows for breeding. |

^Hollow determined to be suitable for use as breeding habitat by black cockatoos as listed above in Section **3.1.1.1**

#### *3.1.1.2 Roosting habitat*

If present, groups of tall native and non-native trees were assumed to provide roosting habitat. The presence of active or historical roosts in these trees was determined through evidence of roosting activity, such as branch clippings, droppings or moulted feathers.

#### *3.1.1.3 Foraging habitat*

Foraging habitat was identified by assessing vegetation in the site for plant species known to provide food for black cockatoos (Davies 1966; DAWE 2022; Groom 2011; Johnstone *et al.* 2011; Johnstone and Kirkby 1999; Johnstone and Storr 1998; Saunders 1980).

Foraging habitat was classified as either 'native' or 'non-native' based on the predominant vegetation's naturalised status and in accordance with DAWE (2022).

It was also classified as either 'primary' or 'secondary' based on black cockatoo foraging preferences. Primary food plants were defined as those with historical and contemporary records of regular consumption by a black cockatoo species. Secondary food plants were defined as plants that black cockatoo species have been recorded consuming occasionally or that, based on their limited extent or agricultural origin, should not be considered a sustaining resource. A list of plant species classified as primary or secondary food plants is provided as **Appendix A**.

Each patch of foraging habitat was assigned a foraging value for each species of black cockatoo likely to occur within the site. As it is not always possible to separate out food plants from non-food plants, mapped foraging habitat may also include vegetation comprising non-food plants. The proportion of non-food plants in mapped foraging habitat was minimised as far as practicable.

Evidence of black cockatoo foraging, such as chewed fruits, was searched for within the site and allocated to a black cockatoo species where possible.

#### 3.1.2 Black cockatoo foraging habitat value

Foraging habitat was described according to the dominant flora species or vegetation type present and mapped using boundaries interpreted from aerial photography and notes taken in the field. The foraging value of each patch of foraging habitat was attributed separately for each species of black cockatoo likely to occur in the site. Foraging value was assigned as outlined in **Section 3.1.1.3**.

### 3.2 Survey limitations

It is important to note constraints imposed on assessments and the degree to which these may have limited outcomes. An evaluation of the desktop study and methods applied in the current assessment against standard constraints outlined in the EPA document *Technical Guidance – Terrestrial vertebrate fauna surveys for environmental impact assessment* (EPA 2020) is provided in **Table 3**.

*Table 3: Evaluation of the fauna assessment against standard constraints outlined in EPA (2020)*

| Constraint | Degree of limitation | Details |
|---|---|---|
| Level of survey | No limitation | A targeted black cockatoo survey was undertaken. The level of survey and survey effort are considered adequate to assess the black cockatoo habitat values within the site. |
| Scope | No limitation | The survey focused on threatened species of black cockatoo. |
| Proportion of fauna identified, recorded and/or collected. | N/A | N/A |
| Sources of information e.g. previously available information (whether historic or recent) as distinct from new data. | No limitation | Adequate information was available from database searches, previous surveys and literature references. |
| The proportion of the task achieved and further work which might be needed. | No limitation | The task was achieved in its entirety. |
| Experience level of personnel | No limitation | This fauna and black cockatoo assessment was undertaken by qualified ecologist with one to three years of experience in undertaking black cockatoo surveys in Western Australia. Technical review was undertaken by a principal environmental consultant with over 15 years' experience in environmental science in Western Australia. |
| Suitability of timing, weather and season | No limitation | Survey timing is not considered to be of great importance for black cockatoo habitat assessments but the weather conditions during the survey were ideal for detecting fauna species. |
| Completeness | No limitation | The desktop study and field survey components of the survey were completed comprehensively. |
| Spatial coverage and access | No limitation | Site coverage was comprehensive (track logged). |

| | | |
|---|---|---|
| | Limitation | Site access was limited to public land (refer **Figure 1**). Private lots were assessed from adjacent public land where possible but additional habitat trees and foraging habitat may occur that were not visible/measurable from the boundary. |
| Survey intensity | No limitation | The intensity of the survey was adequate given the size of the site and the relatively low habitat value present. |
| Influence of disturbance | No limitation | Most of the site is highly modified due to historical disturbance. However, no recent disturbance was noted that may have affected outcomes of the survey. |
| Adequacy of resources | No limitation | All resources required to perform the survey were available. The guidance currently available from Commonwealth and State agencies on the assessment of black cockatoo habitat is limited and relies heavily on technical experts preparing their own methodology. This assessment applies an internally developed methodology that is considered to provide a systematic and balanced characterisation of black cockatoo habitat. |
| | | The locations of habitat trees and other trees in the site were recorded using a handheld GPS receiver with approximately ±5 metre accuracy. Where habitat trees occurred very close to the site boundary, they were conservatively included to compensate for potential GPS error. |

## 4 RESULTS

### 4.1.1 Breeding habitat

170 black cockatoo habitat trees were recorded within the site as shown in **Figure 3**.

The habitat trees comprised 102 *Corymbia calophylla* (marri), 26 *Eucalyptus marginata* (jarrah), 32 *Eucalyptus gomphocephala* (tuart), five *Eucalyptus rudis* (flooded gum) and five stag (dead) trees. Five of the trees were deemed to contain potentially suitable hollows based on initial ground inspection.

An internal hollow inspection was undertaken for five habitat trees, which were originally assessed to potentially contain suitable hollows based on the initial inspection from ground level (ID 4016, 4017, 4059, 4096, 4106). Following internal inspection none of the hollows are considered suitable for nesting by black cockatoos. The reasons a hollow may have been considered unsuitable include that it had a shallow depth, an uneven base or an internal cavity size that would be too small for a black cockatoo to nest within.

A summary of the habitat trees recorded within the site is provided in **Table 4** and an inventory in **Appendix C**.

***Table 4: Habitat trees within the site***

| Category | No. trees |
|---|---|
| Known nesting trees | 0 |
| Suitable nesting trees | 0 |
| Potential nesting trees | 170 |
| Total nesting trees | 170 |

### 4.1.2 Roosting habitat

No roosts or evidence of roosting were observed within the site during the survey.

### 4.1.3 Foraging habitat

A total of 4.85 ha of foraging habitat for Carnaby's black cockatoo and 4.45 ha for forest red-tailed black cockatoo were recorded in the site as shown in **Figure 4** and **Figure 5**.

The extent of foraging habitat by value category is detailed in **Table 5**.

***Table 5: Foraging habitat recorded within the site***

| Foraging habitat | Black cockatoo species and area of foraging habitat (ha) | |
|---|---|---|
| | Carnaby's | Forest red-tailed |
| Native primary | 3.66 | 3.62 |
| Native secondary | 0.82 | 0.55 |
| Non-native primary | 0.04 | 0.03 |
| Non-native secondary | 0.33 | 0.25 |
| **Total** | **4.85** | **4.45** |

## 5 DISCUSSION

As outlined in **Table 1**, Carnaby's black cockatoo and forest red-tailed black cockatoo may occur and breed in the site, but the site lies outside of the modelled distribution range of Baudin' black cockatoo.

### 5.1.1 Breeding habitat

As none of the habitat trees contain hollows suitable for use by black cockatoos for breeding, the site does not currently provide nesting habitat for black cockatoos. The habitat trees within the site have the potential to form suitable hollows in the future. However, it will likely take many decades for hollows to form that are large enough to be suitable for use by black cockatoos for breeding.

### 5.1.2 Roosting habitat

No secondary evidence of roosting such as branch clippings, droppings or feathers were observed during the survey and no known roosts are mapped as occurring within the site. Therefore, there is no reason to suspect that roosting by black cockatoos has recently occurred in the site. Nevertheless, the site contains many tall trees and groups of tall trees that have the potential to provide roosting habitat for black cockatoos. The closest known roost is located one km south of the site.

### 5.1.3 Foraging habitat

The site contains native foraging habitat for Carnaby's cockatoo and forest red-tailed black cockatoo. The highest value foraging resource in the site is associated with the marri and jarrah trees (native primary for both species of black cockatoo) and **Melia azedarach* (non-native primary for forest red-tailed black cockatoo and on-native secondary for Carnaby's black cockatoo).

Tuart trees provide a native secondary food source for both species, as well as a number of planted non-native eucalypts including **Eucalyptus citriodora* and **Eucalyptus camaldulensis* (forest red-tailed black cockatoo foraging only). Additionally, *Xanthorrhoea preissii* (grass trees) provide a native secondary resource for Carnaby's black cockatoo. For plants categorised as secondary options, records of black cockatoos consuming the fruit of these plants exist (DoEE 2017; Groom 2011), but they are likely to be supplementary options that are opportunistically consumed rather than relied upon.

Extensive areas of higher quality foraging habitat for all three species exists in the wider local area, including adjacent to the north-eastern portion of the site.

## 6 CONCLUSIONS

Outcomes of the assessment include the following:

- Carnaby's black cockatoo and forest red-tailed black cockatoo may occur and breed in the site, but the site lies outside of the modelled distribution range of Baudin' black cockatoo.
- The site contains 170 potential nesting trees. Therefore, the site does not currently provide suitable breeding habitat for species of black cockatoo.
- No roosting evidence was recorded. Many tall trees in the site may provide roosting habitat for black cockatoos.
- A total of 4.85 ha of foraging habitat for Carnaby's black cockatoo was recorded, comprising 0.82 ha of native primary plants, 0.82 ha of native secondary plants, 0.04 ha of non-native primary plants and 0.33 ha of non-native secondary plants.
- A total of 4.45 ha of foraging habitat for forest red-tailed black cockatoo was recorded, comprising 3.62 ha of native primary plants, 0.03 ha of non-native primary, 0.55 ha of native secondary plants and 0.25 ha of non-native secondary plants.

## 7 SUMMARY AND CLOSING

We trust that this letter provides sufficient details on the black cockatoo values and tree retention values within the site. Should you have any questions regarding the content of this letter, please do not hesitate to contact the undersigned.

Yours sincerely

Emerge Associates

**Rachel Weber**
PRINCIPAL ENVIRONMENTAL CONSULTANT
cc: nil

Encl: Figure 1: Site Location
Figure 2: Black Cockatoo Habitat Context
Figure 3: Black Cockatoo Habitat Trees
Figure 4: Carnaby's Black Cockatoo Foraging Habitat
Figure 5: Forest Red-tailed Black Cockatoo Foraging Habitat
Appendix A: Black Cockatoo Foraging Plants
Appendix B: Habitat Tree Data
Appendix C: Black Cockatoo Roost Counts

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# Figures

*Figure 1: Site Location*

*Figure 2: Black Cockatoo Habitat Context*

*Figure 3: Black Cockatoo Habitat Trees*

*Figure 4: Carnaby's Black Cockatoo Foraging Habitat*

*Figure 5: Forest Red-tailed Black Cockatoo Foraging Habitat*




**Figure 1: Site Location**

| | |
|---|---|
| Project: | Targeted Black Cockatoo Assessment<br>Wanneroo Town Centre Structure Plan |
| Client: | City of Wanneroo |

Plan Number: GF17-116090-F35
Drawn: GAR
Date: 30/09/2019
Checked: MS
Approved: MM
Date: 11/10/2019

N

0 50 100 150
Metres
Scale: 1:8,000@A4
GDA 1994 MGA Zone 50

emerge ASSOCIATES

While Emerge Associates makes every attempt to ensure the accuracy and completeness of data, Emerge accepts no responsibility for externally sourced data used
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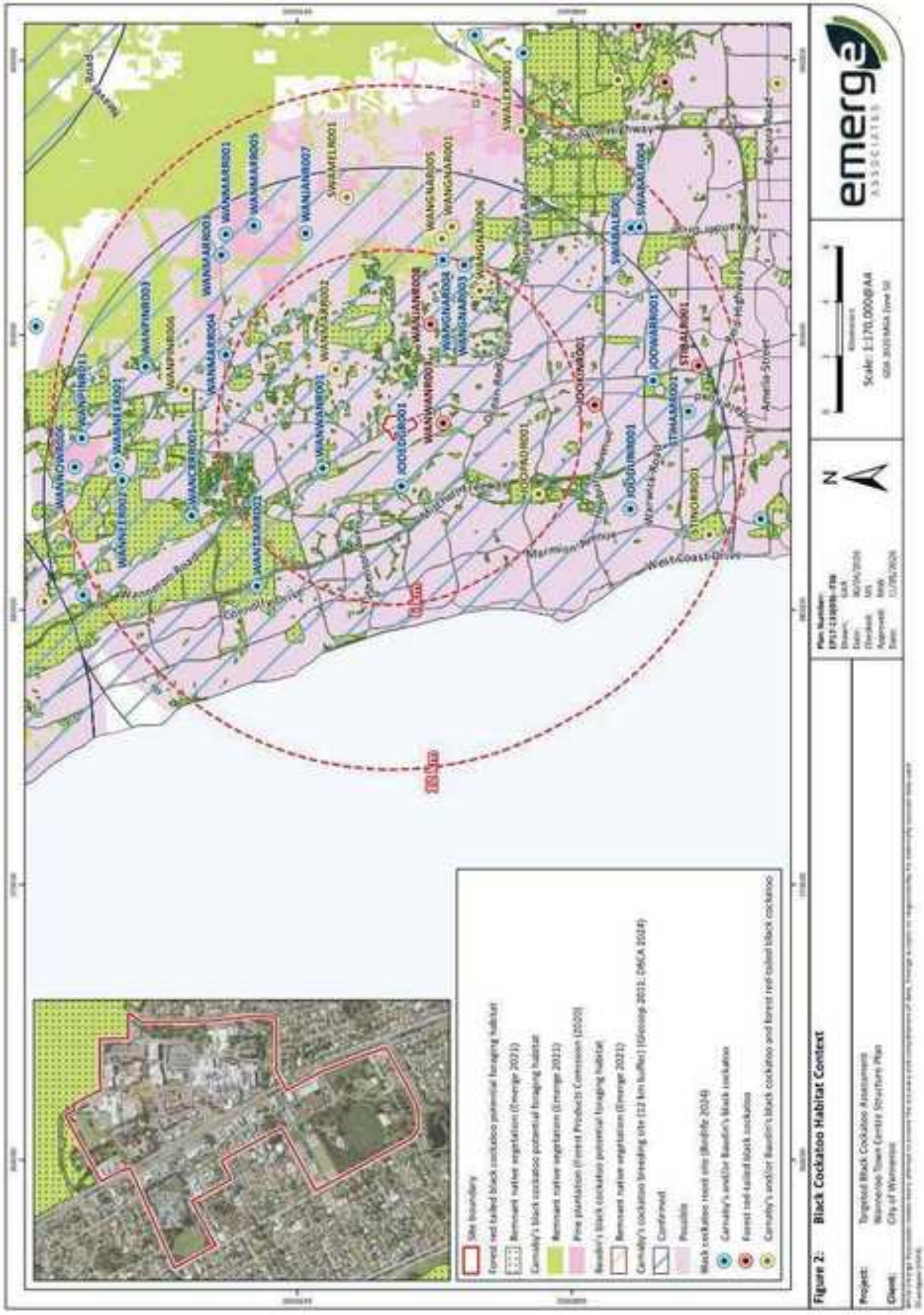
Figure 2: Black Cockatoo Habitat Context
Project: Dyginool Black Cockatoo Assessment
Wanneroo Town Centre Structure Plan
Client: City of Wanneroo
emerge ASSOCIATES
Scale: 1:170,000@A4
N
Site boundary
Forest red-tailed black cockatoo potential foraging habitat
Remnant native vegetation (Emerge 2021)
Carnaby's black cockatoo potential foraging habitat
Remnant native vegetation (Emerge 2021)
Pine plantation (Forest Products Commission (2020)
Baudin's black cockatoo potential foraging habitat
Remnant native vegetation (Emerge 2021)
Carnaby's cockatoo breeding site (12 km buffer) (Glevorg 2013; DBCA 2024)
Confirmed
Possible
Black cockatoo roost site (Birdlife 2024)
Carnaby's and/or Baudin's black cockatoo
Forest red-tailed black cockatoo
Carnaby's and/or Baudin's black cockatoo and forest red-tailed black cockatoo
Warnerville Road
Marmion Avenue
West Coast Drive
Gnangara Road
Ocean Reef Road
Joondalup Drive
Amelia Street
Beenyup Road




**Figure 3: Black Cockatoo Habitat Trees**

Project: Targeted Black Cockatoo Assessment
Wanneroo Town Centre Structure Plan
Client: City of Wanneroo




**Figure 4: Carnaby's Black Cockatoo Foraging Habitat**

| | |
|---|---|
| Project: | Targeted Black Cockatoo Assessment<br>Wanneroo Town Centre Structure Plan |
| Client: | City of Wanneroo |

Plan Number: EP17-133(09)-#08
Drawn: OAR
Date: 30/04/2026
Checked: MS
Approved: MW
Date: 11/05/2026

Metres
Scale: 1:6,000@A4
GDA 1994 MGA Zone 50




**Figure 5:** Forest Red-tailed Black Cockatoo Foraging Habitat

**Project:** Targeted Black Cockatoo Assessment
Wanneroo Town Centre Structure Plan

**Client:** City of Wanneroo

Plan Number: EP17-119(09)-#10
Drawn: GAR
Date: 30/04/2026
Checked: MS
Approved: MW
Date: 11/05/2026

N

Metres
Scale: 1:6,000@A4
GDA 1994 MGA Zone 50

# Appendix A

## Black Cockatoo Foraging Plants

| Species name | Common name | Foraging category as assigned by Emerge | | | Literature references |
|---|---|---|---|---|---|
| | | CBC | BBC | FRTBC | |
| *Acacia balleyana* | Cootamundra wattle | Secondary | - | - | Groom 2011 |
| *Acacia pentadenia* | Karri wattle | Secondary | - | - | Groom 2011 |
| *Acacia saligna* | Orange wattle | Secondary | - | - | Groom 2011 |
| *Agonis flexuosa* | Peppermint tree | Secondary | - | - | Groom 2011 |
| *Allocasuarina fraseriana* | Sheoak | Secondary | Secondary | Secondary | Johnstone & Storr 1998; Johnstone *et al.* 2010; Johnstone 2017; DoEE 2017 |
| *Allocasuarina spp.* | | Secondary | - | Secondary | Johnstone *et al.* 2010; Groom 2011; DSEWPaC 2012; DoEE 2017 |
| *Anigozanthos flavidus* | Tall kangaroo paw | - | Secondary | - | Johnstone *et al.* 2010; DSEWPaC 2012; DoEE 2017 |
| *Araucaria heterophylla* | Norfolk island pine | Secondary | - | - | Groom 2011; DoEE 2017 |
| *Banksia ashbyi* | Ashby's banksia | Primary | Secondary | - | Saunders 1980; Groom 2011; DoEE 2017 |
| *Banksia attenuata* | Slender banksia | Primary | Secondary | - | Saunders 1980; Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia baxteri* | Baxter's banksia | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia carlinoides* | Pink dryandra | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia coccinea* | Scarlet banksia | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia dallanneyi* | Couch honeypot dryandra | Primary | Secondary | - | Groom 2011; DoEE 2017 |
| *Banksia ericifolia* | Heath-leaved banksia | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia fraseri* | | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia gardneri* | Prostrate banksia | Primary | Secondary | - | Groom 2011; DoEE 2017 |
| *Banksia grandis* | Bull banksia | Primary | Secondary | - | Saunders 1980; Johnstone & Storr 1998; Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia hookeriana* | Hooker's banksia | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia ilicifolia* | Holly banksia | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; Johnstone & Storr 1998; DoEE 2017 |
| *Banksia kippistiana* | | Primary | Secondary | - | Groom 2011; DoEE 2017 |
| *Banksia leptophylla* | | Primary | Secondary | - | Groom 2011; DoEE 2017 |
| *Banksia lindleyana* | Porcupine banksia | Primary | Secondary | - | Johnstone *et al.* 2010; DoEE 2017 |

| Species name | Common name | Foraging category as assigned by Emerge | | | Literature references |
|---|---|---|---|---|---|
| | | CBC | BBC | FRTBC | |
| *Banksia littoralis* | Swamp banksia | Primary | Secondary | - | Saunders 1980; Groom 2011Johnstone & Storr 1998; Johnstone *et al.* 2010; DoEE 2017 |
| *Banksia menziesii* | Firewood banksia | Primary | Secondary | - | Saunders 1980; Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia mucronulata* | Swordfish dryandra | Primary | Secondary | - | Groom 2011; DoEE 2017 |
| *Banksia nivea* | Honeypot dryandra | Primary | Secondary | - | Saunders 1980; Groom 2011; DoEE 2017 |
| *Banksia nobilis* | Golden dryandra | Primary | Secondary | - | Saunders 1980; Groom 2011; DoEE 2017 |
| *Banksia praemorsa* | Cut-leaf banksia | Primary | Secondary | - | Saunders 1980; Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia prionotes* | Acorn banksia | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia prolata* | | Primary | Secondary | - | Johnstone *et al.* 2010; DoEE 2017 |
| *Banksia quercifolia* | Oak-leaved banksia | Primary | Secondary | - | Johnstone & Storr 1998; Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia sessilis* | Parrot bush | Primary | Secondary | - | Saunders 1980; Johnstone & Storr 1998; Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia speciosa* | Showy banksia | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia spp.* | | Primary | Secondary | - | Saunders 1979; DSEWPaC 2012; DoEE 2017 |
| *Banksia squarrosa* | Pingle | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Banksia tricuspis* | Pine banksia | Primary | Secondary | - | Groom 2011; DoEE 2017 |
| *Banksia undata* | Urchin dryandra | Primary | Secondary | - | Groom 2011; DoEE 2017 |
| *Banksia verticillata* | Granite banksia | Primary | Secondary | - | Saunders 1980; Groom 2011; DoEE 2017 |
| *Brassica campestris* | Canola | Secondary | - | - | Groom 2011; DoEE 2017 |
| *Callistemon spp.* | | Secondary | Secondary | - | Johnstone *et al.* 2010; DoEE 2017 |
| *Callistemon viminalis* | Captain cook bottlebrush | Secondary | - | - | Groom 2011 |
| *Callitris sp.* | | Secondary | - | - | Johnstone *et al.* 2010; Groom 2011 |
| *Carya illinoinensis* | Pecan | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; Groom 2014; DoEE 2017 |
| *Casuarina cunninghamiana* | River sheoak | Secondary | - | - | Groom 2011 |
| *Citrullus lanatus* | Pie or afghan melon | Secondary | - | - | Johnstone *et al.* 2010; Groom 2011 |

| Species name | Common name | Foraging category as assigned by Emerge | | | Literature references |
|---|---|---|---|---|---|
| | | CBC | BBC | FRTBC | |
| *Corymbia calophylla* | Marri | Primary | Primary | Primary | Johnstone & Storr 1998; Johnstone & Kirkby 1999; Johnstone *et al.* 2010; DSEWPaC 2012; DoEE 2017; Johnstone 2017; Saunders 1979; Johnstone & Kirkby 2008 |
| *Corymbia citriodora* | Lemon scented gum | Secondary | Secondary | Secondary | Johnstone *et al.* 2010; DSEWPaC 2012; Groom 2011; Johnstone 2017 |
| *Corymbia ficifolia* | Red flowering gum | Secondary | - | - | Groom 2011 |
| *Corymbia haematoxylon* | Mountain marri | Secondary | - | Secondary | Groom 2011; DoEE 2012; DoEE 2017 |
| *Corymbia maculata* | Spotted gum | - | - | - | - |
| *Darwinia citriodora* | Lemon-scented darwinia | Secondary | Secondary | - | Groom 2011; Johnstone *et al.* 2010 |
| *Diospyros sp.* | Sweet persimmon | Secondary | Secondary | - | Johnstone *et al.* 2010; Groom 2011; DSEWPaC 2012; DoEE 2017 |
| *Eremophila glabra* | Tarbush | Secondary | - | - | Groom 2011 |
| *Erodium aureum* | | Secondary | - | - | Groom 2011 |
| *Erodium botrys* | Long storksbill | Secondary | Secondary | - | Groom 2011; Johnstone & Storr 1998; Johnstone *et al.* 2010 |
| *Erodium spp.* | | Secondary | Secondary | - | Johnstone *et al.* 2010; DoEE 2017 |
| *Eucalyptus caesia* | Silver princess | Secondary | - | Secondary | Johnstone *et al.* 2010; Groom 2011; DSEWPaC 2012; DoEE 2017; Johnstone 2017 |
| *Eucalyptus camaldulensis* | River red gum | - | - | Secondary | DoEE 2012; DoEE 2017 |
| *Eucalyptus decipiens* | Red heart/moit | - | - | Secondary | Johnstone 2017 |
| *Eucalyptus diversicolor* | Karri | - | - | Primary | Johnstone *et al.* 2010; DSEWPaC 2012; DoEE 2017; Johnstone & Storr 1998 |
| *Eucalyptus erythrocorys* | Illyarrie | Secondary | - | Secondary | DSEWPaC 2012; DoEE 2017; Johnstone 2017, Johnstone *et al.* 2010 |
| *Eucalyptus gomphocephala* | Tuart | Secondary | - | Secondary | Johnstone *et al.* 2010; Groom 2011; DSEWPaC 2012; DoEE 2017 |
| *Eucalyptus grandis* | Flooded gum, rose gum | - | - | Secondary | DoEE 2012; DoEE 2017 |
| *Eucalyptus lehmannii* | Bushy yate | - | - | Secondary | Johnstone 2017 |
| *Eucalyptus leucoxylon* | Yellow gum | Secondary | - | - | Groom 2014 |

| Species name | Common name | Foraging category as assigned by Emerge | | | Literature references |
|---|---|---|---|---|---|
| | | CBC | BBC | FRTBC | |
| *Eucalyptus loxophleba* | York gum | Secondary | - | - | Johnstone *et al.* 2010; Groom 2011; DSEWPaC 2012; DoEE 2017 |
| *Eucalyptus marginata* | Jarrah | Primary | Secondary | Primary | Saunders 1980; Johnstone *et al.* 2010; Groom 2011; DSEWPaC 2012; DoEE 2017; Johnstone & Storr 1998; Johnstone & Kirkby 1999; Johnstone 2017 |
| *Eucalyptus patens* | Blackbutt | Primary | - | Primary | Johnstone & Storr 1998; Johnstone & Kirkby 1999; Johnstone *et al.* 2010; DSEWPaC 2012; DoEE 2017; Johnstone 2017; Groom 2011 |
| *Eucalyptus pleurocarpa* | Tallerack | Secondary | - | - | Groom 2011 |
| *Eucalyptus preissiana* | Bell-fruited mallee | Secondary | - | - | Groom 2011 |
| *Eucalyptus robusta* | Swamp mahogany | Secondary | - | - | Johnstone *et al.* 2010; Groom 2011 |
| *Eucalyptus salmonophloia* | Salmon gum | Primary | - | - | Johnstone *et al.* 2010; Groom 2011; DSEWPaC 2012; DSEWPaC 2012; DoEE 2017 |
| *Eucalyptus staeri* | Albany blackbutt | - | - | Secondary | Johnstone & Storr 1998 |
| *Eucalyptus todtiana* | Coastal blackbutt | Secondary | - | - | Saunders 1980; Johnstone *et al.* 2010; Groom 2011; Johnstone & Kirkby 2008 |
| *Eucalyptus wandoo* | Wandoo | Primary | Secondary | Primary | Saunders 1980; Johnstone *et al.*. 2010; Groom 2011; DSEWPaC 2012; DoEE 2017 |
| *Ficus sp.* | Fig | Secondary | - | - | Groom 2011 |
| *Grevillea armigera* | Prickly toothbrushes | Primary | - | - | Groom 2011 |
| *Grevillea bipinnatifida* | Fuschia grevillea | Primary | - | - | Groom 2011 |
| *Grevillea hookeriana* | Red toothbrushes | Primary | - | - | Groom 2011 |
| *Grevillea hookeriana subsp. api* | Black toothbrushes | Primary | - | - | Groom 2011 |
| *Grevillea paniculata* | Kerosene bush | Primary | - | - | Groom 2011 |
| *Grevillea paradoxa* | Bottlebrush grevillea | Primary | - | - | Groom 2011 |
| *Grevillea petrophiloides* | Pink poker | Primary | - | - | Groom 2011 |
| *Grevillea robusta* | Silky oak | Primary | - | - | Johnstone *et al.* 2010; Groom 2011 |

| Species name | Common name | Foraging category as assigned by Emerge | | | Literature references |
|---|---|---|---|---|---|
| | | CBC | BBC | FRTBC | |
| *Grevillea spp.* | | Primary | - | - | Saunders 1979; Johnstone *et al.* 2010; DSEWPaC 2012; DoEE 2017 |
| *Grevillea wilsonii* | Native fuchsia | - | Secondary | - | Johnstone *et al.* 2010 |
| *Hakea auriculata* | | Primary | - | - | Saunders 1980; Groom 2011 |
| *Hakea candolleana* | | Primary | - | - | Groom 2011 |
| *Hakea circumalata* | Coastal hakea | Primary | - | - | Groom 2011 |
| *Hakea commutata* | | Primary | - | - | Groom 2011 |
| *Hakea conchifolia* | Shell-leaved hakea | Primary | - | - | Groom 2011 |
| *Hakea costata* | Ribbed hakea | Primary | - | - | Groom 2011 |
| *Hakea cristata* | Snail hakea | Primary | Secondary | - | Groom 2011; Johnstone *et al.* 2010 |
| *Hakea cucullata* | Snail hakea | Primary | - | - | Groom 2011 |
| *Hakea cyclocarpa* | Ramshorn | Primary | - | - | Saunders 1980; Groom 2011 |
| *Hakea eneabba* | | Primary | - | - | Groom 2011 |
| *Hakea erinacea* | Hedgehog hakea | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011 |
| *Hakea falcata* | Sickle hakea | Primary | - | - | Groom 2011 |
| *Hakea flabellifolia* | Fan-leaved hakea | Primary | - | - | Groom 2011 |
| *Hakea gilbertii* | | Primary | - | - | Saunders 1980; Groom 2011 |
| *Hakea incrassata* | Golfball or marble hakea | Primary | - | - | Johnstone *et al.* 2010; Groom 2011 |
| *Hakea lasiantha* | Woolly flowered hakea | Primary | - | - | Johnstone *et al.* 2010; Groom 2011 |
| *Hakea lasianthoides* | | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011 |
| *Hakea laurina* | Pin-cushion hakea | Primary | - | - | Johnstone *et al.* 2010; Groom 2011 |
| *Hakea lissocarpha* | Honeybush | Primary | Secondary | - | Saunders 1980; Johnstone *et al.* 2010; Groom 2011 |
| *Hakea marginata* | | - | Secondary | - | Johnstone *et al.* 2010 |
| *Hakea megalosperma* | Lesueur hakea | Primary | - | - | Groom 2011 |
| *Hakea multilineata* | Grass leaf hakea | Primary | - | - | Groom 2011 |
| *Hakea neospathulata* | | Primary | - | - | Groom 2011 |
| *Hakea obliqua* | Needles and corks | Primary | - | - | Saunders 1980; Groom 2011 |
| *Hakea oleifolia* | Dungyn | Primary | - | - | Groom 2011 |

| Species name | Common name | Foraging category as assigned by Emerge | | | Literature references |
|---|---|---|---|---|---|
| | | CBC | BBC | FRTBC | |
| *Hakea pandanicarpa subsp. crassifolia* | Thick-leaved hakea | Primary | - | - | Groom 2011 |
| *Hakea petiolaris* | Sea urchin hakea | Primary | - | - | Groom 2011 |
| *Hakea polyanthema* | | Primary | - | - | Groom 2011 |
| *Hakea preissii* | Needle tree | Primary | - | - | Groom 2011 |
| *Hakea prostrata* | Harsh hakea | Primary | Secondary | - | Saunders 1980; Johnstone *et al.* 2010; Groom 2011 |
| *Hakea psilorrhyncha* | | Primary | - | - | Groom 2011 |
| *Hakea ruscifolia* | Candle hakea | Primary | Secondary | - | Saunders 1980; Groom 2011; Johnstone *et al.* 2010 |
| *Hakea scoparia* | Kangaroo bush | Primary | - | - | Groom 2011 |
| *Hakea smilacifolia* | | Primary | - | - | Groom 2011 |
| *Hakea spp.* | | Primary | Secondary | - | Saunders 1979; DSEWPaC 2012; DoEE 2017 |
| *Hakea stenocarpa* | Narrow-fruited hakea | Primary | Secondary | - | Johnstone et al. 2010; Groom 2011 |
| *Hakea sulcata* | Furrowed hakea | Primary | - | - | Groom 2011 |
| *Hakea trifurcata* | Two-leaved hakea | Primary | Secondary | - | Saunders 1980; Johnstone *et al.* 2010; Groom 2011 |
| *Hakea undulata* | Wavy-leaved hakea | Primary | Secondary | - | Saunders 1980; Johnstone *et al.* 2010; Groom 2011 |
| *Hakea varia* | Variable-leaved hakea | Primary | Secondary | - | Saunders 1980; Groom 2011 |
| *Harpephyllum caffrum* | Kaffir plum | - | - | Secondary | Johnstone 2017 |
| *Helianthus annuus* | Sunflower | Secondary | - | - | Johnstone *et al.* 2010; Groom 2011 |
| *Hibiscus sp.* | Hibiscus | Secondary | - | - | Groom 2011 |
| *Isopogon scabriusculus* | | Secondary | - | - | Groom 2011 |
| *Jacaranda mimosifolia* | Jacaranda | Secondary | Secondary | - | Johnstone *et al.* 2010; Groom 2011 |
| *Jacksonia furcellata* | Grey stinkwood | Secondary | - | - | Groom 2011 |
| *Kingia australis* | Kingia | - | Secondary | - | Johnstone *et al.* 2010 |
| *Lambertia inermis* | Chittick | Secondary | - | - | Johnstone & Storr 1998; Groom 2011 |
| *Lambertia multiflora* | Many-flowered honeysuckle | Secondary | - | - | Saunders 1980; Groom 2011 |

| Species name | Common name | Foraging category as assigned by Emerge | | | Literature references |
|---|---|---|---|---|---|
| | | CBC | BBC | FRTBC | |
| *Liquidamber styraciflua* | Liquid amber | Primary | - | Secondary | Johnstone *et al.* 2010; Groom 2011; Groom 2014; Personal observation |
| *Lupinus sp.* | Lupin | Secondary | - | - | Saunders 1980; Groom 2011 |
| *Macadamia integrifolia* | Macadamia | Primary | Secondary | - | Johnstone *et al.* 2010; Grooms 2011; Groom 2014 |
| *Malus domestica* | Apple | Secondary | Secondary | - | Johnstone *et al.* 2010; Johnstone & Storr 1998; DSEWPaC 2012; DoEE 2017; Groom 2011 |
| *Melaleuca leuropoma* | | Secondary | - | - | Saunders 1980; Groom 2011 |
| *Melia azedarach* | Cape lilac or white cedar | Secondary | - | Primary | Johnstone *et al.* 2010; Groom 2011 |
| *Mesomeleana spp.* | | Secondary | - | - | Johnstone *et al.* 2010; Groom 2011 |
| *Olea europea* | Olive | - | - | Secondary | Johnstone 2017 |
| *Persoonia longifolia* | Snottygobble | - | - | Secondary | Johnstone & Storr 1998; Johnstone & Kirkby 1999; Johnstone *et al.* 2010; DSEWPaC 2012; DoEE 2017 |
| *Pinus canariensis* | Canary island pine | Primary | - | - | Johnstone *et al.* 2010; Groom 2011 |
| *Pinus caribea* | Caribbean pine | Primary | - | - | Johnstone *et al.* 2010; Groom 2011 |
| *Pinus pinaster* | Pinaster or maritime pine | Primary | - | - | Groom 2011 |
| *Pinus radiata* | Radiata pine | Primary | Secondary | - | Johnstone *et al.* 2010; Groom 2011 |
| *Pinus spp.* | | Primary | Secondary | - | Johnstone & Storr 1998; Saunders 1979; Johnstone *et al.* 2010; DSEWPaC 2012; DoEE 2017 |
| *Protea 'Pink Ice'* | | Secondary | - | - | Groom 2011 |
| *Protea repens* | | Secondary | - | - | Groom 2011 |
| *Protea spp.* | | Secondary | - | - | Johnstone *et al.* 2010 |
| *Prunus amygdalus* | Almond tree | Secondary | - | - | Johnstone & Storr 1998; Johnstone *et al.* 2010; Groom 2011; DoEE 2017 |
| *Pyrus communis* | European pear | - | Secondary | - | Johnstone & Storr 1998; Johnstone *et al.* 2010; DSEWPaC 2012; DoEE 2017 |
| *Quercus spp.* | Oak | - | Secondary | - | Johnstone *et al.* 2010 |

| Species name | Common name | Foraging category as assigned by Emerge | | | Literature references |
|---|---|---|---|---|---|
| | | CBC | BBC | FRTBC | |
| *Raphanus raphanistrum* | Wild radish | Secondary | - | - | Groom 2011; DoEE 2017 |
| *Reedia spathacea* | | - | Secondary | - | Johnstone *et al.* 2010 |
| *Rumex hypogaeus* | Doublegee | Secondary | - | - | Saunders 1980 |
| *Stenocarpus sinuatus* | | Secondary | - | - | Johnstone *et al.* 2010 |
| *Syzygium smithii* | Lilly pilly | Secondary | - | - | Groom 2014 |
| *Tipuana tipu* | Tipu or rosewood tree | Primary | - | - | Groom 2011, Groom 2014 |
| *Xanthorrhoea preissii* | Grass tree | Secondary | Secondary | - | Groom 2011; Johnstone *et al.* 2010 |
| *Xylomelum occidentale* | Woody pear | Secondary | - | - | Groom 2014 |

CBC=Carnaby's black cockatoo, BBC=Baudin's black cockatoo and FRTBC=Forest red-tailed black cockatoo

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# Appendix B

Black Cockatoo Roost Counts

## Black Cockatoo Roost Counts

**Wanneroo Town Centre Structure Plan**

*Table 1: White-tailed black cockatoo recorded in roosts within 12 km of the site*

| Roost ID | Year and number of individuals | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| JOODUNR001 | - | - | 60 | 0 | 0 | 17 | 43 | 110 | 80 | 0 |
| JOOEDGR001 | 0 | 0 | - | 0 | 0 | 23 | 0 | 0 | 0 | - |
| JOOPADR001 | 0 | - | 1 | 17 | 7 | 7 | 0 | 0 | 0 | 0 |
| JOOWARR001 | 0 | 60 | - | 0 | 0 | 0 | 0 | 0 | - | 0 |
| STIHAMR001 | - | - | - | - | 0 | - | 24 | 0 | 0 | 62 |
| SWAMELR001 | 500 | 41 | 0 | 20 | 480 | 0 | - | 268 | 0 | 0 |
| WANCRRR001 | - | - | - | 191 | 0 | 0 | 0 | 0 | 0 | - |
| WANGNAR001 | 0 | - | - | - | 0 | - | 454 | 316 | 157 | 255 |
| WANGNAR003 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WANGNAR004 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| WANGNAR005 | - | - | - | 100 | 0 | 14 | 0 | 260 | - | - |
| WANGNAR006 | - | - | - | - | 40 | - | 3 | 6 | 0 | - |
| WANJANR007 | - | 16 | - | 0 | - | 0 | - | - | - | - |
| WANMARR001 | 0 | 20 | - | 0 | - | 71 | 0 | 770 | 0 | 0 |
| WANMARR002 | 0 | - | 2 | 3 | 3 | 0 | 0 | 0 | 0 | 0 |
| WANMARR003 | 542 | 152 | 10 | 16 | 147 | 280 | 4 | 1260 | 625 | 739 |
| WANMARR004 | 0 | 0 | 0 | - | - | - | - | 8 | 0 | 0 |

## Black Cockatoo Roost Counts

**Wanneroo Town Centre Structure Plan**

*Table 1: White-tailed black cockatoo recorded in roosts within 12 km of the site (continued)*

| Roost ID | Year and number of individuals | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| WANMARR005 | . | . | . | . | . | . | . | 0 | 350 | . |
| WANNEER001 | . | 29 | . | . | 0 | . | 0 | . | . | . |
| WANNEER002 | 604 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | . |
| WANPINR003 | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | . | . |
| WANPINR006 | 13 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | . | 0 |
| WANTAMR001 | . | . | 0 | 103 | 20 | 10 | 0 | 0 | . | 0 |
| WANWANR001 | 0 | 11 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

. = not surveyed

# Black Cockatoo Roost Counts

**Wanneroo Town Centre Structure Plan**

*Table 2: Forest red-tailed black cockatoo recorded in roosts within 12 km of the site*

| Roost ID | Year and number of individuals | | | | | |
|---|---|---|---|---|---|---|
| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| JOOPADR001 | 0 | 0 | 0 | 0 | 0 | 9 |
| SWAMELR001 | 0 | 0 | - | 129 | 0 | 0 |
| WANGNAR005 | 0 | 0 | 0 | 7 | - | - |
| WANGNAR006 | 3 | - | 0 | 4 | 0 | - |
| WANJANR008 | - | - | - | 102 | 156 | 243 |
| WANMARR002 | 0 | 0 | 0 | 0 | 11 | 20 |
| WANWANR003 | - | - | - | - | - | 3 |

- = not surveyed

# Appendix C

Habitat Tree Inventory

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**Black Cockatoo Habitat Tree Inventory**
**Wanneroo Town Centre Structure Plan**



| Easting | Northing | DBH (cm) | Species | Category | Notes |
|---|---|---|---|---|---|
| 386570.72 | 6485848.98 | 70 | *Corymbia calophylla* | Potential nesting tree | Tree hollows present. Internal hollow inspection completed. No hollows considered suitable for nesting by black cockatoos. |
| 386546.91 | 6485946.50 | 78 | *Corymbia calophylla* | Potential nesting tree | Tree hollows present. Internal hollow inspection completed. No hollows considered suitable for nesting by black cockatoos. |
| 386561.04 | 6485868.16 | 96 | *Corymbia calophylla* | Potential nesting tree | Tree hollows present. Internal hollow inspection completed. No hollows considered suitable for nesting by black cockatoos. |
| 387069.787 | 6486656.216 | 50 | *Corymbia calophylla* | Potential nesting tree | |
| 386645.2001 | 6485975.629 | 50 | *Corymbia calophylla* | Potential nesting tree | |
| 386588.384 | 6485948.065 | 50 | *Corymbia calophylla* | Potential nesting tree | |
| 386554.3127 | 6485945.362 | 50 | *Corymbia calophylla* | Potential nesting tree | |
| 386534.3283 | 6485919.311 | 50 | *Corymbia calophylla* | Potential nesting tree | |
| 386560.5567 | 6485868.603 | 50 | *Corymbia calophylla* | Potential nesting tree | |
| 386561.062 | 6485865.726 | 50 | *Corymbia calophylla* | Potential nesting tree | |
| 386668.9933 | 6485775.895 | 50 | *Corymbia calophylla* | Potential nesting tree | |
| 387027.0732 | 6486603.422 | 51 | *Corymbia calophylla* | Potential nesting tree | |
| 386554.9125 | 6485873.64 | 51 | *Corymbia calophylla* | Potential nesting tree | |
| 386578.9656 | 6485857.054 | 51 | *Corymbia calophylla* | Potential nesting tree | |
| 386715.0005 | 6486011.207 | 51 | *Corymbia calophylla* | Potential nesting tree | |
| 386270.5302 | 6486398.721 | 51 | *Corymbia calophylla* | Potential nesting tree | |
| 386538.9819 | 6485909.606 | 52 | *Corymbia calophylla* | Potential nesting tree | |
| 386587.5787 | 6485900.718 | 52 | *Corymbia calophylla* | Potential nesting tree | |
| 386560.6175 | 6485914.722 | 52 | *Corymbia calophylla* | Potential nesting tree | |
| 386545.3107 | 6485885.397 | 52 | *Corymbia calophylla* | Potential nesting tree | |
| 386562.131 | 6485880.482 | 52 | *Corymbia calophylla* | Potential nesting tree | |
| 386607.9655 | 6485786.864 | 52 | *Corymbia calophylla* | Potential nesting tree | |
| 386275.2352 | 6486536.532 | 52 | *Corymbia calophylla* | Potential nesting tree | |
| 386605.1979 | 6485978.183 | 53 | *Corymbia calophylla* | Potential nesting tree | |
| 386585.8426 | 6485920.765 | 53 | *Corymbia calophylla* | Potential nesting tree | |

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## Black Cockatoo Habitat Tree Inventory
## Wanneroo Town Centre Structure Plan



| Easting | Northing | DBH (cm) | Species | Category | Notes |
|---|---|---|---|---|---|
| 386581.1594 | 6485864.284 | 53 | *Corymbia calophylla* | Potential nesting tree | |
| 386578.5733 | 6485858.269 | 53 | *Corymbia calophylla* | Potential nesting tree | |
| 386705.0126 | 6486161.538 | 53 | *Corymbia calophylla* | Potential nesting tree | |
| 386597.1899 | 6485793.398 | 53 | *Corymbia calophylla* | Potential nesting tree | |
| 387069.7251 | 6486661.87 | 54 | *Corymbia calophylla* | Potential nesting tree | |
| 386551.1677 | 6485921.27 | 54 | *Corymbia calophylla* | Potential nesting tree | |
| 386597.1618 | 6485899.271 | 54 | *Corymbia calophylla* | Potential nesting tree | |
| 386574.2198 | 6485866.536 | 54 | *Corymbia calophylla* | Potential nesting tree | |
| 386282.4078 | 6486398.791 | 54 | *Corymbia calophylla* | Potential nesting tree | |
| 386528.2796 | 6485926.672 | 55 | *Corymbia calophylla* | Potential nesting tree | |
| 386565.0187 | 6485902.132 | 55 | *Corymbia calophylla* | Potential nesting tree | |
| 386682.7094 | 6485717.289 | 55 | *Corymbia calophylla* | Potential nesting tree | |
| 386648.5663 | 6485738.421 | 55 | *Corymbia calophylla* | Potential nesting tree | |
| 386556.3825 | 6485955.251 | 56 | *Corymbia calophylla* | Potential nesting tree | |
| 386524.8865 | 6485933.73 | 56 | *Corymbia calophylla* | Potential nesting tree | |
| 386671.9552 | 6486204.411 | 56 | *Corymbia calophylla* | Potential nesting tree | |
| 386673.06 | 6486198.99 | 56 | *Corymbia calophylla* | Potential nesting tree | |
| 386599.88 | 6485945.20 | 57 | *Corymbia calophylla* | Potential nesting tree | |
| 386562.70 | 6485923.73 | 57 | *Corymbia calophylla* | Potential nesting tree | |
| 386564.04 | 6485870.53 | 57 | *Corymbia calophylla* | Potential nesting tree | |
| 386706.34 | 6486023.31 | 57 | *Corymbia calophylla* | Potential nesting tree | |
| 387029.67 | 6486591.26 | 58 | *Corymbia calophylla* | Potential nesting tree | |
| 387004.90 | 6486569.14 | 58 | *Corymbia calophylla* | Potential nesting tree | |
| 387006.87 | 6486571.49 | 58 | *Corymbia calophylla* | Potential nesting tree | |
| 386691.61 | 6485752.20 | 58 | *Corymbia calophylla* | Potential nesting tree | |
| 386523.00 | 6485924.84 | 59 | *Corymbia calophylla* | Potential nesting tree | |
| 386538.86 | 6485903.73 | 59 | *Corymbia calophylla* | Potential nesting tree | |
| 386613.95 | 6485785.05 | 59 | *Corymbia calophylla* | Potential nesting tree | |
| 386643.19 | 6485969.07 | 60 | *Corymbia calophylla* | Potential nesting tree | |
| 386597.63 | 6485976.99 | 60 | *Corymbia calophylla* | Potential nesting tree | |
| 386541.82 | 6485883.92 | 60 | *Corymbia calophylla* | Potential nesting tree | |

| Easting | Northing | DBH (cm) | Species | Category | Notes |
|---|---|---|---|---|---|
| 386668.18 | 6486177.43 | 60 | *Corymbia calophylla* | Potential nesting tree | |
| 386600.62 | 6485799.87 | 60 | *Corymbia calophylla* | Potential nesting tree | |
| 386728.14 | 6485996.05 | 61 | *Corymbia calophylla* | Potential nesting tree | |
| 386290.48 | 6486407.19 | 61 | *Corymbia calophylla* | Potential nesting tree | |
| 386943.74 | 6486220.48 | 63 | *Corymbia calophylla* | Potential nesting tree | |
| 386589.68 | 6485804.73 | 63 | *Corymbia calophylla* | Potential nesting tree | |
| 386587.92 | 6485809.70 | 63 | *Corymbia calophylla* | Potential nesting tree | |
| 386519.51 | 6486508.04 | 63 | *Corymbia calophylla* | Potential nesting tree | |
| 386990.15 | 6486169.21 | 64 | *Corymbia calophylla* | Potential nesting tree | |
| 386520.33 | 6486511.38 | 64 | *Corymbia calophylla* | Potential nesting tree | |
| 386671.77 | 6486186.67 | 64 | *Corymbia calophylla* | Potential nesting tree | |
| 386671.93 | 6486189.22 | 64 | *Corymbia calophylla* | Potential nesting tree | |
| 386618.09 | 6485796.40 | 64 | *Corymbia calophylla* | Potential nesting tree | |
| 386569.00 | 6486461.81 | 65 | *Corymbia calophylla* | Potential nesting tree | |
| 386253.67 | 6486421.64 | 65 | *Corymbia calophylla* | Potential nesting tree | |
| 386961.45 | 6486229.43 | 66 | *Corymbia calophylla* | Potential nesting tree | |
| 386573.83 | 6486513.30 | 66 | *Corymbia calophylla* | Potential nesting tree | |
| 386605.36 | 6486505.89 | 66 | *Corymbia calophylla* | Potential nesting tree | |
| 386516.45 | 6485934.52 | 66 | *Corymbia calophylla* | Potential nesting tree | |
| 386685.78 | 6485739.16 | 66 | *Corymbia calophylla* | Potential nesting tree | |
| 386533.48 | 6485901.79 | 67 | *Corymbia calophylla* | Potential nesting tree | |
| 386708.91 | 6486013.80 | 67 | *Corymbia calophylla* | Potential nesting tree | |
| 386578.03 | 6485959.59 | 68 | *Corymbia calophylla* | Potential nesting tree | |
| 386531.64 | 6485905.09 | 68 | *Corymbia calophylla* | Potential nesting tree | |
| 386578.03 | 6485881.88 | 69 | *Corymbia calophylla* | Potential nesting tree | |
| 386576.26 | 6485956.80 | 70 | *Corymbia calophylla* | Potential nesting tree | |
| 386592.39 | 6485928.60 | 70 | *Corymbia calophylla* | Potential nesting tree | |
| 386582.16 | 6485893.67 | 70 | *Corymbia calophylla* | Potential nesting tree | |
| 386857.95 | 6485906.90 | 71 | *Corymbia calophylla* | Potential nesting tree | |
| 387048.30 | 6486637.25 | 72 | *Corymbia calophylla* | Potential nesting tree | |
| 386592.52 | 6485898.89 | 75 | *Corymbia calophylla* | Potential nesting tree | |

| Easting | Northing | DBH (cm) | Species | Category | Notes |
|---|---|---|---|---|---|
| 386582.66 | 6485926.05 | 76 | *Corymbia calophylla* | Potential nesting tree | |
| 386553.28 | 6485875.95 | 76 | *Corymbia calophylla* | Potential nesting tree | |
| 386578.66 | 6485927.45 | 78 | *Corymbia calophylla* | Potential nesting tree | |
| 386571.05 | 6485835.68 | 78 | *Corymbia calophylla* | Potential nesting tree | |
| 386567.45 | 6485956.59 | 81 | *Corymbia calophylla* | Potential nesting tree | |
| 386556.54 | 6485880.53 | 81 | *Corymbia calophylla* | Potential nesting tree | |
| 386918.76 | 6485854.91 | 81 | *Corymbia calophylla* | Potential nesting tree | |
| 386226.98 | 6486504.02 | 82 | *Corymbia calophylla* | Potential nesting tree | |
| 386585.98 | 6485865.22 | 84 | *Corymbia calophylla* | Potential nesting tree | |
| 386563.23 | 6486529.93 | 87 | *Corymbia calophylla* | Potential nesting tree | |
| 386587.49 | 6485934.20 | 89 | *Corymbia calophylla* | Potential nesting tree | |
| 386983.91 | 6486168.26 | 93 | *Corymbia calophylla* | Potential nesting tree | |
| 386514.45 | 6485935.50 | 95 | *Corymbia calophylla* | Potential nesting tree | |
| 386565.27 | 6485888.06 | 100 | *Corymbia calophylla* | Potential nesting tree | |
| 387045.08 | 6486594.31 | 119 | *Corymbia calophylla* | Potential nesting tree | |
| 386695.6175 | 6486197.576 | 51 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386456.0298 | 6486492.051 | 55 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386381.4133 | 6486454.867 | 55 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386509.46 | 6486336.77 | 57 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386454.12 | 6486485.16 | 61 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386704.89 | 6486190.36 | 62 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386704.42 | 6486181.38 | 64 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386455.50 | 6486488.83 | 64 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386972.90 | 6486758.26 | 67 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386934.07 | 6485763.95 | 70 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386699.22 | 6486188.64 | 70 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386505.36 | 6486339.49 | 71 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386701.80 | 6486195.54 | 77 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386695.62 | 6486180.39 | 80 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386382.35 | 6486447.67 | 83 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386695.24 | 6486197.24 | 85 | *Eucalyptus gomphocephala* | Potential nesting tree | |

| Easting | Northing | DBH (cm) | Species | Category | Notes |
|---|---|---|---|---|---|
| 386869.66 | 6485883.86 | 90 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386660.90 | 6485943.43 | 90 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386509.89 | 6486341.32 | 98 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386517.07 | 6486334.08 | 106 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386729.79 | 6486009.82 | 109 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386773.62 | 6485848.66 | 110 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386635.99 | 6486399.69 | 112 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386426.26 | 6486460.02 | 114 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386695.41 | 6486156.22 | 114 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386427.74 | 6486455.80 | 115 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386605.87 | 6485960.01 | 125 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386654.26 | 6486409.31 | 128 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386578.33 | 6486517.12 | 129 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 387068.14 | 6486252.99 | 130 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386618.64 | 6485987.53 | 140 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 386750.68 | 6485936.55 | 148 | *Eucalyptus gomphocephala* | Potential nesting tree | |
| 387040.71 | 6486439.83 | 74 | *Eucalyptus marginata* | Potential nesting tree | Tree hollows present. Internal hollow inspection completed. No hollows considered suitable for nesting by black cockatoos. |
| 387033.54 | 6486437.20 | 97 | *Eucalyptus marginata* | Potential nesting tree | Tree hollows present. Internal hollow inspection completed. No hollows considered suitable for nesting by black cockatoos. |
| 386997.6449 | 6486548.555 | 50 | *Eucalyptus marginata* | Potential nesting tree | |
| 386980.1497 | 6486217.439 | 51 | *Eucalyptus marginata* | Potential nesting tree | |
| 387046.2651 | 6486209.184 | 52 | *Eucalyptus marginata* | Potential nesting tree | |
| 387012.8218 | 6486546.726 | 53 | *Eucalyptus marginata* | Potential nesting tree | |
| 387052.1375 | 6486589.727 | 56 | *Eucalyptus marginata* | Potential nesting tree | |
| 387019.55 | 6486494.69 | 57 | *Eucalyptus marginata* | Potential nesting tree | |
| 386977.26 | 6486766.06 | 57 | *Eucalyptus marginata* | Potential nesting tree | |
| 386305.64 | 6486404.21 | 57 | *Eucalyptus marginata* | Potential nesting tree | |
| 387044.15 | 6486419.58 | 62 | *Eucalyptus marginata* | Potential nesting tree | |

| Easting | Northing | DBH (cm) | Species | Category | Notes |
|---|---|---|---|---|---|
| 387021.86 | 6486508.36 | 64 | *Eucalyptus marginata* | Potential nesting tree | |
| 387020.48 | 6486453.13 | 65 | *Eucalyptus marginata* | Potential nesting tree | |
| 386232.71 | 6486452.71 | 66 | *Eucalyptus marginata* | Potential nesting tree | |
| 386573.81 | 6485904.00 | 68 | *Eucalyptus marginata* | Potential nesting tree | |
| 386234.17 | 6486449.37 | 68 | *Eucalyptus marginata* | Potential nesting tree | |
| 387013.96 | 6486538.31 | 72 | *Eucalyptus marginata* | Potential nesting tree | |
| 386964.43 | 6486234.01 | 72 | *Eucalyptus marginata* | Potential nesting tree | |
| 386633.32 | 6485738.14 | 72 | *Eucalyptus marginata* | Potential nesting tree | |
| 387021.46 | 6486459.02 | 81 | *Eucalyptus marginata* | Potential nesting tree | |
| 386315.24 | 6486407.10 | 83 | *Eucalyptus marginata* | Potential nesting tree | |
| 387031.66 | 6486453.25 | 89 | *Eucalyptus marginata* | Potential nesting tree | |
| 386630.20 | 6485746.53 | 90 | *Eucalyptus marginata* | Potential nesting tree | |
| 386966.22 | 6486278.48 | 102 | *Eucalyptus marginata* | Potential nesting tree | |
| 386589.11 | 6486502.16 | 113 | *Eucalyptus marginata* | Potential nesting tree | |
| 387011.50 | 6486476.87 | 118 | *Eucalyptus marginata* | Potential nesting tree | |
| 386894.1544 | 6485758.302 | 50 | *Eucalypus rudis* | Potential nesting tree | |
| 386788.34 | 6485913.90 | 74 | *Eucalypus rudis* | Potential nesting tree | |
| 386695.81 | 6485732.29 | 93 | *Eucalypus rudis* | Potential nesting tree | |
| 386780.41 | 6485929.56 | 110 | *Eucalypus rudis* | Potential nesting tree | |
| 386828.91 | 6485920.33 | 140 | *Eucalypus rudis* | Potential nesting tree | |
| 386598.0505 | 6485956.264 | 55 | Stag | Potential nesting tree | |
| 387059.80 | 6486296.25 | 74 | Stag | Potential nesting tree | |
| 387069.88 | 6486206.89 | 76 | Stag | Potential nesting tree | |
| 386907.40 | 6485880.17 | 76 | Stag | Potential nesting tree | |
| 387037.59 | 6486534.14 | 101 | Stag | Potential nesting tree | |

# Appendix D

## Conservation Significant Flora Likelihood of Occurrence

| Species name | Level of significance | | Life strategy | Habitat | Flowering period | Likelihood of occurrence |
|---|---|---|---|---|---|---|
| | WA | EPBC Act | | | | |
| *Caladenia huegelii* | CR | EN | PG | Banksia spp., Eucalyptus marginata and Corymbia calophylla woodlands, usually within 20km of the coast. Grows amongst dense low shrubs in well-drained, deep sandy soils in lush undergrowth in a variety of moisture levels. Soils usually deep grey-white sand associated with the Bassendean sand dune system but may also extend into Spearwood dune system. | Sep-Nov | Potential to occur |
| *Darwinia carnea* | CR | EN | P | Sandy loam. Lateritic breakaways and hills. Low open woodland wandoo and/or Allocasuarina huegeliana over heath or sparse shrubland. | Oct-Nov | Nil (does not occur) |
| *Darwinia oxylepis* | CR | EN | P | Stony, peaty sand. Rocky gullies. | Aug-Nov | Nil (does not occur) |
| *Marianthus paralius* | EN | EN | P | White sand over limestone. Low coastal cliffs. | Sep-Nov | Nil (does not occur) |
| *Calectasia elegans* | CR | - | P | Grey yellow sand on plains. | Sep-Oct | Potential to occur |
| *Thelymitra variegata* | CR | - | PG | Sandy clay, sand, laterite. | Jun-Sep | Nil (does not occur) (unreliable record) |
| *Darwinia meeboldii* | VU | VU | P | Peaty soils over quartzite. Hill slopes. | Aug-Nov | Nil (does not occur) |
| *Eucalyptus argutifolia* | VU | VU | P | Shallow soils over limestone. Slopes or gullies of limestone ridges, outcrops. | Mar-Apr | Nil (does not occur) (unreliable record) |
| *Baeckea sp. Limestone (N. Gibson & M.N. Lyons 1425)* | P1 | - | P | Grey yellow sand over limestone. | Sep-Dec | Nil (does not occur) |
| *Drosera patens* | P1 | - | P | Sandy soils on margins of winter wet depressions, swamps and lakes. | Aug-Dec | Nil (does not occur) |
| *Drosera x sidjamesii* | P1 | - | P | Along lake margins, close to winter high-water line. | Nov-Dec, Jan-Mar | Nil (does not occur) |

| Species name | Level of significance | | Life strategy | Habitat | Flowering period | Likelihood of occurrence |
|---|---|---|---|---|---|---|
| | WA | EPBC Act | | | | |
| *Grevillea sp. Ocean Reef (D. Pike Joon 4)* | P1 | - | P | Dry, bare, light yellow-brown/grey sand. Sand dunes. | Nov | Nil (does not occur) |
| *Leucopogon maritimus* | P1 | - | P | Sand dunes and lower heath. White, grey and yellow sand. | Mar | Nil (does not occur) (unreliable record) |
| *Acacia benthamii* | P2 | - | P | Sand, typically on limestone breakaways. | Aug-Sep | Nil (does not occur) |
| *Drosera x badgerupii* | P2 | - | P | Black sandy soil, winter wet. | Dec | Nil (does not occur) |
| *Millotia tenuifolia var. laevis* | P2 | - | A | Granite or lateritic soils. | Sep-Oct | Nil (does not occur) |
| *Poranthera moorokatta* | P2 | - | A | Sandy or clay soils. Dampland or low sandy dunes in banksia woodland. | Sep-Nov | Potential to occur |
| *Stenanthemum sublineare* | P2 | - | P | White sand on coastal plains. | Oct-Dec | Potential to occur |
| *Thryptomene velutina* | P2 | - | P | Sandplain, yellow or red sands and loams. Granite, sandstone. | Jun-Sep | Nil (does not occur) |
| *Austrostipa mundula* | P3 | - | P | Grey sand over limestone. | Sep-Nov | Nil (does not occur) (unreliable record) |
| *Conostylis bracteata* | P3 | - | P | Sand, limestone. Consolidated sand dunes. | Aug-Sep | Nil (does not occur) |
| *Cyathochaeta teretifolia* | P3 | - | P | Grey sand, sandy clay in swamps and creek edges. | Oct-Jan | Nil (does not occur) |
| *Dampiera triloba* | P3 | - | P | Damp peat/loam soil. | Aug-Dec | Nil (does not occur) |
| *Hibbertia leptotheca* | P3 | - | P | Brown to white sand with limestone. | Aug-Oct | Nil (does not occur) |
| *Pimelea calcicola* | P3 | - | P | Sand, limestone on coastal ridges. | Sep-Nov | Nil (does not occur) |
| *Sarcozona bicarinata* | P3 | - | P | White sand. | Aug | Potential to occur |
| *Stylidium paludicola* | P3 | - | P | Peaty sand over clay. Winter wet habitats. Marri and Melaleuca woodland, Melaleuca shrubland. | Oct-Dec | Nil (does not occur) |
| *Styphelia filifolia* | P3 | - | P | Brown over pale yellow sand. | Feb-Apr | Potential to occur |

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Conservation Significant Flora Likelihood of Occurrence
Wanneroo Town Centre



| Species name | Level of significance | | Life strategy | Habitat | Flowering period | Likelihood of occurrence |
|---|---|---|---|---|---|---|
| | WA | EPBC Act | | | | |
| *Utricularia oppositiflora* | P3 | - | P | Depressions, often with standing water. Sand and clay. | Nov-Dec | Nil (does not occur) |
| *Anigozanthos humilis subsp. chrysanthus* | P4 | - | P | Grey or yellow sand. | Jul-Oct | Potential to occur |
| *Darwinia macrostegia* | P4 | - | P | Stony soils, peaty sand. Rocky hillsides, gullies. | Aug-Nov | Nil (does not occur) |
| *Eucalyptus foecunda subsp. foecunda* | P4 | - | P | Sand over limestone. Outcropping limestone. | Jan-Mar | Nil (does not occur) |
| *Jacksonia sericea* | P4 | - | P | Calcareous and sandy soils on Swan Coastal Plain. | Dec-Feb | Potential to occur |

Note: CR=critically endangered, EN=endangered, VU=vulnerable, P1=Priority 1, P2=Priority 2, P3=Priority 3, P4=Priority 4, P=perennial, PG=perennial geophyte, A=annual.

# Appendix E

Conservation Significant Communities Likelihood of Occurrence

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Conservation Significant Communities Likelihood of Occurrence
Wanneroo Town Centre



| Code | Community name | TEC/ PEC | Level of significance | | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | | State | EPBC Act | |
| Banksia WL SCP | Banksia Woodlands of the Swan Coastal Plain ecological community | TEC/ PEC | P3 | EN | Recorded |
| SCP20a | *Banksia attenuata* woodlands over species rich dense shrublands (floristic community type 20a as originally described in Gibson et al. 1994) | TEC | CR | - | Potential to occur |
| SCP21c | Low lying *Banksia attenuata* woodlands or shrublands | PEC | P3 | - | NIL (does not occur) |
| SCP22 | *Banksia ilicifolia* woodlands | PEC | P3 | - | NIL (does not occur) |
| SCP23b | Swan Coastal Plain *Banksia attenuata - Banksia menziesii* woodlands | PEC | P3 | - | Potential to occur |
| SCP24 | Northern Spearwood shrublands and woodlands | PEC | P3 | - | NIL (does not occur) |
| SCP25 | Southern *Eucalyptus gomphocephala -Agonis flexuosa* woodlands | PEC | P3 | - | NIL (does not occur) |
| SCP26a | *Melaleuca huegelii - M. systena* shrublands of limestone ridges (floristic community type 26a as originally described in Gibson et al. 1994) | TEC | CR | - | NIL (does not occur) |
| SCP29a | Coastal shrublands on shallow sands | PEC | P3 | - | NIL (does not occur) |
| SCP29b | Acacia shrublands on talier dunes | PEC | P3 | - | NIL (does not occur) |
| SCP30a | *Callitris preissii* (or *Melaleuca lanceolata*) forests and woodlands of the Swan Coastal Plain (floristic community type 30a as originally described in Gibson et al. 1994) | TEC | CR | - | NIL (does not occur) |
| Tuart woodlands | Tuart (*Eucalyptus gomphocephala*) woodlands and forests of the Swan Coastal Plain | TEC/ PEC | P3 | CR | Recorded |
| - | Honeymyrtle shrubland on limestone ridges of the Swan Coastal Plain Bioregion | TEC | - | CR | NIL (does not occur) |
| - | Empodisma peatlands of southwestern Australia | TEC | - | EN | NIL (does not occur) |

Note: TEC=threatened ecological community, PEC=priority ecological community, CR=critically endangered, EN=endangered, P3=priority 3

# Appendix F

Conservation Significant Fauna Likelihood of Occurrence

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| **Birds** | | | | | |
| *Actitis hypoleucos* | Common sandpiper | MI | MI | Edge of sheltered waters salt or fresh, e.g. estuaries, mangrove creeks, rocky coasts, near-coastal saltlakes (including saltwork ponds), river pools, lagoons, claypans, drying swamps, flood waters, dams and sewage ponds. Preferring situations where low perches are available (Johnstone & Storr 1998). | Nil (does not occur) (unreliable record) |
| *Anous stolidus* | Common noddy | MI | MI | Tropical and subtropical seas, cayes, reefs, buoys and piles (Pizzey & Knight 2012). | Nil (does not occur) (unreliable record) |
| *Anous tenuirostris melanops* | Australian lesser noddy | EN | VU | Very common in blue-water seas around the Abrolhos (endemic to this area, accidental occurrences on lower west coast of Australia) (Johnstone and Storr 1998). | Nil (does not occur) (unreliable record) |
| *Apus pacificus* | Pacific swift | MI | MI | Aerial, migratory species that is most often seen over inland plains and sometimes above open areas, foothills or in coastal areas. Sometimes occurs over settled areas, including towns, urban areas and cities (Pizzey & Knight 2012). | Potential to occur |
| *Ardenna carneipes* | Flesh-footed shearwater | VU | MI | Marine species that breeds on islands off south coast from near Cape Leeuwin (Johnstone and Storr 1998). | Nil (does not occur) (unreliable record) |
| *Ardenna grisea* | Sooty shearwater | MI | MI | Marine, migratory species that may visit south-western Australian waters from June to October (Pizzey & Knight 2012). | Nil (does not occur) (unreliable record) |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Ardenna pacifica* | Wedge-tailed Shearwater | MI | MI | Pelagic species that inhabits tropical and subtropical seas. Common in western and eastern Australian seas. In western Australia breeds on offshore islands from Montebello to Rottnest/Carnac (Morcombe & Stewart 2021; Pizzey & Knight 2012). | Nil (does not occur) (unreliable record) |
| *Botaurus dubius* | Australian little bittern | P4 | - | Dense vegetation surrounding/within freshwater pools, swamps and lagoons, well screened with trees. Shelters in dense beds of Typha spp., Baumea spp. and tall rushes in freshwater swamps around lakes and along rivers (Johnstone and Storr 1998). | Nil (does not occur) |
| *Botaurus flavicollis australis* | Black bittern | P2 | - | Freshwater pools, swamps and lagoons, well-screened with trees. Occasionally feeding by day but mainly sheltering in dense waterside vegetation (Melaleuca spp., Eucalyptus camaldulensis, Pandanus spp. and long grass) (Johnstone and Storr 1998). | Nil (does not occur) |
| *Botaurus poiciloptilus* | Australasian bittern | EN | EN | In or over water, in tall reedbeds, sedges, rushes, cumbungi, lignum. Also occurs in ricefields, drains in tussocky paddocks and occasionally in saltmarshes and brackish wetlands (TSSC 2019). | Nil (does not occur) |
| *Calidris acuminata* | Sharp-tailed sandpiper | VU (MI) | VU (MI) | Occurs in tidal mudflats, saltmarshes and mangroves, as well as, shallow fresh, brackish or saline inland wetlands. It is also known from floodwaters, irrigated pastures and crops, sewage ponds, saltfields (Pizzey & Knight 2012). | Nil (does not occur) (unreliable record) |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Calidris alba* | Sanderling | MI | MI | Mainly steeply shelving sandy beaches exposed to ocean swell. Also sandy inlets, estuarine sandbanks and near-coastal saltlakes (including saltwork ponds) (Johnstone & Storr 1998). | Nil (does not occur) (unreliable record) |
| *Calidris canutus* | Red knot | EN | EN (MI) | Mud and sand flats in estuaries and on sheltered coasts. Also near-coastal saltlakes, including saltwork ponds (Pizzey & Knight 2012). | Nil (does not occur) (unreliable record) |
| *Calidris ferruginea* | Curlew sandpiper | CR | CR (MI) | Mainly shallows of estuaries and near-coastal saltlakes (including saltwork ponds) and drying near-coastal freshwater lakes and swamps. Also beaches and near-coastal sewage ponds (Johnstone & Storr 1988). | Nil (does not occur) |
| *Calidris melanotos* | Pectoral sandpiper | MI | MI | Mainly fresh waters (swamps, lagoons, river pools, irrigation channels and sewage ponds); also samphire flats around estuaries and saltlakes (Johnstone & Storr 1998). | Nil (does not occur) (unreliable record) |
| *Calidris ruficollis* | Red-necked stint | MI | MI | Tidal mudflats, saltmarshes, sandy or shelly beaches, saline and freshwater wetlands (coastal and inland), saltfields, sewage ponds (Pizzey and Knight 2012). | Nil (does not occur) |
| *Calidris subminuta* | Long-toed stint | MI | MI | Mainly freshwater swamps (especially when drying and where vegetation is short), river pools, lagoons and claypans; also brackish pools, sewage ponds and samphire flats around estuaries and saltlakes (Johnstone & Storr 1988). | Nil (does not occur) (unreliable record) |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Calonectris leucomelas* | Streaked shearwater | MI | MI | Regular non-breeding visitor to western Australian north of Geraldton (Pizzey & Knight 2012). | Nil (does not occur) (unreliable record) |
| *Calyptorhynchus banksii naso* | Forest red-tailed black cockatoo | VU | VU | Eucalypt and Corymbia forests, often in hilly interior. More recently also observed in more open agricultural and suburban areas including Perth metropolitan area. Attracted to seeding Corymbia calophylla, Eucalyptus marginata, introduced Melia azedarach and Eucalyptus spp. trees (Johnstone et al. 2013). | Likely to occur |
| *Charadrius leschenaultii* | Great sand plover | VU | VU (MI) | Wide sandy or shelly beaches, sandpits, tidal mudflats, reefs, sand cays, mangroves, saltmarsh, dune wilderness, bare paddocks, seldom far inland (Pizzey & Knight 2012). | Nil (does not occur) |
| *Chlidonias leucopterus* | White-winged black tern | MI | MI | Vegetated and open wetlands, brackish and saline lakes, saltfields, irrigated lands, sewage ponds and occasionally offshore (Pizzey & Knight 2012). | Nil (does not occur) (unreliable record) |
| *Diomedea amsterdamensis* | Amsterdam Island albatross | CR | EN (MI) | The Amsterdam albatross is a marine, pelagic seabird. It nests in open patchy vegetation (among tussocks, ferns or shrubs) near exposed ridges or hillocks (Weimerskirch et al. 1985). It sleeps and rests on ocean waters when not breeding (Marchant and Higgins 1990) | Nil (does not occur) (unreliable record) |
| *Diomedea antipodensis gibsoni* | Gibson's Albatross | EN | VU | Marine, pelagic and aerial species. Rare visitor in the Indian and Pacific oceans (DCCEEW 2023). | Nil (does not occur) (unreliable record) |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Diomedea epomophora* | Southern royal albatross | VU | VU (MI) | Rare visitor to Western Australian seas; it breeds on subantarctic islands south of New Zealand (Johnstone and Storr 1998). | Nil (does not occur) (unreliable record) |
| *Diomedea exulans* | Wandering albatross | VU | VU (MI) | Marine, pelagic and aerial species. It breeds on Macquarie Island and feeds in Australian portions of the Southern Ocean (DCCEEW 2022). | Nil (does not occur) (unreliable record) |
| *Falco hypoleucos* | Grey falcon | VU | VU | Species occurs in arid and semi-arid Australia, where it inhabits timbered lowland plains. In particular Acacia shrublands and that are crossed by tree-lined water courses. Species has also been observed hunting in treeless areas and frequenting tussock grassland and open woodlands (TSSC 2020). | Nil (does not occur) (unreliable record) |
| *Falco peregrinus* | Peregrine falcon | OS | - | Mainly found around cliffs along coasts, rivers, ranges and around wooded watercourses and lakes (Johnstone and Storr 1998). | Potential to occur |
| *Gelochelidon nilotica* | Gull-billed tern | MI | MI | Beaches, mudflats; fresh, brackish wetlands, including far inland; grasslands, crops, ploughed fields, airfields (Pizzey & Knight 2012). | Nil (does not occur) |
| *Glareola maldivarum* | Oriental pratincole | MI | MI | Plains, shallow wet and dry edges of open bare wetlands, tidal mudflats and beaches (Pizzey & Knight 2012). | Nil (does not occur) (unreliable record) |
| *Haliaeetus leucogaster* | White-bellied sea-eagle | - | MA | Coasts, islands, estuaries, inlets, large rivers, inland lakes and reservoirs (Pizzey & Knight 2012). | Nil (does not occur) (unreliable record) |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Halobaena caerulea* | Blue petrel | MI | VU (MI) | Marine species that breeds on southern subantarctic and northern artic islands. Only an accidental or uncommon visitor to Western Australian waters (Johnstone & Storr 1998). | Nil (does not occur) (unreliable record) |
| *Hydroprogne caspia* | Caspian tern | MI | MI | Mainly sheltered areas, estuaries (when not laden with silt) and tidal creeks; occasionally near-coastal saltlakes (including saltwork ponds) and brackish pools in lower courses of rivers; rarely fresh waters (DCCEEW 2023). | Nil (does not occur) (unreliable record) |
| *Leipoa ocellata* | Malleefowl | VU | VU | Scrubs and thickets of Eucalyptus spp., Melaleuca lanceolata and Acacia linophylla; also other dense litter-forming shrublands. Attracted to fallen wheat in stubbles and along roads (Johnstone and Storr 1998). | Nil (does not occur) (unreliable record) |
| *Limosa lapponica* | Bar-tailed godwit | MI | MI | Estuarine sand and mudflats and sandy beaches with loads of seaweed; also reef flats and near-coastal saltlakes (including saltwork and sewage ponds) (Johnstone and Storr 1998). | Nil (does not occur) (unreliable record) |
| *Limosa lapponica menzbieri* | Bar-tailed godwit | CR (MI) | CR (MI) | Mainly coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays. Has also been recorded in coastal sewage farms and saltworks, saltlakes and brackish wetlands near coasts, sandy ocean beaches, rock platforms, and coral reef-flats (Higgins and Davies 1996). | Nil (does not occur) (unreliable record) |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Limosa limosa* | Black-tailed godwit | EN MI | EN (MI) | Tidal mudflats, estuaries, sewage ponds, shallow river margins, brackish or saline inland lakes, flooded pastures, airfields (Pizzey & Knight 2012). | Nil (does not occur) |
| *Macronectes giganteus* | Southern giant-petrel | MI | EN (MI) | Breeds on southern subantarctic and antarctic islands. May visit Western Australian waters from February to December (mostly June to September) (Johnstone and Storr 1998). | Nil (does not occur) |
| *Macronectes halli* | Northern giant petrel | MI | VU (MI) | Breeds on subantarctic islands. May visit Western Australian water from February to September (Johnstone and Storr 1998). | Nil (does not occur) |
| *Motacilla cinerea* | Grey wagtail | MI | MI | In Australia mostly near running water in disused quarries, sandy and rocky streams in escarpments and rainforests, sewage ponds, ploughed fields and airfields (Pizzey & Knight 2012). | Nil (does not occur) (unreliable record) |
| *Ninox connivens connivens* | Barking owl (southwest subpop.) | P3 | - | Open forests, woodlands, dense scrubs, foothills, river red gums, and other large trees near watercourses penetrating otherwise open country. Also Melaleuca woodlands, mangroves, rainforests and deciduous vine scrubs (Johnstone and Storr 1998; Pizzey & Knight 2012). | Nil (does not occur) (unreliable record) |
| *Numenius madagascariensis* | Eastern curlew | CR | CR (MI) | Mainly tidal mudflats; also reef flats, sandy beaches and rarely near-coastal lakes (including saltwork ponds) (Johnstone and Storr 1998). | Nil (does not occur) (unreliable record) |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Oceanites oceanicus* | Wilson's storm petrel | MI | MI | Marine, migratory species that may visit south-western Australian waters and shores in late autumn to winter (Pizzey & Knight 2012). | Nil (does not occur) (unreliable record) |
| *Onychoprion anaethetus* | Bridled tern | MI | MI | Tropical and subtropical seas, offshore islands, rarely coasts (Pizzey & Knight 2012). | Nil (does not occur) |
| *Oxyura australis* | Blue-billed duck | P4 | - | Mainly deeper freshwater swamps and lakes; occasionally saltlakes and estuaries freshened by flood waters (Johnstone and Storr 1998). | Nil (does not occur) |
| *Pachyptila turtur subantarctica* | Fairy prion | - | VU | Breeds on subantarctic islands and is presumed to frequent subtropical waters during non-breeding period (TSSC 2015). | Nil (does not occur) (unreliable record) |
| *Pandion haliaetus* | Osprey | MI | MI | Coasts, estuaries, bays, inlets, islands, and surrounding waters; coral atolls, reefs, lagoons, rock cliffs, stacks (Pizzey & Knight 2012). | Nil (does not occur) |
| *Phaethon rubricauda* | red-tailed tropicbird | P4 (MI) | MI | Breeding occurs seasonally in loose colonies on small, remote oceanic islands mostly on inaccessible cliffs. No regular migrations are known; adults can be found in the vicinity of colonies all year round (Schreiber & Schreiber 2020). | Nil (does not occur) (unreliable record) |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Phaethon rubricauda westralis* | Red-tailed tropicbird | P4 (MI) | EN (MI) | Spend most of their lives at sea and rarely venture near land. This bird is normally found in tropical and subtropical seas around northern Australia. Though rarely seen in colder areas, a few pairs breed on Sugarloaf Rock, south of Cape Naturaliste (DPAW 2017b). Are known to breed on Rottnest Island (DCCEEW 2023). | Nil (does not occur) (unreliable record) |
| *Phoebetria fusca* | Sooty albatross | EN | VU (MI) | Marine, pelagic species that tolerates a wide range of sea surface temperatures and salinities. breeds on subtropical and subantarctic islands in the Indian and Atlantic Oceans, on vegetated cliffs and steep slopes that are sheltered from prevailing winds, often amongst tussock grass (Pizzey & Knight 2012). | Nil (does not occur) (unreliable record) |
| *Plegadis falcinellus* | Glossy Ibis | MI | MI | Well-vegetated wetlands, wet pasture, ricefields, floodwaters, floodplains, brackish or occasionally saline wetlands, mangroves, mudflats and occasionally dry grassland (Pizzey & Knight 2012). | Nil (does not occur) |
| *Pluvialis fulva* | Pacific golden plover | MI | MI | Estuaries, mudflats, saltmarshes, mangroves; rocky reefs and stranded seaweed on ocean shores; margins of shallow open inland swamps; sewage ponds, short-grass paddocks, sportsgrounds, airfields, ploughed land (Pizzey & Knight 2012). | Nil (does not occur) (unreliable record) |
| *Pluvialis squatarola* | Grey Plover | VU (MI) | VU (MI) | Mudflats, saltmarsh, tidal reefs and estuaries, rarely inland (Pizzey and Knight 2012). | Nil (does not occur) (unreliable record) |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Procellaria aequinoctialis* | White-chinned petrel | VU | MI | Have a circumpolar dispersal with it's northernmost range reaching 40° lattitude. Breeds on subantarctic islands in the NZ, Indian Ocean and Atlantic Ocean regions. | Nil (does not occur) |
| *Pterodroma mollis* | Soft-plumaged petrel | MI | VU (MI) | Marine species that breeds on temperate and subantarctic islands in south Atlantic and south Indian Ocean. Visitor to West Australian waters from March to September. Rarely observed inshore (Johnstone & Storr 1998). | Nil (does not occur) (unreliable record) |
| *Rostratula australis* | Australian painted snipe | EN | EN | Mainly shallow terrestrial freshwater (occasionally brackish) wetlands, including temporary and permanent lakes, swamps and claypans (Marchant and Higgins 1993). | Nil (does not occur) (unreliable record) |
| *Stercorarius antarcticus lonnbergi* | Brown skua | P4 | - | Mostly beyond shelf break; occasionally on beaches foraging on dead seals or whales (Pizzey & Knight 2012). | Nil (does not occur) (unreliable record) |
| *Stercorarius parasiticus* | Arctic skua | MI | MI | Offshore waters, bays and harbours, seldom ashore. Also follows ships (Pizzey & Knight 2012). | Nil (does not occur) (unreliable record) |
| *Sterna dougallii* | Roseate tern | MI | MI | Offshore waters, islands, coral reefs, sand cays, beaches, tidal inlets (Pizzey & Knight 2012). | Nil (does not occur) (unreliable record) |
| *Sterna paradisaea* | Arctic tern | MI | MI | Sheltered coasts, estauries and near-coastal lakes. Scarce passage migrant and accidental visitor (Johnston and Storr 1998). | Nil (does not occur) (unreliable record) |
| *Sternula albifrons* | Little tern | MI | MI | Species is mainly coastal, being found on beaches, sheltered inlets, estuaries, lakes, sewage farms, lagoons, river mouths and deltas (Pizzey & Knight 2012). | Nil (does not occur) (unreliable record) |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Sternula nereis nereis* | Australian fairy tern | VU | VU | Sheltered blue-water seas close to land, estuaries (when free of silt) and near-coastal lakes (Johnstone and Storr 1998). | Nil (does not occur) |
| *Thalassarche carteri* | Indian yellow-nosed albatross | EN | VU (MI) | Marine species that inhabits seas of south and west coast of Western Australia and breeds on islands in the south Indian Ocean and in the south Atlantic (Johnstone & Storr 1998). | Nil (does not occur) (unreliable record) |
| *Thalassarche cauta* | Shy albatross | VU | VU (MI) | Scarce visitor (late May to mid-October) to southwestern and western seas. Breeds on islands off Tasmania and south New Zealand (Johnstone and Storr 1998). | Nil (does not occur) (unreliable record) |
| *Thalassarche chlororhynchos* | Atlantic yellow-nosed albatross | VU | MI | Marine migratory species that breeds on the Tristan da Cunha group and on Gough Island. Sparse visitor to Australian waters/shores (DCCEEW 2022). | Nil (does not occur) (unreliable record) |
| *Thalassarche chrysostoma* | Grey-headed albatross | VU | EN (MI) | Marine migratory species that remains at sea for most of its life. Breeding habitat on subantarctic and Antarctic islands of the Indian and Atlantic Oceans and seas south of New Zealand (Marchant and Higgins 1993). | Nil (does not occur) |
| *Thalassarche impavida* | Campbell albatross | VU | VU (MI) | Scarce visitor to south-western and western Australian seas. Breeds on Campbell Island (Pizzey & Knight 2012). | Nil (does not occur) (unreliable record) |
| *Thalassarche melanophris* | Black-browed albatross | EN | VU (MI) | Seas of south and west coasts. Visitor to Western Australian mainland from January to early November (mostly May to September). Breeds on southern subantarctic and Antarctic islands (Johnstone and Storr 1998). | Nil (does not occur) (unreliable record) |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Thalassarche steadi* | White-capped albatross | VU | VU (MI) | Scarce visitor (late May to mid-October) to southwestern and western seas. Breeds on islands off Tasmania and south New Zealand (Johnstone and Storr 1998). | Nil (does not occur) (unreliable record) |
| *Thalasseus bergii* | Crested tern | MI | MI | Mainly blue-water seas (especially within 3 km of land), including southern estuaries in summer and autumn (when free of silt); also tidal creeks in north, but not penetrating far into larger estuaries (DCCEEW 2023). | Nil (does not occur) |
| *Tringa brevipes* | Grey-tailed tattler | P4 (MI) | MI | Tidal mud and reef flats, sheltered rocky coasts, stony and seaweedy beaches and sandpits, dry coral ridges (Abrolhos) and pebbly shores of near-coastal saltlakes (including saltwork ponds) (Johnstone and Storr 1998). | Nil (does not occur) (unreliable record) |
| *Tringa glareola* | Wood sandpiper | MI | MI | Mainly shallow fresh waters (lagoons, swamps, claypans, river pools, dams, bore overflows and sewage ponds); occasionally brackish swamps, rarely saltlakes and estuaries (Pizzey & Knight 2012). | Nil (does not occur) |
| *Tringa nebularia* | Common greenshank | EN (MI) | EN (MI) | Mudflats, estuaries, saltmarshes, margins of lakes, wetlands, claypans (fresh and saline), commercial saltfields, sewage ponds (Pizzey & Knight 2012). | Nil (does not occur) |
| *Tringa stagnatilis* | Marsh sandpiper | MI | MI | Mainly shallow fresh or brackish waters: swamps, lakes, river pools, soaks, sewage ponds and bore overflows. Occasionally estuaries and salt ponds, and rarely coasts (DCCEEW 2023). | Nil (does not occur) |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Tyto novaehollandiae novaehollandiae* | Australian masked owl | P3 | - | Forests, open woodlands, farmlands with large trees. E.g. river red gums, adjacent cleared country, timbered watercourses, paperbark woodlands and caves (Pizzey & Knight 2012). | Nil (does not occur) |
| *Xenus cinereus* | Terek sandpiper | VU (MI) | VU (MI) | Tidal mudflats, estuaries; shores and reefs of islands; coastal swamps, commercial saltfields (Pizzey & Knight 2012). | Nil (does not occur) (unreliable record) |
| *Zanda baudinii* | Baudin's black cockatoo | EN | EN | Mainly eucalypt forests. Attracted to seeding Corymbia calophylla, Banksia spp., Hakea spp., and to fruiting apples and pears (Johnstone and Storr 1998). | Nil (does not occur) (unreliable record) |
| *Zanda latirostris* | Carnaby's black cockatoo | EN | EN | Mainly proteaceous scrubs and heaths and adjacent eucalypt woodlands and forests; also plantations of Pinus spp. Attracted to seeding Banksia spp., Hakea spp., Eucalyptus spp., Corymbia calophylla, Grevillea spp., and Allocasuarina spp. (Johnstone and Storr 1998). | Likely to occur |
| | | | | | |
| **Fish** | | | | | |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Galaxiella nigrostriata* | Black-stripe minnow | EN | EN | Seasonally dry coastal wetlands. Permanent or ephemeral spring-fed headwater streams, ponds, roadside ditches and small creeks in sandy wetland areas with thick vegetation. Also occurs in the shallow areas of some freshwater lakes with thick vegetation. The water is usually highly tannin-stained and acidic (pH 4.5-6.5) (Bray and Gomon 2017). | Nil (does not occur) (unreliable record) |
| **Invertebrate** | | | | | |
| *Australotomurus morbidus* | Cemetery springtail | P3 | - | Typical habitats for Australotomurus species are long undisturbed native grasslands and heathland at low and high elevations. Known only from four locations in Perth. | Nil (does not occur) (unreliable record) |
| *Austrosaga spinifer* | Spiny katydid | P2 | - | Unknown. | Potential to occur |
| *Hesperocolletes douglasi* | Douglas's broad-headed bee | CR | CR | Banksia woodland vegetation (Pille Arnold 2019). | Potential to occur |
| *Hylaeus globuliferus* | Woollybush bee | P3 | - | Males are territorial and may be found perched on the growing tips of Adenanthos sp., Banksia sp. or Jacksonia sp. Has also been recorded visiting the flowers of Grevillea sp. (PaDIL 2022). | Potential to occur |
| *Idiosoma nigrum* | Shield-backed trapdoor spider | EN | VU | Typically inhabits clay soils of eucalypt woodlands and acacia vegetation, and relies heavily on leaf-litter and twigs to build its burrow. Found in three isolated populations in the central and northern wheatbelt, and the Jack Hills and Weld Ranges (DSEWPC 2013) | Nil (does not occur) (unreliable record) |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Idiosoma sigillatum* | Swan Coastal Plain shield-backed trapdoor spider | P3 | - | Widely distributed in sandy areas on the Swan Coastal Plain and on Rottnest Island (Prince 2003). Species predominantly recorded from remnant banksia woodland vegetation and heath on sandy soils (Rix et. al 2018). | Potential to occur |
| *Leioproctus contrarius* | a short-tongued bee | P3 | - | Life history and habits are poorly documented/ unknown. | Potential to occur |
| *Synemon gratiosa* | Graceful sun-moth | P4 | - | Coastal heathland on Quindalup dunes where it is restricted to secondary sand dunes due to the abundance of the preferred host plant Lomandra maritima. Banksia woodland on Spearwood and Bassendean dunes, where the second known host plant L. hermaphrodita is widespread (DEC 2011). | Potential to occur |
| **Mammals** | | | | | |
| *Bettongia penicillata ogilbyi* | Woylie | CR | EN | Woodlands and adjacent heaths with a dense understorey of shrubs, particularly Gastrolobium spp. (TSSC 2018). | Nil (does not occur) (unreliable record) |
| *Dasyurus geoffroii* | Chuditch | VU | VU | Wide range of habitats from woodlands, dry sclerophyll forests, riparian vegetation, beaches and deserts. Appears to utilise native vegetation along roadsides in the wheatbelt (DEC 2012). | Nil (does not occur) |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Hydromys chrysogaster* | Rakali | P4 | - | Areas with permanent water, fresh, brackish or marine. Likely to occur in all major rivers and most of the larger streams as well as bodies of permanent water in the lower south-west (Christensen et al. 1984). Intact riparian vegetation and associated bank stability is critical to their survival (DWER 2023). | Nil (does not occur) |
| *Isoodon fusciventer* | Quenda | P4 | - | Dense scrubby, often swampy, vegetation with dense cover up to one metre high (DEC 2012) | Potential to occur |
| *Myrmecobius fasciatus* | Numbat | EN | EN | Generally dominated by Eucalyptus spp. that provide hollow logs and branches for shelter and termites for food (van Dyck & Strahan 2008). | Nil (does not occur) (unreliable record) |
| *Notamacropus irma* | Western brush wallaby | P4 | - | Dry sclerophyll forest, Banksia spp. woodlands and shrublands, typically favouring dense low vegetation that provides dense cover (Christensen and Strahan 1983). | Nil (does not occur) |
| *Phascogale tapoatafa wambenger* | South-western brush-tailed phascogale | CD | - | Dry sclerophyll forests and open woodlands that contain hollow-bearing trees but a sparse ground cover (Triggs 2003). | Nil (does not occur) |
| *Pseudocheirus occidentalis* | Western ringtail possum | CR | CR | On the Swan Coastal Plain in Agonis flexuosa woodlands and Agonis flexuosa/ Eucalyptus gomphocephala forests. Also Eucalyptus marginata forests (DBCA 2017). | Nil (does not occur) (unreliable record) |
| **Reptiles** | | | | | |

| Species name | Common name | Level of | | Habitat | Likelihood of occurrence |
|---|---|---|---|---|---|
| | | WA | EPBC Act | | |
| *Ctenotus gemmula* | - | P3 | - | Pale soils supporting heathlands and usually in association with Banksia spp. (Bush et al. 2010) | Nil (does not occur) (unreliable record) |
| *Neelaps calonotos* | Black-striped snake | P3 | - | Coastal and near-coastal dunes, sandplains supporting heathlands and Banksia spp. woodlands (Bush et al. 2010). | Potential to occur |
| *Pseudemydura umbrina* | Western swamp tortoise | CR | CR | Clay based ephemeral swamps (Bush et al. 2010). | Nil (does not occur) (unreliable record) |
| Note: CR=critically endangered, EN=endangered, VU=vulnerable, CD=conservation dependent, MI=migratory, OS=other specially protected, P1=Priority 1, P2=Priority 2, P3=Priority 3, P4=Priority 4. Species with a high or moderate likelihood to occur within the site are shaded green. | | | | | |

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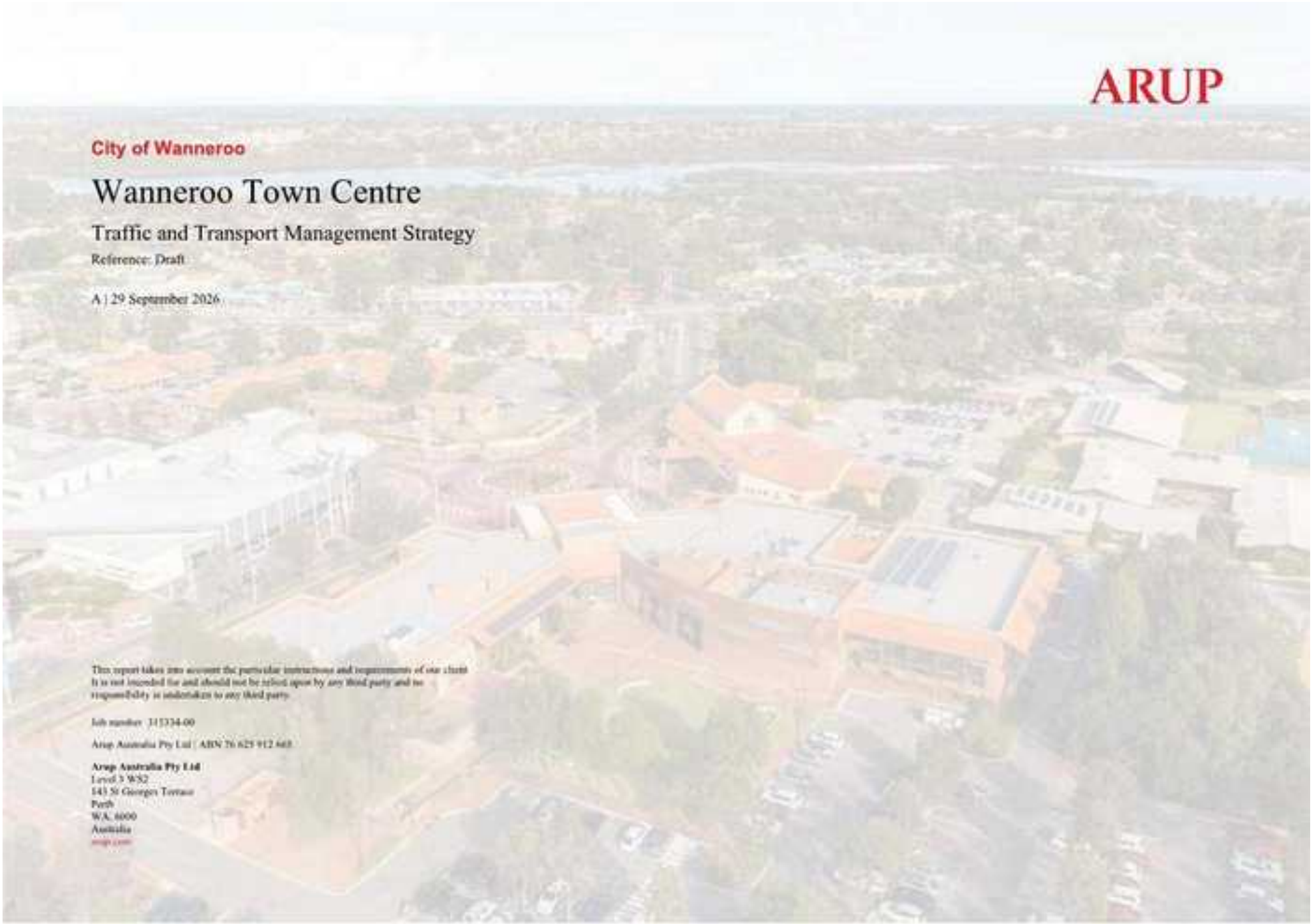
City of Wanneroo

# Wanneroo Town Centre

## Traffic and Transport Management Strategy

Reference: Draft

A | 29 September 2026



This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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# 1. Introduction

## 1.1 Traffic and Transport Management Strategy Report

This Traffic and Transport Management Strategy has been prepared to support the development of the Wanneroo Town Centre (WTC) Precinct Plan, which identified the need for an updated Activity Centre Structure Plan for the Wanneroo Town Centre and its surrounding area.

The purpose of this report is to inform the development of the Precinct Plan and provide the transport and movement information required under State Planning Policy 4.2: Activity Centres for Perth and Peel (SPP 4.2). The report assesses the existing transport network, identifies key transport issues and opportunities, and establishes a framework to support future growth and development within the WTC.

## 1.2 Wanneroo Town Centre Precinct Plan Review

In 2026, the City of Wanneroo commenced the development of the WTC Precinct Plan. The vision for the WTC is to create a vibrant, connected and welcoming destination that integrates contemporary development with the area's historic character, creating a strong sense of place.

The WTC will provide a diverse mix of land uses and high-quality public spaces that meet community needs while continuing to accommodate the City's civic heart, including the City of Wanneroo Civic Centre. To support this vision, the transport network must facilitate safe, efficient and sustainable movement for residents, workers and visitors. Accordingly, this Traffic and Transport Management Strategy has been prepared to ensure the future transport network supports the planned growth and development of the WTC.

## 1.3 State Planning Policy 4.2 (SPP 4.2)

Western Australian Planning Commission's State Planning Policy 4.2: Activity Centres for Perth and Peel (SPP 4.2) guides the planning and development of activity centres throughout Western Australia.

SPP 4.2 includes a number of transport and movement objectives, including:

- Ensuring activity centres provide sufficient development intensity and land use diversity to support high-frequency public transport.
- Maximising access to activity centres by walking, bike riding and public transport while reducing reliance on private vehicles.
- Planning activity centre development around a legible street network and high-quality public spaces.

## 1.4 Report Structure

This report sets up the required responses to the key areas set out in SPP 4.2. Outside of the introduction section of the Report, there are six key areas that are examined within the report.

- Regional Perspective
- Public Transport
- Pedestrian Movement and Amenity
- Bike Riding
- Vehicle Movement and Access
- Parking

# 2. Regional Perspective

## 2.1 Regional Location

The WTC is located approximately 23 km north of the Perth CBD and around 1 km east of Lake Joondalup. The transport network withing and surrounding the WTC is primarily served by Wanneroo Road, regional distributor road that bisects the centre and carries between 26,000 and 44,000 vehs per day (vpd).




Figure 2-1 Location of Activity Centre

Traffic conditions in the WTC are also influenced by Ocean Reef Road and Marmion Avenue, both of which form part of the State road network. Ocean Reef Road, located to the south of the WTC, carries approximately 25,000 to 41,000 vpd and provides a key east-west connection between Wanneroo Road and Marmion Avenue. Marmion Avenue carries between 21,000 and 26,000 vpd and serves as an important north-south corridor within the region (Main Roads WA Traffic Map, 2026). Travelling from the main intersection of Wanneroo Road and Dundebar Road, the WTC is approximately:

- 33 km from North Airport
- 27 km from Yanchep
- 9 km from Joondalup
- 24 km to Morley

The location of the WTC in a regional perspective is shown in Figure 2-1.

## 2.2 Regional Perspective – Road Hierarchy

With the exception of Wanneroo Road, which is under the cate and control of Main Roads WA, the street network within the WTC is dominated by Access Streets and Local Distributors, all maintained and controlled by the City of Wanneroo. The road network within the study area and their designations under the Main Roads WA road hierarchy are shown in Figure 2-2 The main distributor level roads are:

- Wanneroo Road – Primary Distributor
- Dundebar Road – Local Distributor
- Servite Terrace – Local Distributor
- Civic Drive – Local Distributor
- Church Street – Local Distributor
- Ariti Avenue – Local Distributor

All other streets shown in Figure 2-2 are classified as Access Road. Additionally, Illyarrie Rise is expected to be classified as a Local Distributor Road once completed.




Figure 2-2 Road Hierarchy




Figure 2-3 Speed Zones

## 2.3 Regional Perspective – Road Speed Zones

The speed limit on Wanneroo Road through the WTC is 60 km/h, increasing to 70 km/h approximately 760 m north and 340 m south of the study area boundary. Within the WTC, most local streets have a posted limit of 50 km/h. As part of the proposed Rocca Way closure, the speed limit in the immediate vicinity of Rocca Way has been reduced to 20 km/h. Roads surrounding the Wanneroo Civic Centre, including Dundebar Road, Service Terrace, Senario Drvie and Yagan Place, have posted limit of 40 km/h.

The posted speed limits are shown in Figure 2-3.

## 2.4 Regional Perspective – Points of Arrival

The WTC has a range of arrival points across different transport modes, as shown in Figure 2-4.

- **Vehicle access** is primarily provided via Wanneroo Road from the north and south, with an additional entry point from the east via Dundebar Road.
- **Bus services** access the WTC from Wanneroo Road to the north and south, Dundebar Road to the east, and through Elizabeth Road to the south.
- **Bike riding** access is provided by the Primary Long Term Cycle Network (LTCN), including a shared path adjacent to Scenic Drive around Lake Joondalup and a route along Church Street connecting Scenic Drive to Wanneroo Road.

- **Pedestrian access** is supported by the local street and footpath network, which provides connections between the surrounding area, the cycling network, and the WTC.
- There are range of other lower order, localised entry points for all modes, including Civic Drive from the south, Church Street and Ariti Avenue which provide connections from Lake Joondalup to the west, and Bamboore Crescent and Karimba Street from the east.




Figure 2-4 Point of Arrival

## 2.5 Regional Perspective – Key Sites

Several key destinations and development sites within the WTC generate existing travel demand and are expected to influence future travel patterns. These sites, shown in Figure 2-5, include:

- **Wanneroo Central Shopping Centre**, which is a major trip attractor within the WTC following its recent redevelopment.




Figure 2-5 Key Sites

- The **civic precinct**, comprising the City of Wanneroo Council offices, Wanneroo Library, Wanneroo Regional Museum and ECU Health Centre, located near the intersection of Dundebar Road, Servite Terrace and Rocca Way.
- **Wanneroo Showgrounds**, which hosts the annual Wanneroo Agricultural Show, as well as the Wanneroo Amateur Football Club, Wanneroo Sports and Social Club and skate park, generating both event-based and regular visitor trips.
- Two schools are located within the WTC: **Wanneroo Primary School and St Anthony's School**. School pick-up and drop-off activity has a noticeable impact on the surrounding road network during the morning and afternoon peak school periods.
- A **future rapid transit terminus** proposed as part of the East Wanneroo District Structure Plan (EWDSP). The terminus is planned to be located

in the north-eastern quadrant of the Wanneroo Road/Dundebar Road intersection, although its exact location has not yet been confirmed. The facility is intended to provide seamless integration with the future rapid transit corridor along Wanneroo Road.

## 2.6 Regional Perspective – Travel Context

### 2.6.1 Journey to Work

#### Mode Split

To benchmark existing travel patterns and inform an understanding of future travel demand, Census Journey to Work data was analysed. This dataset captures the primary method of travel used by employed residents to travel between their place of residence and place of employment on Census day.

The 2021 Journey to Work data for the WTC catchment is shown in Figure 2-6. The WTC catchment was approximated using four Statistical Area Level 1 (SA1) units:

- SA1 505030130602
- SA1 505030130608
- SA1 505030130614
- SA1 505030130632

In comparison to Greater Perth, residents within the WTC catchment exhibit a higher reliance on private vehicles and lower use of public transport. This reflects the location of Wanneroo relative to major employment centres and the current public transport network available to local residents.

Direct comparison with the 2016 Census results is not possible, as the SA1 boundaries and coding structure were revised between the 2016 and 2021 Census periods. Nevertheless, the overall travel patterns observed in both Census datasets are broadly consistent.

In both 2016 and 2021, travelling as a car driver was the dominant journey-to-work mode, followed by car passenger. Public transport, walking and bike riding accounted for relatively small proportions of overall journeys. Some active and public transport modes recorded very low or zero values within individual SA1s. This should not be interpreted as a complete absence of these travel modes but rather reflects that they were not recorded as the primary method of travel to work for Census respondents within those areas.

The 2021 Census also recorded relatively high proportions of respondents who either worked from home or did not travel to work on Census day. These outcomes should be interpreted in the context of the COVID-19 pandemic, which influenced travel patterns and work arrangements at the time of the Census.

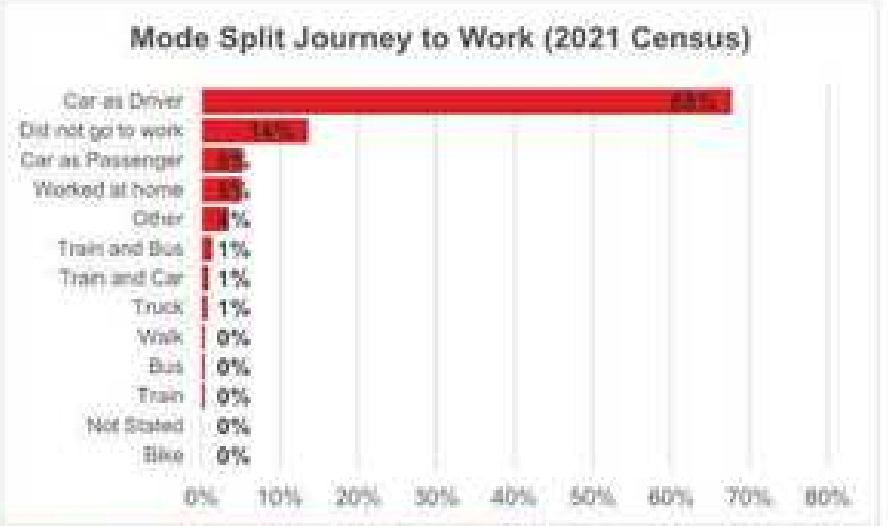


Figure 2-6 Mode split journey to work (2021 Census)

#### Trips and Movement

The movement of people to and from Wanneroo for employment purposes was examined to understand travel patterns from a sub-regional perspective. For this analysis, the Local Government Area (LGA) was used as the geographic unit. Outbound journey-to-work trips are shown in Figure 2-7, while inbound journey-to-work trips are shown in Figure 2-8.




Figure 2-7Journey to Work – Key Destinations from Wanneroo




Figure 2-8 Journey to Work – origin suburb to Wanneroo

For outbound trips, shown in Figure 2-7 from place of residence to place of employment, there is a relatively high degree of self-containment, with 28.9% of employed residents working within the City of Wanneroo. Other key employment destinations include:

- Joondalup (13%)
- Perth (11.5%)
- Stirling (10.8%)
- Swan (6.4%)
- Belmont (3.1%)

The results indicate that, while Wanneroo functions as an employment destination for local residents, a substantial proportion of workers continue to travel to major employment centres in Joondalup, Perth and Stirling.

For inbound , shown in Figure 2-8, trips to employment destinations within Wanneroo, 57.8% of workers reside within the City of Wanneroo. Other key origins include:

- Joondalup (16.2%)
- Stirling (8.2%)
- Swan (6.9%)
- Bayswater (1.5%)
- Gosnells (0.8%)

These results demonstrate that Wanneroo attracts workers from across Perth's northern metropolitan region, although the majority of employment trips originate from within the local area. The strong relationship between Wanneroo and Joondalup is particularly evident, with significant two-way commuting occurring between the two centres. This highlights the importance of maintaining efficient transport connections between Wanneroo, Joondalup and other major employment centres within the metropolitan area.

### 2.6.2 Vehicle Ownership

The Census provides information on household vehicle ownership. A review of vehicle ownership data for the Wanneroo locality was undertaken using 2021 Census data and is presented in Figure 2-9.

Direct comparison between the 2016 and 2021 Census results should be interpreted with caution due to changes in SA1 boundaries between Census periods. The study area included approximately 675 dwellings in 2016, compared with 554 dwellings in 2021, reflecting differences in the statistical geography used for the analysis rather than a reduction in dwelling numbers.

Despite these limitations, several broad trends are apparent. The proportion of households with no motor vehicle increased between 2016 and 2021, while the proportion of households with two motor vehicles decreased. In 2016, households with two vehicles represented the largest ownership category; however, by 2021, one-vehicle households were the most common. A slight increase was also observed in the proportion of households owning four or more vehicles.

Overall, the results indicate that private vehicle ownership remains high within the WTC. While there are indications of a shift towards lower levels of vehicle ownership for some households, a substantial proportion of households continue to own multiple vehicles. This is consistent with the Journey to Work data, which identifies private vehicle travel as the dominant mode of travel to work.




**Figure 2-9 Car Ownership Percentage – Wanneroo between 2001 and 2016**

### 2.6.3 Walking and Bike Riding Trend

Recent national travel behaviour data indicates growing demand for active transport and micromobility across Australia. The 2025 National Walking and Cycling Participation Survey (NWCPS) found that bike riding for transport increased by more than 10% between 2023 and 2025. Notable growth was observed in bike riding for commuting purposes (20.0%, up from 14.6%), as part of a public transport journey (5.5%, up from 2.0%), and for shopping trips (12.5%, up from 7.0%).

The survey also identified infrastructure as the primary factor influencing bike riding participation, with 42% of people who rode a bike in the past year indicating that improved paths, facilities and on-road safety treatments would encourage them to ride more frequently. This finding is particularly relevant to the WTC, where a number of active transport projects are proposed through the Active Transport Plan and Long-Term Cycle Network.

Emerging transport trends are also likely to influence future travel patterns within the WTC. E-bike ownership increased to 6% of Australian households in 2025, double the rate recorded in 2023, while micromobility usage is also increasing, with approximately 2% of Australians using e-rideables weekly and 3% of households owning an e-rideable device.

These trends suggest that demand for walking, bike riding and micromobility within the WTC is likely to increase over time, particularly as planned infrastructure improvements are implemented. As a result, the provision of safe and connected routes, end-of-trip facilities and integration with future public transport services will become increasingly important in supporting future travel demand.

### 2.6.4 Travel Times

Travel times between the WTC and selected activity centres and destinations were assessed to provide context for travel behaviour and mode choice. The assessment involved:

- Using Google Maps to compare travel times during the AM peak period.
- Examining five destinations: Mindarie, Joondalup, Hillarys Boat Harbour, Kingsway Shopping Centre and Perth CBD.
- Comparing three travel modes: private vehicle, public transport (bus only or bus and train for Perth trips), and bike riding.
- Undertaking the comparison at 8:15 am on a typical weekday.
- Using the intersection of Wanneroo Road and Dundebar Road as the trip origin.

A range of travel times was recorded for private vehicle and public transport trips to account for variability in peak-period traffic conditions and the availability of multiple public transport routing options. For trips to Perth CBD, the destination was nominated as 140 William Street.




Figure 2-10 Comparison of Typical Travel Times

The resulting travel times were compared and ranked by mode to understand the relative attractiveness of each travel option and how these influence travel patterns within and around the WTC. The results are presented in Figure 2-10. The travel time comparison highlights several factors influencing travel behaviour within the WTC:

- Private vehicle travel provides the shortest journey times for all assessed destinations.
- Public transport travel times are generally longer than private vehicle travel due to service frequency, indirect routing, transfer requirements and the lack of priority measures along key corridors.
- Bike riding is competitive for shorter-distance trips, particularly to nearby destinations, although its attractiveness may be constrained by gaps in the bike riding network and the quality of existing infrastructure.

# 3. Public Transport

## 3.1 Public Transport Network

### 3.1.1 Existing Bus Services

The Transperth public transport network within the WTC, shown in Figure 3-1, is served by three bus routes:

- **Route 389** – Perth to Wanneroo via Wanneroo Road;
- **Route 467** – Whitfords Station to Joondalup Station via Pearsall, Hocking, Sinagra, and Ashby; and
- **Route 468** – Whitfords Station to Joondalup Station via Wanneroo Road.




Figure 3-1 Transperth network map – WTC area

Table 3-1 WTC Bus Services

| Bus Route | Travel Between | Weekday | Saturday | Sunday/Public Holiday |
|---|---|---|---|---|
| 389 | Perth – Wanneroo | 25 services (6:03 AM to 12:07 AM)<br><br>AM Peak: 20 mins<br>PM Peak: 20 mins | 19 services (7:00 AM to 12:05 AM) hourly | 16 services (8:00 AM to 11:15 PM) hourly |
| | Wanneroo – Perth | 26 services (5:46 AM to 12:15 AM)<br><br>AM Peak: 20 mins<br>PM Peak: 30 mins | 19 services (6:22 AM to 12:14 AM) hourly | 15 services (8:20 AM to 10:11 PM) hourly |
| 467 | Whitfords – Joondalup | 47 services (5:31 AM to 10:42 PM)<br><br>AM Peak 15 mins<br>PM Peak: 15 mins | 14 services (7:04 AM to 8:01 PM) hourly | 13 services (7:04 AM to 7:01 PM) hourly |
| | Joondalup – Whitfords | 47 services (5:25 AM to 8:24 PM)<br><br>AM Peak: 12 mins<br>PM Peak: 20 mins | 14 services (7:26 AM to 8:07 PM) hourly | 14 services (7:28 AM to 7:37 PM) hourly |
| 468 | Whitfords – Joondalup | 37 services (5:18 AM to 10:16 PM)<br><br>AM Peak:15 mins<br>PM Peak: 20 mins | 16 services (6:08 AM to 10:15 PM) hourly | 12 services (7:52 AM to 7:14 PM) hourly |
| | Joondalup Whitfords | 44 services (6:08 AM to 11:12 PM)<br><br>AM Peak 20 mins<br>PM Peak: 20 mins | 16 services (6:53 AM to 11:12 PM) hourly | 12 services (8:31 AM to 8:12 PM) hourly |

The existing bus network primarily supports local movements between the WTC, Joondalup Station and Whitfords Station, while also providing sub-regional connectivity to Perth via the Wanneroo Road/Charles Street corridor. Collectively, Routes 389, 467 and 468 provide approximately 226 weekday bus services through the WTC.

### 3.1.2 Existing Bus Services Utilisation

Average weekday bus stop utilisation data indicates that public transport patronage within the Wanneroo Town Centre (WTC) remains relatively low. Across the 13 bus stops within the study area, there were a total of 249 boardings and 256 alightings on an average weekday, equivalent to approximately 19 boardings and 20 alightings per stop per day.

Bus stops along Wanneroo Road accounted for the majority of public transport activity, recording 182 boardings and 182 alightings per weekday. The highest utilisation was observed at Stops 12308, 12402 and 12403, which together accounted for approximately 70% of all passenger movements along the corridor. Average weekday utilisation of each stop along Wanneroo Road is presented in Figure 3-2.

Bus stops along Dundebar Road recorded a total of 67 boardings and 74 alightings per weekday. Patronage was concentrated at Stops 18290 and 18296, which accounted for over 90% of passenger movements on Dundebar Road, while the remaining stops experienced very limited usage. Average weekday utilisation of each stop along Dundebar Road is presented in Figure 3-3.




Figure 3-2 Wanneroo Road bus stop patronage (August 2018)

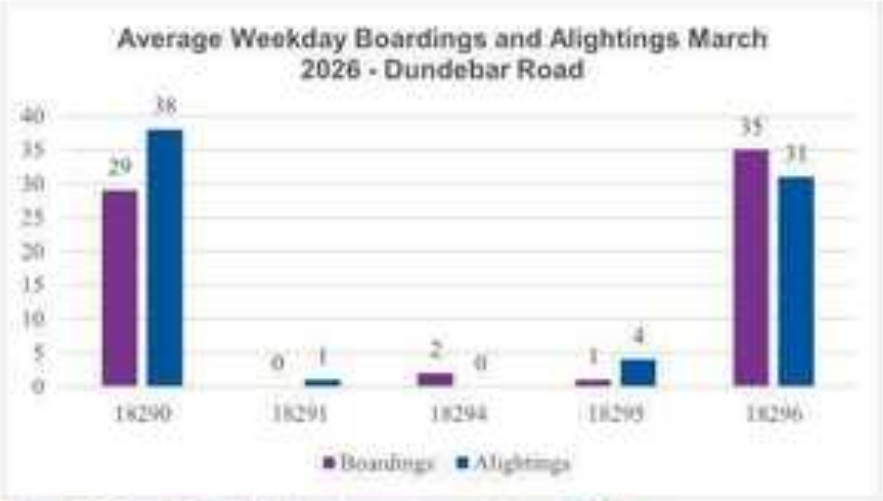


Figure 3-3 Dundebar Road bus stop patronage (August 2018)




Figure 3-4 Bus stop with the highest utilisation in WTC

The bus stops with the highest patronage are the closest to the Wanneroo Central shopping centre and the City of Wanneroo administration building, as shown in Figure 3-4 and summarised in Table 3-2. These 6 stops account for 86% of all boardings and 89% of alightings within the WTC.

Overall, the results indicate that public transport usage within the WTC is concentrated at a small number of bus stops, with the majority of stops experiencing relatively low daily patronage. This suggests that, while public transport services are available within the centre, existing demand for bus travel remains modest compared with other transport modes.

**Table 3-2 WTC Bus Services**

| Bus Stop | Location | Average Weekday Boardings | Average Weekday Alightings |
|---|---|---|---|
| 12307 | Wanneroo Rd southbound, north of Dundebar Rd | 23 | 33 |
| 12308 | Wanneroo Rd southbound, in front of Wanneroo Central | 64 | 32 |
| 12402 | Wanneroo Rd northbound, opposite Wanneroo Central | 24 | 62 |
| 12403 | Wanneroo Rd northbound, north of Dundebar Rd | 40 | 32 |
| 18290 | Dundebar Rd eastbound, east of Servite Tce | 29 | 38 |
| 18296 | Dundebar Rd westbound, between Yagan Place and Servite Tce | 35 | 31 |

Overall bus patronage within the WTC is low. This is supported by the 2016 and 2021 Census data which shows a reduction in people travelling to work by bus and train from 3% to 0%.

### 3.1.3 Future Public Transport Network

Despite the relatively high level of bus services operating through the WTC, there are currently no dedicated bus priority measures within the centre to improve the efficiency, reliability or attractiveness of public transport. Several planned and proposed initiatives are expected to support improved public transport operations in the future, including:

- Upgrades to the bus facilities at the Wanneroo Road / East Road intersection, including improved bus bays and passenger infrastructure.
- Based on EWDSP, A proposed rapid transit connection between the Gnangara Station and the WTC, with a future terminus identified near the Wanneroo Road / Dundebar Road intersection.




**Figure 3-5 Potential Bus Rapid Transit Route connecting Gnangara Station with WTC**

These initiatives have the potential to improve public transport accessibility and service reliability while strengthening connections between the WTC and surrounding growth areas.

# 4. Pedestrian Movement and Amenity

## 4.1 Pedestrian Movement

WTC currently has a moderate level of pedestrian infrastructure provision, with footpaths provided on both sides of many streets and a largely connected pedestrian network throughout the centre. Pedestrian activity within the WTC is primarily associated with shopping, community facilities, recreational destinations, and school-related trips.

Pedestrian activity is generally concentrated around the Wanneroo Central Shopping Centre and the Civic Centre precinct. Higher levels of pedestrian movement are also evident along Scenic Drive and key east-west connections between Scenic Drive and the WTC, particularly Church Street and Ariti Avenue. The key pedestrian desire lines identified within the WTC, and shown in Figure 4-1, are:

- North-south movements between the Civic Centre precinct and Wanneroo Central Shopping Centre.
- East-west movements along Dundebar Road.
- East-west movements between Scenic Drive and Wanneroo Road, primarily via Church Street and Ariti Avenue.
- East-west movements between Wanneroo Central Shopping Centre, the tavern precinct and St Anthony's School.
- North-south movements between the WTC core and northern development areas, including Lot 9000 and Ilyarrie Rise, which are identified as emerging pedestrian desire lines following the future development around that area.

Pedestrian connectivity within the WTC is influenced by two primary barriers. Wanneroo Road acts as a significant east-west barrier, carrying approximately 26,000 vehicles per day south of Dundebar Road and reducing connectivity between the eastern and western parts of the centre. In addition, local topography and associated retaining walls around the Wanneroo Community Centre and Aquamotion create constraints to pedestrian movement and may discourage direct walking routes between key destinations.




Figure 4-1 Desire Line - WTC

Wanneroo Road currently presents a significant barrier to east-west pedestrian connectivity within the WTC. However, pedestrian crossing opportunities are relatively frequent. Along the approximately 1.5 km section of Wanneroo Road within the study area, there are six unsignalised intersections and two signalised intersections at Dundebar Road/Church Street and Hastings Street/Conlan Avenue. Crossing facilities are provided at intersections rather than as mid-block crossings.

The unsignalised crossing points generally include kerb ramps, tactile ground surface indicators (TGSIs) and median refuges to assist pedestrians crossing Wanneroo Road. The average spacing between crossing opportunities is approximately 152 m, which supports pedestrian permeability across the corridor.

Several projects are planned or proposed to further improve pedestrian connectivity and safety within the WTC. These include a proposed pedestrian bridge providing a grade-separated connection across Wanneroo Road, although the location of the bridge has not yet been confirmed. In addition, a zebra-controlled four-way pedestrian crossing is planned at the Rocca Way/Dundebar Road intersection. This proposal builds on the implemented raised intersection treatment, which has been introduced to reduce vehicle speeds and improve conditions for pedestrians.

The Active Transport Plan 2026/27–2030/31 also identifies Wanneroo Road, north of Ariti Avenue, as a priority location for a future signalised mid-block pedestrian crossing. The crossing currently being investigated and to be approved by Main Roads WA under the relevant pedestrian crossing guidelines.




Figure 4-2 Wanneroo Road Existing pedestrian crossing facilities

Popular walking and jogging routes within and around the WTC were identified using activity heat mapping from Strava, as shown in Figure 4-3.

The data indicates that pedestrian and recreational activity is concentrated along several key corridors within the centre, including:

- Dundebar Road;
- Wanneroo Road;
- Civic Drive; and
- Church Street, Ariti Avenue and Frederick Street to the west of Wanneroo Road.



Figure 4-3 Strava Heat Mapping for Running Activities – WTC (Source:Strava)

The most heavily used recreational route in the area is the Scenic Drive shared path, located approximately 360 m west of the WTC study area boundary. The popularity of this route highlights the importance of east-west pedestrian and cyclist connections between the WTC and the Lake Joondalup foreshore recreation area.

# 5. Bike Riding

## 5.1 Bike Riding Network

The existing bike riding network within and surrounding the WTC is shown in Figure 5-1. Key bike riding facilities include a shared path on the eastern side of Wanneroo Road, shared paths and on-street bike lanes along Dundebar Road and Servite Terrace, and shared paths along Cafaggio Crescent and Senario Drive. In addition, several local streets provide a suitable environment for bike riding due to their relatively low traffic volumes and speeds.




Figure 5-1 Wanneroo Central Walking and Riding Guide (Your Move, 2024)



Figure 5-2 Long-Term Cycle Network (LTCN)

The long-term bike riding network identified for the area is shown in Figure 5-2. The network is classified according to its hierarchy and intended function in supporting future bike riding demand. The City of Wanneroo's Active Transport Plan 2025/26-2030/31 identifies several projects within and surrounding the WTC that will improve bike riding connectivity and support implementation of the Long-Term Cycle Network (LTCN).

Table 5-1 Planned bike riding network improvements within and surrounding the WTC

| Planned Year | LTCN Hierarchy | Location | Description |
|---|---|---|---|
| **Capital Works** | | | |
| **Year 3 (2028/2029)** | 1 - Primary | Dundebar Road from Griffiths Road to Steven Street | Construct 3.5m red asphalt shared path North, 2-2.5m shared path south |

| Planned Year | LTCN Hierarchy | Location | Description |
|---|---|---|---|
| **Year 3 (2028/2029)** | 2 - Secondary | Wanneroo Road from Calabrese Ave to Scenic Dr | Construct concrete shared path west side |
| **Year 4 (2029/30)** | 1 - Primary | Dundebar Road from Civic Drive to Griffiths Road | Construct 3.5m red asphalt shared path North, 2-2.5m shared path south |
| **Year 5 (2030/31)** | 3 - Local | Rocca Way from Dundebar Road to Conlan Avenue | Upgrade Rocca Way Shared Space in Wanneroo Town Centre |
| **Recurring Program** | | | |
| **Year 4 (2029/2030)** | 2 - Secondary | Wanneroo Road from Crisafulli Ave to Shaw Rd | Upgrade concrete shared path east side |
| **Year 5 (2030/2031)** | 1 - Primary | Wanneroo Road from San Rosa Rd to Ariti Avenue | Upgrade concrete shared path west side |

The planned projects focus on upgrading key sections of the primary and secondary LTCN, particularly along Dundebar Road and Wanneroo Road, while also improving local access through upgrades within the Rocca Way shared space. Collectively, these projects will strengthen connections between the WTC, surrounding residential areas and the broader active transport network.

## 5.2 Bike Riding Activity

Strava heat mapping has been used to identify popular bike riding routes within and around the WTC. As shown in Figure 5-3, the most frequently recorded bike riding routes within the WTC are:

- Wanneroo Road;
- Dundebar Road;
- Civic Drive; and
- Church Street, Ariti Avenue and Frederick Street west of Wanneroo Road.



Figure 5-3 Strava heatmapping for cycling activities – Activity Centre (Source: Strava)

The most heavily used bike riding corridor in the vicinity of the WTC is Scenic Drive, located approximately 360 m west of the study area boundary. Strava data indicates that many people riding bikes travel on-road along Scenic Drive rather than using the adjacent shared path. The popularity of Scenic Drive highlights the importance of east-west bike riding connections between the WTC and the Lake Joondalup shared path network, particularly via Church Street and Ariti Avenue.

# 6. Vehicular Movement and Access

## 6.1 Road Network

WTC is in the nearest proximity to Wanneroo Road, a main arterial road that serves the precinct and its connection to northern and southern suburbs within the metropolitan region, including the CBD. It is important for broader connectivity with other relevant precincts. Traffic volumes were obtained from the MRWA TrafficMap and are shown in Figure 6-1.




Figure 6-1. Average weekday traffic volumes

As expected, Wanneroo Road is the most relevant route within the precinct, carrying up to 27,000 vpd, with a Heavy Vehicle proportion of 6.0%. Dundebar Rd carries up to 9,000 thousand vpd with a heavy vehicle proportion of 5.4%.

Figure 6-1 reveals traffic flows on Wanneroo Rd to be highly tidal, with large southbound flows in the AM Peak and northbound Flows in the PM Peak. This is further supported by the proportion of total daily traffic occurring in the existing peak hours, which has been determined from analysis of SCATS count data for the intersection of Wanneroo Road with Dundebar Road (as shown in Figure 6-1.

Table 6-1. Peak hour proportion from SCATS Volumes - February 2026

| Road Link | Direction | AM Peak hour | PM Peak hour |
|---|---|---|---|
| Wanneroo Road south of Dundebar Road | Northbound | 5.9% | 11.9% |
| | Southbound | 12.0% | 5.1% |
| Dundebar Road east of Wanneroo Road | Eastbound | 5.5% | 2.3% |
| | Westbound | 4.2% | 6.4% |

Traffic speed data has been extracted from TomTom Move data on the 85th percentile traffic speeds shown in Table 6-2. The 85th percentile speed represents the speed that 85% of vehicles travel at or under, which only 15% of vehicles exceed. In general terms, vehicles travel within speed limit across Wanneroo Rd in the northbound and southbound directions for the AM and PM Peaks.

Table 6-2. Average weekday traffic speeds

| Road Link | Peak hour | Direction | Posted Speed Limit (km/h) | 85th percentile speed (km/h) |
|---|---|---|---|---|
| Wanneroo Road | AM | Northbound | 60 | 63.23 |
| Wanneroo Road | PM | Northbound | 60 | 58.45 |
| Wanneroo Road | AM | Southbound | 60 | 61.11 |
| Wanneroo Road | PM | Southbound | 60 | 62.2 |

### 6.1.1 Traffic behaviour within WTC

A turning movement count survey was undertaken on Thursday 30 April 2026 at 15 intersections within and surrounding the Wanneroo Town Centre (WTC) study area, as shown in Figure 6-2.

The survey was undertaken during the weekday commuter periods between 6:30 am and 9:30 am and 2:30 pm and 5:30 pm to capture typical traffic conditions and travel patterns within the town centre. The surveyed

intersections included key access points to the WTC, connections to Wanneroo Road, and local roads that support circulation throughout the centre.



Figure 6-2. Intersection turning count survey for WTC precinct

Analysis of the 15-minute turning movement counts identified the following Peak hour patterns representing the periods of highest traffic demand across the surveyed network:

- AM peak: From 8:00 am and 9:00 am
- PM peak: From 4:00 pm and 5:00 pm

The surveyed traffic volumes indicate that Wanneroo Road functions as the predominant traffic corridor within the study area, carrying substantially higher traffic volumes than the internal town centre road network.

As shown in Figure 6-3and Figure 6-4, the highest traffic flows occur along Wanneroo Road between Dundebar Road and Sinagra Street, where two-way volumes exceed 1,500 vehicles per hour during both peak periods. By comparison, most internal roads within the WTC, including Rocca Way, Civic Drive, Yagan Place and Windam Way, carry less than 500 vehicles per hour and primarily serve local access and circulation functions. The traffic pattern demonstrates that regional through movements are concentrated on Wanneroo Road, while the internal street network predominantly accommodates local trips associated with retail, civic, community and adjacent residential land uses.



Figure 6-3. AM Peak traffic flow within WTC

The AM and PM peak volume distributions are broadly consistent, with only minor variations in route utilisation between periods. Overall, the survey confirms that traffic activity within the WTC is concentrated on the distributor road network, while the internal road network experiences comparatively low traffic volumes, supporting its role as a local access environment rather than a strategic traffic corridor



Figure 6-4. PM Peak traffic flow within WTC

### 6.1.2 Network congestion

Given the strategic role of Wanneroo Road as the primary north-south regional transport corridor serving the Wanneroo Town Centre and the broader northern growth corridor, a focused assessment was undertaken at the two intersections located along this route within WTC as shown in Figure 6-5: Wanneroo Rd/ Dundebar Rd and Wanneroo Rd/ Conlan Ave.

Intersection performance is measured using Level of Service (LOS), Degree of Saturation (DoS) and average delay. LOS provides an overall indication of traffic conditions, ranging from A (very good operation) to F (poor operation with significant congestion). measures how much of an intersection's available capacity is being used and is calculated as the ratio of traffic demand to capacity. A DoS value close to 1.0 indicates the intersection is approaching its practical operating limit. Average delay is the average time each vehicle spends waiting to pass through the intersection. Generally, intersections with lower delays achieve better LOS ratings, while higher delays result in poorer LOS outcomes.




Figure 6-5. Wanneroo Rd intersection performance analysis.

As shown in Table 6-3, under existing conditions, the Wanneroo Road/Dundebar Road intersection already operates under significant congestion during the AM peak. The critical southbound movement on Wanneroo Road and the westbound movement on Dundebar Road both operate at LOS F, with average delays of 133 seconds and 182 seconds, respectively. Both movements also exceed practical capacity with a DoS of 1.14, indicating that the intersection is experiencing substantial queuing and delay.

Table 6-3. Wanneroo Road/ Dundebar Road current conditions intersection performance AM Peak.

| Road | Peak hour | Direction | Average Speed (km/h) | DoS | Average Delay (s) | LOS |
|---|---|---|---|---|---|---|
| Wanneroo Road | AM | Southbound | 11.4 | 1.14 | 133 | LOS F |
| Wanneroo Road | AM | Northbound | 37.1 | 1.042 | 21.1 | LOS C |
| Dundebar Rd | AM | Westbound | 8.7 | 1.14 | 181.7 | LOS F |

During the PM peak, as shown in tables Table 6-4 the intersection performance improves considerably. The southbound and northbound movements on Wanneroo Road operate at LOS B and LOS A, respectively, with low delays. The westbound Dundebar Road approach operates at LOS D with an average delay of approximately 43 seconds.

**Table 6-4. Wanneroo Road/ Dundebar Road current conditions intersection performance PM Peak.**

| Road | Peak hour | Direction | Average Speed (km/h) | DoS | Average Delay (s) | LOS |
|---|---|---|---|---|---|---|
| Wanneroo Road | PM | Southbound | 38.6 | 0.434 | 17.4 | LOS B |
| Wanneroo Road | PM | Northbound | 54.8 | 0.713 | 3.6 | LOS A |
| Dundebar Rd | PM | Westbound | 24.2 | 0.702 | 42.8 | LOS D |

The Wanneroo Road/Conlan Avenue intersection experiences moderate congestion during the AM peak, as shown in Table 6-5. The northbound and southbound movements on Wanneroo Road, together with the westbound Conlan Avenue approach, operate at LOS D, with delays ranging between 35 and 40 seconds. The eastbound Hastings Street approach is the critical movement, operating at LOS F with an average delay of approximately 141 seconds and a DoS slightly exceeding capacity.

**Table 6-5. Wanneroo Road/ Conlan Avenue current conditions intersection performance AM Peak.**

| Road | Peak hour | Direction | Average Speed (km/h) | DoS | Average Delay (s) | LOS |
|---|---|---|---|---|---|---|
| Wanneroo Road | AM | Southbound | 12.4 | 0.736 | 35.5 | LOS D |
| Wanneroo Road | AM | Northbound | 16.2 | 0.78 | 38.1 | LOS D |
| Conlan Avenue | AM | Westbound | 11 | 0.736 | 40.3 | LOS D |
| Hastings St | AM | Eastbound | 10.5 | 1.028 | 141.2 | LOS F |

During the PM peak, as shown in Table 6-6 , the southbound movement on Wanneroo Road operates efficiently at LOS B, with an average delay of approximately 17 seconds. The northbound movement becomes the critical movement, operating at LOS E with a delay of approximately 69 seconds, while the westbound Conlan Avenue approach operates at LOS D.

**Table 6-6. Wanneroo Road/ Conlan Avenue current conditions intersection performance PM Peak.**

| Road | Peak hour | Direction | Average Speed (km/h) | DoS | Average Delay (s) | LOS |
|---|---|---|---|---|---|---|
| Wanneroo Road | PM | Southbound | 23.2 | 0.499 | 16.6 | LOS B |
| Wanneroo Road | PM | Northbound | 9.7 | 0.966 | 69.4 | LOS E |
| Conlan Avenue | PM | Westbound | 9.7 | 0.433 | 48.3 | LOS D |
| Hastings St | PM | Eastbound | 13 | 0.974 | 107.6 | LOS F |

### 6.1.3 Rocca Way closure

The City of Wanneroo has assessed the feasibility of closing part of Rocca Way to support the evolution of the Wanneroo Town Centre into a more pedestrian-focused activity centre. A SIDRA network assessment of 15 surrounding intersections under 2026, 2031 and 2036 demand scenario demonstrated that the closure could be accommodated with limited impact on overall network performance. Option 1, involving the partial closure of Rocca Way between Yagan Place and the Australia Post/Wanneroo Shopping Centre access as shown in **Error! Reference source not found.** was identified as the preferred option as it provides improved pedestrian connectivity, safety and public realm outcomes while maintaining local access and operational flexibility. The proposal reinforces Rocca Way's role as the civic and community heart of the Town Centre and supports the broader vision for a more walkable, activated and connected centre.

As shown in Table 6-7, following the Rocca Way closure, the Wanneroo Road/Dundebar Road intersection continues to experience significant congestion during the AM peak. The southbound Wanneroo Road and westbound Dundebar Road movements remain the critical movements, both operating at LOS F with delays exceeding 140 seconds and 175 seconds, respectively. Compared with existing conditions, the changes are minor, indicating that the closure has a negligible impact on overall AM peak intersection performance



Figure 6-6 Rocca Way closure preferred option

Table 6-7. Wanneroo Road/Dundebar Road including Rocca Way closure intersection performance AM Peak.

| Road | Peak hour | Direction | Average Speed (km/h) | DoS | Average Delay (s) | LOS |
|---|---|---|---|---|---|---|
| Wanneroo Road | AM | Southbound | 11.0 | 1.15 | 140.3 | LOS F |
| Wanneroo Road | AM | Northbound | 29.3 | 1.16 | 35.1 | LOS D |
| Dundebar Rd | AM | Westbound | 8.7 | 1.14 | 174.8 | LOS F |

The PM peak results shown in Table 6-8, the intersection continues to operate at an acceptable level of service following the Rocca Way closure. The southbound and northbound Wanneroo Road movements operate at LOS C and LOS A, respectively, with low delays and sufficient spare capacity. Overall, the results indicate that the closure does not materially affect PM peak operations at this intersection.

Table 6-8. Wanneroo Road/Dundebar Road including Rocca Way closure intersection performance PM Peak

| Road | Peak hour | Direction | Average Speed (km/h) | DoS | Average Delay (s) | LOS |
|---|---|---|---|---|---|---|
| Wanneroo Road | PM | Southbound | 36.6 | 0.47 | 20.2 | LOS C |
| Wanneroo Road | PM | Northbound | 53 | 0.713 | 8.9 | LOS A |
| Dundebar Rd | PM | Westbound | 24.1 | 0.708 | 40.8 | LOS D |

The Rocca Way closure has a negligible effect on the operation of the Wanneroo Road/Conlan Avenue intersection during the AM peak. The northbound and southbound Wanneroo Road movements, together with the westbound Conlan Avenue approach, continue to operate at LOS D, while the eastbound Hastings Street approach remains the critical movement at LOS F. The results are effectively unchanged from existing conditions, demonstrating that intersection performance continues to be driven by background traffic demand.

Table 6-9. Wanneroo Road/ Conlan Avenue including Rocca Way closure intersection performance AM Peak.

| Road | Peak hour | Direction | Average Speed (km/h) | DoS | Average Delay (s) | LOS |
|---|---|---|---|---|---|---|
| Wanneroo Road | AM | Southbound | 12.4 | 0.742 | 35.6 | LOS D |
| Wanneroo Road | AM | Northbound | 16.2 | 0.78 | 38.1 | LOS D |
| Conlan Avenue | AM | Westbound | 10 | 0.246 | 42.6 | LOS D |
| Hastings St | AM | Eastbound | 10.5 | 1.028 | 141.2 | LOS F |

During the PM peak, the Wanneroo Road/Conlan Avenue intersection continues to operate at a similar level to existing conditions. The southbound movement operates at LOS B, while the northbound movement remains the critical movement at LOS E. Minor improvements are observed on the Hastings Street approach, although it continues to operate at LOS F. Overall, the Rocca Way closure results in only marginal changes and does not materially affect intersection performance.

Table 6-10. Wanneroo Road/ Conlan Avenue including Rocca Way closure intersection performance PM Peak

| Road | Peak hour | Direction | Average Speed (km/h) | DoS | Average Delay (s) | LOS |
|---|---|---|---|---|---|---|
| Wanneroo Road | PM | Southbound | 24 | 0.499 | 15.5 | LOS B |
| Wanneroo Road | PM | Northbound | 10 | 0.96 | 67 | LOS E |
| Conlan Avenue | PM | Westbound | 9 | 0.617 | 50 | LOS D |
| Hastings St | PM | Eastbound | 13.6 | 0.951 | 100.9 | LOS F |

## 6.2 Forecast Traffic Volumes

To understand future traffic movements within and around the Wanneroo Town Centre (WTC) and assess the impacts of the proposed Rocca Way closure, forecast traffic data were obtained from Main Roads WA Regional Operations Model (ROM24) link volume plots for the 2026, 2031 and 2036 assessment years. The ROM24 forecasts incorporate strategic land use growth and planned network changes, including the East Wanneroo District Structure Plan (EWDSP) assumptions. The modelling also incorporated the Servite Terrace extension to Illyarrie Rise after 2031.

Future-year traffic demands were developed by applying the ROM24 growth forecasts to the calibrated 2026 intersection turning movement counts. The resulting traffic demands were subsequently assessed using a SIDRA network model comprising the WTC study area. This approach enabled the comparison of existing conditions and future-year scenarios with without the proposed Rocca Way closure. Table 6-11 and Table 6-12 shows the traffic projection for 2031 and 2036 scenarios for the AM and PM Peaks respectively.

Table 6-11 indicates that Traffic volumes are forecast to increase across all key approaches between 2026 and 2036. The largest growth occurs on Dundebar Road westbound (up to 41%) and Servite Terrace southbound (61%), with the latter primarily driven by the future connection to Illyarrie Rise. Growth on Wanneroo Road is more moderate, generally ranging between 16% and 26% by 2036.

**Table 6-11. AM Peak projected traffic volumes for WTC road network**

| Int. | Road | Direction | 2026 vol. | 2031 vol. | 2036 vol. | % increase 2031 | %increase 2036 |
|---|---|---|---|---|---|---|---|
| Wanneroo Rd/ Dundebar Rd | Wanneroo Rd | Northbound | 796 | 899 | 1006 | 12.9% | 26.4% |
| | Wanneroo Rd | Southbound | 1791 | 1930 | 2071 | 7.8% | 15.6% |
| | Dundebar Rd | Westbound | 505 | 613 | 712 | 21.4% | 41.0% |
| Wanneroo Rd/ Conlan Ave | Wanneroo Rd | Northbound | 877 | 967 | 1054 | 10.3% | 20.2% |
| | Wanneroo Rd | Southbound | 1386 | 1530 | 1647 | 10.4% | 18.8% |
| | Conlan Ave | Westbound | 210 | 222 | 236 | 5.7% | 12.4% |
| | Hastings St | Eastbound | 290 | 320 | 358 | 10.3% | 23.4% |
| Dundebar Rd/ Servite Tce | Dundebar Rd | Eastbound | 590 | 616 | 717 | 4.4% | 21.5% |
| | Dundebar Rd | Westbound | 564 | 698 | 765 | 23.8% | 35.6% |
| | Servite Tce | Southbound | 183 | 199 | 294 | 8.7% | 60.7% |

As shown in Table 6-12, a similar pattern is observed during the PM peak, with the highest growth occurring on Servite Terrace southbound (102%), Dundebar Road eastbound (65%) and Dundebar Road westbound (50%). These increases are largely attributable to the planned Illyarrie Rise connection and associated redistribution of traffic, while growth on Wanneroo Road remains moderate at approximately 17% to 25% by 2036.

**Table 6-12. PM Peak projected traffic volumes for WTC road network**

| Int. | Road | Direction | 2026 | 2031 | 2036 | % increase 2031 | %increase 2036 |
|---|---|---|---|---|---|---|---|
| Wanneroo Rd/ Dundebar Rd | Wanneroo Rd | Northbound | 1712 | 1897 | 2145 | 10.8% | 25.3% |
| | Wanneroo Rd | Southbound | 1049 | 1139 | 1227 | 8.6% | 17.0% |
| | Dundebar Rd | Westbound | 774 | 918 | 1087 | 18.6% | 40.4% |
| Wanneroo Rd/ Conlan Ave | Wanneroo Rd | Northbound | 1645 | 1788 | 1983 | 8.7% | 20.5% |
| | Wanneroo Rd | Southbound | 921 | 1007 | 1077 | 9.3% | 16.9% |
| | Conlan Ave | Westbound | 322 | 364 | 405 | 13.0% | 25.8% |
| | Hastings St | Eastbound | 261 | 292 | 328 | 11.9% | 25.7% |
| Dundebar Rd/ Servite Tce | Dundebar Rd | Eastbound | 276 | 316 | 454 | 14.5% | 64.5% |
| | Dundebar Rd | Westbound | 596 | 752 | 894 | 26.2% | 50.0% |
| | Servite Tce | Southbound | 53 | 61 | 107 | 15.1% | 101.9% |

# 7. Parking

## 7.1 Off-Street Parking

There are approximately 2,110 off-street parking bays within the WTC, excluding parking associated with the Wanneroo Showgrounds. Their approximate distribution is shown in Figure 7-1.




Figure 7-1 Off-Street Parking Distribution within WTC

Parking within the WTC is currently provided in a number of discrete parking areas, with users generally selecting the parking facility closest to their destination. Based on parking occupancy surveys undertaken in 2026, the Aquamotion, Wanneroo Civic Centre and Wanneroo Central car parks were identified as experiencing the highest levels of utilisation, with parking demand approaching capacity during peak periods.

Each parking area exhibits a different demand profile. The Civic Centre car park experiences consistently high utilisation throughout standard business hours, reflecting the concentration of civic and administrative uses in the precinct. In contrast, parking demand at Aquamotion is more pronounced outside traditional working hours, particularly during the early morning, evening and weekend periods associated with recreational activities.

## 7.2 On-Street Parking

There are 217 on-street parking bays within the WTC, with their approximate locations shown in Figure 7-2. The majority of on-street parking is provided as parallel parking, although sections of angled parking are provided along Rocca Way, Dundebar Road, Cafaggio Crescent, Senario Drive and Servite Terrace.




Figure 7-2 On-Street Parking Distribution Within WTC

The parking inventory identified a range of parking management measures currently in place throughout the WTC. Parking on Servite Terrace includes a combination of free three-hour parking and 15-minute loading zones, while sections of Dundebar Road are subject to three-hour time restrictions.

Angled parking provides a greater number of parking bays within a given road length; however, parallel parking requires less road reserve width and allows greater space to be allocated to footpaths, landscaping and other streetscape improvements.

# 8. Movement Network Plan – Wanneroo Town Centre

## 8.1 Movement

SPP 7.2 Precinct Design Guidelines identify four movement- related objectives that should be addressed within activity centres. These objectives seek to ensure that the movement network responds to the movement and place function of the precinct and supports a range of transport modes, including walking, bike riding, public transport, on-demand transport, private vehicles and freight servicing. The four movement objectives are:

1. To ensure the movement network supports the function and ongoing development of the precinct.
2. To provide a resilient movement network that prioritises affordable, efficient, sustainable and healthy transport modes.
3. To enable a range of transport choices that meet the needs of residents, workers and visitors.
4. To ensure the quantity, location, management and design of parking support the vision for the precinct.

To address these objectives, five movement network elements have been identified for assessment. Each element is linked to the relevant performance indicators outlined in Table 8-1.

**Table 8-1 Performance Indicators**

| Content Required | Performance Indicators |
|---|---|
| **Public Transport Infrastructure** | Prioritisation of public transport |
| **Walking and Cycling** | • Prioritisation of Active Transport<br>• Provision of end of trip facilities<br>• Improved access and facilities for pedestrian and cyclists |
| **Traffic Assessment** | Improved access by all modes, including freight vehicles |
| **Freight servicing** | Improved access by all modes, including freight vehicles |
| **Centre Parking Policy** | Provides for upper limits and common use of car parking |

This section outlines the recommended movement network initiatives for the WTC and demonstrates how the proposed measures respond to the movement objectives and performance indicators identified in SPP 7.2.

## 8.2 Public Transport

There are currently no dedicated public transport priority measures within the WTC. Existing bus volumes and patronage levels are relatively low, and do not currently justify the provision of on-road bus priority treatments within the centre.

However, projected growth in population, employment and activity within the WTC will increase travel demand and place greater pressure on the transport network. Public transport improvements will be required to support this growth, increase patronage and reduce reliance on private vehicles. This is reflected in the high utilisation of existing parking facilities throughout the WTC. Without a shift towards greater public transport use, increasing development and trip generation are likely to exacerbate parking demand and congestion.

The existing bus network primarily supports local movements to and from Joondalup and Whitfords Stations, together with sub-regional movements to Perth via the Wanneroo Road/Charles Street corridor. Many factors influencing public transport patronage, including travel times and congestion along Wanneroo Road, are outside the direct influence of the WTC.

The East Wanneroo District Structure Plan (EWDSP) identifies two future rail stations at Mariginiup and Gnangara. These stations form part of the State Government's long-term transport vision and may ultimately be incorporated into a future east-west rail connection linking the Morley-Ellenbrook and

Yanchep lines. While this infrastructure is expected to support long-term accessibility outcomes, delivery remains a long-term proposition.

In the shorter to medium term, the EWDSP also identifies a future rapid transit connection between Gnangara Station and the WTC. A future transit node is proposed near the intersection of Wanneroo Road and Dundebar Road, creating an important public transport gateway into the centre. This location should be protected and planned as a future multimodal interchange that integrates local bus services, rapid transit and active transport connections.




**Figure 8-1 2050 Public Transport Network – excerpt from Perth and Peel @ 3.5 million**

The Perth and Peel @ 3.5 Million Transport Network identifies the need to improve public transport connectivity between Whitfords, Wanneroo and Joondalup. As part of this strategy, a high-priority transit corridor is proposed along Wanneroo Road, extending from Whitfords Avenue to south of Pinjar Road. The corridor would improve travel times and service reliability while supporting more frequent public transport services between Joondalup, Wanneroo and Whitfords.

The proposed transit corridor passes directly through the WTC and presents an opportunity to strengthen the centre's role as a strategic transport hub. The future transit node identified through the EWDSP should be integrated with this corridor to provide seamless transfers between local services, rapid transit and future higher-order public transport connections.

As development progresses in East Wanneroo, local bus services should be expanded to provide direct connections between emerging residential communities and key destinations within the WTC. The City should continue to work with the Public Transport Authority to improve local bus services and advocate for the timely delivery of the planned high-priority transit corridor.

## Bus Stop Infrastructure




**Figure 8-2. Bus stops without amenities within WTC**

All bus stops within the WTC should provide a minimum level of passenger amenity, including shelter, seating and waste bins. Several bus stops currently do not meet this standard. In particular, Stop 12404 on Wanneroo Road (north of Hart Court), and Stops 18291 and 18295 on Dundebar Road (east of Civic Drive), currently provide seating but do not include shelters or bins.

The PTA's Bus Shelter Subsidy Program provides funding assistance for the installation of new bus shelters at eligible locations. However, bus stops are generally required to achieve an average of at least 15 weekday boardings before funding can be considered. The identified stops currently do not meet this threshold and should be monitored as patronage increases over time.

**Priority public transport initiatives for the WTC include:**

1. Protecting and planning for the future rapid transit terminus at Wanneroo Road/Dundebar Road.
2. Supporting delivery of the proposed high-priority transit corridor along Wanneroo Road.
3. Expanding local bus services to serve future East Wanneroo communities.
4. Improving bus stop amenity throughout the centre.
5. Integrating future public transport investment with walking and bike riding networks to support mode shift away from private vehicle use.

## 8.3 Walking and Bike Riding

The WTC has been planned to support walking and bike riding as the preferred modes of travel for local trips within the centre, reducing reliance on private vehicles for short-distance journeys. Consistent with this objective, a number of existing and planned initiatives have been implemented or identified to improve pedestrian safety, comfort and connectivity throughout the centre. These initiatives include:

1. **Implement a 40 km/h speed environment throughout the WTC.** Currently, a 40 km/h speed limit has been implemented across much of the north-eastern part of the WTC, with opportunities identified to extend the treatment throughout the remainder of the centre. Rocca Way already operates as a shared space with a 20 km/h speed limit and incorporates differentiated paving treatments to encourage lower vehicle speeds and support pedestrian priority.
2. **Implement the proposed Rocca Way closure and Wanneroo Tavern precinct revitalisation.** As identified in the WTC Precinct Plan, these initiatives will strengthen pedestrian connectivity through the centre and provide new pedestrian links between key destinations within the WTC.
3. **Retain and enhance pedestrian crossing phases at all signalised intersections** to maintain safe and convenient pedestrian access across the movement network.
4. **Implement a four-way zebra crossing at the Rocca Way/Dundebar Road intersection.** Should future traffic and pedestrian volumes warrant signalisation, the intersection can be upgraded to traffic signals while maintaining a high level of pedestrian accessibility and safety.
5. **Provide footpaths and shared paths on all new streets within the WTC** in accordance with the City of Wanneroo Pathway Policy.
6. **Install wombat crossings on side streets intersecting Dundebar Road, Civic Drive and Servite Terrace** (excluding signalised intersections) to improve pedestrian priority, reduce vehicle speeds and provide more continuous walking routes.

In addition to these initiatives, several key pedestrian and bike riding routes have been identified through the WTC. The City of Wanneroo's Active Transport Plan 2025/26-2030/31 includes a range of projects that support these routes, including shared path construction along Dundebar Road and Wanneroo Road, together with ongoing maintenance and renewal programs across the active transport network.




Figure 8-3 Pedestrian Based Measures

### End-of-Trip Facilities

To support increased walking and bike riding, future development within the WTC should provide adequate bicycle parking and end-of-trip facilities. The recommended provisions includes:

- Tenant and employee bicycle parking: 1 space per 200 m² of non-residential floor area;
- Visitor bicycle parking: 1 space per 400 m² of non-residential floor area;
- 1 locker per tenant/employee bicycle parking space; and
- 1 male and 1 female shower for every 10 tenant/employee bicycle parking spaces.

The provision of bicycle parking and end-of-trip facilities will complement planned active transport infrastructure improvements and support mode shift towards walking and bike riding within the WTC.

## 8.4 Traffic

The introduction of additional road capacity within the WTC is not supported. Increasing road capacity would make the centre more attractive to sub-regional through traffic, reinforcing existing travel patterns and generating additional vehicle demand. This would further constrain the operation of the centre, reduce the effectiveness of place-based initiatives, and limit the ability of the network to accommodate trips associated with future development.

The opportunity to increase road capacity within the WTC was explored during consultation with Main Roads WA as part of the Activity Centre Plan process. Main Roads WA's only request was to increase the Wanneroo Road road reserve north of Dundebar Road to match the existing road reserve width south of Dundebar Road. This requirement has been incorporated into the WTC Plan.

While the strategic road network within the WTC will remain largely unchanged, several modifications to the local road network are proposed to improve connectivity, support future development and distribute local traffic movements. In addition, the WTC Plan proposes the closure of Rocca Way between Yagan Place and the Post Office to strengthen the pedestrian environment within the centre. The proposed local road network modifications include:

- Extension of Servite Terrace northwards through the large undeveloped landholding.
- Extension of Friars Drive northwards through the large undeveloped landholding.
- A new east-west connection between Wanneroo Road (opposite Hart Court, with left-in/left-out access only) and Servite Terrace.
- New east-west connections between the extended Servite Terrace and Friars Drive, and between Friars Drive and Boyagin Way.

- A new connection between Wanneroo Road (opposite Crisafulli Avenue, with left-in/left-out access only) and Windan Way.
- A new connection between Civic Drive and Windan Way.
- Widening of the Cafaggio Crescent and Senario Drive road reserves to accommodate footpaths and shared paths on the currently undeveloped side of the road.
- Provision of laneways or service roads, similar to Pupil Lane, to provide access to development fronting the western side of Wanneroo Road.

The recommended road hierarchy is shown in Figure 8-4, with corresponding cross-sections provided in Figure 8-5. The proposed hierarchy and cross-sections have been developed based on the forecast traffic volumes associated with the ultimate development yield of the WTC.

For the most part, the recommended hierarchy is consistent with the existing road hierarchy. The following exceptions and clarifications apply:

- **Servite Terrace** is proposed to be classified as a *Main Street* with a 17.9 m road reserve. However, the existing section of Servite Terrace is not proposed to be widened. The recommended reserve width and cross-section would only apply to the future northern extension through the undeveloped landholding.
- **Rocca Way** is proposed to be fully walkable to enhance safe and convenient pedestrian connectivity within Wanneroo Town Centre and support the creation of an active, accessible and vibrant town centre environment.
- **Conlan Avenue** is proposed to be classified as a *Main Street* to provide access to the WTC activity centre.
- **Neighbourhood Connector B** roads are proposed with reserves ranging from 19.4 m to 20.0 m. The variation reflects differences in the width of on-street parking bays, which range between 2.1 m and 2.3 m.

This approach ensures that future road investment supports local access, development and place outcomes, while avoiding unnecessary increases in vehicular capacity that could undermine the role and function of the WTC as an activity centre.




Figure 8-4. WTC Proposed new road network hierarchy



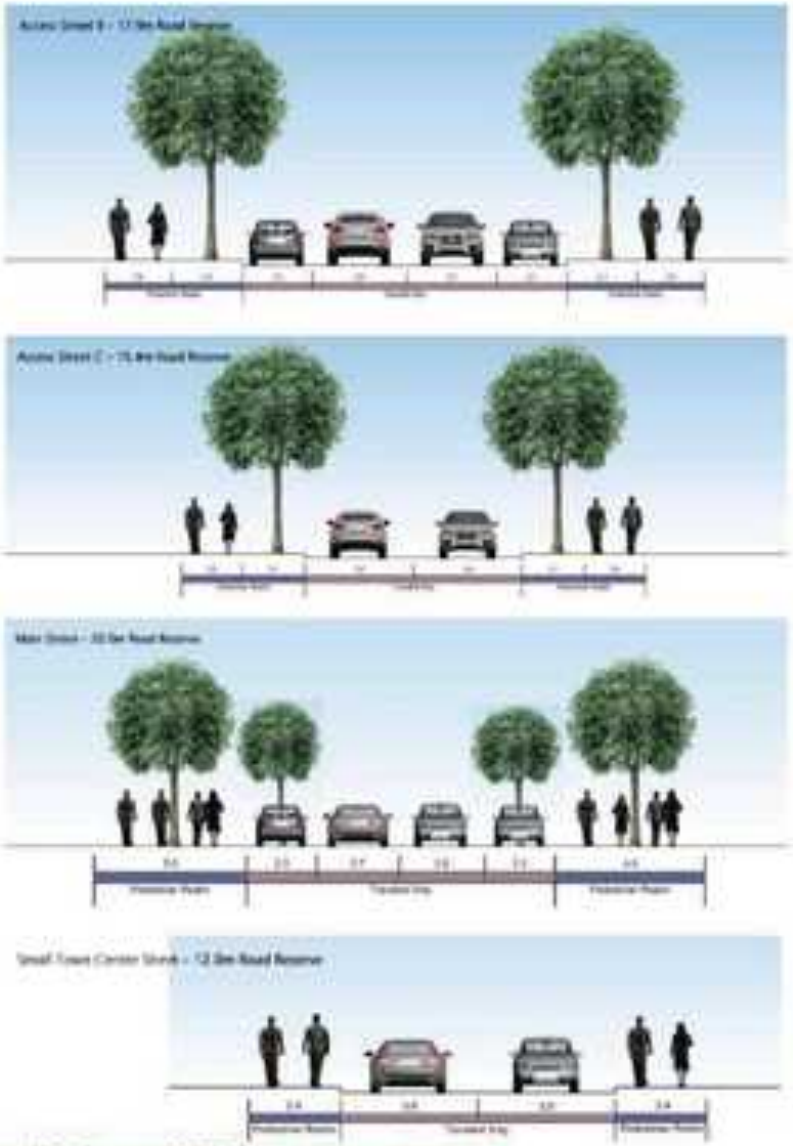

Figure 8-5. Proposed WTC New section connections




Figure 8-6 Proposed intersection treatments within the WTC

There are two existing roads where the current road hierarchy designations are not appropriate given the existing, or forecast traffic volumes, as follows:

- Dundebar Road – currently carries 8,000 vpd. With the intensification of land use is forecast to carry up to 15,000 vpd. Dundebar Road be designated as an Integrater Arterial B (activity centre) or a District Distributor B under the Main Roads WA definitions.
- Hastings Street – currently carries 2,000 vpd however with intensification of land use is forecast to carry up to 4,000 vpd. It also forms the fourth approach of the signalised intersection between Wanneroo Road and Conlan Avenue. Hastings Street is currently classified as an Access Street, but this should be upgraded to a Neighbourhood Connector B or a Local Distributor under the MRA definitions. This does not require any widening to the existing road reserve.

Within the WTC, all T- intersections should operate under priority control (excluding certain intersections along Wanneroo Road which should operate under signal control, or priority control restricted to left in left out movements). Additional roundabout controlled intersections should be avoided, due to their impact on pedestrian and bike rider safety and accessibility. Proposed intersection treatments area shown in Figure 8-6.

The proposed intersection of Wanneroo Road with the new east west connection (opposite Hart Cour) requires careful consideration. For safety reasons, a priority controlled four-way intersection is not recommended. Instead, a new east west connection should be limited to left in left out movements

The four-way intersection of Dundebar with Servite Terrace and Rocca Way will be modified from roundabout control to signal control to improve pedestrian and bike rider safety. The four-way intersection of Dundebar Road with Yagan Place and Senario Drive will be maintained in its current form.

## 8.5 Freight Servicing

Wanneroo Road is part of the secondary freight network, approved to carry restricted access vehicles (RAVs) up to 2.7 m in length and up to a mass of 87.5 tonnes. Wanneroo Road will continue to serve as part of the freight network for the foreseeable future.

Service vehicle access to the Wanneroo Central shopping centre loading docks via the road connection between Wanneroo Road and Windan Way. This arrangement is being done to not interfere the active transport access within the main area of WTC.

## 8.6 Centre Parking Policy

The long-term parking strategy for the WTC should focus on managing parking demand, improving the efficiency of existing parking assets and accommodating future growth through structured parking rather than additional surface parking. This approach supports the vision of a compact, walkable and vibrant activity centre while ensuring adequate parking remains available for residents, workers and visitors.

### Parking Provision Rates

Parking within the WTC should be regulated through upper parking limits rather than minimum parking requirements. Based on WA Planning Commission Non-Residential Car Parking Rates in Perth and Peel, parking provision within activity centre should be between one space per 100 m2 and 25 m2. Based on the forecasted land use growth and the current parking utilisation, parking provision for future non-residential development should be capped at one parking bay per 60 m² of non-residential floor area.

This parking rate represents a balance between accommodating future parking demand and avoiding excessive parking provision that would encourage private vehicle use, compromise development opportunities and reduce the vibrancy of the town centre. Limiting parking supply will also support greater use of walking, bike riding and public transport for local trips.

### Parking Management and Shared Parking

The WTC should progressively transition towards a "park once" approach, where parking serves the entire town centre rather than individual developments. Under this model, visitors can park once and access multiple destinations on foot, reducing vehicle movements within the centre and improving parking utilisation.

- To support this approach:
- Short-stay parking should be prioritised within the town centre core through the introduction of time restrictions on on-street parking.
- Shared and reciprocal parking arrangements should be encouraged between developments with complementary peak demands.
- Parking should be unbundled from individual land uses where appropriate.
- Development applications seeking parking reductions should demonstrate that adequate capacity exists within the shared parking network.
- Visitor parking, bicycle parking and end-of-trip facilities should be retained and enhanced.

This approach will allow parking resources to be used more efficiently while reducing the overall amount of land required for parking.

### Multi-Storey Parking

While lower parking provision rates and shared parking arrangements will improve parking efficiency, additional public parking capacity is still likely to be required as the WTC grows. Given the limited availability of developable land within the centre, the provision of additional at-grade parking is unlikely to be practical or consistent with the desired urban form. Future parking demand should therefore be accommodated through multi-storey parking facilities located on the periphery of the town centre. Potential locations for future structured parking for further study include:

- Civic Centre precinct;
- Aquamotion; and
- Memorial Park.

These locations would provide additional parking capacity while minimising vehicle movements within the town centre core and preserving central land for mixed-use development, public spaces and active frontages. The parking assessment indicates that parking pressure may emerge at these locations before a broader town-centre-wide parking shortfall occurs. Consequently, the City should commence long-term planning for a future multi-storey parking facility, supported by detailed feasibility studies and business case assessment.

## 8.7 Indicator Measurement

The success of the movement network measures proposed in the Activity Centre Plan are based on the ability of strategies and statutory controls being able to support the intent of SPP 4.2 and the objectives of that policy. The relationship between measures proposed and the performance indicators is set out in Figure 8-3.

Table 8-2 Performance Indicator Measures

| Indicator | Measure | How indicator is achieved |
|---|---|---|
| **Public Transport Infrastructure** | | |
| Prioritisation of public transport | Protect and plan for a future multimodal transit node near Wanneroo Road/Dundebar Road. | Safeguards land for the proposed Guangara–WTC rapid transit terminus and enables integration with local bus, rapid transit, walking and bike riding connections. |
| | Support delivery of the high-priority transit corridor along Wanneroo Road between Whitfords Avenue and south of Pinjar Road. | Improves travel time, service reliability and frequency between Joondalup, Wanneroo and Whitfords. |
| | Expand local bus services between the WTC and future East Wanneroo communities. | Provides direct public transport access from emerging residential areas to employment, retail, civic and community destinations in the WTC. |
| | Upgrade bus stop amenities within the WTC, including shelters, seating and bins. | Improves passenger comfort and accessibility. Stops that do not meet PTA funding thresholds should be monitored as patronage increases. |
| **Walking and Cycling** | | |
| Prioritisation of Active Transport & Improved access and facilities for pedestrian and cyclists | Expand the 40 km/h speed environment across the WTC and retain the 20 km/h shared-space treatment on Rocca Way. | Reduces vehicle speeds and supports safer, more comfortable walking and bike riding within the centre. |
| | Implement the proposed partial closure of Rocca Way and pedestrian links identified in the WTC Precinct Plan. | Strengthens pedestrian connectivity between key destinations and supports a more walkable town centre core. |
| | Retain and enhance pedestrian phases at signalised intersections and implement the planned four-way zebra crossing at Rocca Way/Dundebar Road. | Improves pedestrian priority and safety at key crossing locations, with future signal control retained as an option if warranted. |
| | Provide footpaths or shared paths on all new streets and install wombat crossings on side streets intersecting Dundebar Road, Civic Drive and Servite Terrace, excluding signalised intersections. | Provides continuous, accessible routes and reinforces pedestrian priority across local street connections. |
| | Investigate a signalised mid-block crossing on Wanneroo Road north of Ariti Avenue. | Improves east-west connectivity across Wanneroo Road and access between the WTC and the Scenic Drive/Lake Joondalup corridor. |
| | Deliver the bike riding projects identified in the City of Wanneroo Active Transport Plan 2025/26–2030/31. | Upgrades the primary, secondary and local LTCN along Dundebar Road, Wanneroo Road and Rocca Way, improving connections to surrounding residential areas and the broader network. |
| Provision of end-of-trip facilities | Apply planning controls requiring bicycle parking, lockers, showers and change facilities for new non-residential development. | Supports bike riding by providing secure parking and facilities for employees, tenants and visitors. |
| **Traffic** | | |
| Improved access by all modes, including freight vehicles | Avoid additional strategic road capacity within the WTC, other than widening the Wanneroo Road reserve north of Dundebar Road to match the reserve to the south. | Avoids inducing additional through traffic while preserving the corridor width requested by Main Roads WA. |
| | Implement the preferred partial closure of Rocca Way between Yagan Place and the Australia Post/Wanneroo Central access. | Improves pedestrian connectivity and public realm outcomes while maintaining local access; modelling indicates limited effect on overall network performance. |
| | Provide the proposed local street connections, including the northern extensions of Servite Terrace and Friars Drive and new east-west links through undeveloped land. | Improves local permeability, distributes local traffic and supports future development without increasing strategic through-traffic capacity. |

| Indicator | Measure | How indicator is achieved |
|---|---|---|
| | Provide left-in/left-out connections to Wanneroo Road opposite Hart Court and Crisafulli Avenue, and connect Civic Drive to Windan Way. | Maintains safe access to development and limits conflicting movements on Wanneroo Road. |
| | Widen the Cafaggio Crescent and Senario Drive reserves and provide laneways or service roads for lots fronting the western side of Wanneroo Road. | Accommodates footpaths/shared paths and separates local property access and servicing from the strategic road corridor. |
| | Apply the proposed road hierarchy and intersection treatments, including signalisation of Dundebar Road/Servite Terrace/Rocca Way and avoiding additional roundabouts. | Aligns street function and design with forecast demand while improving pedestrian and bike rider safety. |
| **Freight Servicing** | | |
| Improved freight and service access | Provide service vehicle access to the Wanneroo Central loading docks via the Wanneroo Road–Windan Way connection. | Maintains efficient loading access while reducing conflict with walking and bike riding movements in the WTC core. |
| **Centre Parking Policy** | | |
| Upper limits and common use of parking | Apply an upper parking provision rate of one bay per 60 m² of non-residential floor area. | Limits excessive parking supply while providing a balanced level of parking to support future development and mode shift. |
| | Implement a "park once" approach supported by shared and reciprocal parking, unbundled parking and development-specific parking assessments. | Improves utilisation of existing parking, reduces duplication and allows visitors to access multiple destinations on foot. |
| | Prioritise short-stay parking in the town centre core through progressive time restrictions on on-street parking. | Improves turnover and access to businesses, civic facilities and services. |
| | Investigate multi-storey parking as a medium- to long-term solution. | Provides additional capacity at peripheral locations while preserving central land for mixed-use development, public space and active frontages. |

ARUP

City of Wanneroo

# Wanneroo Town Centre Parking Study

## Technical Note

Reference: 315334-00

Rev C | 4 September 2026



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This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 315334-00

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# 1. Introduction

## 1.1 Study Background

Wanneroo Town Centre (WTC) Precinct Plan establishes a long-term vision for the town centre to evolve into a vibrant, connected and mixed-use destination that supports future population and employment growth while retaining its civic and historic character. The plan promotes higher-density development, enhanced public spaces and improved walking, cycling and public transport connections to create a more accessible and active town centre.

To achieve this vision, the WTC Precinct Plan identifies several initiatives, including redevelopment of key opportunity sites and closure of Rocca Way to improve the public realm. Together, these initiatives will change the distribution and intensity of land uses across the town centre and are expected to influence both parking demand and parking supply.

Understanding these changes is essential to ensure that the future parking network continues to support residents, workers and visitors while aligning with the broader objectives of the Precinct Plan. This study therefore establishes the existing parking conditions within Wanneroo Town Centre, assesses current parking demand, and evaluates how future development may affect parking demand and parking supply. The key objectives of this study are to:

1. Document the existing parking inventory within Wanneroo Town Centre, including parking capacity, ownership, restrictions and parking types.
2. Assess existing parking demand through parking occupancy, duration and turnover surveys.
3. Estimate future parking demand and future parking supply arising from planned development within the town centre.
4. Identify any future parking pressure to the public parking.
5. Develop recommendations to support the management of parking within Wanneroo Town Centre.

## 1.2 Study area and context

The study area encompasses the entirety of the Wanneroo Town Centre, where a parking inventory was undertaken to establish the location, capacity, ownership and parking restrictions associated with both public and private parking facilities.

While the parking inventory was completed across the broader town centre, the assessment focuses primarily on the Dundebar, Rocca Way and Memorial Park precincts. These precincts are expected to experience the greatest level of change under the Wanneroo Town Centre Precinct Plan, including opportunities for redevelopment, intensification of land uses and public realm improvements. As a result, these precincts are anticipated to generate the most significant changes in future parking demand and parking supply.

The remaining precincts within the town centre are also expected to accommodate future development; however, the extent of land use change is anticipated to be less substantial, and existing parking resources are expected to continue serving these areas. Consequently, the assessment places particular emphasis on understanding the future parking implications associated with redevelopment within the Dundebar, Rocca Way and Memorial Park precincts, while considering parking supply and demand across the broader Wanneroo Town Centre parking network. Therefore, this area is identified as Parking Study Area.

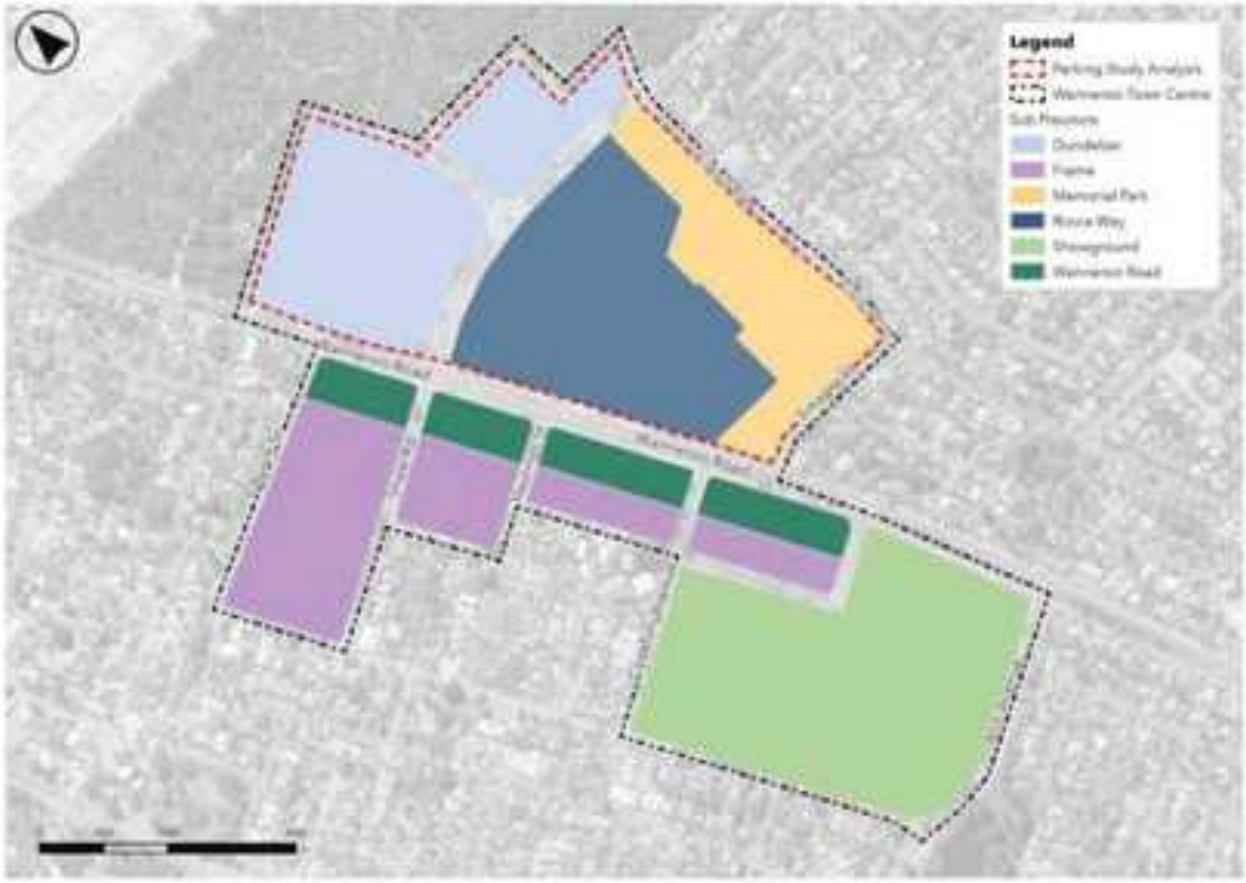


Figure 1-1 Study Area

## 1.3 Methodology

The parking assessment has been undertaken in five steps to understand existing parking conditions within Wanneroo Town Centre and assess the potential implications of future redevelopment on parking demand and supply.

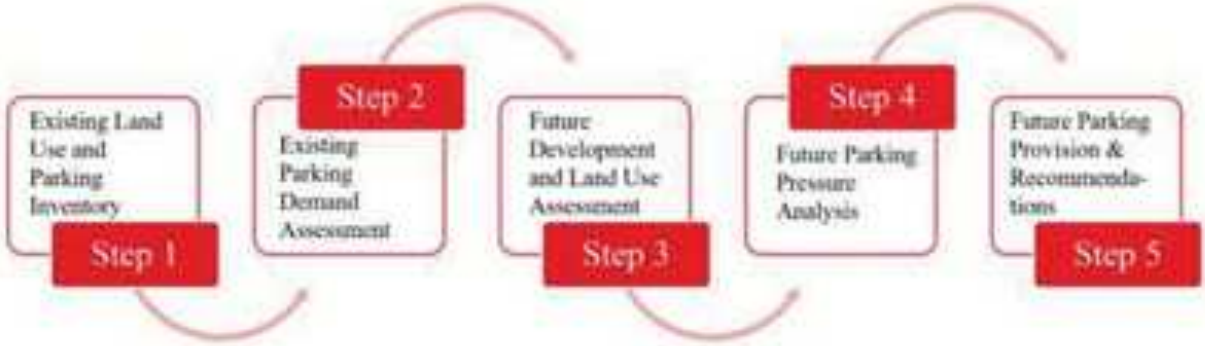


Figure 1-2 Parking Study Methodology

*Step 1 – Existing Land Use and Parking Inventory*

A parking inventory was undertaken across Wanneroo Town Centre to establish the existing parking supply available within the study area.

The survey covered 30 parking zones throughout the town centre and documented:

- Number of parking bays

- Parking ownership (public and private)
- Parking type (e.g. unrestricted, time-restricted, ACROD, loading)
- Parking restrictions and operating conditions

In addition to the parking inventory, existing land uses within the town centre were mapped to understand the spatial distribution of current activities and their relationship to parking demand. The land use mapping assists in interpreting existing parking patterns and provides a basis for understanding how future redevelopment may influence parking requirements. Existing land use mapping was used to understand the spatial distribution of activities within the town centre and to inform the future land use assessment.

*Step 2 – Existing Parking Demand Assessment*

Parking occupancy surveys were undertaken to understand how the existing parking supply is utilised. Unlike the parking inventory survey, occupancy surveys were focused on selected parking areas that are anticipated to be influenced by future redevelopment and on parking facilities owned or managed by the City of Wanneroo. The surveys were undertaken to establish:

- Peak parking occupancy
- Parking utilisation
- Duration of stay
- Parking turnover

Together, these metrics provide an understanding of how different land uses influence parking demand, parking duration and parking turnover across the town centre.

*Step 3 – Future Development and Land Use Assessment*

Future development was assessed using the Wanneroo Town Centre Precinct Plan and the client-provided activity floorspace forecasts for 2026 and 2046. As detailed development proposals are not yet available for individual redevelopment sites, the forecasts were disaggregated from broad activity categories into the more detailed land-use classifications used in this assessment. The existing land-use composition was used to distribute the 2026 activity floorspace and the forecast increase between 2026 and 2046.

The resulting activity floorspace was then linked to the parking areas considered most likely to serve each land use. This established the indicative 2026 and 2046 activity floorspace influencing each assessed parking area and the corresponding floorspace growth factor. The assessment was limited to the 13 parking areas included in the occupancy survey.

*Step 4 – Future Parking Pressure Analysis*

Future parking pressure was assessed using the observed weekday and weekend peak demand identified in the occupancy survey as the 2026 baseline. For each assessed parking area, the observed peak demand was adjusted using the corresponding activity floorspace growth factor established in Step 3 to estimate indicative 2046 parking demand. The projected demand was compared with the available analytical parking supply under two scenarios Do Nothing and Do Something Scenario where it followed confirmed changes to the analytical parking supply, including the removal of 20 general-use bays associated with the Rocca Way closure.

The comparison identifies parking areas where future demand may exceed available capacity and indicates the potential parking shortfall within the assessed parking network.

Relevant planning requirements were also applied to the activity floorspace growth influencing the assessed parking network to establish a planning-based range of additional parking provision. This assessment provides a reference for considering the potential scale of future public parking provision and is separate from the demand-growth assessment.

*Step 5 – Recommendations and Next Steps*

Based on the assessment findings, recommendations have been developed to support the implementation of the Wanneroo Town Centre Precinct Plan while maintaining an appropriate balance between parking provision and sustainable transport objectives.

# 2. Baseline Condition

## 2.1 Existing Land Use

Land use influences the type, intensity, and timing of activities occurring within an area, which in turn affects travel patterns and parking demand. Different land uses also generate different parking characteristics, including variations in occupancy, duration of stay and peak demand periods. Therefore, existing land uses within WTC were mapped to identify the spatial distribution of retail, commercial, civic, community, health, and recreational.

Figure 2-1 illustrates the existing land use distribution within WTC. The town centre currently accommodates a diverse mix of activities, with major activity generators including Wanneroo Central Shopping Centre, the City of Wanneroo Civic Centre and Aquamotion.

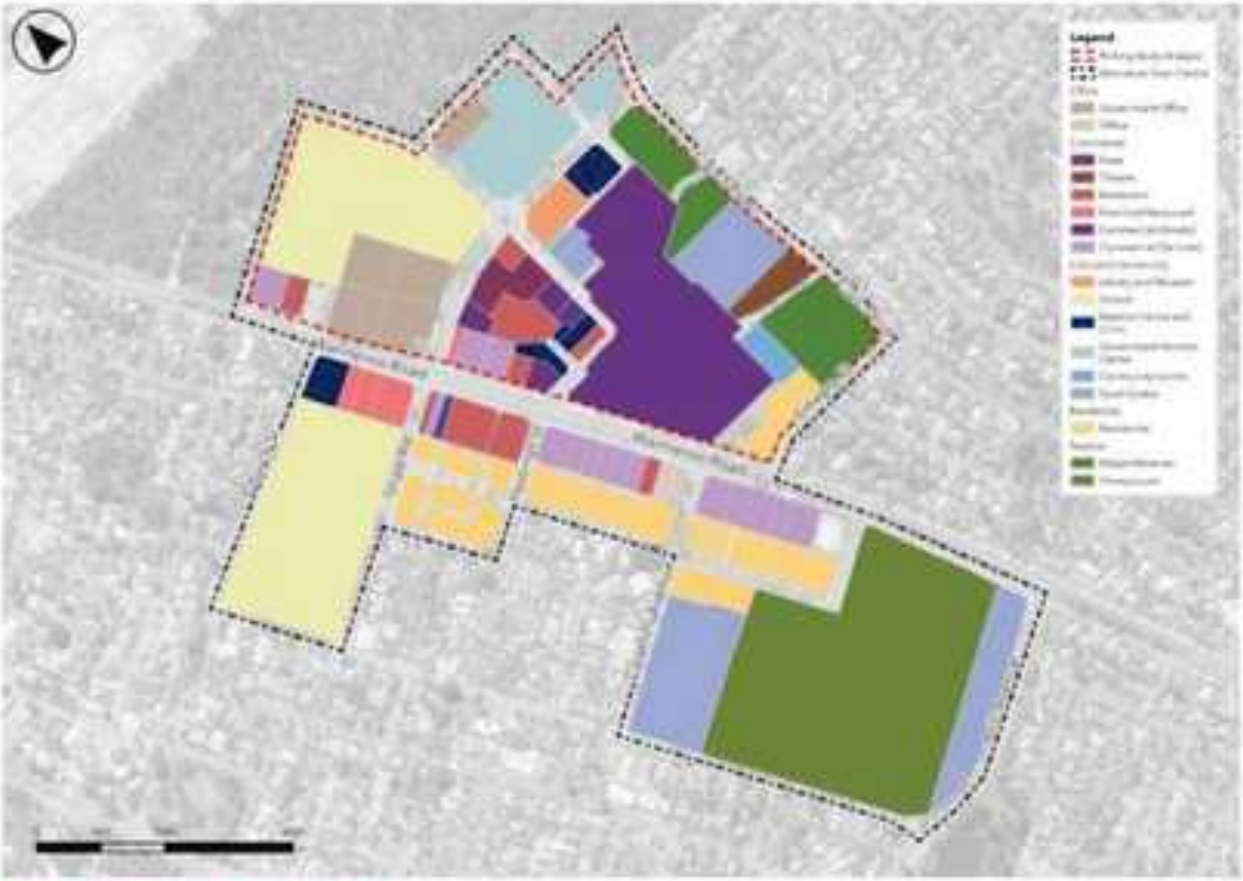

Figure 2-1 Existing Mapped Land Use

Table 2-1 summarises the existing mapped physical non-residential gross floor area (GFA) by land use. The GFA was estimated by mapping the building footprint associated with each land use and applying the estimated number of floors, based on available information. The results therefore represent an indicative estimate of existing physical GFA rather than a surveyed or verified building-floor-area measurement. The mapping provides a baseline of the current distribution and composition of activities within the town centre, supporting the interpretation of existing parking patterns and the assessment of how forecast land-use growth may influence future parking demand.

Table 2-1 Existing Mapped Physical GFA by Land Use

| Land Use | GFA (m2) | Land Use | GFA (m2) | Land Use | GFA (m2) |
|---|---|---|---|---|---|
| Government Office | 5,150 | Restaurant | 6,161 | School | 10,755 |
| Office | 2,195 | Fast-food Restaurant | 1,362 | Government Services | 8,396 |
| Hotel | 1,351 | Commercial (Goods) | 21,634 | Community Centre | 3,016 |
| Cinema | 869 | Library and Museum | 5,253 | Sport Centre | 6,626 |

| Land Use | GFA (m2) | Land Use | GFA (m2) | Land Use | GFA (m2) |
|---|---|---|---|---|---|
| Commercial (Services) | 4,285 | Medical Centre & Clinic | 4,416 | | |

## 2.2 Parking Supply

To understand the existing parking supply available within Wanneroo Town Centre and its capacity to support surrounding activities, a parking inventory was undertaken across 30 selected parking zones. The inventory recorded the location, capacity, ownership, restrictions and bay types associated with the principal formal parking areas within WTC.

The inventory captured most of the location where parking may occur within the broader town centre. However, parking within the Wanneroo Showgrounds, including parking areas near Ariti Avenue, was not included in the inventory. These areas are therefore not shown as surveyed parking zones, and their capacity has not been included in the parking supply totals presented in this assessment. Nevertheless, the Showgrounds parking may represent a potential supplementary parking resource, subject to further investigation of its capacity, availability, accessibility and connection to the town-centre core.

Figure 2-2 shows the locations of the 30 parking inventory zones, while Table 2-2 identifies the corresponding parking areas. Across these surveyed zones, a total of 2,327 parking bays were recorded. Approximately 80% are general-use bays and 3% are ACROD bays, with the remaining supply comprising reserved, loading, service and other specific-use bays. Of the total surveyed supply, 1,346 bays are located within the defined Parking Study Area.




Figure 2-2 Parking Inventory Survey Zones

**Table 2-2 Parking Inventory Zones and Parking Areas**

| Zone | Parking Area | Zone | Parking Area |
|---|---|---|---|
| Zone 1 | Wanneroo Central Car Park 1 | Zone 16 | Cafaggio Crescent On Street Parking |
| Zone 2 | Wanneroo Central Car Park 2 | Zone 17 | Senario Drive On Street Parking |
| Zone 3 | Wanneroo Community Pharmacy Parking | Zone 18 | Wanneroo Gp Super Clinic Parking |
| Zone 4 | Sky Orthodontics Parking | Zone 19 | Dundebar Road On Street Parking (From Wanneroo Road to Civic Drive) |
| Zone 5 | Wanneroo Tavern Parking | Zone 20 | Aquamotion Car Park |
| Zone 6 | 964 Wanneroo Shopping Centre Parking | Zone 21 | Memorial Park Car Park |
| Zone 7 | Windan Way On Street Parking | Zone 22 | Wanneroo Central Car Park 5 |
| Zone 8 | Wanneroo Central Parking | Zone 23 | Wanneroo Central Car Park 6 |
| Zone 9 | Rocca Way On Street Parking | Zone 24 | McDonald's Car Park |
| Zone 10 | Wanneroo Central Car Park 3 | Zone 25 | Wanneroo Primary School Cark Park |
| Zone 11 | City Of Wanneroo Parking | Zone 26 | 955-969 Wanneroo Rd Commercial Area |
| Zone 12 | Saint Anthony's School South Car Park | Zone 27 | 943-949 Wanneroo Rd Commercial Area |
| Zone 13 | Saint Anthony's School North Car Park | Zone 28 | 915-920 Wanneroo Rd Commercial Area |
| Zone 14 | Servite Terrace On-Street Parking | Zone 29 | Wanneroo Sports And Social Club |
| Zone 15 | Yagan Place On-Street Parking | Zone 30 | Wanneroo Central Undercover Car Park |

Figure 2-3 shows the distribution of parking capacity across the surveyed parking zones from all parking types. Further details of the parking inventory, including bay type, ownership, restrictions and surrounding land uses, are provided in Appendix A.




**Figure 2-3 Parking Capacity by Inventory Survey**

The existing parking supply is concentrated in three major parking areas. The City of Wanneroo Car Park primarily serves visitors to the Civic Centre and City employees. Wanneroo Central Parking and the Wanneroo

Central Undercover Car Park primarily serve visitors to Wanneroo Central, while also accommodating parking demand associated with nearby land uses. The remaining supply is distributed across smaller off-street and on-street parking areas, which generally provide convenient parking for adjacent sites.

## 2.3 Existing Parking Demand

### 2.3.1 Occupancy Survey Methodology

Occupancy survey assessed how parking demand varied throughout the day across 13 selected parking zones within the Parking Study Area, as shown in Figure 2-4. The selected zones primarily comprise public parking facilities that support broader town-centre activities, while private parking areas dedicated to individual developments were generally excluded.

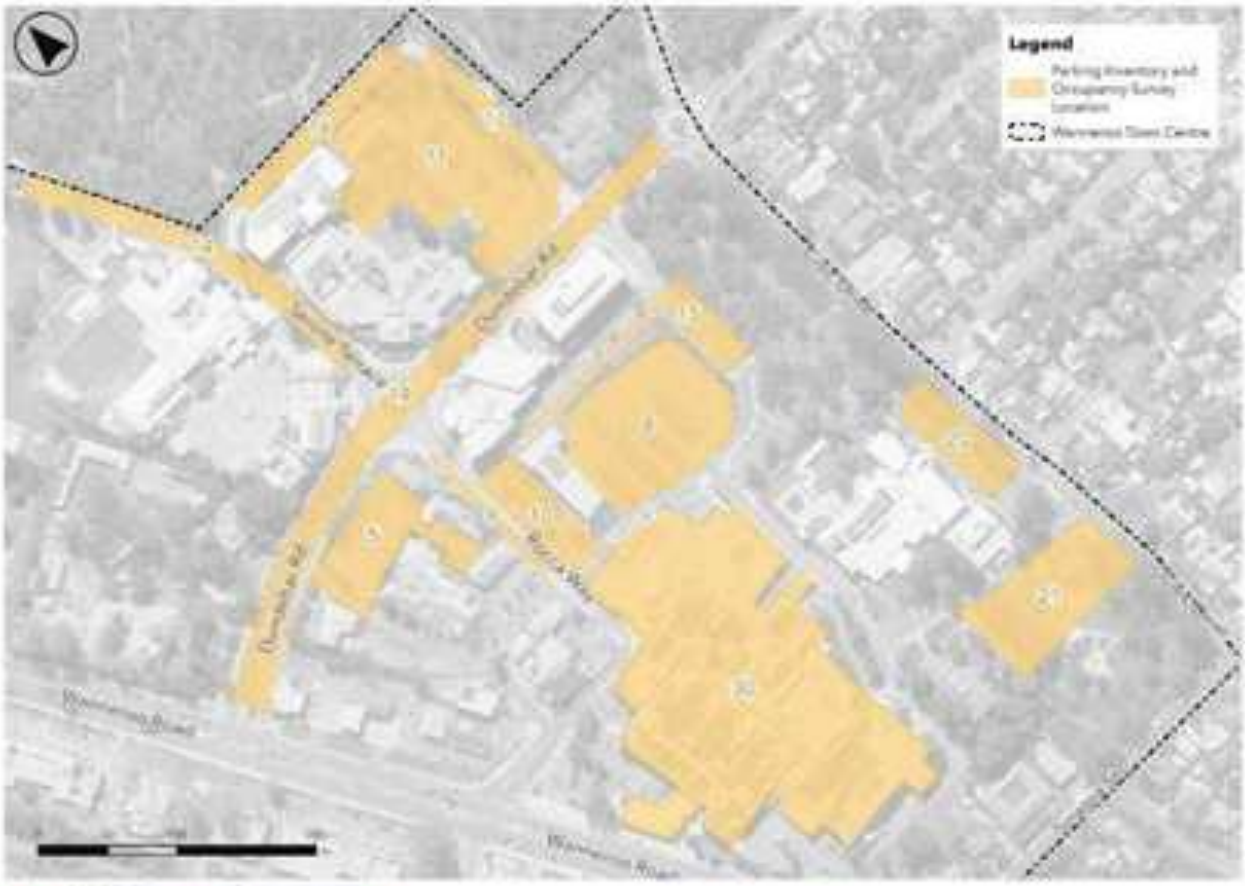


Figure 2-4 Occupancy Survey Zones

The survey was undertaken on Thursday, 30 April 2026 and Saturday, 2 May 2026 to capture differences between weekday and weekend parking patterns. Observations were recorded between 7:00 am and 7:00 pm, covering the principal operating hours of retail, civic, community and recreational activities within the town centre. The survey days were assumed to represent typical weekday and weekend conditions. However, the results provide a snapshot of parking activity and may not capture occasional peak conditions associated with concurrent school, community, civic or sporting events, seasonal variation, or other day-to-day fluctuations.

The occupancy survey and subsequent analysis considered general-use and reserved bays only to assess general parking-demand patterns. ACROD, motorcycle and specific-use bays, including loading and service bays, were excluded because it is restricted to particular users, vehicle types or purposes and do not form part of the general parking supply.

The broader parking inventory identified 2,327 bays across the 30 surveyed inventory zones. Within the 13 zones included in the occupancy survey, 1,283 general-use and reserved bays were included in the parking-demand analysis. This comprises 1,153 general-use bays and 130 reserved bays, as summarised in Table 2-3.

The 1,283-bay capacity is used consistently as the baseline supply for the occupancy and future parking-pressure assessments.

Table 2-3 General-Use and Reserved Bay Capacity within the Occupancy Survey Area

| Zone | Parking Area | General User Bays | Reserved Bays | Total Bays Included in Analysis |
|---|---|---|---|---|
| Zone 5 | Wanneroo Tavern Parking | 45 | 36 | 81 |
| Zone 8 | Wanneroo Central Parking | 234 | | 234 |
| Zone 9 | Rocca Way On Street Parking | 20 | | 20 |
| Zone 10 | Wanneroo Central Car Park 3 | 40 | | 40 |
| Zone 11 | City Of Wanneroo Parking | 180 | 36 | 216 |
| Zone 14 | Servite Terrace On Street Parking | 47 | | 47 |
| Zone 15 | Yagan Place On Street Parking | 57 | | 57 |
| Zone 16 | Cafaggio Crescent On Street Parking | 48 | 6 | 54 |
| Zone 17 | Senario Drive On Street Parking | 43 | | 43 |
| Zone 19 | Dundebar Road On Street Parking (From Wanneroo Road to Civic Drive) | 20 | 3 | 23 |
| Zone 20 | Aquamotion Car Park | 42 | | 42 |
| Zone 21 | Memorial Park Car Park | 79 | 36 | 115 |
| Zone 30 | Wanneroo Central Undercover Car Park | 298 | 13 | 311 |
| **Total** | | **1153** | **130** | **1283** |

### 2.3.2 Parking Occupancy

Parking occupancy is the proportion of available parking spaces that are occupied at a specific point in time, expressed as a percentage of the total parking capacity within an off-street parking area or along an on-street parking section. Assessing occupancy for each parking area helps identify differences in utilisation throughout the day and determine when each area experiences peak demand.

#### *2.3.2.1 Total Parking Occupancy*

Figure 2-5 presents the network-wide parking occupancy across the 13 parking zones included in the occupancy survey. Occupancy is compared against the 1,283 general-use and reserved bays included in the analysis. The markers on the weekday and weekend profiles identify the respective peak survey-period demand.

During the weekday survey, combined parking demand reached its peak at approximately 10:30 am, when 1,058 of the 1,283 surveyed bays were occupied. This is equivalent to an overall occupancy rate of approximately 82.4%, leaving approximately 225 bays available across the surveyed parking network. During the weekend survey, combined parking demand peaked at approximately 11:30 am, when 737 bays were occupied. This is equivalent to an overall occupancy rate of approximately 57.4%, leaving approximately 546 bays available across the surveyed parking network.

The higher weekday occupancy reflects the combined operation of office, civic, retail, community and recreational activities within the town centre. Weekend demand is lower at the network level and is more strongly associated with retail, community and recreational activities, while demand associated with office and civic uses is substantially reduced.

At the network level, parking capacity remained available during both the weekday and weekend peak periods. However, the combined results do not reflect how evenly this capacity was distributed across individual parking areas. Some locations experienced high or very high occupancy while capacity remained available elsewhere. The number of occupied bays recorded during the respective weekday and weekend peak periods was therefore adopted as the baseline demand for forecasting future parking conditions.




**Figure 2-5 Combined Parking Occupancy Rate across the Occupancy Survey Area**

### *2.3.2.2 Parking Occupancy by Parking Area*

At network level, the occupancy survey recorded approximately 82.4% occupancy during the weekday peak period and 57.4% during the weekend peak period. However, these network-wide results mask substantial differences between individual parking areas, with some locations experiencing high occupancy while capacity remained available elsewhere. For the purpose of this assessment, occupancy of 95% or greater is considered very high because few bays remain available for incoming users. Figure 2-6 and Figure 2-7 present the weekday and weekend parking occupancy profiles for each surveyed parking area.




**Figure 2-6 Weekday Parking Occupancy by Parking Area**




Figure 2-7 Weekend Parking Occupancy by Parking Area

The following figures compare weekday and weekend occupancy profiles for selected parking areas associated with the Civic Centre, Aquamotion and Memorial Park. The Wanneroo Tavern car park is also included because a portion of the facility is leased by the City for staff parking and therefore contributes to the broader Civic Centre parking supply.




Figure 2-8 City of Wanneroo Parking Occupancy Profiles




Figure 2-9 Wanneroo Tavern Parking Occupancy Profiles




Figure 2-10 Aquamotion Car Park Occupancy Profiles




Figure 2-11 Memorial Park Car Park Occupancy Profiles

Table 2-4 summarises parking occupancy at selected times throughout the day. The results are consistent with the daily occupancy profiles presented in the previous figures, showing that parking demand is generally higher on weekdays than on weekends. For both weekdays and weekends, parking occupancy begins to decline after approximately 6:00 PM, reflecting the reduction in demand as retail, office, and civic activities wind down for the day.

Overall, the individual parking-area results demonstrate that existing parking pressure is primarily localised rather than network-wide. Parking areas closest to major activity generators frequently experience high or very high occupancy, while capacity remains available elsewhere within the survey area. The effectiveness of this available capacity therefore depends on the quality of pedestrian connections, wayfinding and parking-management measures that encourage users to consider alternative parking locations.

Table 2-4 Parking Occupancy by Parking Area at Selected Times

| Parking Area | Weekday | | | | | Weekend | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 9:00 AM | 12:00 PM | 3:00 PM | 6:00 PM | 10:30 AM* | 9:00 AM | 12:00 PM | 3:00 PM | 6:00 PM | 11:30 AM* |
| Wanneroo Tavern Parking | 47% | 73% | 86% | 23% | 80% | 11% | 12% | 20% | 23% | 12% |
| Wanneroo Central Parking | 48% | 84% | 59% | 24% | 91% | 31% | 87% | 77% | 32% | 99% |
| Rocca Way On Street Parking | 55% | 65% | 50% | 10% | 60% | 45% | 60% | 50% | 5% | 60% |
| Wanneroo Central Car Park 3 | 95% | 93% | 93% | 48% | 95% | 80% | 95% | 95% | 28% | 83% |
| City Of Wanneroo Parking | 86% | 83% | 83% | 13% | 85% | 15% | 11% | 13% | 9% | 13% |
| Servite Terrace On Street Parking | 49% | 81% | 89% | 6% | 74% | 2% | 9% | 9% | 11% | 13% |
| Yagan Place On Street Parking | 98% | 93% | 74% | 5% | 98% | 10% | 39% | 16% | 2% | 46% |
| Cafaggio Crescent On Street Parking | 93% | 94% | 94% | 13% | 96% | 15% | 17% | 19% | 13% | 15% |
| Scenario Drive On Street Parking | 74% | 95% | 100% | 5% | 100% | 0% | 0% | 0% | 2% | 0% |

| Parking Area | Weekday | | | | | Weekend | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 9:00 AM | 12:00 PM | 3:00 PM | 6:00 PM | 10:30 AM* | 9:00 AM | 12:00 PM | 3:00 PM | 6:00 PM | 11:30 AM* |
| Dundebar Road On Street Parking (From Wanneroo Road to Civic Drive) | 83% | 70% | 78% | 9% | 91% | 17% | 48% | 57% | 35% | 43% |
| Aquamotion Car Park | 100% | 90% | 74% | 93% | 98% | 98% | 100% | 10% | 17% | 86% |
| Memorial Park Car Park | 74% | 66% | 41% | 48% | 88% | 73% | 57% | 9% | 5% | 59% |
| Wanneroo Central Undercover Car Park | 45% | 76% | 52% | 35% | 63% | 45% | 85% | 68% | 1% | 86% |

* *Peak hour*

**Occupancy Rate**

< 25% | 25 - 50% | 50 - 85% | 85 - 95% | > 95%

Key observations from the daily occupancy analysis are summarised below:

1. Weekday parking demand is generally higher than weekend demand

- On weekdays, most surveyed parking areas experience relatively high occupancy between 9:00 am and 5:00 pm, with occupancy generally exceeding 50%. On weekends, relatively high occupancy is concentrated at selected locations, particularly parking areas serving Wanneroo Central and Aquamotion.
- This indicates that weekday parking demand is associated with a broader mix of employment, civic, retail, community and recreational activities, while weekend demand is more concentrated around retail and recreational destinations.

2. Parking occupancy is unevenly distributed across the WTC

- Although the network-wide results indicate that parking capacity remains available across the Parking Study Area, the individual parking-area profiles show that some locations experience high occupancy while capacity remains available elsewhere.
- This uneven distribution indicates that parking demand is influenced by the location and convenience of individual parking areas, with users generally favouring parking close to their destination. Consequently, localised parking pressure can occur before the wider parking network reaches full capacity.
- On weekdays, relatively high demand is distributed across parking areas serving employment, civic, retail and recreational activities. On weekends, demand is more concentrated around retail and recreational destinations, particularly Wanneroo Central, while parking associated with office and civic uses is substantially less utilised.

3. City of Wanneroo parking is primarily demand is primarily associated with weekday employment and civic activities

- The City of Wanneroo Car Park experiences high occupancy throughout most of the weekday survey period, reflecting long-stay demand associated with employees and visitors accessing the Civic Centre and council services. Occupancy is substantially lower during the weekend survey, when office and civic activities are more limited.
- High utilisation of general-use bays results in Civic Centre-related parking demand extending into surrounding areas, including Yagan Place and the portion of the Wanneroo Tavern Car Park leased for City staff. This indicates that parking demand associated with the Civic Centre is not contained entirely within the primary on-site car park.
- The reported occupancy rate for the City of Wanneroo Car Park is based on the combined general-use and reserved capacity included in the analysis. Therefore, the overall occupancy rate may remain below 100% even when the general-use bays are effectively at capacity.

4. Aquamotion exhibits a distinct parking demand pattern

- Aquamotion experiences high parking occupancy from the beginning of the weekday survey period and remains highly utilised throughout much of the day, despite a temporary reduction to approximately 70% at around 2:30 pm. This pattern indicates that Aquamotion generates activity across an extended period, including before typical work and school hours.
- During the weekend survey, Aquamotion experiences its highest occupancy between approximately 8:00 am and 12:00 pm. This differs from the pattern observed at many retail-focused parking areas, where demand generally increases later in the morning.
- Aquamotion's sporting and recreational function generates parking demand during both weekday and weekend survey periods. Unlike office-focused parking areas, which experience substantially lower weekend demand, Aquamotion remains highly utilised on both survey days.

5. Memorial Park Car Park experiences broadly comparable weekday and weekend demand

- Memorial Park Car Park records broadly comparable weekday and weekend utilisation, although the timing of peak demand differs between the two survey days. On both days, occupancy generally declines after approximately 12:00 pm, indicating that demand is more concentrated during the morning.
- This pattern is consistent with the mix of surrounding community, recreational and cultural uses, including Memorial Park, nearby community facilities and the theatre, which generate parking activity during both weekdays and weekends. The lower occupancy later in the day indicates that the intensity of this activity varies throughout the day.

6. Rocca Way on-street parking remains underutilised compared with nearby shopping centre parking

- Rocca Way on-street parking remains below approximately 65% occupancy throughout both survey days, indicating that parking bays are generally available.
- In comparison, the Wanneroo Central parking area in front of Lifestyle Fitness experiences consistently higher occupancy and provides more direct access to Wanneroo Central. The lower occupancy along Rocca Way indicates that many visitors favour the more conveniently located off-street parking, despite parking capacity remaining available nearby.

### 2.3.3 Duration of Stay

Duration of stay represents the estimated length of time that an individual vehicle remains within a parking area. Average duration of stay was calculated separately for the weekday and weekend surveys for each parking area. Table 2-5 summarises the results and the difference between the two survey days. Duration of stay provides an indication of the way different parking areas are used. Longer average durations may be associated with employment, civic or other long-stay activities, while shorter durations may indicate a higher proportion of retail, service or short recreational visits. Key observations from the duration of stay analysis are summarised below:

1. Longer parking durations are associated with employment-related land uses on weekdays

- On weekdays, the longest average parking durations are generally observed in parking areas serving office and civic land uses, where vehicles typically remain parked for much of the working day. This pattern is evident at the City of Wanneroo Car Park and along Cafaggio Crescent and Senario Drive, which serve the Wanneroo Civic Centre and surrounding office uses.
- Wanneroo Tavern car park also records a relatively long average weekday parking duration of 4:07. This is considered to reflect the City of Wanneroo's lease of part of the car park for the dedicated staff parking due to the constraint capacity around the Civic Centre. The similarity between the duration of stay at the Wanneroo Tavern and parking areas surrounding the Civic Centre indicates that part of the Tavern parking area performs a comparable long-stay employment-parking function.

2. Retail-oriented parking areas generally record shorter stays

- Parking areas serving Wanneroo Central generally record shorter average durations than parking surrounding the Civic Centre.
- The Wanneroo Central parking areas record weekday average durations of approximately 1 hour and 15 minutes to 1 hour and 56 minutes, with generally shorter durations during the weekend survey.
- This pattern is consistent with a greater proportion of shorter retail and service-related visits and the more frequent reuse of parking bays throughout the day.

3. Some parking areas experience longer stays on weekends

- Rocca Way on-street parking and Aquamotion Car Park record slightly longer average durations during the weekend survey than during the weekday survey.
- At Aquamotion, the average increases from 1 hour and 16 minutes on the weekday to 1 hour and 20 minutes on the weekend. This small difference indicates broadly similar parking durations across the two survey days.
- At Rocca Way, the average increases from 1 hour and 19 minutes to 1 hour and 25 minutes. The six-minute difference is minor and does not indicate a substantial change in parking behaviour between the survey days.

4. Senario Drive on-street parking experiences a significant reduction in parking duration on weekends

- The average duration at Senario Drive decreases from 6 hours and 29 minutes during the weekday survey to 30 minutes during the weekend survey. The long weekday duration is consistent with employment-related parking activity near the Civic Centre.
- Only one vehicle was recorded at Senario Drive during the weekend survey. The weekend average should therefore be interpreted cautiously and is not necessarily representative of typical weekend parking behaviour. Instead, the result primarily demonstrates that parking activity at this location was very limited during the weekend survey.

**Table 2-5 Average Duration of Stay by Parking Area**

| Parking Area | Average Duration of Stay | | |
|---|---|---|---|
| | Weekday Average (h:mm) | Weekend Average (h:mm) | Duration Difference |
| Wanneroo Tavern Parking | 4:07 | 1:31 | 2:36 |
| Wanneroo Central Parking | 1:30 | 1:08 | 0:22 |
| Rocca Way On Street Parking | 1:19 | 1:25 | -0:06 |
| Wanneroo Central Car Park 3 | 1:56 | 1:03 | 0:53 |
| City Of Wanneroo Parking | 5:31 | 7:04 | 1:33 |
| Servite Terrace On Street Parking | 2:36 | 1:51 | 0:45 |
| Yagan Place On Street Parking | 2:47 | 2:02 | 0:45 |
| Cafaggio Crescent On Street Parking | 4:36 | 4:23 | 0:13 |
| Senario Drive On Street Parking | 6:29 | 0:30 | 5:59 |
| Dundebar Road On Street Parking (From Wanneroo Road to Civic Drive) | 2:22 | 1:44 | 0:38 |
| Aquamotion Car Park | 1:16 | 1:20 | -0:04 |
| Memorial Park Car Park | 1:52 | 1:37 | 0:15 |
| Wanneroo Central Undercover Car Park | 1:15 | 1:02 | 0:13 |

Overall, the duration-of-stay results indicate a clear distinction between longer-stay weekday parking around the Civic Centre and generally shorter-stay parking around retail and recreational destinations. These results are considered together with parking turnover in the following section to understand how frequently individual bays are reused.

### 2.3.4 Turnover Ratio

Parking turnover represents the average number of vehicles using each parking bay during the survey period. It was calculated by dividing the total number of vehicles recorded within each parking area by the number of general-use and reserved bays included in the analysis.

A higher turnover ratio indicates that parking bays were used by a greater number of vehicles during the survey period, while a lower turnover ratio indicates less frequent reuse. Turnover is closely related to duration of stay, as shorter parking durations generally allow bays to be used by more vehicles during the day.

Key observations from the turnover analysis include:

1. Civic Centre parking generally records lower weekday turnover
   - Parking areas surrounding the City of Wanneroo Civic Centre generally record lower weekday turnover than retail and recreational parking areas. This pattern is consistent with the longer average parking durations and reflects the influence of employment and civic-related parking activity.
   - The City of Wanneroo Car Park, Cafaggio Crescent on-street parking, Senario Drive on-street parking and the portion of the Wanneroo Tavern Car Park leased for City staff generally accommodate longer-stay weekday parking. Consequently, individual bays are reused less frequently during the survey period.
2. Retail parking records comparatively higher turnover
   - Parking areas serving Wanneroo Central generally record comparatively higher turnover, indicating that individual bays accommodate a greater number of vehicles throughout the day. This pattern is consistent with the shorter average parking durations recorded at the retail-oriented parking areas and the greater frequency of shorter retail and service-related visits.
   - However, turnover varies between the individual Wanneroo Central parking areas, indicating that some areas may also accommodate longer-stay parking, potentially associated with employees or visitors undertaking multiple activities within the town centre.
3. Aquamotion records high weekday turnover
   - Aquamotion Car Park records the highest weekday turnover ratio among the surveyed parking areas. This indicates that its bays accommodate a comparatively high number of vehicles over the survey period. This result is consistent with Aquamotion's relatively short average weekday duration of stay of approximately 1 hour and 16 minutes, combined with sustained occupancy across much of the day.
   - Together, these results indicate that Aquamotion experiences both intensive use and frequent reuse of its parking bays, rather than being occupied by the same vehicles throughout the day.
4. Weekend turnover is more concentrated around retail and recreational destinations
   - During the weekend survey, higher turnover is concentrated around Wanneroo Central and selected recreational destinations. Parking areas associated with office and civic activities generally record lower weekend turnover, consistent with the substantially lower parking activity observed at these locations.
   - Weekend turnover results should be interpreted alongside the number of vehicles recorded. For example, a turnover ratio based on very limited parking activity may not represent typical weekend behaviour.

**Table 2-6 Turnover Ratio by Parking Area**

| Parking Area | Weekday | | Weekend | |
|---|---|---|---|---|
| | Total Vehicles | Turnover Ratio | Total Vehicles | Turnover Ratio |
| Wanneroo Tavern Parking | 132 | 1.61 | 89 | 1.09 |
| Wanneroo Central Parking | 1,001 | 4.28 | 1,441 | 6.16 |
| Rocca Way On Street Parking | 81 | 3.38 | 66 | 2.75 |
| Wanneroo Central Car Park 3 | 203 | 4.72 | 331 | 7.70 |
| City Of Wanneroo Parking | 326 | 1.44 | 52 | 0.23 |

| Parking Area | Weekday | | Weekend | |
|---|---|---|---|---|
| | Total Vehicles | Turnover Ratio | Total Vehicles | Turnover Ratio |
| Servite Terrace On Street Parking | 117 | 2.29 | 28 | 0.55 |
| Yagan Place On Street Parking | 158 | 2.77 | 68 | 1.19 |
| Cafaggio Crescent On Street Parking | 100 | 1.59 | 19 | 0.30 |
| Senario Drive On Street Parking | 52 | 1.02 | 1 | 0.02 |
| Dundebar Road On Street Parking (From Wanneroo Road to Civic Drive) | 68 | 2.43 | 57 | 2.04 |
| Aquamotion Car Park | 413 | 8.26 | 240 | 4.80 |
| Memorial Park Car Park | 446 | 3.78 | 261 | 2.21 |
| Wanneroo Central Undercover Car Park | 1,587 | 4.97 | 1,815 | 5.69 |

## 2.4 Key Findings

Below are the key findings from the existing parking condition around the WTC.

1. Parking demand is strongly influenced by surrounding land use and varies significantly between weekdays and weekend

   Weekday parking demand is associated with the combined operation of employment, civic, retail, community and recreational activities. This results in relatively high occupancy around the City of Wanneroo Civic Centre, Aquamotion, Wanneroo Central and surrounding on-street parking areas. During the weekend survey, parking demand is more concentrated around retail and recreational destinations, particularly Wanneroo Central, Aquamotion and Memorial Park, while parking associated with office and civic uses is substantially less utilised.

2. Parking behaviour reflects the surrounding land uses

   Parking areas serving employment and civic activities generally record longer parking durations and lower turnover during the weekday survey, particularly around the Civic Centre, where vehicles remain parked for much of the working day. The portion of the Wanneroo Tavern Car Park leased for City staff also performs a long-stay employment-parking function.

   Retail-oriented parking areas around Wanneroo Central generally experience shorter stays and higher turnover, reflecting more frequent bay reuse. Aquamotion exhibits a different pattern, with high occupancy during both survey days and frequent reuse of its relatively limited parking supply.

3. Parking demand is concentrated in the most convenient locations

   Parking areas providing the most direct access to key destinations generally experience the highest occupancy, while some nearby parking areas requiring a longer walk retain available capacity. This is particularly evident around Wanneroo Central, where parking immediately adjacent to the shopping centre is more heavily utilised than surrounding on-street and peripheral parking areas.

   This finding demonstrates that parking availability cannot be considered solely at a network-wide level. Parking located further from key destinations will function effectively as part of the town-centre parking network only where it is supported by safe, direct, comfortable and legible pedestrian connections. Improved directional signage and wayfinding should also be provided to direct users to parking areas with available capacity and clearly identify walking routes to key destinations. Additional parking provision should respond to monitored demand and practical operating thresholds rather than isolated or occasional maximum conditions.

4. The existing parking supply has spare capacity, but demand is unevenly distributed

   Across the 13 parking zones included in the occupancy survey, the combined supply of 1,283 general-use and reserved bays retains approximately 225 available bays during the weekday peak and 546 available bays during the weekend peak. However, this network-wide result does not reflect the level of parking availability experienced at individual destinations. Several parking areas experience high or very high occupancy while capacity remains available elsewhere. The existing parking issue is therefore primarily

one of localised pressure and uneven utilisation rather than an overall shortage across the surveyed parking network. The conditions at the three key civic and recreational parking areas are summarised below:

- **City of Wanneroo Parking**: General-use parking is highly utilised during weekdays, with parking demand extending to Yagan Place and the parking area at Wanneroo Tavern leased for City staff. Although the overall City of Wanneroo Parking occupancy remains below 100%, the total includes reserved, ACROD and other restricted bays that are not necessarily available to general users.
- **Aquamotion Car Park:** Aquamotion experiences high utilisation during both the weekday and weekend survey periods and remains busy over an extended period. The combination of sustained occupancy, relatively short stays and high turnover indicates intensive use and limited available capacity during busy periods.
- **Memorial Park Car Park:** Memorial Park experiences relatively high morning occupancy during both survey days but generally retains some available capacity under the surveyed conditions. Occupancy reduces after approximately midday.

The existing survey therefore does not demonstrate a parking shortage across the Parking Study Area as a whole. However, it identifies localised constraints, particularly for general-use parking around the Civic Centre and during busy periods at Aquamotion. These constraints should be considered alongside available capacity in nearby parking areas, pedestrian connectivity and opportunities to improve the distribution of parking demand. Additionally, measures such as improved parking management, travel demand management initiatives, or additional parking provision may need to be considered.

**Table 2-7 2026 Parking Demand and Available Capacity during the Survey-Period Peaks**

| Measure | Network-Wide | | Civic Centre Precinct* | | Aquamotion Car Park | | Memorial Park Car Park | |
|---|---|---|---|---|---|---|---|---|
| | Weekday Peak | Weekend Peak | Weekday Peak | Weekend Peak | Weekday Peak | Weekend Peak | Weekday Peak | Weekend Peak |
| Peak recorded demand | 1,058 bays | 737 bays | 344 bays | 47 bays | 41 bays | 36 bays | 101 bays | 68 bays |
| Parking Supply | 1,283 bays | 1,283 bays | 394 bays | 394 bays | 42 bays | 42 bays | 115 bays | 115 bays |
| Average occupancy | 82% | 57% | 88% | 12% | 98% | 90% | 88% | 77% |
| Shortfall/ spare capacity | 225 bays | 546 bays | 50 bays | 347 bays | 1 bay | 6 bays | 14 bays | 47 bays |

**Include parking demand and supply for City of Wanneroo Parking, Cafaggio Crecent on Street Parking, and Senario Drive On Street Parking, Wanneroo Tavern Parking (Leased for City of Wanneroo)*

# 3. Future Development and Land Use Assessment

## 3.1 Future Development Overview

WTC Precinct Plan establishes a long-term vision for WTC to evolve into a vibrant, connected and mixed-use activity centre that supports future population and employment growth. The Precinct Plan identifies redevelopment opportunities, public-realm improvements and transport initiatives that are expected to change the intensity and distribution of activities across the town centre. These changes may influence both the scale and spatial distribution of future parking demand.

Figure 3-1 presents the land-use framework established by the Precinct Plan. The key development opportunities relevant to the parking assessment are summarised below.

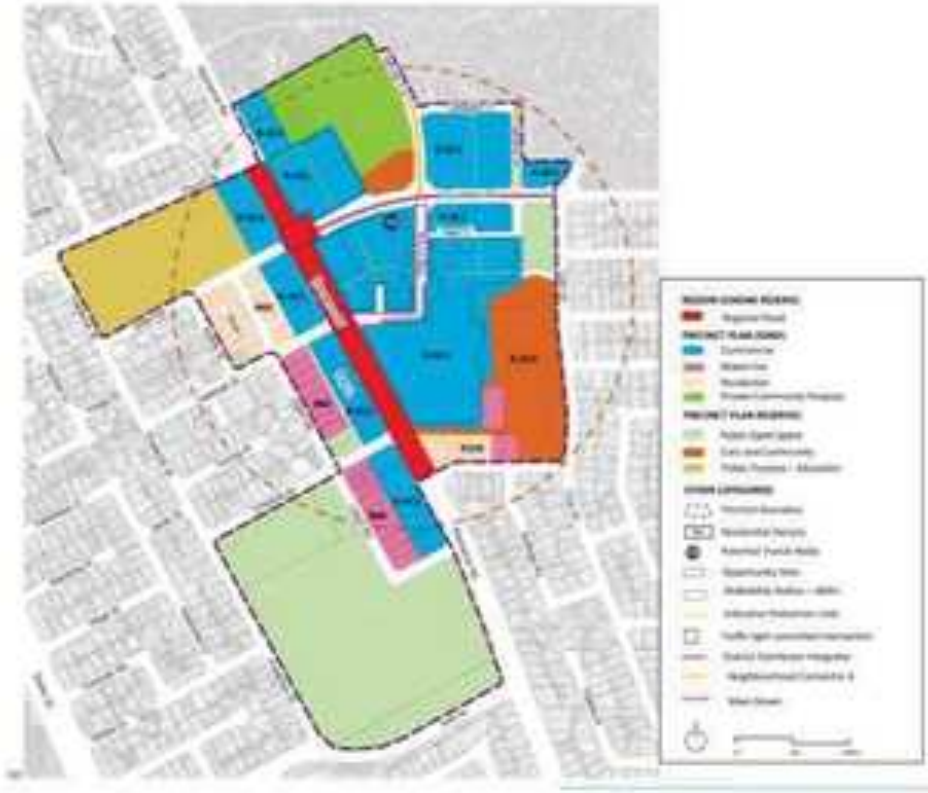

Figure 3-1 Wanneroo Town Centre Precinct Plan

1. Wanneroo Central Shopping Centre Renewal

Wanneroo Central Shopping Centre is expected to remain the primary retail destination within the town centre. The Precinct Plan identifies opportunities to renew the shopping centre and improve its integration with surrounding precincts through enhanced pedestrian connections and more active frontages. Future redevelopment is likely to increase retail, commercial and community floorspace, reinforcing the shopping centre as a major generator of parking demand.

2. Wanneroo Tavern and surrounding lots

Wanneroo Village Tavern precinct occupies a strategically important location within the town centre and is identified as a key redevelopment opportunity area. The precinct has the potential to accommodate a more intensive mix of uses, supported by improved pedestrian accessibility and the proposed future transit node. Although the ultimate development outcome has not yet been determined, the precinct has the potential to accommodate a more intensive mix of commercial, retail, hospitality, residential and community uses. This intensification is expected to increase parking demand while also creating greater opportunities for shared parking across complementary land uses.

3. DBCA Opportunity Site

The DBCA site represents a significant redevelopment opportunity within the town centre. The Precinct Plan identifies the potential for additional employment-generating uses, including commercial, office and community activities. Future development of the site has the potential to strengthen the employment role of the town centre and generate additional weekday parking demand. Improved pedestrian connectivity between the DBCA site, Civic Centre and Wanneroo Central will also support more efficient use of the broader parking network by encouraging visitors to access multiple destinations on foot.

4. Public Realm Improvements

The proposed closure of Rocca Way is a key component of the Precinct Plan, transforming the existing road corridor into a more pedestrian-oriented public space. While this proposal will remove a number of existing on-street parking bays, it is expected to improve walkability, strengthen connections between key destinations, and support the transition towards a more compact and active town centre. The parking implications of the Rocca Way closure are considered alongside the broader changes in future parking supply presented later in this report.

## 3.2 Activity Floorspace Estimate

Aligned with the strategic direction established in the WTC Precinct Plan, Pracsys prepared floorspace forecasts through the *Wanneroo Town Centre Needs Assessment and Economic, Retail and Employment Strategy* (Pracsys, 2026). The forecasts estimate the potential scale and composition of future activity floorspace within the town centre and support planning for commercially and economically productive land uses. The Forecast ID scenario has been adopted as it represents the expected development trajectory for Wanneroo Town Centre and provides an appropriate basis for strategic parking planning. Table 3-1 presents the forecast floorspace by Department of Planning land use category while Table 3-2 provides summary of the categories and types of activities they generally represent.

Table 3-1 Wanneroo Town Centre Activity Floorspace Forecast (Source: Pracsys, 2026)

| Year | 2026 | | | 2046 | | |
|---|---|---|---|---|---|---|
| Scenario | WA Tmr Central Band | Forecast ID | WA Tmr Upper Band | WA Tmr Central Band | Forecast ID | WA Tmr Upper Band |
| SHP | 19,632 | 19,632 | 19,632 | 26,941 | 30,170 | 33,279 |
| RES | 350 | 350 | 350 | 3,669 | 3711 | 3,869 |
| ENT | 8,439 | 8,439 | 8,439 | 13,907 | 14,918 | 18,722 |
| MAN | 0 | 0 | 0 | 0 | 0 | 0 |
| SER | 628 | 628 | 628 | 706 | 781 | 1,065 |
| RET | 470 | 470 | 470 | 529 | 585 | 797 |
| HEL | 11,289 | 11,289 | 11,289 | 15,576 | 16,930 | 22,018 |
| UTE | 300 | 300 | 300 | 337 | 373 | 509 |
| STO | 75 | 75 | 75 | 84 | 93 | 127 |
| PRI | 3,100 | 3,100 | 3,100 | 3,486 | 3,858 | 5,255 |
| OFF | 10,742 | 10,742 | 10,742 | 24,447 | 25,734 | 30,576 |
| **Total** | **55,025** | **55,025** | **55,025** | **89,682** | **97,154** | **116,216** |

Table 3-2 Department of Planning Activity Categories

| Categories | What it broadly represents | Typical examples |
|---|---|---|
| SHP | Retail/ shopping activity | Supermarket, specialty retail, pharmacy, clothing stores, news agency, convenience retail, food outlets within shopping centres |
| RES | Residential accommodation | Apartments, townhouses, aged care accommodation, residential living |
| ENT | Entertainment, recreation, and hospitality | Aquamotion, gym, tavern, hotel, restaurant precincts, theatre, recreation facilities |
| MAN | Manufacturing | Industrial production, fabrication, processing |
| SER | Commercial service industries | Mechanic, repair services, trade services, dry cleaning, personal services |
| RET | Bulky goods retail | Furniture showroom, hardware, vehicle sales, electrical goods, large-format retail |

| Categories | What it broadly represents | Typical examples |
|---|---|---|
| HEL | Community, health and education services | Medical centre, allied health, childcare, school, community centre, library, government service centre |
| UTE | Utilities and transport infrastructure | Car parks, utility sites, communication facilities, water/power infrastructure |
| STO | Storage and warehousing | Warehouse, storage facilities, distribution buildings |
| PRI | Primary production and resource activities | Agriculture, conservation, rural uses |
| OFF | Office-based employment | Professional offices, consulting firms, government offices, real estate, accountants, engineers, business services |

Not all activity categories included in the Pracsys forecast were carried forward into the parking assessment. Residential, primary production, utilities and transport infrastructure, storage and warehousing, and manufacturing were excluded because these categories either do not represent the principal non-residential activities being assessed or are generally expected to accommodate their parking requirements separately from the public parking network. The following categories were retained as the primary activity types that may influence general parking demand within WTC:

- SHP: shop and retail activities
- ENT: entertainment, recreation and hospitality activities
- SER: commercial service activities
- RET: bulky goods and other retail activities
- HEL: health, education and community service activities
- OFF: office-based employment activities

The forecast increase in activity floorspace was calculated by subtracting the adopted 2026 Forecast ID value from the corresponding 2046 value for each retained category. The results are summarised in Table 3-3.

Table 3-3 Adopted Activity Floorspace Growth, 2026 to 2046

| Category | 2026 Activity Floorspace (m2) | 2046 Activity Floorspace (m2) | Activity Floorspace Increase (m2) |
|---|---|---|---|
| SHP | 19,632 | 30,170 | 10,538 |
| ENT | 8,439 | 14,918 | 6,479 |
| SER | 628 | 781 | 153 |
| RET | 470 | 585 | 115 |
| HEL | 11,289 | 16,930 | 5,641 |
| OFF | 10,742 | 25,734 | 14,992 |
| **Total** | **51,200** | **89,119** | **37,919** |

Across the retained activity categories, the Forecast ID scenario indicates an increase of approximately 37,919 m² between 2026 and 2046, from 51,200 m² to 89,119 m² within the WTC. The largest increase is forecast for office-based employment activities, at approximately 14,992 m², followed by shop and retail activities at 10,538 m², entertainment, recreation and hospitality activities at 6,479 m², and health, education and community service activities at 5,641 m². These forecasts indicate that future growth within WTC is expected to comprise a combination of employment, retail, recreational, hospitality, health and community activities.

## 3.3 Indicative Floorspace Distribution

Pracsys forecasts identify activity floorspace growth at the town-centre level using broad land-use categories. To assess the potential parking implications of this growth, the forecasts were disaggregated into the more detailed land-use classifications used in this study. Each existing mapped land use was aligned with the relevant Pracsys category. Its proportional share within that category was then calculated using the existing mapped physical GFA. These proportions were applied to the Pracsys 2026 activity floorspace to establish the indicative 2026 distribution by detailed land use.

The same proportions were applied to the forecast floorspace increase between 2026 and 2046. For example, if a detailed land use represents 70% of the existing mapped GFA within its Pracsys category, it was allocated

70% of both the 2026 activity floorspace and the forecast increase for that category. This approach was adopted because the Pracsys forecasts do not identify which detailed land uses will accommodate future growth.

The allocated 2026 activity floorspace and the distributed increase were then combined to establish the indicative 2046 activity floorspace distribution. Table 3-4 presents the resulting distribution. The results represent a strategic planning assumption and should not be interpreted as a confirmed future land-use mix or development yield.

**Table 3-4 Indicative 2046 Activity Floorspace Distribution by Land Use**

| Category | Detailed Land Use | Allocated 2026 Activity Floorspace (m2) | Activity Floorspace Increase, 2026 to 2046 (m2) | Indicative 2046 Activity Floorspace (m2) |
|---|---|---|---|---|
| OFF | Government Office | 7,532 | 10,511.91 | 18,044 |
| OFF | Office | 3,210 | 4,480.56 | 7,691 |
| ENT | Hotel | 1,559 | | 1,559 |
| ENT | Theatre | 1,003 | 880.06 | 1,883 |
| ENT | Sport Centre | 6,380 | 5,599.32 | 11,980 |
| SHP | Restaurant | 4,179 | 2,235.29 | 6,414 |
| SHP | Fast-food Restaurant | 924 | 494.31 | 1,418 |
| SHP | Commercial (Goods) | 14,597 | 7,808.58 | 22,406 |
| SER | Commercial (Services) | 1,378 | 153.48 | 1,532 |
| HEL | School | 3,526 | | 3,526 |
| HEL | Library and Museum | 1,722 | 1,405.63 | 3,128 |
| HEL | Medical Centre & Clinic | 1,448 | 1,181.52 | 2,629 |
| HEL | Government Services | 2,753 | 2,246.45 | 4,999 |
| HEL | Community Centre | 989 | 807.09 | 1,796 |
| RET | Bulk Showroom | | 114.87 | 115 |

## 3.4 Projected Floorspace Influencing Parking Areas

To assess how forecast activity growth may affect the public parking network, the indicative floorspace distribution developed in Section 3.3 was spatially linked to the parking areas included in the assessment. This step establishes the activity floorspace expected to influence each parking area and provides the basis for forecasting future parking demand.

As the location and accessibility of each lot differ, the associated activity floorspace is not expected to influence all parking areas equally. Each WTC lot was therefore linked to the public parking area or areas considered most likely to serve its activities. The assumed relationships considered:

- proximity between each lot and surrounding parking areas;
- likely pedestrian access between parking areas and destinations;
- existing parking-use patterns and surrounding land uses; and
- roads, physical barriers and pedestrian connections that may influence parking choice.

Where a lot could reasonably be served by more than one parking area, its activity floorspace was distributed across the relevant parking areas. Similarly, an individual parking area may serve activities located across several nearby lots. These relationships therefore represent indicative parking catchments rather than fixed or exclusive allocations.

Figure 3-2 illustrates the assumed relationships between the land-use areas and public parking areas. Based on these relationships, the allocated 2026 and indicative 2046 activity floorspace was aggregated for each parking area. Table 3-5 presents the resulting activity floorspace and associated growth factor for each parking area.

$$\text{Floorspace growth factor} = \frac{\text{2046 activity floorspace}}{\text{2026 activity floorspace}}$$

The growth factor indicates the relative change in activity floorspace expected to influence each parking area and is carried forward into the future parking-demand assessment. It does not represent a forecast occupancy rate or imply that each parking area must independently accommodate all demand associated with the surrounding land uses. Actual parking choice may also be influenced by parking availability and restrictions, walking distance, pedestrian accessibility, on-site parking provision and opportunities for shared parking across the broader town-centre network.

The indicative allocation shows that activity floorspace growth is not evenly distributed across the parking network. Higher growth factors are generally associated with parking areas serving the Civic Centre, Aquamotion and Memorial Park, while lower growth factors are associated with some established retail parking areas. These results identify where surrounding activity growth may place greater pressure on the parking network and provide the basis for the future parking-demand assessment.



Figure 3-2 Assumed Relationship Between Land-Use Areas and Public Parking Areas

Table 3-5 Indicative Activity Floorspace Influencing Each Parking Area

| Zone | Parking Area | Allocated 2026 Activity Floorspace (m2) | Indicative 2046 Activity Floorspace (m2) | Floorspace Growth Factor |
|---|---|---|---|---|
| Zone 1 | Wanneroo Central Car Park 1 | 1526.19 | 2236.91 | 1.47 |
| Zone 2 | Wanneroo Central Car Park 2 | 440.80 | 663.31 | 1.50 |
| Zone 3 | Wanneroo Community Pharmacy Parking | 274.80 | 405.01 | 1.47 |
| Zone 4 | Sky Orthodontics Parking | 102.83 | 186.75 | 1.82 |
| Zone 5 | Wanneroo Taven Parking | 1,512.63 | 1,913.84 | 1.27 |
| Zone 5* | Wanneroo Taven Parking (Post Office Parking) | 1,626.07 | 2,114.39 | 1.30 |

| Zone | Parking Area | Allocated 2026 Activity Floorspace (m2) | Indicative 2046 Activity Floorspace (m2) | Floorspace Growth Factor |
|---|---|---|---|---|
| Zone 6 | 964 Wanneroo Shopping Cent Parking | 300.13 | 512.71 | 1.71 |
| Zone 7 | Windan Way On Street Parking | 254.74 | 364.69 | 1.43 |
| Zone 8 | Wanneroo Central Car Park 4 | 9,508.54 | 15,867.73 | 1.67 |
| Zone 9 | Rocca Way On Street Parking | 254.74 | 364.69 | 1.43 |
| Zone 10 | Wanneroo Central Car Park 3 | 1,124.93 | 2,236.53 | 1.99 |
| Zone 11 | City Of Wanneroo Parking | 2,124.41 | 4,804.47 | 2.26 |
| Zone 12 | Saint Anthony's School South Car Park | 1,105.51 | 1,877.95 | 1.70 |
| Zone 13 | Saint Anthony's School North Car Park | 699.40 | 699.40 | 1.00 |
| Zone 14 | Servite Terrace On Street Parking | 2,823.80 | 5,503.87 | 1.95 |
| Zone 15 | Yagan Place On Street Parking | 1,494.97 | 2,487.29 | 1.66 |
| Zone 16 | Cafaggio Crescent On Street Parking | 2,124.41 | 4,804.47 | 2.26 |
| Zone 17 | Senario Drive On Street Parking | 2,124.41 | 4,804.47 | 2.26 |
| Zone 18 | Wanneroo Gp Super Clinig Parking | 254.78 | 462.71 | 1.82 |
| Zone 19 | Dundebar Road On Street Parking (From Wanneroo Road to Civic Drive) | 828.92 | 1,505.39 | 1.82 |
| Zone 20 | Aquamotion Car Park | 2,139.74 | 4,017.56 | 1.88 |
| Zone 21 | Memorial Park Car Park | 1,297.58 | 2,418.21 | 1.86 |
| Zone 22 | Wanneroo Central Car Park 5 | 814.18 | 1,221.78 | 1.50 |
| Zone 23 | Wanneroo Central Car Park 6 | 90.49 | 99.84 | 1.10 |
| Zone 30 | Wanneroo Central Undercover Car Park | 5,549.20 | 8,256.37 | 1.49 |

*Note: A growth factor of 1.50 indicates that the activity floorspace associated with the parking area is approximately 1.5 times the allocated 2026 activity floorspace. Grey shading identifies parking areas included in the occupancy survey.*

# 4. Future Parking Demand and Parking Pressure

## 4.1 Future Parking Demand

The future parking-demand assessment was limited to the 13 parking areas included in the occupancy survey. These parking areas were selected because observed weekday and weekend occupancy data were available to establish the 2026 baseline demand. Parking demand was not projected for the remaining inventory zones. For each surveyed parking area, the observed 2026 peak demand was adjusted in proportion to the forecast increase in the activity floorspace assumed to influence that parking area:

***Indicative 2046 parking demanad***
***= Observed 2026 peak demand x Floorspace Growth Factor***

The calculation was undertaken separately for the weekday and weekend peak periods to retain the different demand patterns identified in the baseline assessment.

The methodology assumes that parking demand changes in proportion to the activity floorspace influencing each parking area and that this relationship remains broadly consistent through to 2046. Accordingly, the results represent an indicative projection of future demand within the assessed parking network. Future demand may also be influenced by development-provided parking, shared-parking arrangements, parking management, public and active transport accessibility, and changes in travel behaviour. Table 4-1 presents the observed 2026 peak demand and indicative 2046 parking demand for each parking area included in the occupancy survey.

**Table 4-1 Indicative Parking Demand by Parking Area**

| Parking Area | Floorspace Growth Factor | Weekday | | Weekend | |
|---|---|---|---|---|---|
| | | 2026 | 2046 | 2026 | 2046 |
| Wanneroo Tavern | 1.26 | 65 | 83.0 | 10 | 13.0 |
| Wanneroo Central Parking | 1.66 | 214 | 358.0 | 232 | 388.0 |
| Rocca Way On Street Parking | 1.43 | 12 | 18.0 | 12 | 18.0 |
| Wanneroo Central Car Park 3 | 1.98 | 38 | 76.0 | 33 | 66.0 |
| City Of Wanneroo Parking | 2.26 | 184 | 417.0 | 29 | 66.0 |
| Servite Terrace On Street Parking | 1.94 | 35 | 69.0 | 6 | 12.0 |
| Yagan Place On Street Parking | 1.66 | 56 | 94.0 | 26 | 44.0 |
| Cafaggio Crescent On Street Parking | 2.26 | 52 | 118.0 | 8 | 19.0 |
| Senario Drive On Street Parking | 2.26 | 43 | 98.0 | 0 | 0.0 |
| Dundebar Road On Street Parking (From Wanneroo Road to Civic Drive) | 1.81 | 21 | 39.0 | 10 | 19.0 |
| Aquamotion Car Park | 1.87 | 41 | 77.0 | 36 | 68.0 |
| Memorial Park Car Park | 1.86 | 101 | 189.0 | 68 | 127.0 |
| Wanneroo Central Undercover Car Park | 0.80 | 196 | 158.0 | 267 | 215.0 |
| **Total** | | 1,058 | 1,794 | 737 | 1,055 |

## 4.2 Future Parking Pressure

Future parking-pressure assessment evaluates the potential increase in demand within the 13 parking areas included in the occupancy survey. The assessment considers only the activity floorspace identified as influencing these parking areas. Parking demand associated with land uses outside the assumed parking catchments, or with parking areas not covered by the occupancy survey, has not been quantified. Accordingly, the results represent future parking pressure within the assessed parking network and should not be interpreted as a forecast for the whole of WTC. Two future parking-supply scenarios were assessed:

- Do Nothing Scenario – assumes forecast development occurs without any change to the existing parking supply.
- Do Something Scenario – assumes forecast development occurs together with known changes to the parking supply, including the removal and addition of parking associated with planned projects.

It is important to note that the analysis represents a strategic assessment. The indicative additional parking provision associated with future development does not necessarily represent actual future observed parking demand, as future development may provide parking on-site and travel behaviour may change over time.

### 4.2.1 Future Parking – Do Nothing

Do Nothing Scenario assesses the ability of the existing parking network to accommodate future development assuming no additional parking supply is provided and the demand come from the growth in the land use around it. This additional parking demand was then added to the existing peak parking demand observed during parking survey and compared against the existing parking capacity.

$$Future\ parking\ pressure_{DN} = \frac{Existing\ peak\ parking\ demand + Indicative\ additional\ parking\ demand}{Existing\ Parking\ Supply}$$

The resulting values provide an indication of where future parking pressure may occur if future development relies on the existing parking network and no additional parking supply is delivered.

Values exceeding 100% indicate that the parking requirement allocated to a parking area exceeds the currently available parking capacity. These values should be interpreted as an indication of future parking pressure rather than a forecast parking occupancy.

**Table 4-2 Indicative Parking Pressure by Public Parking Area During Peak Hour – Do-Nothing Scenario**

| Parking Area | Weekday | | Weekend | |
|---|---|---|---|---|
| | 2026 | 2046 | 2026 | 2046 |
| Wanneroo Tavern | 80% | 183% | 7% | 28% |
| Wanneroo Central Parking | 91% | 244% | 79% | 265% |
| Rocca Way On Street Parking | 60% | 150% | 50% | 150% |
| Wanneroo Central Car Park 3 | 95% | 285% | 98% | 248% |
| City Of Wanneroo Parking | 85% | 278% | 15% | 44% |
| Servite Terrace On Street Parking | 74% | 221% | 13% | 38% |
| Yagan Place On Street Parking | 98% | 263% | 35% | 123% |
| Cafaggio Crescent On Street Parking | 96% | 315% | 15% | 50% |
| Senario Drive On Street Parking | 100% | 328% | 0% | 0% |
| Dundebar Road On Street Parking (From Wanneroo Road to Civic Drive) | 91% | 261% | 52% | 126% |
| Aquamotion Car Park | 98% | 281% | 90% | 248% |
| Memorial Park Car Park | 88% | 252% | 77% | 170% |
| Wanneroo Central Undercover Car Park | 63% | 114% | 75% | 155% |

**Table 4-3 Indicative Average Parking Pressure During Peak Hour – Do-Nothing Scenario**

| Measures | Weekday | | Weekend | |
|---|---|---|---|---|
| | 2026 | 2046 | 2026 | 2046 |
| Estimated Parking Demand | 1,058 bays | 1,794 bays | 737 bays | 1,055 bays |
| Parking Supply | 1,283 bays | 1,283 bays | 1,283 bays | 1,283 bays |
| Average occupancy | 82% | 140% | 57% | 82% |

| Measures | Weekday | | Weekend | |
|---|---|---|---|---|
| | 2026 | 2046 | 2026 | 2046 |
| Shortfall/ spare capacity | 225 bays | 511 bays | 546 bays | 228 bays |

At an overall network level, the existing Parking Study Area provides approximately 1,283 parking bays. Based on the existing peak demand and the indicative additional parking provision allocated to the Parking Study Area, the minimum provision scenario results in an indicative weekday parking requirement of approximately 1,794 bays, equivalent to approximately 140% of the existing parking supply.

At an individual parking area level, values exceeding 100% should be interpreted as an indication that the parking requirement allocated to that catchment exceeds the capacity currently available in the nominated parking area.

Below are several key findings for the Do-Nothing Scenario:

1. Existing spare capacity is insufficient to fully accommodate forecast weekday growth under the minimum scenario.

   Parking Study Area currently retains approximately 225 bays of available capacity during the observed weekday peak, based on 1,058 occupied bays and an analytical supply of 1,283 general-use and reserved bays. The indicative 2046 weekday demand is approximately 1,794 bays, representing an increase of approximately 736 bays from the observed 2026 weekday peak. If this future demand were primarily accommodated within the existing parking network, the current available capacity would not be sufficient to absorb the forecast growth. The assessment indicates an indicative network-wide weekday shortfall of approximately 511 bays by 2046:

   *Indicative weekday parking shortfall: 1,794 bays – 1,283 bays = approx. 511 bays shortfall*

   This result represents a strategic indication of potential parking pressure. Actual future demand will depend on factors including parking provided as part of future developments, shared parking arrangements, parking management, travel behaviour and access by public and active transport.

2. Weekend demand may remain within the overall network capacity, but localised pressure is still expected

   The indicative 2046 weekend demand is approximately 1,055 bays, compared with the existing analytical supply of 1,283 bays. This indicates approximately 228 bays of available capacity at the network level under the Do-Nothing Scenario.

   However, this network-wide balance does not mean that capacity will be readily available at every destination. Some parking areas serving retail and recreational activities are expected to experience demand above their existing capacity, while parking remains available elsewhere. The accessibility and practical usefulness of this remaining capacity will depend on pedestrian connections, wayfinding and the willingness of users to park further from their destination.

3. Future parking pressure is expected to remain unevenly distributed

   Future parking pressure is expected to be concentrated around locations that already experience relatively high occupancy and are influenced by stronger activity-floorspace growth. These locations include parking around Wanneroo Central, Aquamotion, Yagan Place, the Civic Centre and selected surrounding on-street parking areas. The baseline survey demonstrates that users generally favour parking close to their destination. Consequently, individual parking areas may experience localised capacity constraints before the broader parking network reaches full utilisation.

   Available capacity in other parts of WTC may help accommodate some of this demand, but its effectiveness will depend on safe and convenient pedestrian connections, clear wayfinding and parking-management measures that encourage more efficient use of the wider parking network.

### 4.2.2 Future Parking – Do Something

Do-Something Scenario assesses the ability of the parking network to accommodate the same indicative future demand identified under the Do-Nothing Scenario, while accounting for confirmed changes to parking supply.

The demand assumptions remain unchanged between the two scenarios, allowing the effect of confirmed parking-supply changes to be isolated.

#### 4.2.2.1 *Changes to Parking Supply*

A key initiative proposed within the Wanneroo Town Centre Precinct Plan is the closure of Rocca Way to through traffic. The closure is intended to improve pedestrian connectivity between the eastern and western sides of the town centre and support the creation of a more walkable and active town centre environment.

The proposed pedestrianisation of Rocca Way is expected to improve accessibility between major destinations and encourage visitors to move between destinations on foot rather than relying on short vehicle trips. As a result, parking demand may become more evenly distributed across the town centre rather than concentrated immediately adjacent to individual destinations.

Option 1 Rocca Way closure would convert part of the existing road corridor into a pedestrian-oriented public space, improving connections between Wanneroo Central and surrounding destinations. The concept would remove the 20 existing general-use bays and two motorcycle bays along Rocca Way while retaining two ACROD bays. The demand and shortfall analysis considers general-use and reserved bays only. Therefore, the confirmed change to the analytical parking supply is the removal of 20 general-use bays. The retained ACROD bays remain available to eligible users but are not included in the analytical supply used in this chapter.




**Figure 4-1 Rocca Way Closure Concept Design (Option 1)**

Parking potentially provided as part of future development of the DBCA opportunity site or other parking plan within WTC has not been included in the quantified future supply at this stage, as the ultimate development outcome and associated parking provision are not yet confirmed. Any future parking delivered as part of the DBCA development could improve the future parking balance and should be incorporated once more detailed development information becomes available. This analysis also only analyses the land use that will potentially use the general parking. Other parking area that has their own parking is not included in this analysis.

**Table 4-4 Confirmed Change to Analytical Parking Supply**

| Parking Change | Existing Bays Affected | Future Bays | Net Change |
|---|---|---|---|
| Rocca Way closure | 20 general bays | 0 | -20 general bays |
| **Net change** | | | -20 general bays |

#### 4.2.2.2 *Future Parking Pressure*

The indicative future parking demand remains unchanged from the Do-Nothing Scenario. Under the Do-Something Scenario, this demand is compared against the reduced analytical parking supply of 1,263 bays following removal of the 20 general-use bays along Rocca Way. A positive balance represents available capacity, while a negative balance represents an indicative parking shortfall.

Table 4-5 Future Parking Gap During Peak Hour – Do Something Scenario

| Measures | Weekday | | Weekend | |
|---|---|---|---|---|
| | 2026 | 2046 | 2026 | 2046 |
| Estimated Parking Demand | 1,058 bays | 1,794 bays | 737 bays | 1,055 bays |
| Parking Supply | 1,263 bays | 1,263 bays | 1,263 bays | 1,263 bays |
| Average occupancy | 84% | 142% | 58% | 84% |
| Shortfall/ spare capacity | 205 bays | 531 bays | 526 bays | 208 bays |

#### 4.2.2.3 *Spatial Distribution of Future Parking Pressure*

The town centre-wide parking gap does not fully describe how future parking conditions may be experienced at an individual parking area level. The spatial assessment indicates that some parking areas may experience pressure earlier than others due to proximity to major activity generators, higher existing occupancy, concentration of forecast development, user preference to park close to destinations and changes to local parking supply.

Even where the overall parking network retains some spare capacity, individual parking areas may exceed practical operating capacity. This reinforces the importance of considering the town centre as an interconnected parking network rather than assessing individual car parks in isolation.

$$Future\ parking\ pressure_{DS} = \frac{Existing\ peak\ parking\ demand + Indicative\ additional\ parking\ demand}{Future\ Parking\ Supply}$$

Table 4-6 Indicative Parking Pressure by Public Parking Area During Peak Hour – Do Something Scenario

| Parking Area | Weekday | | Weekend | |
|---|---|---|---|---|
| | 2026 | 2046 | 2026 | 2046 |
| Wanneroo Tavern | 80% | 183% | 7% | 28% |
| Wanneroo Central Parking | 91% | 251% | 79% | 271% |
| Rocca Way On Street Parking | 60% | | 50% | |
| Wanneroo Central Car Park 3 | 95% | 323% | 98% | 285% |
| City Of Wanneroo Parking | 85% | 278% | 15% | 44% |
| Servite Terrace On Street Parking | 74% | 221% | 13% | 38% |
| Yagan Place On Street Parking | 98% | 263% | 35% | 123% |
| Cafaggio Crescent On Street Parking | 96% | 315% | 15% | 50% |
| Senario Drive On Street Parking | 100% | 328% | 0% | 0% |
| Dundebar Road On Street Parking (From Wanneroo Road to Civic Drive) | 91% | 261% | 52% | 126% |
| Aquamotion Car Park | 98% | 281% | 90% | 248% |
| Memorial Park Car Park | 88% | 252% | 77% | 178% |
| Wanneroo Central Undercover Car Park | 63% | 114% | 75% | 155% |

Below are the key findings based on the Do-Something Scenario:

1. Future parking pressure remains high in several locations

   Do-Something Scenario indicates that future parking pressure remains concentrated around several locations, particularly Wanneroo Central, the Civic Centre precinct and Aquamotion. The projected

pressure reflects both high existing utilisation and substantial forecast growth in the activity floorspace influencing these parking areas.

At the network level, the removal of 20 general-use bays along Rocca Way reduces the analytical parking supply from 1,283 bays to 1,263 bays. Based on the indicative 2046 weekday demand of 1,794 bays, this results in an indicative weekday shortfall of approximately 531 bays. The Rocca Way closure therefore marginally increases the overall shortfall compared with the Do-Nothing Scenario but forecast activity growth remains the primary driver of future parking pressure.

2. Parking pressure is redistributed following the Rocca Way closure

Rocca Way closure is expected to alter local vehicle access and parking circulation around Wanneroo Central. Although the existing bays represent a relatively small proportion of the assessed parking supply and currently record lower utilisation than some nearby facilities, their importance may increase as surrounding activity and development intensify.

The closure would remove the opportunity for these bays to accommodate part of the future parking-demand growth associated with nearby land uses. Consequently, demand that may otherwise have been accommodated along Rocca Way could transfer to surrounding parking facilities, including locations already experiencing relatively high utilisation. The local effect of the closure may therefore become more significant over time, even though the immediate network-wide reduction in parking capacity is limited.

3. Shared parking between the Civic Centre and commercial areas may support future demand

Civic Centre and commercial activities generate different parking-demand patterns but form part of an interconnected parking network. Civic Centre demand is primarily associated with longer-stay weekday employment and civic activities, while commercial demand generally involves shorter stays and higher turnover. However, some parking demand generated by nearby commercial development may be accommodated within the Civic Centre Car Park, particularly where direct and convenient pedestrian connections are available. Future parking planning should therefore distinguish between these demand characteristics while considering opportunities for shared parking across the broader precinct.

4. Surrounding on-street parking cannot independently accommodate Civic Centre Growth

The projected demand around Cafaggio Crescent, Senario Drive and Yagan Place indicates that surrounding on-street parking will continue to perform an important supporting role for the Civic Centre precinct. However, these locations have limited potential to accommodate substantial additional parking supply.

Future pressure should therefore be addressed at a precinct level rather than by assuming that individual on-street parking areas can be expanded. Potential responses may include more effective management of long-stay parking, shared use of nearby parking facilities, improved pedestrian connections and additional off-street parking capacity at a suitable location.

5. Aquamotion requires a location-specific and staged parking response

Aquamotion is expected to remain a key area of parking pressure. It already experiences high utilisation during both weekday and weekend survey periods, combined with relatively short stays and high turnover. The activity-floorspace assessment also identifies substantial growth influencing Aquamotion and surrounding parking areas. The Aquamotion parking issue should therefore not be assumed to be resolved solely through additional parking around the Civic Centre. A staged response should be considered:

- **Short term:** monitor occupancy during representative periods, review peak operating conditions, improve wayfinding and investigate whether nearby existing capacity can practically serve Aquamotion.
- **Medium term:** improve pedestrian connections to surrounding parking, investigate shared or reciprocal parking arrangements and review whether parking management could improve availability during peak periods.
- **Long term:** investigate additional parking capacity, including the potential for structured parking, if monitoring confirms sustained demand above practical capacity after management and shared-parking measures have been implemented.

# 5. Future Public Parking Provision

## 5.1 Parking Provision Requirements

The activity floorspace increase identified in Chapter 3 was assessed against relevant parking provision requirements to understand the potential scale of parking associated with future development within Wanneroo Town Centre. This assessment provides a planning-based benchmark for future parking provision and is separate from the demand-growth assessment presented in Chapter 4.

Chapter 4 estimates how observed parking demand may change in response to forecast activity floorspace growth within the parking areas included in the occupancy survey. In comparison, this section applies relevant planning requirements to the additional activity floorspace to identify the potential range of parking provision associated with future development. The two approaches provide complementary planning indicators and are not expected to produce identical results. Three parking provision approaches were reviewed from existing guidelines and parking rate recommendations also assessed.

1. Local Planning Policy 5.2 – Wanneroo Town Centre

   The Local Planning Policy identifies a parking provision rate of one parking space per 50 m² of non-residential floor area.

2. WA Planning Manual – Non-Residential Car Parking Rates in Perth and Peel (Activity Centre-Based Rates)

   The WA Planning Manual identifies parking provision rates based on activity centre classification under State Planning Policy 4.2. Wanneroo Town Centre is classified as a Secondary Centre, resulting in the following parking provision range:

   - Minimum rate: one parking space per 100 m² of non-residential floor area
   - Maximum rate: one parking space per 25 m² of non-residential floor area

3. WA Planning Manual – Non-Residential Car Parking Rates in Perth and Peel (Detailed Land Use Parking Rates)

   In addition to the activity centre-based rates, the WA Planning Manual provides parking provision requirements for specific land uses such as offices, medical centres, community facilities, retail premises, restaurants and entertainment uses. These rates might be applied for a specific land use types if needed. Parking rates for each land use can be found in Appendix C.

4. WTC Parking Rate Recommendation

   Based on the demand assessment presented in Chapter 4, future land use growth and the closure of Rocca Way are estimated to result in a parking shortfall of approximately 531 bays by 2046. The parking provision rates manual were reviewed against the forecast growth in activity floorspace to understand the level of parking that could be delivered under future development scenarios.

   To balance future parking demand with broader planning objectives, a parking provision rate of one parking space per 60 m² of non-residential floor area has been explored. This rate is expected to deliver a level of parking supply that more closely aligns with the forecast parking shortfall while supporting a more efficient use of land within the town centre. Accordingly, a parking provision rate of one parking space per 60 m² of non-residential floor area is recommended for consideration within Wanneroo Town Centre.

Table 5-1 Indicative Additional Parking Provision Influencing the Assessed Public Parking Network

| Category | Land Use | Additional GFA (m2) | LPP 5.2 (one parking space per 50 m²) | WA Planning Manual – Activity Centre Based | | WA Planning Manual – Detailed Land Use | | WTC Parking Rate Recommendation (one parking space per 60 m²) | Notes |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Minimum (one parking space per 100 m²) | Maximum (one parking space per 25 m²) | Minimum* | Maximum* | | |
| OFF | Government Office | 9,115.43 | 183 | 92 | 365 | 46 | 183 | 152 | |
| OFF | Office | 2,027.34 | 41 | 21 | 82 | 11 | 41 | 34 | |
| ENT | Hotel | - | 0 | 0 | 0 | 0 | 0 | 0 | Average room size: 30 m2 |
| ENT | Theatre | 880.06 | 18 | 9 | 36 | 11 | 31 | 15 | Average cinema size: 5.79 m2 per person accommodated (benchmark to existing theatre) |
| ENT | Sport Centre | 5,542.61 | 111 | 56 | 222 | 56 | 194 | 93 | |
| SHP | Restaurant | 1,721.18 | 35 | 18 | 69 | 18 | 87 | 29 | |
| SHP | Fast-food Restaurant | 494.31 | 10 | 5 | 20 | 10 | 50 | 9 | |
| SHP | Commercial (Goods) | 7,133.89 | 143 | 72 | 286 | 143 | 357 | 119 | |
| SER | Commercial (Services) | 153.48 | 4 | 2 | 7 | 4 | 8 | 3 | |
| HEL | School | - | 0 | 0 | 0 | 0 | 0 | 0 | |
| HEL | Library and Museum | 1,405.63 | 29 | 15 | 57 | 15 | 15 | 24 | |
| HEL | Medical Centre & Clinic | 1,181.52 | 24 | 12 | 48 | 48 | 95 | 20 | Average GP size: 200 m2 with around 4 practitioners |
| HEL | Government Services | 2,006.03 | 41 | 21 | 81 | 21 | 21 | 34 | |
| HEL | Community Centre | 807.09 | 17 | 9 | 33 | 9 | 9 | 14 | |
| RET | Bulk Showroom | - | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Total** | | | **656** | **332** | **1306** | **392** | **1091** | **546** | |

** Refer to Appendix C for the parking rates based on land use from WA Planning Manual*

Table 5-1 summarises the additional non-residential floorspace growth forecast between 2026 and 2046 and the indicative parking provision generated under each planning approach. This assessment provides a planning benchmark to understand the potential parking requirements associated with future development within WTC. The ultimate parking requirement may be influenced by a range of factors, including the availability and quality of public transport, walking and cycling infrastructure, other mobility options, and the potential implementation of shared-parking arrangements. These factors have not been separately quantified as part of this benchmark assessment.

Application of Local Planning Policy 5.2 results in approximately 656 additional parking bays. The WA Planning Manual activity centre-based assessment produces a range of approximately 332 to 1,306 additional bays, while the detailed land-use assessment produces a range of approximately 392 to 1,091 additional bays.

As discussed in Chapter 4, future land use growth and the Rocca Way closure are estimated to result in a parking shortfall of approximately 531 bays by 2046. Accordingly, a parking provision rate of **one parking space per 60 m² of non-residential floor area** is recommended for future development within WTC. This rate remains consistent with the intent of the WA Planning Manual and reflects the role of the Town Centre as an activity centre, where increased use of public transport, walking and cycling, together with potential shared-parking initiatives, may reduce future reliance on private vehicle travel. Should these alternative transport options and parking management measures be successfully implemented, there may be opportunities to consider lower parking provision rates in the future.

## 5.2 Parking Development Planning

### 5.2.1 Timing

The assessment identified that the existing public parking network within Wanneroo Town Centre (WTC) currently retains a moderate level of spare capacity at a network-wide level. As outlined in the previous section, a parking provision rate of one parking space per 60 m² of non-residential floor area is recommended for future development within WTC. This rate is intended to support future growth while recognising the Town Centre's strategic role. While the existing network currently has available capacity, this capacity is expected to reduce over time as additional development occurs and parking demand increases. If future development does not provide sufficient on-site parking and instead relies on the existing public parking network, the rate at which available capacity is consumed will increase. This is particularly relevant if the City adopts lower parking provision requirements or pursues a shared-parking approach, where a greater proportion of parking demand is accommodated within the public parking network.

Under these circumstances, additional public parking infrastructure may be required to accommodate future growth and maintain an appropriate level of parking availability. The City should therefore commence planning for future public parking provision well before the network reaches capacity. This will provide sufficient time to undertake site identification, feasibility assessments, business case development, concept design, approvals, funding, procurement and construction activities.

In the absence of detailed development staging information, an indicative linear growth assumption was applied between the observed 2026 weekday peak demand and the forecast 2046 weekday peak demand. The assessment assumes the removal of 20 general-use bays and two service bays associated with the Rocca Way closure and identifies when the network may reach key utilisation thresholds.

#### *5.2.1.1 Indicative Timing of Network-Wide Parking Pressure*

Table 5-2 summarises the indicative timing of network-wide parking pressure. The assessment indicates that the network may reach approximately 90% utilisation by 2028, 95% utilisation by 2030 and full analytical capacity by around 2032. These results are indicative only and should not be interpreted as fixed delivery dates. Actual parking demand will depend on the timing, scale and nature of future development, the level of parking provided as part of individual developments, and the effectiveness of initiatives that encourage travel by public transport, walking and cycling.

Table 5-2 Indicative Timing of Network-Wide Parking Pressure

| Indicative Threshold | Weekday Peak Demand | Approximate year under linear growth |
|---|---|---|
| 84% of supply | 1,058 occupied bays | Current baseline, (2026) |
| 90% of supply | 1,137 occupied bays | Around 2028 |
| 95% of supply | 1,200 occupied bays | Around 2030 |
| 100% of supply | 1,263 occupied bays | Around 2032 |

The results highlight that, although spare capacity currently exists, it may be exhausted relatively quickly if development proceeds without corresponding parking provision. This risk is likely to increase where developments rely on shared public parking rather than providing parking on-site. Accordingly, the City should monitor parking utilisation and development activity and commence investigations into future public parking solutions as utilisation approaches 90% of available capacity. Any required public parking infrastructure should be operational before practical network capacity is reached.

#### *5.2.1.2 Indicative Timing of Parking Pressure at Key Civic Locations*

The network-wide assessment indicates that the assessed parking network currently retains some available capacity. However, parking demand is concentrated at the Civic Centre precinct, Aquamotion Car Park and Memorial Park Car Park, where existing weekday utilisation is substantially higher than the network-wide average.

To identify when localised parking pressure may arise, the illustrative linear growth assumption described in Section 5.2.1 was applied separately to these three locations. The assessment compares the observed 2026 weekday peak demand with the indicative 2046 demand and identifies when each location may reach 90%, 95% and 100% of its existing analytical parking supply.

Table 5-3 Indicative Timing of Key Civic Locations Parking Pressure

| Component | | Civic Centre Precinct* | Aquamotion Car Park | Memorial Park Car Park |
|---|---|---|---|---|
| Existing Parking Supply | | 394 bays | 42 bays | 115 bays |
| Existing Weekday Peak Recorded Demand | | 344 bays | 41 bays | 101 bays |
| Indicative Future Parking Demand (2046) | | 716 bays | 77 bays | 189 bays |
| Indicative Future Shortfall/Spare Capacity (2046) | | 322 bays | 35 bays | 74 bays |
| Approximate Year | 90% Utilisation | 2027 | 2026 | 2027 |
| | 95% Utilisation | 2028 | 2026 | 2028 |
| | 100% Utilisation | 2029 | 2027 | 2029 |

**include parking demand and supply for City of Wanneroo Parking, Cafaggio Crecent on Street Parking, and Senario Drive On Street Parking, Wanneroo Tavern Parking (Leased for City of Wanneroo)*

The results indicate that the three key locations may reach practical capacity earlier than the assessed parking network as a whole. Aquamotion already exceeded the 95% utilisation threshold during the observed 2026 weekday peak, indicating that its existing parking supply is already under substantial pressure. Under the illustrative linear growth assumption, demand may exceed the existing Aquamotion capacity around 2027.

The Civic Centre precinct and Memorial Park were operating below, but close to, 90% utilisation during the observed weekday peak. Under the same growth assumption, both locations may approach 90% utilisation around 2027, 95% around 2028 and their existing analytical capacity around 2029. By comparison, the assessed parking network as a whole is not expected to reach its analytical capacity until approximately 2032.

### 5.2.2 City-Provided Additional Public Parking

Consistent with the vision for a more walkable and vibrant town centre, future parking provision should avoid extensive surface parking within the town centre core. Instead, where additional public parking is required, structured parking facilities located on the periphery of the town centre should be investigated. This approach would allow valuable land within the core of WTC to be used for development, public spaces, active frontages and pedestrian connections, while still accommodating parking demand.

The assessment identified a potential network-wide parking shortfall of approximately 531 bays by 2046. While this does not necessarily represent the number of bays that must be delivered through City-provided parking, it highlights the need for additional capacity if future growth occurs without a substantial reduction in private vehicle travel demand. Given the limited amount of land available within WTC, accommodating this level of demand through at-grade parking would be challenging. Structured parking therefore provides a more land-efficient means of delivering additional public parking capacity.

Several locations were identified as having potential to accommodate future structured parking. These locations were selected based on their proximity to existing parking demand, accessibility to key destinations, ability to support shared parking, and location on the periphery of the town centre. The locations should be considered indicative only and would require further feasibility assessment before any preferred option is confirmed.

### *5.2.2.1 Civic Centre Precinct*

Civic Centre precinct should be investigated as the preferred location for the initial stage of additional structured parking. Parking areas within and surrounding the precinct already experience high weekday utilisation associated with employment, civic and visitor activities. Forecast growth in office and civic activity is expected to place further pressure on the City of Wanneroo Car Park and surrounding parking areas, including Wanneroo Tavern Parking, Cafaggio Crescent and Senario Drive.

A multi-storey car park within the Civic Centre precinct could accommodate long-stay weekday demand while also supporting nearby commercial, community and visitor activities. The facility should therefore be planned as shared precinct parking rather than exclusively for City employees. Appropriate access and management arrangements would enable the facility to serve different users throughout the day and improve the overall efficiency of the parking network. Safe, direct and accessible pedestrian connections would also be required between the facility, the Civic Centre, Wanneroo Central and surrounding destinations.

*The Wanneroo Civic Centre Parking and Travel Study (Stantec, 2021)* previously identified the potential for a multi-storey car park within the precinct, providing supporting justification for further investigation. Based on the previous study, approximately 180 additional bays may be accommodated, subject to detailed design and feasibility assessment.



**Figure 5-1 Potential Location for multi-storey car park (Stantec, 2021)**

A detailed feasibility assessment is required before confirming the preferred site, capacity, number of levels or facility layout. The assessment should consider land availability, vehicle access, pedestrian connectivity, traffic impacts, visual amenity, built-form integration, environmental constraints and opportunities for staged expansion. Areas within the south-eastern portion of the existing car park may contain retained vegetation or other environmental values that could influence the location, footprint and design of future parking infrastructure. The location and design of the proposed Civic Centre multi-storey car park will be subject to further design development and environmental assessment.

#### *5.2.2.2 Aquamotion and Memorial Park Precinct*

Aquamotion and Memorial Park should be considered together as a potential parking precinct serving the southern and central parts of WTC. However, the two locations perform different roles and present different opportunities for addressing future parking demand.

Aquamotion has the more immediate parking need. The existing car park experiences sustained occupancy and high turnover during both weekday and weekend periods, indicating intensive use of the available supply. Forecast growth in recreational activity is expected to place further pressure on this location. Opportunities to provide substantial additional parking within the existing Aquamotion site may be constrained by the limited car park footprint and surrounding parkland. In the short term, the City should investigate parking-management measures, shared use of nearby parking and improved pedestrian connections to alternative parking areas.

Memorial Park currently experiences lower parking demand outside its morning peak and appears to provide a larger area for investigating additional parking capacity. A multi-storey car park within or adjacent to the Memorial Park precinct could support Memorial Park, Aquamotion, nearby community and cultural facilities, and activities within the central part of WTC. This location may therefore provide an opportunity to address parking pressure across a broader catchment rather than serving a single destination.

The suitability of Memorial Park for structured parking will depend on the availability of an appropriate development footprint and the ability to protect the park's recreational, landscape and environmental functions. Any facility should be located and designed to minimise impacts on public open space, visual amenity and surrounding activities.

Any future facility would need to be carefully designed to minimise impacts on public open space, recreational functions, landscape character and visual amenity. Safe and direct pedestrian connections to Aquamotion, community facilities and the wider town centre would also be essential to ensure the facility functions effectively as shared parking.

As an indicative assessment only, a structured facility at Memorial Park could potentially provide capacity broadly equivalent to, or greater than, the existing parking supply at the site, while a facility associated with Aquamotion may provide additional capacity comparable to the existing general-use parking supply. Combined with a future Civic Centre facility, these locations could provide approximately 300 additional public parking bays. While additional public parking will likely form part of the long-term response to future demand, it should be considered alongside complementary measures such as shared parking arrangements, public transport improvements, walking and cycling enhancements, and integrated parking management initiatives. Together, these measures can support future growth while maintaining the walkability and vibrancy of Wanneroo Town Centre.

# 6. Recommendations

The parking assessment indicates that Wanneroo Town Centre currently has sufficient parking capacity at an overall town centre level, although utilisation varies considerably between individual parking areas. Higher occupancy is concentrated around major activity generators, while spare capacity remains available in other locations.

Forecast activity growth is expected to increase weekday parking demand and may result in demand exceeding the capacity of the assessed parking network. Additional parking provision is therefore likely to be required to support the long-term growth of WTC if travel behaviour and parking demand remain broadly consistent with the assumptions adopted in this assessment.

## 6.1 Mixed-Use Developments and Shared Parking Approach

Higher-density and mixed-use development should be encouraged within the core of WTC, with the town centre's shared parking supply progressively consolidated in peripheral locations. This approach supports the Precinct Plan's vision for a vibrant, walkable and active town centre by reducing the need for large areas of development land to be dedicated to on-site parking. As identified in this study, a parking provision rate of one parking space per 60 m² of non-residential floor area is recommended for future development within WTC. This rate provides a balanced approach to accommodating future parking demand while supporting the strategic objectives of the town centre.

Over time, the City should investigate the establishment of a shared parking network that serves multiple land uses, including commercial, civic, community and recreational activities. Shared parking can improve utilisation of available parking supply by recognising that peak parking demand varies across different land uses and times of day. This reduces duplication of parking provision and allows land within the town centre core to be used more efficiently.

Consideration may be given to reducing the parking provision requirements for individual developments below the recommended rate of one parking space per 60 m² of non-residential floor area if the City decided to provide shared parking area. Any reduction should be supported by a detailed parking assessment demonstrating that the shared parking network has adequate capacity to accommodate the development's demand together with demand generated by existing and future activities.

## 6.2 Multi-Storey Car Park Development

Lower parking provision rate and a shared parking approach adaptation will required the City to progressively provide additional public parking capacity to support future growth. Given the limited availability of developable land within the town centre, accommodating future parking demand through additional at-grade parking is unlikely to be practical or consistent with the vision for a walkable, vibrant and compact activity centre.

Structured parking, such as a multi-storey car park, should therefore be investigated as a medium to long-term parking solution. Compared with traditional surface parking, a multi-storey facility can provide a significantly greater number of parking bays while minimising the land area required. This enables centrally located land to be preserved for mixed-use development, active uses, public spaces and improved pedestrian amenity.

Potential locations for future structured parking include the Civic Centre precinct, Aquamotion and Memorial Park. These locations are situated on the periphery of the town centre and may help minimise additional traffic movements within the town centre core while maintaining reasonable walking access to key destinations. The suitability of each location should be confirmed through detailed investigation. Any future multi-storey car park will require detailed feasibility assessment and business case development.

The location-specific assessment indicates that parking pressure at the three key civic and recreational locations may occur earlier than the network-wide pressure identified in Section 5.2.1. Table 6-1 presents the indicative 2046 shortfall and the approximate year in which each location may reach 90%, 95% and 100% of its existing analytical parking supply.

Table 6-1 Indicative Parking Shortfall and Timing at Key Civic Locations

| Component | | Civic Centre Precinct* | Aquamotion Car Park | Memorial Park Car Park |
|---|---|---|---|---|
| Indicative Future Shortfall/Spare Capacity (2046) | | 322 bays | 35 bays | 74 bays |
| Approximate Year | 90% Utilisation | 2027 | 2026 | 2027 |
| | 95% Utilisation | 2028 | 2026 | 2028 |
| | 100% Utilisation | 2029 | 2027 | 2029 |

**include parking demand and supply for City of Wanneroo Parking, Cafaggio Crecent on Street Parking, and Senario Drive On Street Parking, Wanneroo Tavern Parking (Leased for City of Wanneroo)*

These estimates should be reviewed and refined when more detailed information becomes available regarding the timing, location, scale and land-use composition of development within each precinct. Actual parking pressure may occur earlier or later depending on development staging, the parking delivered through individual developments, shared-parking arrangements and changes in travel behaviour.

To facilitate implementation, the City should:

- commence site investigations and feasibility assessment as an immediate planning action;
- identify and protect the preferred site before redevelopment opportunities are lost;
- progress a business case and concept design as network utilisation approaches 90%, or earlier if significant development is committed;
- confirm the preferred capacity, funding and delivery model before utilisation approaches 95%; and
- deliver the required capacity before monitored demand exceeds the practical capacity of the assessed parking network.

Based on the approximate year of reaching the 90% utilisation, it is estimated to start preparing for the business case an dbusiness design process as it will reach the 90% utilisation at 2027 or 2026. The number of the parking shortfall identified in Table 6-1 shouldn't be the target of parking areas for now adnd can be developed staggered while also looking for other development that can cover the demand or demand management. Parking delivery should also be coordinated with major development programs. Where a committed development is expected to place substantial additional demand on the shared parking network, the associated public and development-provided parking measures should be confirmed before that development becomes operational.

## 6.3 Accessible Parking Requirements

Accessible parking should be integrated into the location, design and management of future parking facilities. Unlike general long-stay parking, which may be located toward the periphery of the town-centre core, accessible bays should be positioned close to principal destinations and accessible pedestrian routes. Based on the indicative additional provision considered in this assessment, approximately eight additional accessible bays may be required based on AS/NSZ 2890.6. This estimate should be confirmed during facility design against the applicable statutory and technical requirements and the final number of bays proposed. Future private developments should provide accessible parking appropriate to their individual use and statutory requirements. Accessible parking should:

- be distributed across key destinations rather than concentrated solely within one facility;
- provide convenient access to the Civic Centre, Wanneroo Central, Aquamotion and major community facilities;
- connect directly to compliant and continuous accessible paths;
- avoid unnecessary road crossings and steep gradients;
- include appropriate dimensions, shared spaces, signage and pavement markings; and
- be supported by accessible pedestrian crossings, kerb ramps, lighting and wayfinding.

## 6.4 Parking Management

Occupancy surveys indicate that parking demand is unevenly distributed across Wanneroo Town Centre, with some parking areas operating at relatively high occupancy while spare capacity remains available elsewhere. This suggests that future parking pressure cannot be addressed solely by increasing parking supply, and that opportunities exist to make more efficient use of the broader parking network.

The City should consider a coordinated parking management approach that encourages users to select parking locations appropriate to the duration and purpose of their visit. In particular, long-stay parking associated with workers should, where practical, be directed towards parking areas with greater available capacity or locations where longer-duration parking has less impact on access to key destinations. Higher-demand parking close to retail, community and other short-stay destinations should be prioritised for visitors and shorter-duration trips. Below are some recommendations for parking management measures:

- periodically monitoring occupancy, duration of stay and turnover;
- identifying and clearly communicating appropriate long-stay worker parking areas;
- reviewing time restrictions where long-stay parking reduces visitor availability;
- improving signage and wayfinding to available parking;
- coordinating parking restrictions across public and privately controlled facilities where agreements can be established;
- investigating shared and reciprocal parking arrangements;
- introducing real-time or regularly updated parking information where justified; and
- reviewing parking-management measures as development occurs.

A more effective separation of long-stay and short-stay parking functions would help preserve convenient central parking for higher-turnover activities while making better use of available capacity across the wider parking network. Paid parking may be considered as a longer-term management measure where monitoring demonstrates sustained high occupancy and insufficient turnover in high-demand locations. Paid parking should not be introduced solely to generate revenue. Its role would be to manage demand, encourage turnover and influence the location and duration of parking. Before introducing paid parking, the City should consider:

- consistent occupancy above the adopted operational threshold;
- the availability of reasonable free or lower-cost alternatives;
- implications for workers, visitors and surrounding streets;
- accessible parking and equity considerations;
- coordination with private parking operators;
- appropriate pricing, time restrictions and exemptions; and
- the availability of public and active transport alternatives.

## 6.5 Encourage Public Transport for Commuter and Worker Trips

The baseline assessment indicates that weekday parking demand is higher than weekend demand, reflecting the influence of employment, civic and other weekday activities within the town centre. Long-stay commuter parking occupies parking capacity for extended periods and contributes relatively little to parking turnover. As employment and commercial floorspace increase, encouraging a greater proportion of workers to access Wanneroo Town Centre by public transport could reduce growth in long-stay parking demand and preserve centrally located parking for visitors and shorter-duration activities.

The City should therefore work with relevant transport agencies, major employers and future developments to:

- Improve pedestrian connections between public transport stops, employment areas and key destinations.

- Integrate improved public transport facilities into future development and public-realm projects;
- Review whether existing public transport services and frequencies adequately support typical employee start and finish times.
- Provide clear and accessible public transport information to employees and visitors.
- Encourage major employers and future developments to implement workplace travel planning measures that reduce reliance on single-occupant vehicle trips.

Reducing the number of workers relying on long-stay parking would free capacity that can be used by shorter-stay visitors, indirectly supporting greater parking availability and turnover throughout the day. The City's internal travel policies and communications should align with the broader transport objectives for WTC. Employment information should promote the full range of travel options rather than emphasising only the convenience of driving and parking.

## 6.6 Improve Walking and Active Transport Connectivity

The parking assessment demonstrates that parking availability should be considered as a network rather than as a series of independent car parks. While some parking areas experience relatively high occupancy, spare capacity may be available within walking distance elsewhere in the town centre.

Improving pedestrian connectivity between parking areas and key destinations would increase the effective catchment of existing parking and support better utilisation of available capacity. The City should prioritise safe, direct and legible pedestrian connections between public parking areas, major activity generators, future development opportunity sites and public transport stops.

- Public parking areas and Wanneroo Central.
- The Civic Centre and surrounding destinations.
- Future development opportunity sites and the broader town centre.
- Public transport stops and key activity areas.
- Parking areas with available capacity and higher-demand destinations.

Improvements may include enhanced pedestrian crossings, continuous footpaths, lighting, shade, accessibility improvements and wayfinding. The proposed Rocca Way public realm improvements provide an opportunity to strengthen pedestrian connectivity and support a more walkable town centre, potentially allowing parking in one location to serve multiple destinations.

# 7. Conclusion

This study assessed the existing and future parking demand and parking requirements within the Wanneroo Town Centre (WTC) through a combination of parking inventory surveys, occupancy surveys, land use growth forecasts, and parking provision assessments.

The parking inventory identified a total of 2,327 parking across 30 parking areas with approximately 80% comprising general use bays. Occupancy surveys were undertaken across 13 key parking areas, representing a combined supply of 1,283 general-use and reserved bays. The results indicate that, at a network-wide level, parking capacity currently remains available, with approximately 225 bays available during the weekday peak and 546 bays available during the weekend peak. However, the assessment also found that parking demand is strongly influenced by surrounding land uses and is unevenly distributed across the parking network. Several parking areas are operating at high or very high occupancy levels, while spare capacity remains available elsewhere. As a result, the current parking challenge is primarily one of localised parking pressure and utilisation imbalance rather than an overall parking shortage.

Future demand was assessed using forecast land use growth within WTC and the proposed Rocca Way closure. The assessment indicates that, by 2046, growth in non-residential floorspace and the loss of existing parking supply could result in a network-wide parking shortfall of approximately 531 bays if no additional parking is provided and travel behaviour remains unchanged.

To support future development, a parking provision rate of one parking space per 60 m2 of non-residential floor area is recommended. This rate provides a balanced approach that supports future growth while remaining consistent with the activity-centre function of WTC. The recommended rate may be reduced in the future where sufficient shared parking capacity, public transport improvements, active transport infrastructure and other travel demand management measures are provided and can demonstrably reduce reliance on private vehicle travel.

The study also supports a mixed-use development and shared parking approach, with higher-density development concentrated within the town centre core and larger parking facilities located on the periphery. This approach would allow centrally located land to be prioritised for development, public spaces and active frontages while improving the efficiency of the overall parking network. While the existing parking network currently retains spare capacity, the assessment indicates that this capacity could be progressively consumed by future growth. Under the adopted assumptions, network utilisation may approach 90% by approximately 2028 and reach practical capacity by around 2032. Accordingly, the City should commence planning for future public parking infrastructure in the near term.

Given the limited availability of land within WTC, structured parking, including a potential multi-storey car park, should be investigated as one of the long-term solutions. Potential locations include the Civic Centre, Aquamotion and Memorial Park precincts, subject to detailed feasibility assessment, environmental considerations, urban design outcomes and business case development. These areas are being recommended due to the location as all located at the periphery of WTC, high forecasted demand, and also the City-owned land.

Ultimately, the future parking requirements of WTC will be influenced by the City's success in increasing the use of public transport, improving walking and cycling connectivity, implementing parking management initiatives, and establishing a coordinated shared parking network. The combination of these measures will be critical to supporting future growth while maintaining a vibrant, walkable and accessible town centre.

# Appendix

## Appendix A – Public Parking Capacity based on Inventory Survey Results

| Zone | Key Uses | Restriction | Parking Bay Supply | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | General User Bay | ACROD | Reserved Bay | Specific Use Bay | MIC | Total |
| Zone 1 | Shop/Commercial | No restriction | 23 | 1 | 17 | 0 | 0 | 41 |
| Zone 2 | Clinic and Restaurant | No restriction | 0 | 2 | 19 | 0 | 0 | 21 |
| Zone 3 | Clinic, Pharmacy, Restaurant | No restriction | 30 | 2 | 5 | 0 | 0 | 37 |
| Zone 4 | Clinic | No restriction | 9 | 0 | 0 | 0 | 0 | 9 |
| Zone 5 | Hotel, Restaurant, Shop | No restriction | 71 | 5 | 36 | 0 | 0 | 112 |
| Zone 6 | Restaurant, Commercial | No restriction | 5 | 1 | 0 | 0 | 0 | 6 |
| Zone 7 | Commercial | No restriction | 20 | 4 | 0 | 0 | 2 | 26 |
| Zone 8 | Commercial | No restriction | 234 | 0 | 0 | 0 | 0 | 234 |
| Zone 9 | Commercial | No restriction | 20 | 2 | 0 | 0 | 2 | 24 |
| Zone 10 | Commercial | 15 mins max loading zones | 40 | 3 | 0 | 0 | 0 | 43 |
| Zone 11 | Government office | No restriction | 180 | 5 | 36 | 5 | 0 | 226 |
| Zone 12 | School | No restriction | 60 | 2 | 42 | 0 | 0 | 104 |
| Zone 13 | School | No restriction | 12 | 2 | 0 | 0 | 0 | 14 |
| Zone 14 | School | • Free 3-hour time limit<br>• 15 mins max loading zones | 47 | 4 | 0 | 0 | 0 | 51 |
| Zone 15 | Commercial | No restriction | 57 | 0 | 0 | 0 | 0 | 57 |
| Zone 16 | Government office | No restriction | 48 | 2 | 6 | 0 | 7 | 63 |
| Zone 17 | Government office | No restriction | 43 | 0 | 0 | 0 | 8 | 51 |
| Zone 18 | Clinic | No restriction | 4 | 4 | 55 | 0 | 0 | 63 |
| Zone 19 | Commercial, Entertainment, Clinic | Free 3-hour time limit | 20 | 1 | 3 | 3 | 1 | 28 |
| Zone 20 | Sport Centre | No restriction | 42 | 6 | 0 | 2 | 0 | 50 |
| Zone 21 | Entertainment, Community Centre | No restriction | 79 | 3 | 36 | 0 | 0 | 118 |
| Zone 22 | Commercial | No restriction | 36 | 2 | 15 | 1 | 0 | 54 |
| Zone 23 | Commercial | No restriction | 14 | 2 | 0 | 0 | 0 | 16 |
| Zone 24 | Commercial | No restriction | 86 | 3 | 2 | 0 | 0 | 91 |
| Zone 25 | School | No restriction | 0 | 2 | 39 | 2 | 1 | 44 |
| Zone 26 | Commercial | No restriction | 118 | 2 | 2 | 0 | 4 | 126 |
| Zone 27 | Commercial | No restriction | 64 | 2 | 8 | 0 | 0 | 74 |
| Zone 28 | Commercial | No restriction | 94 | 6 | 5 | 0 | 0 | 105 |
| Zone 29 | Sport Centre | No restriction | 117 | 3 | 0 | 0 | 0 | 120 |
| Zone 30 | Commercial | No restriction | 298 | 8 | 13 | 0 | 0 | 319 |
| **Total** | | | **1,871** | **79** | **339** | **13** | **25** | **2,327** |

## Appendix B – Land Use Definition (Department of Planning)

| Categories | Department of Planning - Definition |
|---|---|
| SHP | Any activity which involves the sale of goods from a shop located separate to and/or in a shopping centre other than those included in category – Other Retail. |
| RES | Includes all types of residential land use ranging from single housing to nursing homes for the aged, residential hotels, motels, other holiday housing, institutions and religious housing. Floorspace and employment on private Residential land uses are not included in the output of the Commercial Land Use Survey. |
| ENT | Activities which provide entertainment, recreation and culture for the community and which occur in building and/or on land, such as passive and active sports venues, museums, amusements, gambling services, hotels and the like. |
| MAN | This category includes land use activities involving the manufacture, processing and fabrication of all general goods. Both the scale and associated environmental impact of these activities separate them from other land use categories. |
| SER | This category includes service industries offering a range of services. The scale and environmental impact of such activities require their separation from other land uses. These services include film processing, cleaning, motor vehicle and other repair services, and other servicing activities, including some construction activities. |
| RET | Many of these activities normally are not accommodated in a shopping centre. By virtue of their scale and special nature, the goods of these activities separate them from the Shop/Retail category (e.g. car sales yard, carpet showroom). |
| HEL | Includes government, government-subsidised and non-government activities which provide the community with a specific service, such as hospitals, schools, personal services and religious activities. |
| UTE | All forms of local, State, national and international communication, transport and other utilities (electricity, gas, water, sewerage, roads, parking and other transport or communication related activities, etc.) covering the public and private sectors. |
| STO | Any land use activity which involves the storage, warehousing or wholesaling of goods usually conducted from large structures, or involving large bulky goods, but does not include activities that attract general retail trade activities. |
| PRI | Land use activities which usually involve the use of large areas of land including mining, agriculture, fishing and nature conservation. The function of many of these activities is to make use of, or extract from, the land in its natural state. Since such activities are the first step in the production process they are quite distinct from the other categories |
| OFF | Administrative, clerical, professional and medical offices are activities which do not necessarily require the land area/floorspace or exposure of other land uses. Although offices require building and parking facilities, these needs are quite distinct from those of commercial uses and service industries. |

## Appendix C – WA Planning Manual – Non-Residential Car Park Parking Rates in Perth and Peel for Local and Neighbourhood Activity

| Land Use | Minimum Parking | | | Maximum Parking | | |
|---|---|---|---|---|---|---|
| | Number of Bays | Unit | | Number of Bays | Unit | |
| Amusement Parlour | 1 | 100 | m2 FA | 7 | 200 | m2 FA |
| Bulky Goods Showroom | 1 | 100 | m2 FA | 1 | 50 | m2 FA |
| Child Care Premises (Staff) | 0.5 | 1 | staff member | 0.5 | 1 | staff member |
| Child Care Premises (Children) | 1 | 20 | children catered for | 1 | 5 | children catered for |
| Cinema/Theatre | 1 | 15 | persons accommodated | 1 | 5 | persons accommodated |
| Civic Use | 1 | 50 | m2 FA | 1 | 25 | m2 FA |
| Club Premises | 1 | 10 | persons accommodated | 1 | 4 | persons accommodated |
| Community Purpose | 1 | 100 | m2 FA | 1 | 100 | m2 FA |
| Consulting Rooms | 2 | 1 | practitioner | 4 | 1 | practitioner |
| Convenience Store | 1 | 25 | m2 FA | 1 | 15 | m2 FA |
| Educational Establishment | 10 | 100 | students | 25 | 100 | students |
| Fast Food Outlet | 1 | 50 | m2 public floorspace | 1 | 10 | m2 public floorspace |
| Hotel (Rooms) | 1 | 10 | rooms | 1 | 2 | rooms |
| Hotel (Bar) | 1 | 5 | persons in bar/restaurant areas | 1 | 2 | persons in bar/restaurant areas |
| Lunch Bar | 1 | 100 | m2 FA | 1 | 20 | m2 FA |
| Market | 1 | 75 | m2 FA | 1 | 20 | m2 FA |
| Medical Centre | 2 | 1 | practitioner | 4 | 1 | practitioner |
| Office | 1 | 200 | m2 FA | 1 | 50 | m2 FA |
| Place of Worship | 1 | 8 | persons accommodated | 1 | 4 | persons accommodated |
| Reception Centre | 1 | 20 | persons accommodated | 1 | 5 | persons accommodated |
| Recreation - Private | 1 | 8 | persons accommodated | 1 | 2 | persons accommodated |
| Restaurant/Cafe | 1 | 10 | persons accommodated within the public floorspace | 1 | 3 | persons accommodated within the public floorspace |
| Shop | 1 | 50 | m2 FA | 1 | 20 | m2 FA |
| Small Bar | 1 | 10 | persons accommodated | 1 | 5 | persons accommodated |
| Tavern | 1 | 100 | m2 of bar and public floorspace | 1 | 10 | m2 of bar and public floorspace |
| Veterinary Centre | 2 | 1 | practitioner | 4 | 1 | practitioner |