# Whiteman P Station Precinc CONCEPT MASTER PLAN MARCH 2022





Whiteman Park Station Precinct Concept Master Plan March 2022

Prepared for The METRONET Office

Prepared by



#### Disclaimer

This document has been produced by the METRONET Office. Any representation, statement, opinion or advice expressed or implied in this publication is made in good faith and on the basis that the Government, its employees and agents are not liable for any damage or loss whatsoever which may occur as a result of action taken or not taken, as the case may be, in respect of any representation, statement, opinion or advice referred to herein. Professional advice should be obtained before applying the information contained in this document to particular circumstances.

Plans in this document are concept illustrations only. Detailed built form, site boundaries, layouts and landscaping are yet to be determined, subject to further detailed planning.

Aboriginal and Torres Strait Islander people are advised that this publication may contain images or names of people who are deceased.

#### Acknowledgement of Country

METRONET acknowledges the People of the Noongar Nation as the Traditional Custodians of the land and waters on which the METRONET program of projects is located. We pay our respects to their Elders, both past, present and emerging, and thank them for their continuing connection to country, culture and community.



Y





WHITEMAN PARK STATION PRECINCT CONCEPT MASTER PLAN

The Morley-Ellenbrook Line (MEL) is a significant investment in METRONET rail infrastructure that will provide a much needed high frequency public transport service to the rapidly growing North-East Corridor. Whiteman Park Station, one of five stations to be delivered under the MEL project, will not only deliver a passenger rail connection to the Swan Urban Growth Corridor, but will also provide an important tourism and public recreation link with Whiteman Park and the nearby Swan Valley.

This Concept Master Plan (CMP) has been prepared by the METRONET Office to guide future planning and development of the Whiteman Park Station Precinct and ensure it is integrated with, and maximises the benefit of, the new rail infrastructure. The CMP has been developed in collaboration with the City of Swan and key State Government stakeholders and will be used to inform precinct structure planning and planning framework amendments.

The CMP establishes the long term vision, principles and implementation roadmap for the precinct to 2051. The CMP provides a shared basis for ongoing coordination of planning and development; and collaboration across government and the private sector to deliver the best possible outcome within the precinct.

The CMP has three key areas of focus, illustrated on the opposite page. With regard to Area A, the CMP identifies planning and urban design matters that need to be addressed as a priority, to ensure they are implemented, where appropriate, as part of the MEL Project. For Areas B and C, the CMP identifies a range of matters to be addressed as the planning of these areas is progressed over coming years.

Therefore, while aspects of the CMP will be implemented to align with station opening in 2024, the CMP envisages that full development of the precinct will be staged over the next 30 years.

### Area A: Station Core & WAPC land

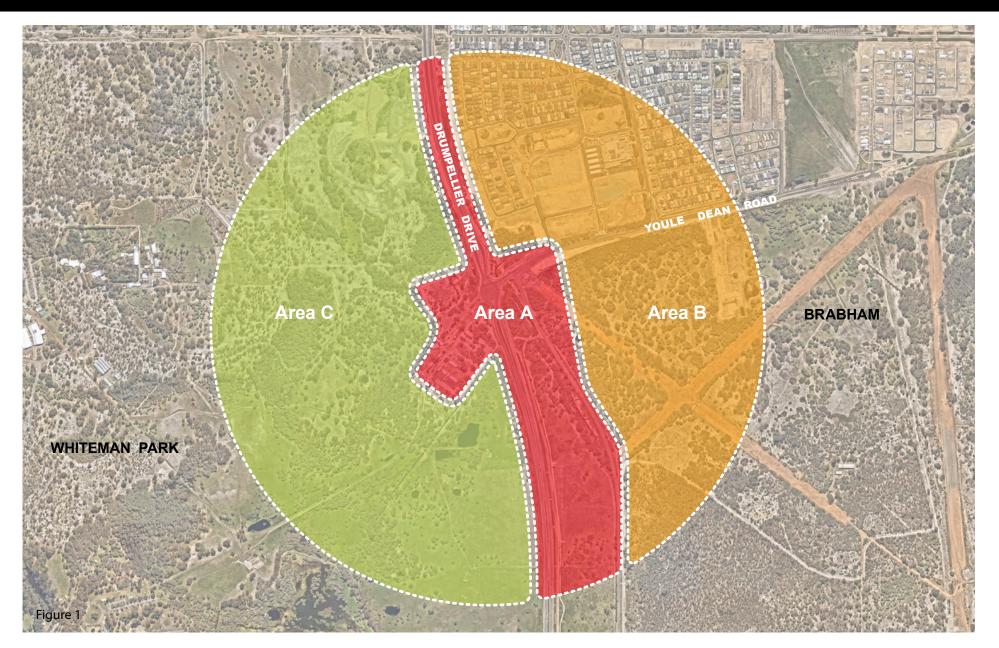
Area A is the primary focus area for the CMP. It includes the rail and station infrastructure being delivered under the MEL Project, plus an area of WAPC owned land east of Drumpellier Drive that is currently un-planned. A key purpose of the CMP is to ensure that works within Area A are designed and constructed to seamlessly integrate with Areas B and C.

### Area B: Brabham JV site

Area B includes parts of Whiteman Edge, the Brabham District Centre, and the Brabham Joint Venture (JV) site. The CMP identifies opportunities to improve the layout and development intensity of the District Centre over time. It also provides guidance for structure planning of the Brabham JV site, to ensure it maximises the transit-oriented development opportunity provided by the new Whiteman Park Station.

### **Area C: Whiteman Park**

Area C includes land within the eastern edge of Whiteman Park, some of which is degraded and may be suitable for new and diversified uses that complement other Park functions and activities. The CMP identifies a range of cultural, recreation, tourism and hospitality opportunities within Area C, which will be considered in more detail as part of the Whiteman Park Strategic Plan review.



The CMP illustrates how the vision for Whiteman Park Station Precinct could be realised by 2051.

Developed in consultation with key stakeholders and government agencies, the plan demonstrates how the CMP's strategies and objectives could be delivered on the ground while remaining adaptable to change over time. The CMP will be used as a framework to inform future precinct structure planning of the Brabham JV site and strategic planning within Whiteman Park.

Future plans and ultimate development may differ in scale and layout in response to detailed technical investigations, funding availability and feedback from community engagement.



### **CMP Key Features**

- 1 The new train station provides a catalyst for higher density Transit-Oriented Development (TOD) in the Swan Urban Growth Corridor
- High quality pedestrian-priority
  spaces create a legible link
  through the station underpass
  - Play and adventure-based commercial opportunities
- 7 Terraces, small apartment buildings and mixed use commercial create an urban precinct immersed in nature
- Compact urban schools that maximise TOD potential and encourage walking
  - Expanded Whiteman Park heritage tram network with station transfer
  - Consolidated TOD, providing diverse housing types and social and affordable housing options

Conserved creeks and bushland protect local biodiversity and support naturebased tourism

2

6

8

- Shared streets lined with small offices and live-work units create a vibrant station core that complements the District Centre
- Higher intensity mixed-use development within remaining stages of Brabham District Centre
- Opportunities for cultural and tourism uses including events/ festival space, a gourmet hub and botanical garden complementing Whiteman Park
- 10 Retained landscape features like agricultural drains, mature trees and Aboriginal heritage create a distinct sense of place
  - Relocated Whiteman Park entrance statement

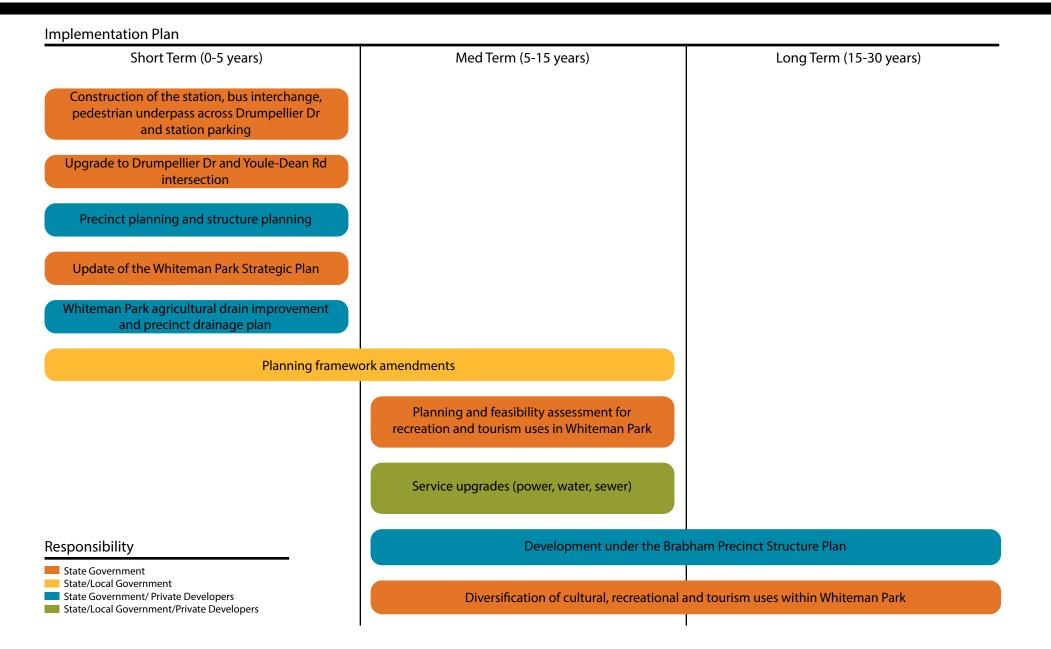




The CMP establishes the long term vision, principles and high level road map for planning, development and infrastructure delivery across the station precinct for the next 30 years.

The Implementation Plan on the opposite page illustrates the anticipated timeframes for planning and development of the Whiteman Park Station Precinct. It also allocates responsibilities for the various tasks and actions required to deliver the precinct vision.

Further consultation and engagement will occur through each stage of the implementation process, including formal consultation when statutory planning decisions are required.



# Contents

Executive Summary	5
Executive Summary	6
1.0 Introduction	13
1.1 Purpose	14
1.2 Process	15
1.3 Project Parameters	16
1.4 METRONET Strategies	17
2.0 Precinct Context	19
2.1 Regional	20
2.2 Local	22
2.3 Planning	24
2.4 Movement	26
2.5 Infrastructure and Servicing	28
2.6 Environmental	30
2.7 Culture and Heritage	32
2.8 Precinct History	33
2.9 Demographic and Social Profile	34
2.10 Market	35
3.0 Design Considerations	37
3.1 Place Drivers	38

4.0 Concept Master Plan	41
4.1 Vision and Principles	42
4.2 Concept Master Plan	44
4.3 Delivering the Vision	46
5.0 Precinct Design	51
5.1 Delivering the Principles	52
5.2 Urban Ecology	53
5.3 Urban Structure	57
5.4 Public Realm	61
5.5 Movement	65
5.6 Land Use	69
5.7 Built Form	73
6.0 Implementation	77
6.1 Implementation Strategy	78

# 1.0 Introduction





WHITEMAN PARK STATION PRECINCT CONCEPT MASTER PLAN

### 1.1 Purpose

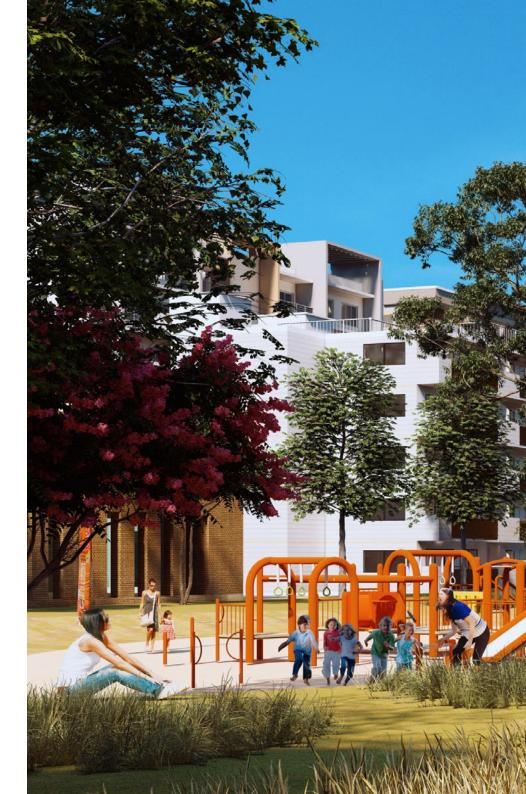
The METRONET program of projects is a significant investment in public transport infrastructure. With approximately 72 kilometres of new passenger rail and up to 18 new stations, METRONET provides the catalyst for over 5,000 hectares of land around new stations to be planned as connected and liveable precincts, offering a range of housing, jobs and services for growing communities.

The Morley-Ellenbrook Line (MEL) will provide a much needed high frequency public transport service to the rapidly growing North-East Corridor. Whiteman Park Station, one of five new stations to be constructed under the MEL project, will not only deliver a passenger rail connection to the Swan Urban Growth Corridor, but will also provide an important tourism and public recreation link with Whiteman Park and the nearby Swan Valley. This Concept Master Plan (CMP) has been prepared by the METRONET Office to guide future planning and development of the Whiteman Park Station Precinct and ensure it is integrated with, and maximises the benefit of, the new rail infrastructure.

The CMP establishes the design vision and high-level roadmap for the development of Whiteman Park Station Precinct over the next 30 years.

The CMP and supporting visualisations seek to illustrate the best possible development outcome for the precinct but are not intended to be a fixed or final plan.

Rather, the CMP informs and guides planning and development of the precinct, including structure planning of the Brabham JV site and District Centre, and review of the Whiteman Park Strategic Plan.



# 1.2 Process

The CMP has been prepared by the METRONET office in collaboration with a Project Working Group (PWG) of relevant stakeholders. This includes the City of Swan, Department of Planning, Lands and Heritage (DPLH), Western Australian Planning Commission (WAPC), Development WA, Department of Communities, Department of Education, and Office of Major Transport and Infrastructure Delivery (OMTID).

All stakeholders have directly contributed to the preparation of the CMP through a series of collaborative workshops in which key constraints and opportunities were identified and design concepts and objectives developed and refined. In addition to the PWG, engagement has occurred with other relevant stakeholders including Peet, Stockland, the Public Transport Authority bus network team, the Office of the Government Architect and the consultant design teams for both the MEL and Brabham projects.

Further stakeholder consultation and engagement will occur through subsequent planning and development processes.

The following diagram illustrates the process by which the CMP was developed.



#### 1. Analyse & Assess

Initial Stakeholder Engagement Site Analysis and Constraints Investigation PWG Issues & Opportunities Workshop





#### 2. Vision & Concept

Place Character and Vision Development Design Optioneering and Opportunities Mapping PWG Design Options Review Workshop

 $\downarrow$ 



#### 3. Implementation & Review

Concept Plan Design Development Strategies and Actions Preparation PWG Implementation Strategies Workshop

### **1.3 Project Parameters**

The Whiteman Park Station Precinct is located on the 21-kilometre Morley-Ellenbrook Line and will provide essential passenger rail infrastructure to Whiteman Park, Brabham and the Swan Urban Growth Corridor.

This city-shaping infrastructure presents significant opportunities to change travel behaviours and drive sustainable urban growth within the surrounding precinct.

The Whiteman Park Station project will deliver:

- A new elevated station at Whiteman Park with passenger rail connections to Perth Airport, the Perth CBD and beyond
- A generous pedestrian and cycling connection underneath the station and Drumpellier Dr to connect people both east and west of station, and into Whiteman Park
- A dedicated bus interchange providing better connectivity to Whiteman Park and the surrounding suburbs

- A new station forecourt with playground, bike shelters and future proofed connection to the Whiteman Park heritage tram
- Kiss and ride facilities and dedicated station parking that will provide for approximately 900 bays
- A connection to the Whiteman Park shuttle bus service
- Principal Shared Path connection to station and into the regional cycling network



### **1.4 METRONET Strategies**

Planning for this precinct has been informed by the METRONET vision to deliver a well-connected Perth with more transport, housing and employment choices. It has also been developed in accordance with METRONET guiding strategies.

The Station Precincts Gateway provides a high-level assessment of how planning and development around METRONET stations can contribute towards meeting the objectives of Perth and Peel @ 3.5 million and other State Government policies.

Gnarla Biddi is METRONET's strategy for ensuring ongoing Aboriginal engagement and participation across the life of the program (including targets and minimum requirements). The METRONET Sustainability Strategy seeks to deliver adaptable, accessible, resilient and connected places which protect natural ecosystems and support equitable economic development opportunities.

The Public Art Strategy seeks to deliver diverse and meaningful public art within METRONET projects to support placemaking and celebrate local history, stories and identity.

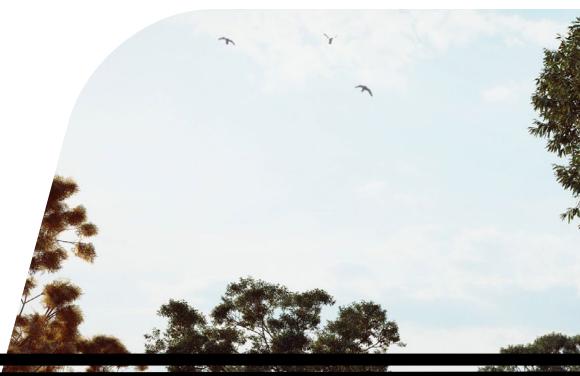








# 2.0 Precinct Context





### 2.1 Regional

The Whiteman Park Station Precinct is located 16 kilometres north-east of Perth on the Morley-Ellenbrook Line. This 21 kilometre rail line will provide essential passenger rail infrastructure for the rapidly urbanising Swan Urban Growth Corridor. Approximately 1100 hectares of land is planned for urban development in this corridor and 12,000 dwellings are expected to house 32,000 residents by 2036.

The opening of the Morley-Ellenbrook Line in 2024 will fundamentally improve public transport services in the area, providing passenger rail connections to the Perth CBD and Airport as well as the surrounding neighbourhoods of Ellenbrook, Malaga, Noranda and Morley. Housing, employment, tourism and recreation activities that were previously only accessible by car will be available to a wider range of people who cannot, or do not wish to, drive.

The precinct extends in a one kilometre radius from Whiteman Park Station, and is located approximately seven kilometres north of Midland, a Strategic Metropolitan Centre, and seven kilometres south of Ellenbrook, a Secondary Centre servicing the north-east corridor.

Whiteman Park is located immediately west of the station and provides a unique recreation and conservation reserve covering nearly 4000 hectares of natural bushland and leisure facilities. It is Perth's most significant conservation reserve and attracts over one million visitors per year to attractions such as Caversham Wildlife Park. Alongside Kings Park and Perth Zoo, Whiteman Park is one of the most popular visitor destinations in Perth.

Further east, the precinct is close to the internationally recognised Swan Valley tourism and viticulture region, which attracts over six million visitors per year. Connections to the Swan Valley are significant for the community to access nature, local hospitality, cultural and entertainment opportunities. The planned Henley Brook Ave east of the station will connect the precinct to the Swan Valley and will supplement the existing West Swan Rd.





### 2.2 Local

The CMP incorporates five areas, each with different characteristics and levels of development.

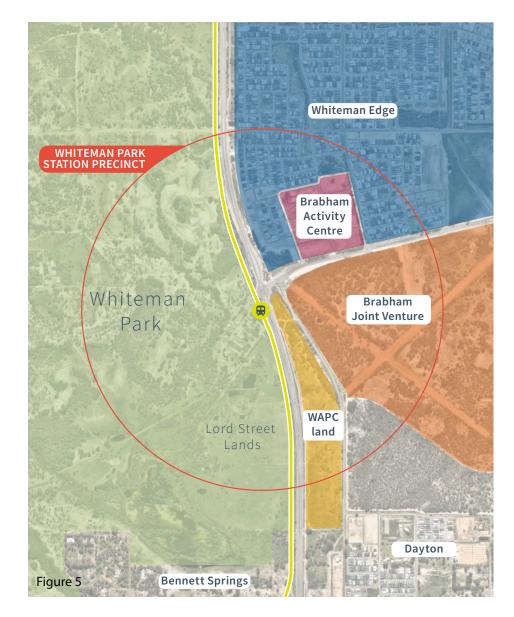
The western half of the precinct incorporates the eastern entry to Whiteman Park and land that has been used for various park activites, including livestock management, parking and commercial operations.

To the east the CMP includes the Whiteman Edge residential estate, the Brabham District Activity Centre, and the planned Brabham JV site. The WAPC owns a large parcel of vacant land south of Youle-Dean Rd and immediately east of the new station. This land presents an opportunity for consolidated transitoriented development with social and affordable housing opportunities within walking distance to the new Whiteman Park Station.

Whiteman Park is managed by the Department of Planning, Lands and Heritage on behalf of the WAPC. The ongoing use and development of the Park is guided by the Whiteman Park Strategic Plan, which is updated every five years. The Strategic Plan identifies the area within the CMP as the 'Lord Street lands', which are considered suitable for development and activites that support the future operation of the Park.

Development in the north-east portion of the CMP area is already well progressed and is guided by the Brabham Activity Centre Plan and Albion (Brabham) Local Structure Plan. Residential development has occurred in this area since 2015, with retail and commercial development since 2018. There is now limited vacant land remaining in these areas.

The Brabham Activity Centre is designated as a district centre and will support the growing residential community in Brabham and surrounding suburbs of Dayton, West Swan and Henley Brook. The activity centre is planned to provide a shopping centre with 20,000sgm of floorspace, a pedestrian-focused main street, a district community centre, retail and commercial uses along major roads and a variety of residential development sites. Development of the activity centre is underway with a Coles supermarket opened in mid-2021.



The south-east portion of the CMP area is vacant state-owned land that will be planned and delivered by the Brabham Joint Venture (JV) through a precinct structure plan. The precinct structure plan will guide future development and subdivision and include detail on zoning, local roads, housing density, and future locations for community facilities such as shops, schools and open space.

The WAPC owns a 13-hectare parcel of land between Drumpellier Dr and Isoodon St, with the station to the west and Brabham JV site to the east. Historically, this site was intended to accommodate the rapid bus transit and then the rail line. However, now that it is no longer required with construction of the Morley-Ellenbrook Line west of Drumpellier Dr, the land is expected to be incorporated into the Brabham Precinct Structure Plan.

The Brabham Activity Centre, Whiteman Edge and Brabham JV sites will provide the CMP area with housing, retail, commercial, community and educational services to meet community needs.



## 2.3 Planning

#### State Planning Framework

The scale and form of development envisaged by the CMP is consistent with Development Control Policy 1.6 – Planning to support transit use and transit-oriented development, and the strategic direction of Perth and Peel @ 3.5 Million, which seeks to promote compact and connected growth within Perth's existing urban footprint. The precinct is identified as 'Urban' and 'Open Space' under the Perth and Peel @ 3.5 Million North East Sub Regional Planning Framework (the Framework).

A consolidated urban form that creates attractive places to live and work, while minimising environmental impacts, is an overarching objective of the Framework. The Framework identifies the Morley-Ellenbrook Line and notes that station precincts are appropriate for focused development in proximity to transport infrastructure.

The Framework also identifies:

- Brabham as a District Centre and the main activity centre between Midland and Ellenbrook;
- The proposed Whiteman-Yanchep Hwy west of Whiteman Park, to connect the

North-West sub-region to the North-East and Central subregions;

- Enhancement of Drumpellier Dr (referred to as Lord St in the Framework) to meet future traffic requirements; and
- Progressive construction of Henley Brook Ave as an integrator arterial road to support development within the Swan Urban Growth Corridor.

To the west of the CMP area, Whiteman Park is reserved Parks and Recreation under the Metropolitan Region Scheme (MRS), as it is land of regional significance for ecological, recreation and landscape purposes. It is also identified as a Bush Forever Area (Site No. 304). East of the CMP, the Brabham Activity Centre, Whiteman Edge and Brabham JV sites are zoned Urban under the MRS, being areas in which a range of activities are planned to be undertaken, including residential and commercial. South of the Brabham JV site is another Parks and Recreation reserve and Bush Forever site (site no. 200). The CMP aligns with the MRS by identifying potential uses in the precinct that are consistent with the purpose for which they are zoned or reserved.

Under the MRS the precinct is heavily constrained by large road and rail reservations, including a Primary Regional Road reserve at the intersection of Youle-Dean Rd and Drumpellier Dr. A 40-metre-wide Public Purpose (Special Use) reserve running east of Drumpellier Dr was originally intended to accommodate the rail line; but will not be used to its full extent once the realigned Drumpellier Dr is constructed. The Morley-Ellenbrook Line will be located west of Drumpellier Dr.

The northernmost part of the precinct is also identified as part of the Gnangara Groundwater Protection Area. The Gnangara groundwater system is Perth's largest source of quality, fresh water and supplies over half of Perth's water supply. Proposed development within this protection area needs to comply with the requirements of the Gnangara Sustainabilty Strategy to ensure water quality contamination risks are minimised.

To realise the best possible outcome for the site, the CMP proposes a series of amendments to road reservations and site zoning to integrate and consolidate development opportunities. Planning Control Area No. 148 (MorleyEllenbrook Line – Whiteman Park) includes land owned by WAPC between Drumpellier Dr and the Isoodon St reserve east of the station, and extends approximately 800 metres into Whiteman Park.

The CMP has been prepared in accordance with the State Planning Framework, including consideration of State Planning Policy 7.0 Design of the Built Environment and State Planning Policy 7.2 Precinct Design and Precinct Design Guidelines.

#### Local Planning Framework

The CMP aligns with the City of Swan's strategic planning framework and Local Planning Strategy, which seek to promote tourism and economic development within the Swan Valley region and capitalise on the METRONET investment. Ensuring Brabham develops as a fully-fledged District Activity Centre with sufficient retail and employment floorspace is a key objective of the local planning framework.

The east side of the precinct forms part of the Albion District Structure Plan (DSP) area. The purpose of the DSP is to provide land use framework objectives and address key issues. Local structure plans will be prepared and approved prior to subdivision, setting out more detailed land use information in accordance with the DSP. Under the DSP, the CMP area is designated for residential land uses as well as a town centre in the location of the Brabham Activity Centre, and a primary school, high school and education support school on the Brabham JV site. The CMP reflects the uses proposed in the DSP.

The precinct is within the City of Swan Urban Growth Corridor Local Area. The Local Area Plan consolidates the outcomes and objectives from the City's Strategic Community Plan, and the strategies and actions from the City's Local Planning Strategy, and further develop these specific to the Urban Growth Corridor Local Area. The Local Area Plan establishes the City's vision and objectives for this area and identifies strategies and actions.

The Local Area Plan includes the following key priorities:

- Improve the road network
- Alternative modes of transport
- Provision of public open space
- Management of natural areas
- Delivery of local schools

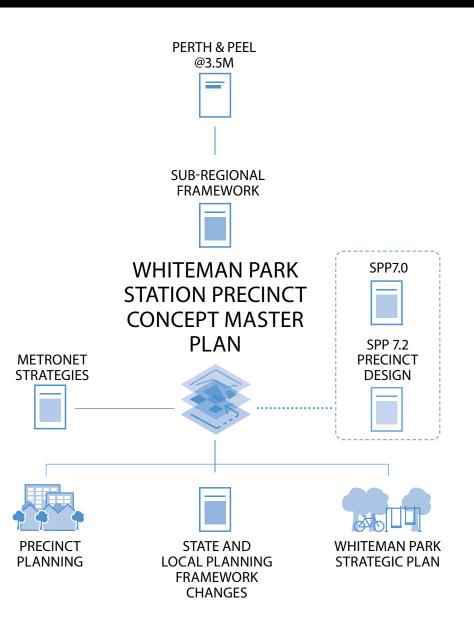
The CMP supports a number of

the Local Area Plan strategies and actions by providing a long-term plan to improve transport networks, develop more compact, walkable neighbourhoods, and link the urban growth corridor to the east with Whiteman Park to the west.

Under the City of Swan Local Planning Scheme No. 17, the Whiteman Park portion of the precinct is zoned for Parks and Recreation, while the eastern half of the precinct is within a Special Use zone to facilitate development of the Albion Estate, guided by a structure plan.

Where relevant, the CMP has adhered to key requirements and parameters established by the Albion DSP and Whiteman Park Strategic Plan, noting the need for these documents to be updated in response to key features of the CMP and final MEL alignment.

Planning and design concepts prepared by the Brabham project team have also been incorporated with these higher-order documents to inform key land use and urban structure elements.



### 2.4 Movement

The Morley-Ellenbrook Line will provide essential passenger rail infrastructure for the north-eastern corridors of Perth for the first time. The closest existing passenger rail service is the Midland Line, approximately 13.5km on average from the CMP area. This equates to approximately a 15-minute drive by private vehicle, 25-minute bus journey or 30-minute bike ride.

The CMP area is currently serviced by two bus routes (353 and 955). Service 353 operates between Bassendean Station and Henley Brook bus station, travelling north and south along Drumpellier Dr/ Isoodon St through the CMP area. Service 955 operates between Morley bus station and the northern edge of Ellenbrook through Everglades Ave. Connections to the Perth CBD are available from Bassendean Station and Morley bus station.

The existing bus routes, plus future routes, are planned to transfer through the Whiteman Park Station bus interchange. Bus network planning will be undertaken as part of the Morley-Ellenbrook Line project to provide for bus routes servicing Whiteman Park Station. Drumpellier Dr bisects the CMP area from north to south and Youle-Dean Rd provides connection to the east. These roads facilitate easy access by car, however create barriers for pedestrians and cyclists. A future Other Regional Road, Henley Brook Ave, is intended to be constructed parallel to Drumpellier Dr, 2km to the east.

The pedestrian and bike network is limited, reflecting the emerging residential development of the area. Within the recent residential development, many streets have footpaths on one side of the road only. On-road cycle lanes are provided along parts of Youle-Dean Rd and Everglades Ave, but do not provide continuous connections to important local destinations. A shared path is provided along the length of Drumpellier Dr.

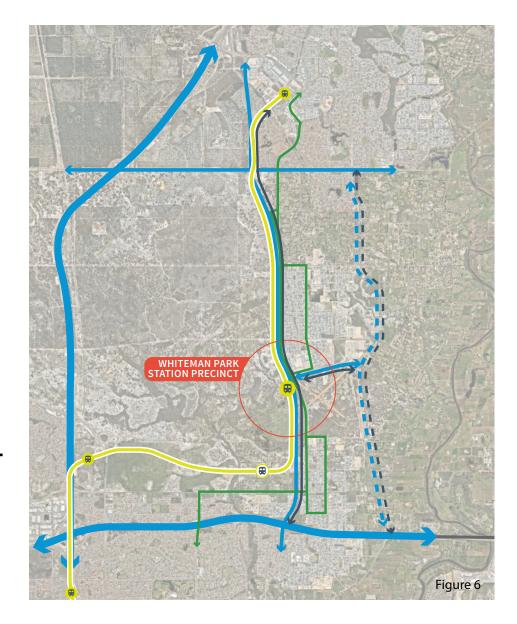
#### Movement Network

Roads

- Primary Connection
- Secondary Connection
- Future Secondary Connection
- Bus Routes

#### Cycle Connections

- Primary Conntection
- Future Primary Connection



Whiteman Park has an extensive pedestrian and cycle path network connecting to the main attractions in the Park and through to Malaga. The new paths provided as part of the Morley-Ellenbrook Line project will connect with this existing network.

The Long-Term Cycle Network identifies a future Principal Shared Path (PShP) alongside future Henley Brook Ave. The CMP envisages the station core to be pedestrian priority, with high quality footpaths and safe road crossing points.

Electric vehicles are likely to affect the movement context of the CMP area and the city more broadly over the coming 30 years. For example, electric cars will require charging points, autonomous vehicles may change car ownership and usage patterns, e-bikes may allow more people to ride and e-scooters and similar devices may become more popular.



A combination of water, power and gas assets service the CMP area.

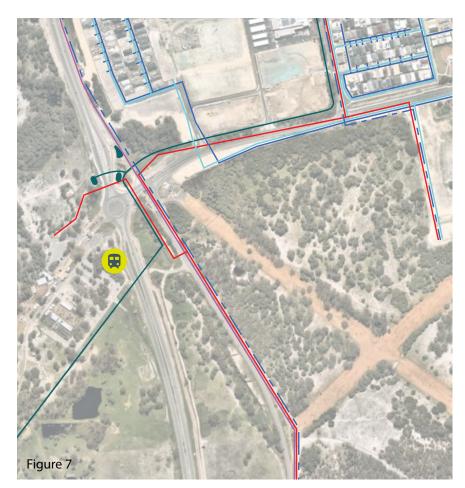
There is a substantial drainage storage area proposed near the intersection of Drumpellier Dr and Youle-Dean Rd. Investigations have identified an opportunity to remove this basin, freeing up this land for potential development, by redirecting drainage under Drumpellier Dr and into the existing agricultural drain within Whiteman Park, with potential for Water Sensitive Urban Design (WSUD) improvements. In addition to freeing up land for development, the redirection of drainage also presents an opportunity to reduce the requirements for imported fill.

The drainage levels and associated fill requirements are currently determined by existing culvert inverts below Drumpellier Dr, which will be upgraded as part of the Morley-Ellenbrook Line project. There are also substantial sustainability benefits with this scenario, including creating an ability to maintain existing vegetation proximate to the station and reducing the need to import sand and raw materials to this site for fill. This proposal will be investigated further with the Department of Water and Environmental Regulation. A 250mm water main exists along Youle-Dean Rd and is recommended to be extended to west of the rail to service Whiteman Park in the future. Whiteman Park is not currently connected to reticulated sewer and is outside of the Water Corporation licence area.

Water availability for irrigation is a key constraint for the precinct, with no new groundwater licenses available in the precinct. There may be an opportunity to access an existing water licence north of Marshall Road, however this will need to be secured once land uses are confirmed within Whiteman Park. All land uses within the CMP area will need to apply water-wise and WSUD principles.

Overhead power lines run alongside Isoodon St, with existing underground power services also provided at Drumpellier Dr and Youle Dean Rd. Power supply to lots created within the Brabham JV site lands would be arranged through typical subdivision and development processes.

Sewer pressure mains and overhead power lines in Isoodon St are also recommended to be re-aligned within Drumpellier Dr to de-constrain the Isoodon St reserve, freeing up land proximate to the station for development.



#### Infrastructure

- Water Main
- Sewer Gravity Mains
- Sewer Pressure Mains
- Drainage Channel and Storage
- 22kv Distribution Lines
- Telecommunications

The Dampier-Bunbury high pressure gas pipeline runs to the east of the precinct. Sensitive land uses such as hospitals, schools, childcare facilities and aged care housing require a 90m setback from this pipeline.

WSUD treatments are being applied throughout the station works. The CMP provides for treatments such as vegetated swales, stormwater directed to tree pits, permeable paving in carpark and other hardstand areas, minimising turfed areas and consideration of alternative water supplies to be investigated in the Brabham Precinct Structure Plan (PSP). These initiatives should be designed to reduce urban heat vulnerability, increase tree canopy cover, reduce water use and assist with building climate change resilience.

The final land use mix and dwelling yields will be used as a basis to model drainage, water and wastewater infrastructure needs in the Brabham JV development. It is expected that development contribution plans will be implemented to fund essential infrastructure for the Brabham JV site.



# 2.6 Environmental

#### Flora and Fauna

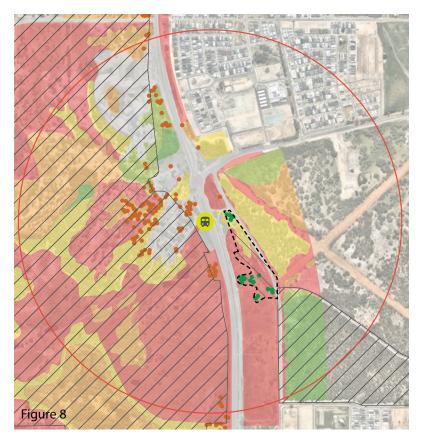
The Whiteman Park Station Precinct is largely comprised of recent residential development, local retail north of Youle-Dean Rd, vacant WAPC landholdings identified for urban growth and infrastructure to the east, and a large regional park of State significance to the west.

Whiteman Park covers nearly 4000ha of natural bushland and is designated as a Bush Forever site (site no. 304). The expanse of regional open space that Whiteman Park provides in the project area is an important part of the area's connection to nature and this is reinforced within the CMP. It plays an important part of the wider urban ecological system, assisting the water cycle and reducing urban heat loads. Vegetation within the CMP area, which includes the outskirts of Whiteman Park, was assessed to be primarily in "degraded' or worse condition due to historical clearing, grazing by livestock/kangaroos and weed infestation.

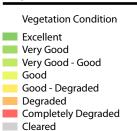
The former Caversham Airfield site to the east contains another Bush Forever site (site no. 200). There is also a designated Native Vegetation Retention Area between Drumpellier Dr and Isoodon St that has been identified as part of the Malaga to Ellenbrook rail works for the MEL project (Condition 8 of Ministerial Statement 1156). The area is significant for Black Cockatoo foraging habitat and there is to be no impacts to native vegetation in this area for a period of five years in accordance with the statement. Located along the existing agricultural drain, this presents an opportunity for a linear park, providing amenity for the future community.

Future development should be sensitive to the conservation of significant vegetation, flora species and key fauna habitats. Opportunities for vegetation, fauna habitat and tree retention within these sites should be maximised.

With heavily vegetated sites comes bushfire risk. To comply with SPP 3.7: Planning in Bushfire Prone Areas, a Bushfire Management Plan inclusive of a Bushfire Hazard Level assessment or Bushfire Attack Level contour mapping should be prepared at the Precinct Structure Plan stage. The preparation of the Bushfire Management Plan would



#### Vegetation



#### Z Bush Forever Areas

- S Native Vegetation Retention Area
  - Potential Black Cockatoo Breeding Habitat
- No Clearing allowed
- Clearing allowed

assist in confirming separation distance and interface treatment requirements from the remnant vegetation within and directly adjacent to the precinct.

#### Water

Groundwater is generally shallow across the precinct and there are some areas of acid sulphate soils disturbance risk. The precinct intersects with Priority 1 (P1) and Priority 3 (P3) Public Drinking Water Source Areas (PDWSA) in the north. Land uses compatible with P1 and P3 land use intent will be proposed within the PDWSAs and will continue to be considered with further planning. The precinct also includes two mapped Conservation Category Wetlands (CCWs), at Horse Swamp and Mussel Pool, five mapped **Resource Enhancement Wetlands** (REWs) and numerous waterways. Future proposals for activation of these areas will be expected to provide up to 30 m buffers for REWs and 50 m buffers for CCWs.

Given the proximity to the Morley-Ellenbrook Line and Drumpellier Dr, noise sensitive land uses proposed within the precinct will be subject to a noise assessment undertaken in accordance with SPP 5.4: Road and Rail Noise.

The CMP provides for enhanced public domain and tree canopy coverage throughout the station precinct, Whiteman Park enhancements and Brabham JV development. Shade trees are particularly important along key connectors, to provide for pedestrian and cyclist comfort and amenity, while also reducing urban heat island in the area.

Climate change will have an impact on the CMP area, with rising temperatures, increased drought and storm intensity anticipated. Detailed environmental studies will be undertaken during the next stages of planning and design across the CMP area.

### Aced opy Park m JV ure g key edestrian enity, eat island th rising bught and Detailed be estages of the CMP

#### Water



# 2.7 Culture and Heritage

#### **Aboriginal Heritage**

The CMP area sits within Whadjuk Country, part of the Noongar nation. It includes many wetlands and watercourses that feed Korndiny Karla Boodjar (Bennett Brook), the life stream of Whiteman Park and a place of high significance to traditional owners. The site has ongoing significance to Noongar people.

The land supplied the local Aboriginal population with food and materials for shelter and was part of a wider link between local communities and the Swan River. There is opportunity to highlight this connection to land through public art, cultural experiences and the treatment of open space across the precinct area.

All land is important to Noongar people from a cultural perspective. A desktop review of the station precinct area has identified two Registered Aboriginal Heritage sites of significance. These include:

- Lord Street North 2 (Place ID: 552): Ceremonial, Mythological, Water Source
- Bennett Brook in Toto (Place ID: 3692): Mythological

The CMP includes a place driver of designing with country on further planning and development proposals within Whiteman Park. This should be undertaken with Whadjuk Noongar representatives and Registered Knowledge Holder families.

Reflecting on the Gyinning (Morley-Ellenbrook Line) Noongar Cultural Context Document (NCCD), there are many elements and stories that can be communicated through Whiteman Park Station and future development of the area, such as the NCCD themes of:

- Water country under the care of the Creation Spirit, the Waugul
- Country with totemic/kinship identifications
- Meeting Places and places of ceremony
- Noongar rail history

#### Non-Aboriginal Heritage

The precinct has a history of transport-related uses to the east and agricultural and conservation to the west.

In 1943, the Caversham Airfield, including three sealed runways, was constructed to provide a temporary airfield to support the Royal Australian Air Force and US Navy during World War II. Following the conclusion of the war, the airfield was repurposed as a racing track and hosted a number of major events including the 1957 and 1962 Australian Grand Prix. These runways and racetracks still remain, providing opportunity to embed aviation and motor heritage into the new community of Brabham.

The suburb of Brabham, forming part of the Whiteman Park Station Precinct, was established in 2011 and named after Australian racing driver Sir Jack Brabham. It has developed over time as an outer-suburban area approximately 25 minutes north-east of Perth CBD, within the Swan Urban Growth Corridor. The area is identified to accommodate a significant amount of Perth's growth.

To the west, Whiteman Park, named after Mr Lew Whiteman, was officially opened in 1986 providing a unique recreation and conservation reserve covering almost 4000ha of natural bushland and leisure facilities. Prior to the Park's opening, the land was owned by Lew Whiteman and used for grazing cattle before Mussel Pool, one of its many water sources, became a popular picnic destination. Since opening, Whiteman Park has become a significant recreation and heritage asset with various attractions including transportrelated museums, heritage tram rides, walking trails, playgrounds and barbeque areas, a village main street and more recently, Caversham Wildlife Park.



### 2.8 Precinct History



#### Korndiny Karla Boodjar

The site has ongoing significance to generations of Noongar people, with cultural sites nearby at Success Hill and around the wetlands of Bennett Brook.



### Cars and Planes

The site was developed into an aerodrome for military use during World War II, later serving as the iconic race track for the 1962 Australian Grand Prix.



#### Tourism Transformation

The relocation of Caversham Wildlife Park in 2003 transformed Whiteman Park from a bushland reserve into one of Perth's top tourist destinations.



### Infrastructure Investment

Multi-billion dollar projects including the Morley-Ellenbrook Line, Northlink, and Drumpellier Drive widening are transforming the region.

# 1800s

European Exploration The site is close to the route taken by James Stirling on his first expedition in 1827, during which he remarked the area was "as beautiful as anything of the kind I have ever witnessed".



The WA Government assembled Whiteman Park from a patchwork of rural sites over thirty years, with Lew Whiteman's landholding and heritage collections at its heart.



### 2.9 Demographic and Social Profile

The Whiteman Park Station Precinct is located in the rapidly developing Swan Urban Growth Corridor, between Henley Brook/Albion to the north, West Swan East and West and Caversham to the south. In 2009 this Corridor was forecast to provide 12,000 dwellings for some 32,000 people by 2036. This growth is now well underway with a population of some 17,000 people in 2020 and a population growth rate of approximately 20% per annum forecasted.

The population profile for the wider Swan area is generally characterised by younger first homebuyers, reflecting the affordability of the area's property market with a lower median house price compared to the Greater Perth area, typical of the precinct's outer suburban context. The average household income is only marginally higher than the Greater Perth area. Housing is less diverse than elsewhere in Perth, with a greater proportion of traditional single residential dwelling housing stock.

As at 2021, the housing profile for the Whiteman Edge estate, located north of Youle-Dean Rd surrounding the Brabham Activity Centre, is generally characterised by single or lone households accounting for over half of the households in the precinct, a rate double that of the greater Perth area, while families with children account for less than a quarter of households. This is also higher than the average for the corridor. This indicates opportunities for diverse housing types to support a mix of household compositions.

The Whiteman Edge estate is home to an ethnically diverse community, with 22% of the population being of Indian, Sri Lankan, Pakistani and Bangladeshi ancestry. This is significantly above the Greater Perth average, where these groups average just 3% of the population. This unique local concentration of cultural and linguistic diversity should be considered when planning for community services, recreational preferences and retail demand.

By providing diverse housing types in the area in future, the Whiteman Park Station Precinct will likely host a greater range of age groups and households who are wanting to live within reach of sought after destinations of Whiteman Park and the Swan Valley while maintaining access to the Perth CBD and beyond. Beyond local residents, external visitors are a critical aspect of the precinct's community context. Whiteman Park receives over one million local, interstate and international visitors per year, while the Swan Valley has reported visitor number of 5.4 million per year and growing with an expenditure of \$430 million.

		Swan Urban Growth Corridor <sup>1</sup>	Greater Perth <sup>2</sup>
	Current Population	17,000	1,950,000
~~	Annual Growth	20%	1.6%
\$	Median house price	\$475k⁴	\$515k⁴
٢	Average household income	\$104k	\$101k
ର୍ଜର ଜନ	Detached housing stock	83%	77%
		Whiteman Edge <sup>3</sup>	Greater Perth
Ŷ	Lone person households	50%	23%
ŴŵŴ	Couples with children	22%	45%
	British/Australian ancestry	54%	48%
	Indian/South East Asian ancestry	22%	3%
1.0mAnnual visitors to Whiteman Park, including CavershamVisitors per annum to the Swan Valley (2019), total expenditure \$430m			



Urban economics and property market analysis undertaken in 2021 indicates that the development of the Whiteman Park Station Precinct is a long-term opportunity. The introduction of the station presents the opportunity for new transitoriented development to the east and enhanced cultural, recreational and tourism uses to the west; however, the envisaged scale and diversity of land uses will take time to be realised.

The train station will increase the number of people accessing and leaving the precinct by public transport. This provides significant opportunity to enhance the experience of visitors to Whiteman Park and to support the growth of a district activity centre that is convenient for residents to access by a range of transport modes. The station is expected to positively influence the development of the area by providing an alternative to transport by private vehicle.

Detached single housing is the predominant housing type currently being delivered in the area, with the market assessment indicating that this type of housing will continue to be delivered over the short term (0-5 years). There is currently low market acceptance of terrace, townhouse and apartment development, leaving little diversity of housing choice for residents. It is expected to be 5+ years before terrace or townhouse options become a sought-after product in the market, and apartment living is expected to be a longer term prospect. The CMP envisages higher density housing to be located nearby to the station and the Brabham Activity Centre, with pedestrianpriority areas to help facilitate this. It is expected that the Brabham PSP will be prepared to include staged development that delivers higher density development close to the station in the medium to longer term. It is also expected that social and affordable housing will be provided for within the Brabham JV site and remnant WAPC landholding to help achieve the Government's target of providing this housing alongside good guality public transport options.

Housing within the growth corridor is considered relatively affordable at this point in time and is associated with delivering single detached housing for first home buyers. However, new rail infrastructure has generally proven to be a key trigger for capital value growth which can create longer term affordability pressures. In response, the need for housing diversity, including suburban apartments, is likely to emerge in the medium to longer term as a means of delivering more affordable product for a range of lifestyles as the area matures.

There is little demand for retail and commercial uses at this time, based on current development available and proposed. However, there is expected demand for conveniencebased uses in the medium term (5+ years) as residential development increases. New retail and commercial tenancies would likely be co-located with the Brabham Activity Centre.

The timing of aspirational cultural, recreational and tourism uses within Whiteman Park is difficult to determine; however, it is anticipated that uses will be delivered in the longer term, subject to further investigation and precinct investment. The CMP provides opportunities for smaller scale local services, such as a childcare, to be placed closer to Whiteman Park Station within the Brabham JV site, to provide activation and complementary uses next to this important transport connection.



# 3.0 Place Drivers





# 3.1 Place Drivers

The five 'place drivers' which articulate how the vision will be achieved and direct future detailed planning.



Maximise Benefits of Transport Infrastructure Investment

Maximise the benefits of the Morley-Ellenbrook Line and Whiteman Park Station investment by delivering a new station that acts as a catalyst for reimagining the local and international opportunities within the precinct and connects Whiteman Park and Brabham for the first time.



# Design with Country

Recognise and celebrate Noongar culture, knowledge and art throughout all aspects of the precinct's buildings, spaces and infrastructure to inspire sharing and understanding.



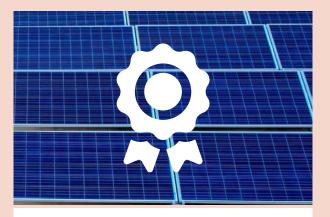
# Blend Park and City

Make transformational moves that preserve or introduce ecological elements into urban areas and enliven park spaces with new connections, cultural amenities and commercial opportunities.



#### **Unlock Economic Potential**

Realise the opportunity to become a cultural, recreational, and tourism hub connecting Whiteman Park and the Swan Valley, leveraging 6+ million annual visitors and direct access from Perth Airport and Perth CBD.



#### Demonstrate Innovation

Collaborate between stakeholders to create a model transit-oriented development that drives modal shift, embeds sustainability and promotes community health and wellbeing.

# 4.0 Concept Master Plan





WHITEMAN PARK STATION PRECINCT CONCEPT MASTER PLAN

# 4.1 Vision and Principles

Within a precinct planning context, a vision articulates the future role and function of the precinct as a unique place, around which design decisions and outcomes can be based and measured. Having a clear vision brings order and clarity, creating a clear framework around which investment can be prioritised and staged. Principles are the link between the vision, design responses and implementation. They represent key pillars that enable the vision that can be practically reflected in the design.

The vision and principles for the CMP were developed in collaboration with the Project Working Group.

The Whiteman Park Station Precinct is where timeless landscape meets an everchanging city.

Its rare biodiversity and layered history form the essence of a new urban community and diverse parkland experiences.

A gateway to the Swan Valley, it connects locals and visitors to spectacular natural assets and renowned tourism attractions.

It is a proving ground for innovative green infrastructure and an exemplar of compact and connected growth.



Protect and enhance Whiteman Park's rare ecology for future generations. Revegetation of cleared areas and restoration of streams and wetlands will protect wildlife, provide natural cooling and establish a unique 'bushland city' character.



Adopt a flexible and adaptable urban structure, merging disconnected landholdings together into a cohesive precinct which seamlessly connects the station to the Park, precinct and surrounding region.



Design and materiality of the public realm should draw inspiration from the natural bushland character of Whiteman Park, while providing a contemporary response to the diverse needs of the growing population, and a new gateway to the Park.



Encourage sustainable travel choices, connecting the station to Whiteman Park and the Swan Valley with high quality walking and cycling trails. It will be a people-first place, with a car-free station forecourt.

	7)
- ( <b>-</b>	╼

Deliver new cultural, recreational and tourism hubs and commercial venues that deliver new employment opportunities to the north east corridor; and welcome people of all ages and backgrounds to connect with nature and each other.



Set a new benchmark for liveable, beautiful and sustainable design, delivering a diversity of houses, terraces and apartments which create a walkable and resilient community.

# 4.2 Concept Master Plan

The CMP illustrates how the vision for the Whiteman Park Station Precinct could be realised by 2051.

It reflects the bold but deliverable vision established for the precinct, blending innovative transportoriented development in the eastern half of the precinct with nationally significant cultural, recreation and environmental amenities to the west within Whiteman Park.

Developed in consultation with the City of Swan and other key stakeholders, the plan demonstrates how the CMP's strategies and objectives could be delivered on the ground while remaining adaptable to change over time. The design is intended to be illustrative only as it does not reflect the full range of technical studies and investigations needed to support a 'shovel ready' plan. Accordingly, the CMP will be used to inform planning and development of the precinct, including the Brabham Precinct Structure Plan and the Whiteman Park Strategic Plan.

These future plans and ultimate development may differ in scale and layout in response to detailed technical investigations, funding availability and feedback from community engagement.

# **CMP Key Features**

- 1 The new train station provides a catalyst for higher density Transit-Oriented Development (TOD) in the Swan Urban Growth Corridor
- High quality pedestrian-priority
  spaces create a legible link
  through the station underpass
  - Play and adventure-based commercial opportunities
- Terraces, small apartment buildings and mixed use commercial create an urban precinct immersed in nature
- Ocompact urban schools that maximise TOD potential and encourage walking
  - Expanded Whiteman Park heritage tram network with station transfer
  - Consolidated TOD, providing diverse housing types and social and affordable housing options

Conserved creeks and bushland protect local biodiversity and support naturebased tourism

0

- Shared streets lined with small offices and live-work units create a vibrant station core that complements the District Centre
- 6 Higher intensity mixed-use development within remaining stages of Brabham District Centre
- 8 Opportunities for cultural and tourism uses including events/ festival space, a gourmet hub and botanical garden complementing Whiteman Park
- 10 Retained landscape features like agricultural drains, mature trees and Aboriginal heritage create a distinct sense of place
  - Relocated Whiteman Park entrance statement



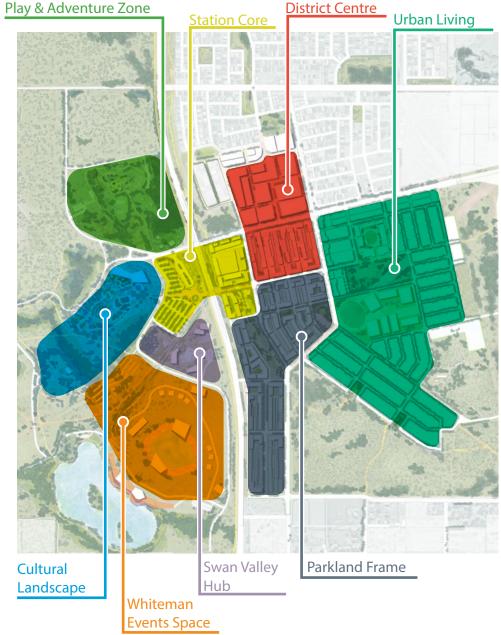
# 4.2 Delivering the Vision

Encompassing a one kilometre radius around the future Whiteman Park Station, the CMP area is a large and diverse site with differing natural features, technical constraints, ownership arrangements and contextual influences.

The CMP defines eight key destinations within the precinct, each with a unique cultural, community or development emphasis. Together, these destinations shape a varied and immersive place with plenty to see and do for people young and old.

Destinations west of station, within Whiteman Park, will be considered further through the Whiteman Park Strategic Plan to identify opportunities for activating the Park and generating new funding mechanisms for maintaining, enhancing and conserving the Park over time.

Destinations east of station, within the Brabham JV site, will be considered further through a Precinct Structure Plan prepared by the Brabham JV and in collaboration with the WAPC and other key state agencies to deliver a sustainable transit-oriented development. While aspects of the CMP will be implemented in line with station opening in 2024, these destinations envisage the site at full development in 2051—meaning that some elements of the plan may require staged delivery over coming years and decades. The following opportunities and supporting visualisations seek to illustrate the best possible development outcome for the site but are not intended to be a fixed or final plan.



### Opportunities for consideration within Brabham Precinct Structure Planning

#### **Station Core**



A lively pedestrianfocused space lined with retail and hospitality venues closely connected to Whiteman Park.

- Mixed use retail opportunity adjoining train station in the precinct core
- 2 Park 'n' Ride as per station specification
- B Daycare and cafe in landmark kiosk structure providing day one place activity
- 4 Pedestrian-focused mall accessing station lined with active frontages and native trees

#### District Centre



A dynamic urban hub with a retail core spanning Youle-Dean Rd, seamlessly connected to its surrounding mixed use urban neighbourhood.

- Active high street with generous landscaping and active frontages connecting to the station
- Mixed use live/work, apartment and office uses extend activity from District Centre
- Opportunity for mixed use and residential within the District Centre
- Long term redevelopment of drive-thru uses as more compact centre and decked parking



Figure 11: Station Core context

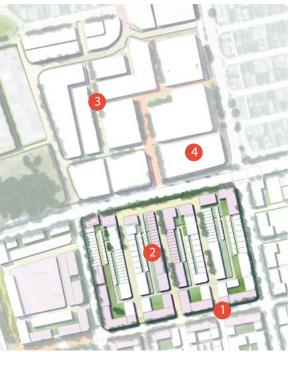


Figure 12: District Centre context

# Opportunities for consideration within Brabham Precinct Structure Planning

#### Parkland Frame



Sustainable high-density living connected to nature, water-sensitive public spaces, mature trees, historic remnants and community amenities.



- Retained agricultural drain, mature trees and servicing corridor within linear open space
- 2 Mix of townhouse and apartment sites with landscaped setbacks and courtyards
- 3 Former Caversham Airfield reflected in road alignment and open space
- Transit-oriented development with diverse housing and opportunity for social and affordable housing

#### **Urban Living**





Figure 14: Urban Living context

A liveable residential neighbourhood where walking and cycling is the easy choice, with the station, Whiteman Park and the Swan Valley just minutes away.

- Former Caversham Airfield runway retained in central open space (with pump station)
- 2 3.5ha urban primary school site with shared use of open space
- 3 8ha urban high school site

4

Continuous PShP connection from Old Swan Rd through to Whiteman Park

Figure 13: Parkland Frame context

### Opportunities for consideration within Whiteman Park Strategic Plan 2021 - 2025

#### Whiteman Events Space





Figure 15: Whiteman Events Space context

A versatile cultural events and music destination framed by natural parkland and connected to Horse Swamp.

- Active foreshore with shade structures and kiosks on boardwalks
- 2 Music Bowl and sound stage for festivals, performances and cultural events
- 3 Timber sheds and shelters for complimentary festival and events uses.
- 4 Grassed event overflow parking (rail access priority)
- 5 Possible extension of new arts and cultural industry and employment opportunities

#### Swan Valley Hub



A cluster of commercial venues directly connected to the station, bringing together the best of art, culture the Swan Valley's gourmet food and wine.

Figure 16: Swan Valley Hub context

Opportunity for food and beverage tenancies framing retained dam

- Improved drainage channel with WSUD enhancements, walking trails and bridge crossing to the train station
- 3 Landscaped 1:3 batter interface to elevated rail corridor
- 4 Urban farming to support food and beverage tenancies
- New arts and cultural industry and employment opportunities

# Opportunities for consideration within Whiteman Park Strategic Plan 2021 - 2025

#### Play & Adventure Zone



Play and adventurebased commercial opportunties to deliver new experiences for visitors within a natural setting.



Figure 17: Play & Adventure Zone context

#### Play and adventure activities to attract different users, employment and commercial opportunties to support Whiteman Park

#### Cultural Landscape





Figure 18: Cultural Landscape Precinct context

New cultural and tourism experiences, celebrating natural landscapes, Noongar heritage and ongoing connection and contribution to the land, culture and community.

- Park Visitor Centre and Cultural Centre/ Gallery
- 2 Opportunity for a botanical garden with garden rooms featuring WA plant species
- 3 Glamping/chalet/ caravan grounds for park visitors and festival accommodation

4

Retained and rehabilitated creeks with boardwalk crossings and walking trails

# 5.0 Precinct Design





# 5.1 Delivering the Principles

A supporting planning and design framework for the CMP has been prepared to deliver the principles over time. The principles have been prepared based on the six design elements of State Planning Policy 7.2 Precinct Design, as summarised opposite.

Collectively, the principles consider the precinct's unique history, the needs of the local community and wider city, and the constraints and opportunities offered by the site's unique natural and strategic Swan Valley location. The focus of each principle is summarised opposite.

The strategies outlined in this report represent desired outcomes and will be explored over time through further planning and consultation by key stakeholders.



# Urban Ecology

Environmental features and natural components of the urban environment



### Urban Structure

The organisation and scale of the precinct and pattern of street blocks



### Public Realm

Provision of public spaces including streets, plazas and regional to local parks



#### Movement

Pedestrian, transit and vehicle connections to and through the precinct

### Land Use

The layout of the precinct's economic, social and civic functions



#### **Built Form**

The scale, typology and spatial relationships of private development

# 5.2 Urban Ecology



The station precinct will protect and enhance Whiteman Park's rare ecology for future generations. Revegetation of cleared areas and restoration of streams and wetlands will protect wildlife, provide natural cooling and establish a unique 'bushland city' character.

#### Objective 1

### Objective 2

#### Objective 3

Retain significant trees and landscape features to combat rising temperatures, and maintain biodiversity and bushland character Create new parkland attractions consistent with Whiteman Park's recreation values and tourism function Celebrate the natural water cycle through rehabilitation of drains, wetlands and integration of Water Sensitive Urban Design



# Strategies

#### Consolidated Drainage Management

The CMP proposes coordinated management of surface drainage and stormwater detention across the site. Previous planning of the area has followed the WSUD/best practice of detaining water within the bounds of a project, at times resulting in large detention areas across multiple sites. Continuation of this approach could result in a large detention basin being required adjacent to the station, limiting activation and TOD opportunities.

Stakeholders have agreed to collaborate in the exploration of a whole-of-precinct drainage strategy

which proposes to convey runoff from Brabham into a WSUD drainage channel as part of the Whiteman Park drainage network. This approach could unlock considerable land for development within the immediate station precinct that would otherwise be required for drainage, and may contribute to an enhanced precinctwide network of wetlands, creeks and streams. The drainage system will be enhanced to cope with drainage requirements for increased storm intensities as expected with climate change.

Delivery of this drainage approach relies on lowering existing culvert levels which pass under Whiteman Park Station, and WSUD improvements required to the agricultural drain in Whiteman Park.



#### **Brabham Vegetation Retention**

The proposed drainage approach has the potential added benefit of decreasing fill requirements within Brabham, reducing up-front cost to government. If a consolidated drainage outcome is not achieved, civil planning investigations suggest that the site would require up to two meters of added fill, increasing development costs and possibly limiting vegetation retention across large areas.

By reducing fill, significant areas of vegetation can be considered for retention within streets and open space while important landscape features such as remnants of the Caversham Airfield and agricultural fixtures may be retained in situ.

As detailed in the Public Realm section of the CMP, a key focus of vegetation retention identified within the precinct is the remnant agricultural drain fringing vegetation which runs parallel to Isoodon St and marks the historical boundary of Whiteman Park. The CMP suggests this be contained within a linear park incorporating WSUD improvements.

Left: Broparken in Sweden shows how a retained landscape feature can provide green amenity and increase the appeal of higher density living.

#### Whiteman Park Conservation

Preservation of the existing ecology within Whiteman Park is a primary driver of the CMP, reflecting the Park's cultural significance, habitat value for endemic species and critical function in the protection of the Gnangara aquifer.

A conservative approach to interventions within the Park has been adopted, with degraded former pasture land identified as suitable for enhancement. This has resulted in a balanced approach to conceptual enhancements within the Park, with broad areas set aside for conservation or rehabilitation in the form of continuous ecological corridors, punctuated by selfcontained enhancement areas which range from passive landscape amenities to more intensive tourism and recreational activities.

In addition to conservation, the potential for funds from the Brabham JV that would otherwise be used to acquire regional environmental offset sites could be used within Whiteman Park for offsets, as this would increase vegetation cover.



# **Key Actions**

- Identified Aboriginal sites protected from incursion of development
- Vegetation identified for retention through MEL EPA approval largely retained in open space
- 3 Existing drainage network retained with runoff from Brabham conveyed into a WSUD enhanced drainage channel in Whiteman Park rather than detained within the station precinct core
- Buffers to high value conservations wetlands generally kept from development, excepting active foreshore amenity at strategic location between Whiteman Park and Bennett Springs East

Figure 19: Urban Ecology context

### **Case Studies**



#### Whiteman Edge, Brabham WA

Whiteman Edge is a Stockland project situated north of the Whiteman Park Station Precinct. Designed by CLE, a defining feature of the project is the retained and enhanced drainage channel that runs through the site.

Retention of this watercourse, and surrounding mature vegetation, has allowed for a lushly landscaped linear park which is a major attraction for residents in the surrounding region. Enhancements around this local amenity include informal grassed areas, play equiptment and places to connect and interact with water.

It is a key exemplar of how the site's current degraded drainage lines could be preserved, enhanced and turned into major drawcards.



#### Bushmead, Hazelmere WA

The award-winning Bushmead project has achieved a significant degree of tree retention within a dense urban environment through a unique technical design approach.

Starting with a comprehensive survey of tree location and size, the site design is then modulated in response to identified tree retention opportunities within streets and open spaces. Novel street design techniques such as carriageway deflections and micro-parks are used to capture as many trees as practicable. Earthworks engineering is then to ensure natural ground level is maintained. Servicing is then bored beneath trees to minimise root disruption.

The project demonstrates how significant tree retention might be achieved within the precinct.

# 5.3 Urban Structure



The station precinct will adopt a flexible and adaptable urban structure, merging disconnected landholdings together into a cohesive precinct which seamlessly connects the station to the Park, precinct and surrounding region.

### Objective 4

Consolidate road and rail reserves to maximise opportunities for Transit-Oriented Development

# Objective 5

### Objective 6

Consolidate drainage and services to maximise developable land within the station precinct

Create a legible, walkable urban grid that facilitates clear and direct connectivity



# Strategies

# Station and District Centre Integration

The CMP proposes an urban structure that connects the station to the surrounding precinct as a seamless urban area spanning Youle-Dean Rd, ensuring development by different stakeholders is wellintegrated and supporting the evolution of a robust and walkable station precinct. The treatment of Youle-Dean Rd as a shared urban street will be crucial to encourage the intended north-south integration.

Consideration of servicing and site levels has informed major servicing corridors being retained within open space to avoid costly relocation, as well as fill minimisation strategies which ensure that station access from Brabham can be achieved without requiring users to navigate significant vertical level differences.

#### Surplus Land Rationalisation

The CMP is predicated upon achieving a consolidated urban development area closely integrated with the station through rationalisation of surplus road and rail reserves arising from the consolidation of Youle-Dean Rd and Isoodon St, repurposing of the eastern rail corridor and containing battering of the Drumpellier Dr overpass within the existing road reserve.



# Urban School Siting and Design

The CMP proposes a high school (with education support school) and primary school within the precinct, in locations generally aligned with the Albion District Structure Plan. The co-location of the primary school and high school is no longer the Department of Education's preferred model and the school locations have been adjusted in response.

The proposed location for the primary school is within the centre of the Brabham JV site, east of Everglades Rd. This provides central access to the catchment including areas to the north. 3.5ha is the preferred size for the site, with a more compact school design minimising unnecessary land take which would lessen TOD outcomes. The site is co-located with Public open space, allowing for the reduced size.

The proposed high school site is 700m south east of the station and is adjacent to public open space. 8ha is the preferred size for the site, with a more compact design to facilitate greater TOD outcomes for the precinct.

Left: Mawson Lakes, SA achieves a flexible and fine grain urban structure by intermixing apartment and townhouse plots of varying sizes with a diverse mix of uses and urban character. The final size and position of the primary and high school will be resolved through further collaboration between the Department of Education and the Brabham JV.

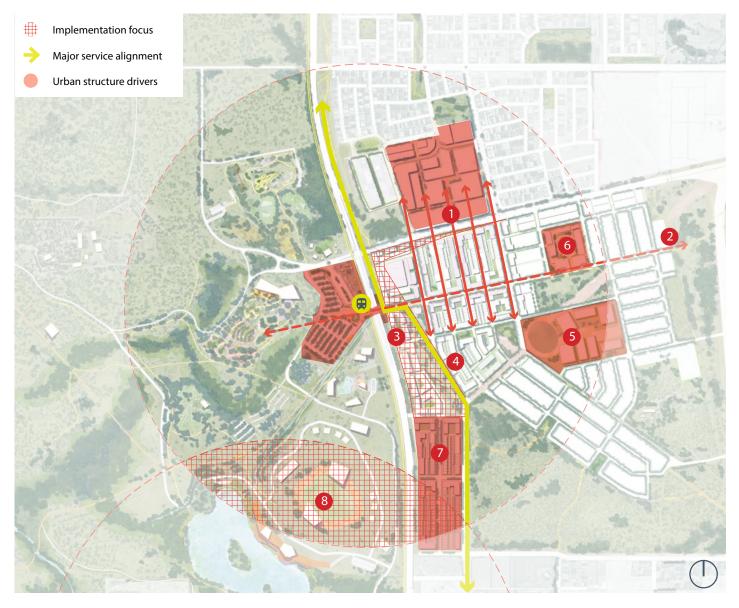


Figure 20: Urban Structure context

# **Key Actions**

- North-south oriented street grid integrates station precinct with district centre and provides solar access to housing
- 2 Fully separated east-west cycle connection from Whiteman Park to West Swan Rd provided through development
- 3 Remnant road and rail reserve integrated into urban development area, Drumpellier Dr batter rationalised within existing road reserve
- 4 Servicing corridor maintained in road reserve and open space
- 5 8ha high school south east of station
- 6 3.5ha primary school relocated to north-east of precinct
- Potential for additional urban land provides opportunity to incorporate social and affordable housing outcomes
  - Area of high access from both Bennett Springs East and Whiteman Park stations suitable for major activation

8

# Station/Precinct Integration



# 5.2.4 Structure Scale Comparison



#### Wellard Station Precinct Uniform, large-scale apartment development sites next to station, surrounded by single dwelling areas

Subiaco Station Precinct

Fine grain urban structure with different housing types developed over time in response to market demand

Whiteman Park Station Precinct Mix of apartment sites, terrace sand single dwellings within each street block, balancing diversity and density

# 5.4 Public Realm



Design and materiality of the public realm should draw inspiration from the natural bushland character of Whiteman Park, while providing a contemporary response to the diverse needs of the growing population, and a new gateway to the Park.

#### Objective 7

Enhance Whiteman Park's status as a nationally recognised cultural tourism destination and recreation hub

### Objective 8

#### Objective 9

Extend Whiteman Park's green character into Brabham through consistent materiality, landscape design, species selection and public art Deliver an integrated public realm experience on both sides of the station to support 'day one' place activation



# Strategies

Expanded Whiteman Park Cultural and Recreational Facilities

The CMP establishes an ambitious vision and strategic direction for the enhancement and activation of the degraded parts of Whiteman Park close to the station. These areas hold considerable potential to provide additional tourism, cultural and recreational uses, strengthening the economic vitality and livability of the region and creating a significant tourism hub between Whiteman Park and the Swan Valley.

The CMP also proposes broad areas of vegetation retention and

rehabilitation, wildflower fields and nature trails, a gourmet hub and camp grounds, an events site and a landmark cultural landscape potentially co-designed and operated by traditional owners. This could become one of Perth's 'mustsee' attractions offering an authentic and rich cultural experience. A diversity of commercial and recreational uses are also suggested by the CMP, providing for a balanced mix of revenue-generating activity supporting park operations and new parkland experiences which sustain increased tourism visitation.

Below: Canberra's Dairy Road illustrates how landscape, water and public life come together in a main street setting within a suburban greenfield context.



# Preservation of Historical and Landscape Features

The CMP seeks to preserve and emphasise significant natural, historical and Aboriginal cultural qualities which have been identified through site analysis and incorporated into the plan.

Through a precinct-wide approach to drainage consolidation, open spaces aligned with remnant vegetation should be pursued wherever possible through detailed design, including the identification of trees within open space and road reserves. The CMP co-locates public open space with areas of high-quality vegetation and remnant landscape features including historic agricultural fences, cattleyards, drains and significant portions of the former Caversham airfield and Grand Prix track, both within open space and the alignment of major roads.

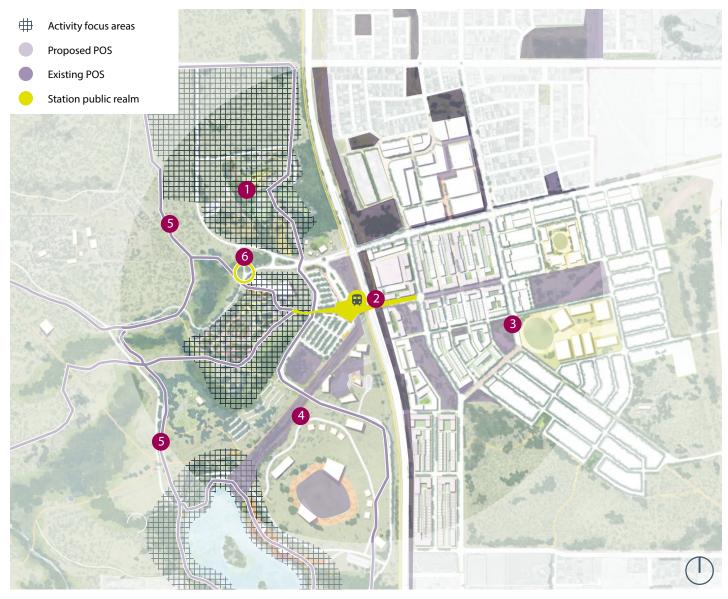
Partial retention of the Isoodon agricultural drain is a preferred outcome, with this feature being deeply connected to the site's agricultural past marking the historical border between the Whiteman landholding and Caversham Airfield. Significant utilities are also located within this corridor, with the provision of public open space in this location negating the need for costly service relocation.

Ultimate areas of vegetation retention will be identified through detailed design of the Brabham JV site, with any Precinct Structure Plan superseding this CMP. It is desirable to see portions of mature vegetation retained within smaller areas of open space.

#### Station Area Activation

The CMP reflects current planning for Whiteman Park Station in providing no park 'n' ride facilities east of the station, with these to be situated on the Park side of the precinct. This arrangement provides a unique opportunity to limit vehicle movement east of the station and provide pedestrian priority areas and public spaces. The CMP proposes a generous pedestrian priority mall between the station underpass and Mayfield Dr.

Equivalent in scale to Forrest Chase, detailed planning should consider how a sequence of spaces can be delivered as part of the pedestrian journey to the station such as event spaces, bosques of native trees and landmark public art. The mall area would be activated by retail within adjoining development, and complement the landscape amenities adjoining the station entry.



## **Key Actions**

- Play and adventure-based commercial opportunities to deliver new experiences for visitors within a natural setting
- 2 Continuous pedestrianpriority station public realm
- Open Space linkages within station precinct connect areas of retained mature vegetation and landscape features including the airstrip
- 4 Linear WSUD enhanced drainage channel as primary organising principle for site, provides pedestrian access to new amenities within Whiteman Park
- 5 Expanded network of walking and cycling trails within Whiteman Park
- 6 Secure gate/entry to core of Whiteman Park including iconic landscape public art, large landscaped turning circle, signage and visitor facilities

Figure 21: Public Realm context

### **Case Studies**



#### Australian Garden, Cranbourne VIC

The Australian Garden is a major botanic garden designed by Taylor Cullity Lethlean on a 25ha site at Cranbourne, on the south-eastern outskirts of Melbourne, Victoria.

Opened in two stages in 2005 and 2012, the garden explores the relationship between the Australian people and our landscape and flora through an immersive sequence of landscape rooms including water features, artwork and sculpted landform. The \$30m project has become a major tourism drawcard for the Cranbourne Botanic Gardens, accounting for more than half of all visits to the site.

It is a key example of a high-quality tourism attraction that could be created within Whiteman Park through exceptional landscape architecture and maximising Whiteman Park's land assets.



#### Shelby Farms, Memphis USA

Shelby Farms is a former working farm on the outskirts of Memphis. The 1,800ha site is comparable in scale to Whiteman Park, and this scale was addressed through a masterplan by James Corner Field Operations which created a series of activity focus nodes around water features and significant vegetation within an otherwise passive parkland.

The \$70m project has become self-sustaining, generating enough revenue from commercial assets to pay for operations and park upkeep.

Visitation to the site doubled after the masterplan was implemented, with surrounding property values rising five per cent.





The station precinct will encourage sustainable travel choices, connecting the station to Whiteman Park and the Swan Valley with high quality walking and cycling trails. It will be a people-first place, with a car-free station forecourt.

#### **Objective 10**

#### **Objective 11**

#### Objective 12

Limit car access and parking immediately east of the station to prioritise pedestrian and cyclist movement Provide a connected, convenient and walkable movement network connecting the station with Whiteman Park, Brabham Activity Centre and across the precinct Deliver new Principal Shared Path connections which provide uninterrupted access between the station, Whiteman Park and the Swan Valley



# Strategies

Integration of Brabham and Whiteman Edge Street Network

The CMP consolidates previous planning processes for the site's movement network. Key differences between Brabham concept planning (2018) and the Albion District Structure Plan have been reconciled, with the reintroduction of a continuous north-south 'transport corridor' neighbourhood connector aligned to the historic Caversham airstrip and the existing Everglades Dr. Consistent with preliminary plans for Brabham, a regular north-south street grid has been maintained wherever possible.

Local movement within the station precinct has been reorientated to run north-south and align with the asbuilt movement network surrounding the Brabham District Centre. In doing so, two additional pedestrian and vehicle crossings over Youle-Dean Rd are provided to seamlessly connect the existing commercial centre with the station precinct. A roundabout intersection at Mayfield Dr is achievable given the relocation and signalisation of the intersection of Drumpellier Dr and Youle-Dean Rd.

The CMP also proposes an expanded movement network within Whiteman Park, improving connectivity between the Park and Bennett Springs, addressing requirements for secondary station access for bushfire and emergency purposes and providing access to future Park amenities.

Ongoing management and security of Whiteman Park is a key consideration of the CMP, with provision of additional roads intended to allow unimpeded circulation around the station and immediate public amenities while ensuring access deeper into the Park is able to be closed outside of operating hours.

#### Create Regional Pedestrian and Cycle Linkages

Pedestrian and cyclist connections to the precinct have been realigned relative to current local and district planning to improve user safety and incentivise modal shift to all forms of active transport.

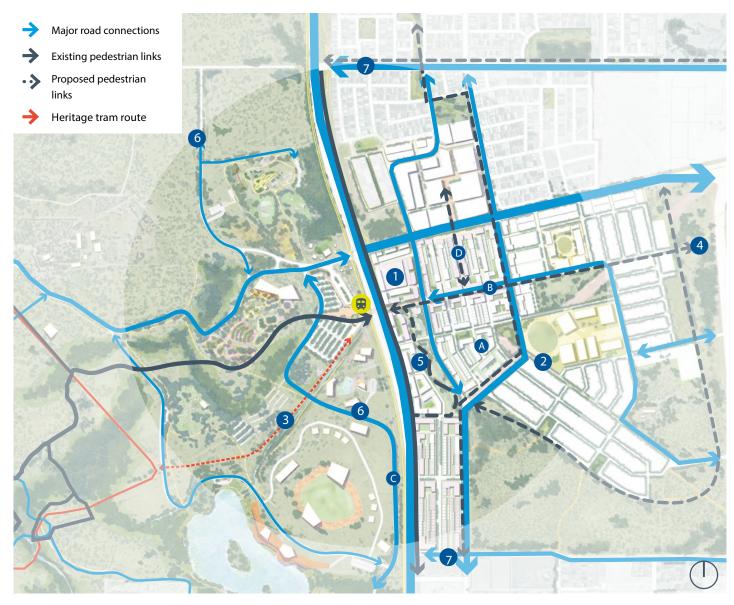
Rather than on-street cycling along the busy Youle-Dean Rd, the CMP proposes a fully-separated 'Copenhagen' cycle lane running east-west from the station through the centre of the Brabham JV site, providing safe and convenient station access for all residents in the area. It is intended that this cycle path alignment will continue east along the former Grand Prix track and ultimately connecting to the future Henley Brook Ave PShP and Swan Valley tourist cycle trail. Equally, this alignment would extend west past the station to connect with existing and future trails in Whiteman Park, terminating at future development in Malaga and West Ellenbrook.

Future-proof access from the Station Area to Whiteman Park

Clear and legible integration of the Whiteman Park station area with the immediate precinct is a priority outcome of the CMP. Station delivery should avoid creating an isolated and self-contained facility that is solely focused on facilitating access from bus and parking facilities to the station. Direct connections to the station from Brabham, and through the station area into Whiteman Park should be accommodated where possible. Sufficient circulation space for high volumes of Park visitors should be considered as part of the station works. It will also be important to ensure that direct access from the station over the existing drain into the 'Gourmet Hub' and north towards the proposed play and adventure space are provided for.

Below: Apsley in Mandogalup, Kwinana provides a cycle lane fully-separated from pedestrian and car movement through the centre of the site, making cycling easy and safe.



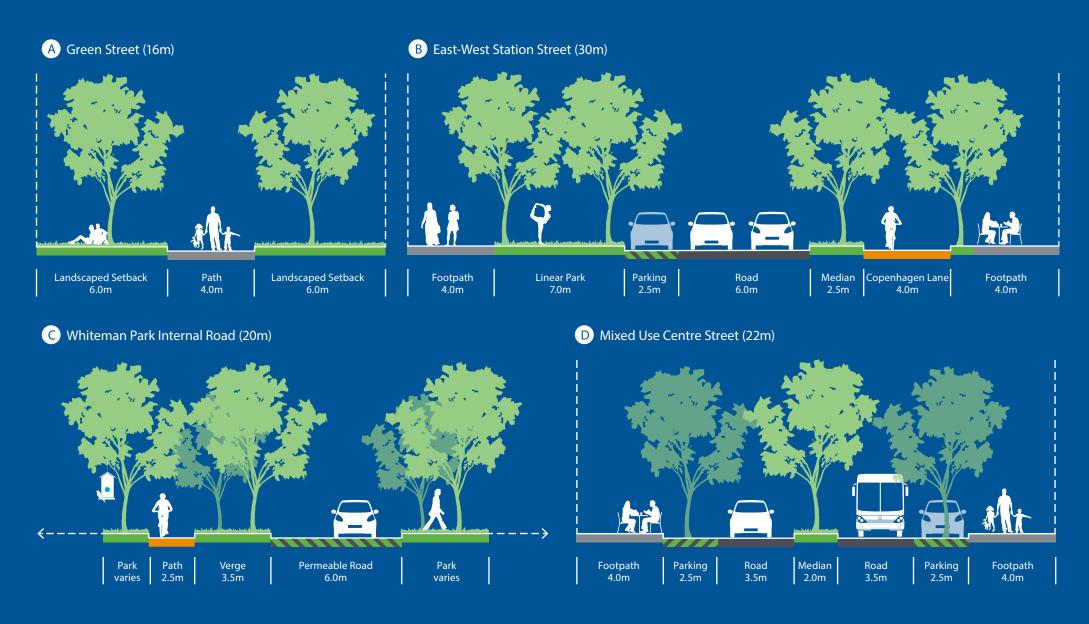


Key Actions

- Pedestrian priority and limited vehicle movements within core station area
- 2 Continuous north-south neighbourhood connector aligned to airfield providing access between Henley Brook and Dayton
- 3 Extended Whiteman Park Heritage Tram network
- 4 Expanded pedestrian and cyclist paths connecting Whiteman Park to Swan Valley
- 5 Alternative route for North-South PShP users through development proposed
- 6 Extended road network within Whiteman Park providing access to Bennett Springs and additional attractions while maintaining secure perimeter
- Investigate options for future access onto Drumpellier Dr at Woolcott and Harrow Sts

Figure 22: Movement context

# **Street Sections**







The station precinct will deliver new cultural, recreational and tourism hubs and commercial venues that deliver new employment opportunities to the north east corridor; and welcome people of all ages and backgrounds to connect with nature and each other.

#### Objective 13

# Objective 14

#### Objective 15

Enhance the visitor experience with commercial uses and station precinct retail that complement the District Centre Explore cultural, commercial, and recreational opportunities in Whiteman Park that capitalise on tourism-related economic potential

Demonstrate innovation in delivery of mixed use development which promotes walkability and allows for adaptability over time



# Strategies

Expand and Complement District Centre Commercial Activity

Based on preliminary landowner discussions, the CMP contemplates a redistribution of some retail floorspace to the immediate station precinct, in exchange allowing more residential development within the current district centre site. This is anticipated to allow for better access to services from the station, increased residential density adjoining existing retail, and an expansion of the district centre activity footprint to both sides of Youle-Dean Rd.

This outcome is subject to detailed negotiation between landowners and the WAPC, and may require amendments to existing precinct planning. While a range of outcomes may arise from this process, future development should ensure that the minimum floorspace requirements for a District Centre are satisfied overall.

Beyond retail uses, the CMP identifies opportunities for live-work and non-retail commercial land uses to the north of the station precinct which may support increased employment self-sufficiency and transit-serviced economic activity. The CMP also identifies a landmark kiosk site near the eastern entry to the pedestrian underpass. This is nominally flagged for childcare and café/kiosk, providing commuter convenience and amenity.

The CMP reflects the need to provide a range of commercial, cultural, retail and other 'place anchors' to sustain activation, with research identifying a minimum of nine local neighbourhood destinations as necessary to achieve a 20 per cent increase in walking and transport use.<sup>1</sup>

# Activate Whiteman Park with Commercial Opportunities

Activation of degraded and historically cleared areas within Whiteman Park within the station precinct has been identified as a key city-shaping opportunity within the precinct. A range of potential land uses which provide for new cultural, recreational and tourism employment and experiences have been identified as opportunities.

In addition to the station core, four distinct destination precincts are proposed within the Park, which have been defined by offsetting from sensitive ecological areas. Each precinct has a specific land use focus. To the north, there is opportunity for play and adventure

1 Boulange et al (2017). Examining associations between urban design attributes and transport mode choice for walking, cycling, public transport and private motor vehicle trips. Journal of Transport & Health. 6. 10.1016/j.jth.2017.07.007.

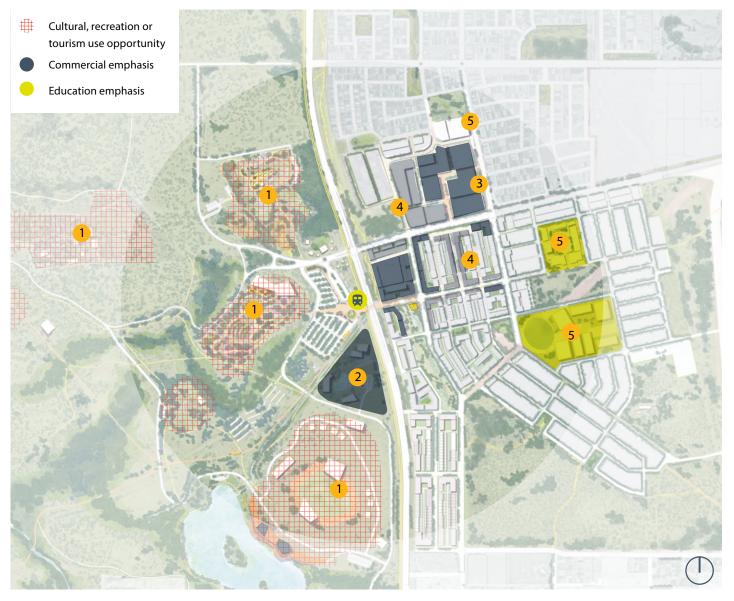
tourism uses such as a pump track, etc. Immediately west of the station is a natural landscape precinct, including a potential cultural landscape tourism attraction, camp grounds, wildflower fields and walking trails and a visitor centre and gallery.

Directly accessed from the station's southern entry is the opportunity to deliver new cultural, recreational and tourism employment and experiences. The Whiteman Events Space and Swan Valley Hub opportunities provide for new commercial uses, cultural and event spaces that can bring in new industries, jobs and visitors to Whiteman Park and the north-east corridor. These opportunities would need to be planned and delivered in-keeping with Whiteman Park's conservation and cultural values.

Land uses shown on the concept plan are representative only and intended to illustrate the potential scale and ambition of future land uses. It is recommended that a detailed commercial investigation and a Business Case to test the viability and sustainability of these uses be undertaken within Whiteman Park to further develop these concepts.

Below: This German childcare designed by Behnisch Architekten shows how landmark built form within a civic space could be delivered at the site near the eastern station entry to the pedestrian underpass.





# **Key Actions**

- 1 Whiteman Park major activity zones with high volumes of visitors (Caversham Wildlife Park, play and adventure spaces, camping areas, etc.)
- 2 Whiteman Park commercial opportunity
- 3 Core District Centre retail development locations (subject to landowner agreement)
- 4 Mixed use residential/ commercial development focus
- 5 Education focus

Figure 23: Land Use context

#### **Case Studies**



#### Edmonson Park, Leppington NSW

Ed Square by Frasers Property Group is a best practice mixeduse town centre development directly integrated with the recently constructed Edmonson Park Metro Station 30km southwest of Sydney.

It vertically integrates 900 apartments and over 35,000 square metres of retail floorspace within an architecturally-designed town centre punctuated with pedestrian malls, active high streets and a central piazza. The project achieved a 6 Star Green Star Communities rating from the Green Building Council of Australia and is targeting 5 Star rating for the apartments and 6 Stars for commercial buildings in the town centre.

It is an exemplar of residential density, high quality retail development and environmental sustainability within an outer suburban activity centre.



#### The Farm, Byron Bay NSW

The Farm is an 2.3ha agri-tourism destination on the outskirts of Byron Bay townsite. Based on a micro-business model, it consolidates a range of food and beverage, agriculture, retail and experiential operators in one location to maximise tourism draw.

Uses include a florist, gelato store, bakery, restaurant, sub-let urban agriculture fields, farm tours and produce grocer. Since opening in 2015, it has grown to attract 500,000 visitors/ year and sustains 120 jobs. The business was recently listed for sale with a \$20m valuation.

With a site cover of just 0.29ha or 13 per cent, it achieves a high degree of commercial activity without compromising landscape character, and therefore serves as a key example of ground lease activity within Whiteman Park.





The station precinct will set a new benchmark for liveable, beautiful and sustainable design, delivering a diversity of houses, terraces and apartments which create a walkable and resilient community.

#### Objective 16

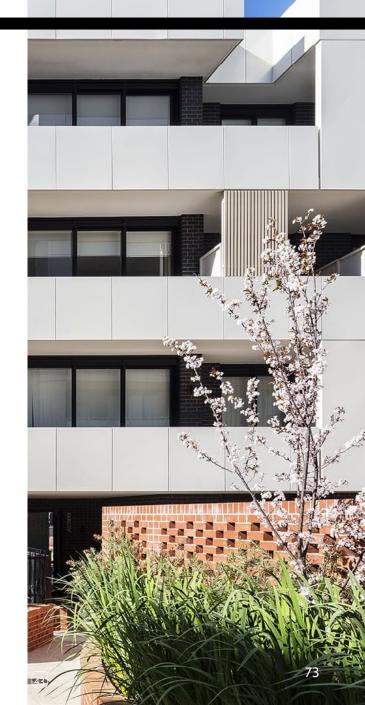
Leverage stateowned land in the precinct core to deliver medium and higher density housing which sustains activity and rail patronage

### Objective 17

Implement precinctwide low carbon, bushfire protection and climate change resilience initiatives in building construction and servicing

## Objective 18

Mix housing types to create a fine-grain character and allow for flexible staging while maximising ultimate residential density



### Strategies

Density to Support a Walkable, Transit-Oriented Community

The CMP contemplates an increased level of residential density reflecting the urban potential of the precinct.

Just 25 minutes from the Perth CBD, Whiteman Park Station Precinct is 4km closer than Cockburn Central and benefits from unrivaled amenities within Whiteman Park and the Swan Valley. Building on these attributes and a high level of government influence via significant land ownership, the precinct is ideally positioned to become Perth's next major transit-oriented development. Recent Australian research suggests that a gross density of 29 dwellings per hectare is required to effect a material increase in walking, cycling and public transport ridership alongside a reduction in vehicle use<sup>1</sup>. By contrast, current density surrounding Brabham District Centre is 10.9 dwellings per gross hectare.

#### Flexible and Fine Grain Urban Character

Recent transit-oriented projects in Perth have tended to only provide large apartment development sites close to stations, resulting in slow development timeframes and longterm land vacancy due to limited market appetite for such sites. Learning from this experience, the CMP mixes townhouse and apartment sites of different sizes throughout the station catchment. This is achieved with a typical block width of 66 metres, which can accommodate either rear-loaded townhouses or apartment blocks with central courtyards. This provides a high degree of flexibility for the site developer, with a range of different housing typologies able to be accommodated as market demand shifts towards a preference for higher density over time. It is acknowledged that due to current markets trends, this higher density may take some time to be achieved.

In time, this approach will achieve a fine-grain and varied urban character similar to established urban areas while encouraging housing diversity. This is supported by research that suggests people are 12 per cent less likely to drive and 1.3 times more likely to walk, cycle or use public transport in precincts with at least seven housing typologies<sup>1</sup>. Place-Responsive Building Types

The CMP aligns different building typologies that respond to distinct areas within the precinct. Higher density residential development with active frontages is suggested in highly trafficked areas along the station pedestrian-priority mall. Indicative building heights in this area are between 4 and 6 storeys.

Mixed use commercial, live-work and shop-top residential development is suggested in the north of the precinct compatible with the adjoining district centre. Heights in this area are suggested as between 2 and 4 storeys. Residential apartment and townhouse development (3-6 storeys) is suggested south of the station in high-amenity areas fronting parkland, with densities decreasing further from the station. Green building standards such as rainwater tanks and solar panels are encouraged.

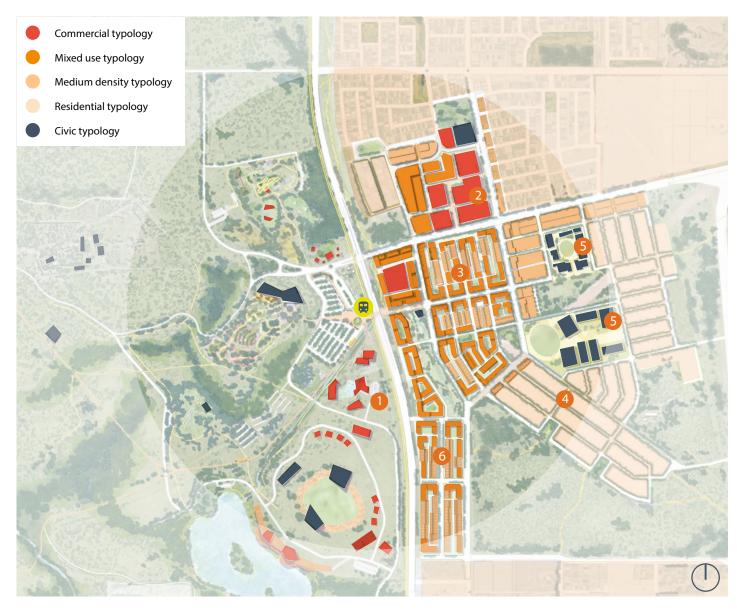
These typologies will require different building depths, parking requirements and street interfaces. It is suggested that detailed precinct planning provide for typology-based planning controls to guide project delivery.

Building footprints and typologies shown on the CMP are indicative only and will be further investigated through precinct structure planning.



Below: Lightsview's Urban Garage is an example of a well-designed terrace house with an urban street interface delivered in a greenfield setting.

1 Boulange et al (2017). Examining associations between urban design attributes and transport mode choice for walking, cycling, public transport and private motor vehicle trips. Journal of Transport & Health. 6. 10.1016/j.jth.2017.07.007.



# **Key Actions**

- Low site cover cultural, recreation and tourism uses within Whiteman Park
- Higher intensity commercial and retail opportunity within District Centre
  - Higher density mixed use opportunity proximate to station, open space and retail convenience
  - Medium to low density residential outside of immediate station precinct
  - Compact primary and high school sites co-located with public open space

6

New transit-oriented development incorporating social and affordable housing

Figure 24: Built Form context

### **Case Studies**



#### Cockburn Central, Perth WA

Cockburn Central is perhaps Perth's most successful transit-oriented development. Developed over the past 20 years and situated a similar distance from the Perth CBD as Whiteman Park Station Precinct, it is a key example of the built form intensity achievable in a greenfield context.

The core Cockburn Central Town Centre area has a gross area of 14.5ha and 1,630 dwellings, achieving a density of 112 dw/ha. Residents have easy access to Cockburn Station with an urban town centre street grid lined with small retailers framing an urban green space. Similar to Whiteman Park, it is situated opposite a major shopping centre site but sustains complementary lowerorder retail activity within the station core.

The innovative project was delivered by DevelopmentWA and the WAPC.



#### Lightsview, Adelaide SA

Lightsview by Peet is an exemplary urban development project that is nationally recognised for achieving higher residential densities through small lot housing product.

Because of this, the 100ha project provides the widest range of housing and land options of any Adelaide suburb. High quality and varied public open spaces and wide streets with footpaths create a sense of space for residents, with every dwelling no more than 300 metres from a high quality landscaped park. Additionally the project delivers over 15 per cent affordable housing with a range of social housing options integrated throughout the site.

The project has received multiple national awards and serves as a key exemplar for future built form in Whiteman Park Station Precinct.

# 6.0 Implementation





# 6.1 Implementation Strategy

The CMP establishes the long term vision, principles and high level road map for planning, development and infrastructure delivery across the station precinct for the next 30 years. In recognition of Whiteman Park Station Precinct's unique character as both an area of urban growth east of station, and a significant environmental and cultural tourism and recreation asset west of station. the CMP proposes an approach to change over time that maximises the benefits of the new station, while being balanced, integrated and respectful of these dual uses.

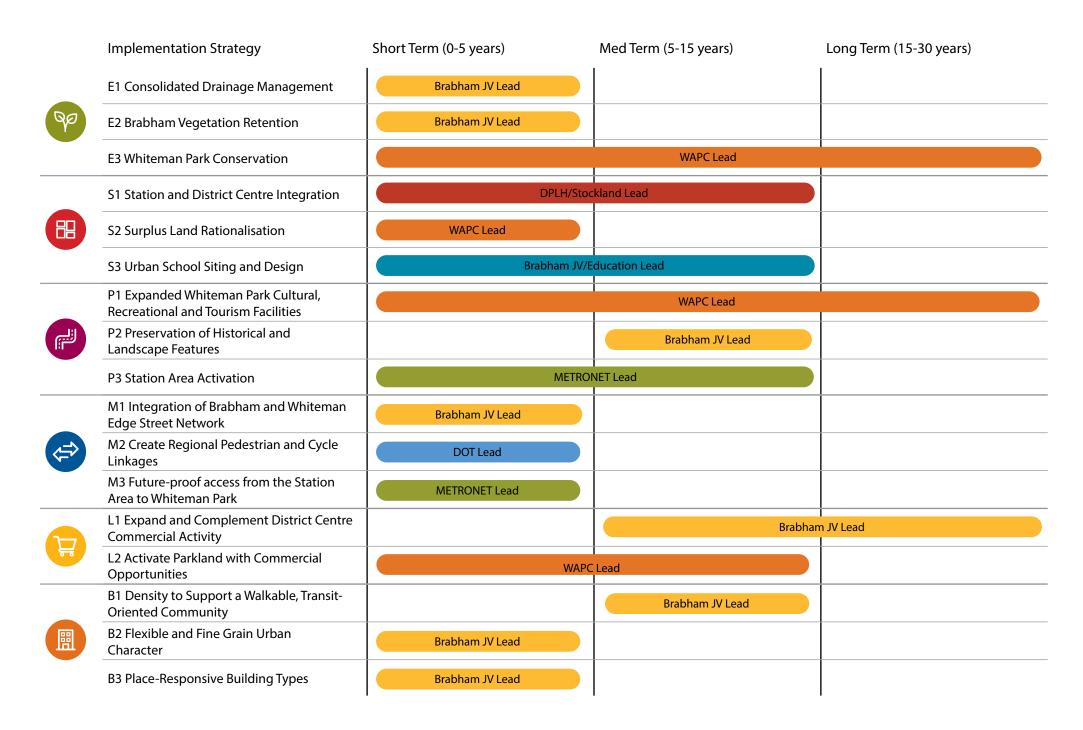
The delivery of the new station is the catalyst for reimagining the opportunities within Whiteman Park and Brabham. This significant State investment will bring new connections for people to live, visit and invest in the area, and represents the first step towards realising the CMP vision.

Within the short to medium term, the CMP identifies precinct structure planning, led by Brabham JV with collaboration across State Government, to deliver sustainable transit-oriented development east of the station within the suburb of Brabham, using best practice precinct design to deliver compact and connected urban growth that reflects the local character and environmental assets of neighbouring Whiteman Park. This precinct structure planning will include associated planning framework changes and working across WAPC, OMTID and Whiteman Park to realise full development potential of Brabham.

Longer term, the CMP identifies opportunities for expanding uses on degraded and underutilised land within the outskirts of Whiteman Park over time to help support the maintenance, enhancement and ongoing conservation of the significant environmental and heritage assets the Park provides for the community. In the short term, these opportunities will be further explored by Whiteman Park and State Government as part of the Whiteman Park Strategic Plan 2021 - 2025. Realisation of these opportunities will require further consultation across Government to inform business cases and investment decisions.

The implementation strategy has been developed to capture the key actions required and critical issues to be resolved through collaboration between stakeholders to deliver these outcomes. It identifies actions based on the principles and strategies of the CMP, assigning each a timeframe and identifying responsibilities.





ᅇ Urban Ecology

Objective 1 Retain significant trees and landscape features to combat rising temperatures, maintain biodiversity and bushland character		Objective 2 Create new parkland attractions consistent with Whiteman Park's recreation values and tourism function		
Objective	Strategy	Action	Responsibility	Timeframe
3	E1 Consolidated Drainage Management	E1.1 Prepare District Water Management Plan for Whiteman Park and Brabham development site to facilitate integrated drainage approach throughout the precinct.		
1 3		E1.2 Progress development application and technical design for regraded agricultural drain, incorporating WSUD improvements and inundation levels at Horse Swamp.	Brabham JV	Short Term
3		E1.3 Integrate required drainage invert levels through station underpass into station works package to facilitate improved drainage outcomes for the precinct.	METRONET OMTID	Short Term
3		E1.4 Reach agreement between Brabham JV and WAPC allowing for drainage detention within Whiteman Park based on 'no net advantage' principle, including opportunities for in-kind contributions through development preparatory works on WAPC land or funding of Whiteman Park drainage works.	Brabham JV WAPC METRONET	Short Term
2 3		E1.5 Investigate options for irrigation of botanical gardens and other open space or landscaped areas in Whiteman Park.	WAPC DPLH City of Swan	Medium Term

Objective	Strategy	Action	Responsibility	Timeframe
1	E2 Brabham Vegetation Retention	E2.1 Conduct a full and comprehensive tree survey across the site to identify the trees which can be retained and designed around where possible. With the benefit of reduced fill, review opportunities for integration of remnant vegetation within the Brabham JV PSP.	Brabham JV	Short Term
12		E2.2 Maximise the retention of existing trees in the design of streets, public realm and local open space. Integrate provisions into PSP.	Brabham JV	Short Term
123		E2.3 Confirm feasibility of retaining Isoodon agricultural drain within linear open space containing extant services in road reserve. If service relocation is proposed, development to demonstrate alternate achievement of vegetation retention of an equivalent area elsewhere within the precinct core.	Brabham JV WAPC	Short Term
12	E3 Whiteman Park Conservation	E3.1 Review environmental impact of proposed additional parkland areas and attractions within Whiteman Park and mitigate where possible.	WAPC	Short Term
2		E3.2 Progress the Whiteman Park Strategic Plan review to incorporate the new station and consider opportunities for new tourism/recreation uses explored through the CMP (outside P1 Groundwater area).	WAPC	Short Term
1		E3.3 Investigate opportunity for environmental offsets required for vegetation clearing on Brabham JV site to be invested in revegetation initiatives within Whiteman Park, rather than acquisition of regional offset sites.	Brabham JV DPLH	Short Term

😬 Urban Structure

	road and rail reserves to portunities for Transit-Oriented It	Objective 5 Consolidate drainage, services and educational facilities to maximise developable land within the station precinct	Objective 6 Create a legible, walkable urban grid tha facilitates clear and direct connectivity	
Objective	Strategy	Action	Responsibility	Timeframe
4 6	S1 Station and District Centre Integration	S1.1 Review the Brabham Activity Centre Plan (ACP) to incorporate high intensity pedestrian oriented land uses and key north-south pedestrian connections identified in the CMP to maximise the walkable catchment to the station and provide active street frontages.	Stockland DPLH	Med Term
5 6		S1.2 Ensure the Brabham JV PSP is supported by an innovative Retail Needs Assessment that identifies maximum opportunities for pedestrian based retail and commercial uses in the immediate station precinct, Mayfield Dr, Everglades Ave and the key grid of streets identified in the CMP.	Brabham JV DPLH	Med Term
56		S1.3 Allow a retail floorspace allocation of up to 5000m2 to support station activation.	DPLH Brabham JV	Med Term
6		S1.4 Implement a flexible approach to street block design in the station precinct to incentivise innovative approaches to mixed use and residential building typologies.	Brabham JV	Short Term
5		S1.5 Set minimum dwelling/floorspace yield requirements for the 500m and 1000m walkable catchment.	r DPLH Short Terr	

Objective	Strategy	Action	Responsibility	Timeframe
4	S2 Surplus Land Rationalisation	S2.1 Co-ordinate a detailed review of all existing MRS reserves and road reserves to identify all land surplus to requirements, including any rezoning and land purchase/ transfer actions, with a focus on delivering more transit- oriented development and social and affordable housing close to the station.	WAPC DPLH	Short Term
4		S2.2 Ensure consideration is given to optimising road reservation widths to reduced and special standards provided for in Liveable Neighbourhoods.	METRONET OMTID Brabham JV	Short Term
4		S2.3 Ensure engineered batters to Drumpellier Dr are minimised and interfaces appropriately treated as part of the station works package to support development within the precinct core. Undertake noise modelling to achieve suitable acoustic outcomes for development abutting Drumpellier Dr.	OMTID METRONET	Short Term
4 5	S3 Urban School Siting and Design	S3.1 Coordinate a review of the location and size of the schools consistent with the special provisions of DC 2.4. This review should ensure both primary and high schools are consolidated to maximise desired precinct outcomes, optimise shared use opportunities and showcase design excellence.	Brabham JV Dept. Education	Short Term
4 5		S3.2 Identify opportunities to fast track school opening as part of the early station activation, including options for staged delivery of the high school.	Brabham JV Dept. Education	Short Term
4 5		S3.3 Integrate education, social and affordable outcomes into Brabham JV PSP and advance necessary shared use agreements.	Brabham JV	Short Term



# Arrow Public Realm

nationally rec	teman Park's status as a cognised cultural tourism nd recreation hub	<b>Objective 8</b> Extend Whiteman Park's green character into Brabham through consistent materiality, landscape design, species selection and public art	<b>5</b> 1		
Objective	Strategy	Action	Responsibility	Timeframe	
79	P1 Expanded Whiteman Park Cultural and Recreational Facilities	P1.1 Fast track resolution of the long term road network including restricted Park access and open public access and gate points. Explore integration with station delivery works.	METRONET WAPC OMTID	Short Term	
79		P1.2 Undertake planning and provisioning for potable water and sewerage connection to accommodate long term Park expansion needs. Future proof through station delivery works.	METRONET OMTID WAPC	Short Term	
7		P1.3 Secure groundwater leases to provide for new cultural, recreational and tourism facilities within Whiteman Park. Confirm availability of Marshall Rd water licences as part of planning and delivery of these spaces.	WAPC	Short Term	
79		P1.4 Revise Whiteman Park Strategic Plan focused on investigating opportunities for new facilities within underutilised, former pastoral lands including consultation with key stakeholders and the South West Land and Sea Council.	WAPC DPLH	Short Term	
79		P1.5 Progress spatial brief and design for facilities being considered as part of district and regional planning sports facility planning elsewhere in the region including Malaga.	WAPC DLGSCI City of Swan	Med Term	

Objective	Strategy	Action	Responsibility	Timeframe
7	P2 Preservation of Historical and Landscape Features	of Historical and to ensure the final placement of open space maximises the		Short Term
789		P2.2 Ensure public art and landscape design maximises the interpretation and connection of historical stories and elements of the Aboriginal and non-Aboriginal settlement heritage throughout the precinct, including coordination across the various project teams to ensure consistent and complimentary approaches with the station public art works.	Brabham JV WAPC METRONET	Med Term
789		P2.3 Look to extend and unify the approach to nomenclature, interpretive elements, wayfinding and signage across the entire precinct consistent with the objectives of Gnarla Biddi.	Brabham JV WAPC METRONET	Med Term
789	P3 Station Area Activation	P3.1 Prepare a day one station activation concept to co- ordinate stakeholders to achieve delivery of key public spaces, connection of primary pedestrian and cycle paths, revised Isoodon St connections, tourist pick up points and activation opportunities within immediate station area (kiosk, toilets, visitor centre and potential pop up facilities on east side of station).	WAPC Brabham JV METRONET City of Swan	Short Term
789		P3.2 Undertake design testing, CPTED review and transit modelling to support pedestrian-priority of eastern station area, confining park and ride to western station area.	Brabham JV	Short Term
787		P3.3 Ensure supplementary station precinct vehicular and pedestrian access is planned for, including to Bennett Springs East.	METRONET WAPC	Med Term



# Movement

	ess and parking immediately tation to prioritise pedestrian and	Objective 11 Provide a connected, convenient and walkable movement network connecting the station with Whiteman Park, Brabham Activity Centre and across the precinct	Objective 12 Deliver new Principal Shared Path connections which provide uninterrupted access between the station, Whiteman Pa and the Swan Valley	
Objective	Strategy	Action	Responsibility	Timeframe
11 12	M1 Integration of Brabham and Whiteman Edge Street Network	M1.1 Consider an innovative approach to street design exploring variable reserve widths, car free linear parks, one way streets and other active transport designs, to be documented as thoroughfare typologies in a PSP.	Brabham JV	Short Term
11 12		M1.2 Identify Safe Active Street pilot project design and funding opportunities on main east – west connection within Brabham.	Brabham JV DOT	Med Term
1		M1.3 Undertake technical review of proposed street network to identify suitable intersection configurations at major roads, particularly the proposed alignments of Isoodon St and the angled alignment of Everglades St.	Brabham JV DPLH	Short Term
10		M1.4 Assess the feasibility of no or low-rates of private parking and/or unbundled resident parking in separate multistorey garages within the station core to maximise development intensity and encourage modal shift. Also investigate carshare and ride share opportunities.	Brabham JV DOT	Short Term
10 11		M1.5 Seek support for Transperth funding to implement services during the early stages of development which deliver a bus network with 500m grid separation.	METRONET PTA Brabham JV	Short Term

Objective	Strategy	Action	Responsibility	Timeframe
12	M2 Create Regional Pedestrian and Cycle Linkages	edestrian and Cycle along Youle-Dean Rd to a separate cycle path connecting		Short Term
12		M2.2 Update the DOT Long Term Cycle Network plan to include all recommended key route changes, including Whiteman Park and Swan Valley connections.	DOT WAPC	Med Term
11 12		M2.3 Create a Travel Smart Plan including resident inductions to highlight health and financial benefits of walking, cycling and public transport use over private vehicle ownership.	DOT Brabham JV	Med Term
11 12		M2.4 Repair and realign the eastern leg of the Whiteman Park heritage tram network, providing stops at the station core and proposed Whiteman events space enabling car free access into Whiteman Park.	WAPC METRONET OMTID	Short Term
10 11 12	M3 Future-proof access from the Station Area to Whiteman Park	M3.1 Consider opportunities for sufficient circulation space for high volumes of visitors for major event volumes in station works. Connections to include over drain to Swan Valley Hub; west over stream to Cultural Landscape; and north to Play and Adventure Zone.	METRONET OMTID	Short Term
10 11 12		M3.2 Redesign eastern station access to align with urban mall typology identified in plan.	METRONET OMTID Brabham JV	Short Term

Land Use

Objective 13 Enhance the visitor experience with commercial uses and station precinct retail that complement the District Centre		Objective 14 Explore cultural, commercial, and recreational opportunities in Whiteman Park that capitalise on tourism- related economic potential	Objective 15 Demonstrate innovation in delive mixed use development which pr walkability and allows for adaptak time	
Objective	Strategy	Action	Responsibility	Timeframe
13 15	L1 Expand and Complement District Centre Commercial Activity	L1.2 Consider amendments to the Brabham ACP to provide for long-term development vision of higher intensity mixed use outomes and mutually beneficial planning amendments allowing greater residential development and retail closer to the precinct core.	DPLH Stockland METRONET	Short Term
13 15		L1.2 Ensure the Brabham PSP is informed by a Retail Needs Assessment that assesses additional retail capacity sustained by TOD and suitable land use mix to maximise pedestrian based retail, commercial and workplace activation opportunities.	Brabham JV DPLH	Med Term
14 L2 Activate Parkland with Commercial Opportunities		L2.1 Consult with Tourism Council, WA Indigenous Tourism Operators Council, select WA tourism operation leaders and existing Whiteman Park stakeholders to develop key parkland activation opportunities and feed in to the brief development for the Whiteman Park Strategic Plan review.	WAPC	Short Term



# **Built Form**

precinct core	e-owned land in the to deliver medium and y housing which sustains ail patronage	Objective 17 Implement precinct-wide low carbon, bushfire protection and climate change resilience initiatives in building construction and servicing		
Objective	Strategy	Action	Responsibility	Timeframe
16 17 18	B1 Density to Support a Walkable, Transit- Oriented Community	B1.1 Based on gross density analysis, reserve an appropriate land area around the precinct core for high-density apartment development while permitting medium density development on remaining sites early in the project. Ensure provision of sites for social and affordable housing stock.	Brabham JV DPLH	Med Term
16 17 18		B1.2 Establish density targets within the PSP supported by peer-reviewed research and TOD case studies, which consider gross densities achieved within the entire catchment including Whiteman Edge, to ensure that appropriate densities in the order of 30 dwellings per gross hectare are achieved.	Brabham JV DPLH	Short Term
16 17 18		B1.3 WAPC to rezone 12ha of Parks and Recreation reserve to Urban to facilitate urban development, incorporating social and affordable housing.	WAPC	Short term
16 17 18	B2 Flexible and Fine Grain Urban Character	B2.1 Support delivery of flexible street blocks varying in width from 66-74m within the station core to ensure adaptability to accommodate townhouse and/or apartment product, rather than relying on large superlot development sites.	Brabham JV DPLH	Long Term
16 17 18		B2.2 Direct PSP to incorporate typology-based guidance on permitted development types to achieve a dense and diverse variety of commercial and residential options.	Brabham JV DPLH	Short Term

Objective	Strategy	Action	Responsibility	Timeframe
16 17 18	B1 Density to Support a Walkable, Transit- Oriented Community	B1.1 Based on gross density analysis, reserve an appropriate land area around the precinct core for high-density apartment development while permitting medium density development on remaining sites early in the project. Ensure provision of sites for social and affordable housing stock.	Brabham JV DPLH	Med Term

This report includes images compiled from a variety of sources. All rights reserved to the copyright owners.

1	Hatch	17	Whiteman Park	33	Royal Botanic Gardens Victoria
2	Stockland	18	Stockland	34	Oculus, Anthony Basheer
3	METRONET	19	Macquarie University	35	T.C.L., Ben Wrigley, Dianna Snape and Peter Hyatt
4	METRONET	20	Frasers Property	36	Field Operations, Timothy Hursley
5	METRONET	21	DKO	37	METRONET
6	METRONET	22	Peet Limited	38	Qube Property
7	METRONET	23	Rochford Wines	39	METRONET
8	METRONET	24	The Farm Byron Bay	40	Bensich Architecten, Thomas Hoffmann-Kuhnt
9	METRONET	25	Saucier & Perrotte, Olivier Blouin	41	Frasers Property
10	METRONET	26	Broadsheet, Jake Roden	42	The Farm Byron Bay
11	METRONET	27	T.C.L., Sam Noonan	43	ОКО
12	Whiteman Park	28	White Architecture	44	Peet Limited
13	State Library WA	29	Royal Botanic Gardens Victoria	45	DevelopmentWA
14	Caversham Wildlife Park	30	Cedar Woods Property	46	Peet Limited
15	Mainroads WA	31	METRONET		
16	Art Gallery WA	32	Nearmaps		



#### MORE INFORMATION

Email: info@metronet.wa.gov.au Phone: 9326 3666 metronet.wa.gov.au