CITY OF CANNING

Queens Park

Queens Park

Local Structure Plan

January 2022

This Local Structure Plan has been prepared to guide development within a designated precinct area centred on Queens Park Train Station. The diversity of housing, non-residential land uses, activation of the area and transport connectivity are key elements of the Local Structure Plan.

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Citation

This document should be cited as follows:

City of Canning (2022), Queens Park Local Structure Plan.

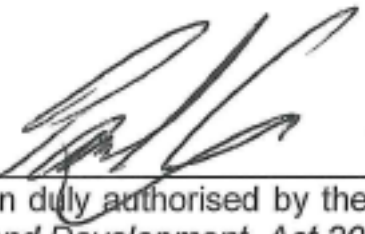
Table 1: Table of Amendments

Amendment No. by Council	Description of Amendment	Date of Final Approval	Amendment signed by:		Date of Final Endorsement by WAPC
			Mayor	Chief Executive Officer	
1	1. Extend LSP area southeast to Wharf Street boundary with Canning City Centre Activity Centre Plan; 2. Change maximum density in Railway (Frame) Precinct to R80; 3. Include more detailed guidance on finished floor level requirements; 4. Reference updated City of Canning documents; 5. Correction of minor typographical errors.	19/12/2017			08/05/2018
2	1. Deletion of requirements that are in SPP7.3 2. Changes and fixes throughout the document for conciseness and consistency with other local government's documents.	19/01/2022			13/06/2022

This structure plan is prepared under the provisions of the City of Canning Town Planning Scheme No.40

IT IS CERTIFIED THAT THIS STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON: 22 November 2016

Signed for and on behalf of the Western Australian Planning Commission



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

Witness

22 November 2016

Date

Date of Expiry: 22 November 2029

Executive Summary

The Queens Park Local Structure Plan project represents an opportunity for development within the City of Canning that links in with the proposed Canning City Centre Activity Centre Plan and the existing Guided Development Schemes in the area. Queens Park is a predominantly residential suburb characterised by single storey houses and grouped dwellings. The Cannington part of this structure plan is a more diverse area used for residential, commercial and recreational purposes. The area contains a small neighbourhood centre, primary and secondary education facilities and is divided by the Armadale Rail Line. The area lies adjacent to Cannington and Welshpool, two important employment centres within the central metropolitan sub region. Over the last 30 years, the large residential and semi-rural lots that characterised the area have been redeveloped into a denser urban neighbourhood. Whilst there has been an increase in the population, the development that has occurred has been on an ad-hoc basis. The result has been an area that lacks character and amenity.

The Queens Park Train Station lies at the centre of the Local Structure Plan area. It is a small station on Perth's train network, catering for the local community and providing public transport access to adjacent schools. Unlike several stations on the network, Queens Park is not a 'Park and Ride' station, which provides greater opportunity to promote Transit Oriented Development and increase development densities close to the station. Notwithstanding the presence of the station, development around it has been blighted, with many sites remaining vacant or underdeveloped.

In Directions 2031 and Beyond (Directions 2031), the Western Australian Planning Commission identifies several objectives and themes in Perth which can be delivered by the local government through many urban regeneration projects. These include achieving articulated density and infill development targets, promotion of affordability, planning housing supply to meet demographic needs and providing community identity and character. An additional yield of 570 dwellings is identified for the area in Directions 2031 supporting documentation.

This Local Structure Plan has been prepared to guide the residential and non-residential development of the precinct towards the objectives of City of Canning's Strategic Community Plan and Directions 2031. The inclusion of commercial uses and higher density near Queens Park Train Station will provide for the activation of the area and the increased density of the area will create genuine housing choice reflecting changes in society.

Title: Queens Park Local Structure Plan

Project: Queens Park, City of Canning

Status: Final (including Amendment No. 2)

Version: January 2022

Author: City of Canning

Table 2: Structure Plan Summary Table

Item	Data	Section number referenced within the structure plan report
Total area covered by the structure plan	154 hectares 16.4 hectares POS – 10.6% of the total area	Part 1 Section 2
Area of each land use proposed (as per Figure 2)		
Railway Core Precinct – Mixed Use	6.9 hectares	Part 1 Section 2
Railway Frame Precinct	45.5 hectares	Part 1 Section 2
Residential Precincts A and B	48.5 hectares	Part 1 Section 2
Estimated Dwelling Yield by 2031	3,400 dwellings	Part 2 Section 1.4
Estimated Residential Density	Between 15 and 25 dwellings per gross hectare	Part 1 Section 5 and 6
Estimated population	Up to 8,500 people	Part 1 Section 1.2
Number of education facilities	9	Part 2 Section 7
Estimated Area of Open Space	11 spaces, total estimated area 16.4 hectares	Part 2 Section 4

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Part 1
Implementation

1 Introduction

1.1 Objective

This Local Structure Plan (LSP) seeks to encourage efficient land uses and Transit Oriented Development (TOD) centred on the Queens Park Train Station; which is considered a neighbourhood activity centre. The LSP outlines the strategic planning framework and the vision for the development of the area, with a clear focus on land use, function, and urban design.

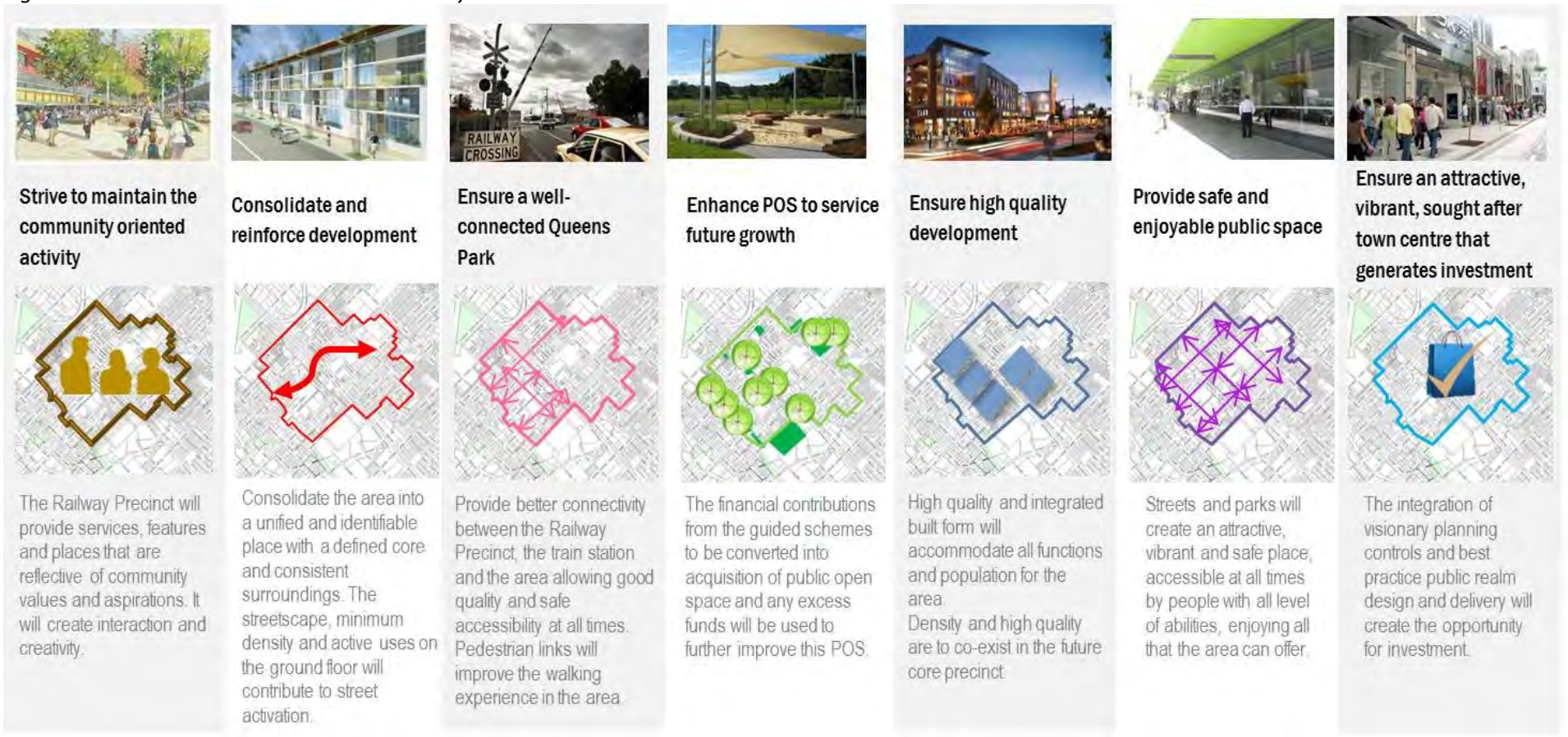
1.2 Vision

The vision for the redevelopment of the area is as follows:

- Strive to maintain existing community oriented activities and provide further opportunities for these activities through redevelopment.
- Consolidate and reinforce development within the Railway Precinct to enhance a local sense of place.
- Ensure a well-connected Queens Park.
- Provide safe and enjoyable public realm.
- Enhance Public Open Space (POS) to service future growth.
- Ensure that new development is high quality, with an integrated built form that is compatible with surrounding development.
- Ensure a high amenity, vibrant, sought after Neighbourhood Centre that attracts investment.
- Facilitate redevelopment of pre-existing light industry sites which are zoned Urban under the Metropolitan Region Scheme (MRS).
- Provide development and a range of land uses that are complementary and reinforce the primacy of the neighbouring Canning City Centre.

Refer to Figure 1 for details:

Figure 1: What does the Local Structure Plan try to achieve



1.3 Local Structure Plan content

The provisions of the Local Structure Plan (LSP) apply to the land within the LSP boundary shown on Figure 2 – Local Structure Plan.

The Queens Park LSP comprises two parts:

- Part One, Implementation – sets out the planning provisions used in the assessment and approval of subdivision and development by the City of Canning and the Western Australian Planning Commission (WAPC). This part includes the Structure Plan map, statutory planning provisions and requirements of "Clause 4 –Development Requirements".
- Part Two, Explanatory Section – is a reference guide and provides a summary of the context and technical studies conducted for the site to interpret and justify the implementation of Part 1.
- Part Two includes the following appendices which are available in the City's website:
  - Queens Park Local Structure Plan Intramaps addresses
  - Supporting studies – Western Power and Water Corporation
  - Community consultation outcomes
  - Final Local Housing strategy map – September 2014
  - LCACS Draft Chapter 3 – Floorspace demand assessment
  - City of Canning Water Management Strategy 2014
  - Arterial Drainage Plan 2016
  - Environmental Management Strategy 2014
  - Supportive guidance for development
  - Queens Park Streetscapes Plan-e
  - Ordinary Council Meeting (February 2015)
  - GIS files

1.4 Interpretations and scheme relationship

Local Planning Scheme 42 (LPS42) zones the Structure Plan area as Centre.

The provisions, standards and requirements of the LSP provide guidance in the assessment of development within the Centre Zone. This structure plan is to be read in conjunction with the provisions of the State Planning Policy 7.3 — Residential Design Codes Volume 1 and 2 (the R-Codes Volume 1 and Volume 2) and the local government's Scheme.

The words and terms used in the LSP have the respective meanings given to them in the local government's Scheme unless otherwise varied or provided for in the LSP.

The precincts, reserves and residential densities are demonstrated in "Figure 2: Local Structure Plan" and in Part 1 of this LSP.

Importantly, the LSP does not:

- Change any approved development;

- Change any property's existing land use or impose development timeframes; and
- Allow for any decrease in the type and amount of development currently allowed.

1.5 Operation

This LSP comes into effect when it is granted approval by the Western Australian Planning Commission ("WAPC").

2 Precincts

a) Figure 2 – Local Structure Plan applies the following development precincts and reserves to the LSP area:

- Railway Core;
- Railway Frame;
- Residential A; and
- Residential B.

b) The precincts classify and describe the desired character of areas within the LSP organised according to the intensity and composition of development, and guide all development within the public and private realms including, but not limited to:

- The distribution of land uses and residential density;
- Building types, form, scale and placement;
- The design and composition of movement networks; and
- The design and composition of parks and civic spaces.

c) The desired character for each precinct with regard to land use is as follows:

i. Railway Core Precinct: The Railway Core Precinct is intended to develop into a vibrant, pedestrian-focused, high density mixed use precinct transport hub. It will allow for retail, entertainment, office and community uses in addition to higher density residential development on upper levels of mixed use buildings. Other residential uses including single houses and grouped dwellings are not preferred.

ii. Railway Frame Precinct: The Railway Frame Precinct is intended to develop as a medium-high density area. The precinct will incorporate multiple dwelling residential uses only. Other residential uses including single houses and grouped dwellings are not preferred.

iii. Residential A and B Precincts: The Residential Precincts will develop as a medium density area with a focus on increased intensity accommodation, greater precinct amenity and improved surveillance of the streets. The precinct will incorporate a mix of residential uses only.

d) The preferred uses for each precinct within the Queens Park LSP area are detailed in Table 3: Preferred uses in each precinct. The local government will have regard to Figure 1, the desired character and objectives for each precinct and the development requirements when considering an application for development of a land use classified as A or D under the Zoning Table of LPS42.

Figure 2: Local Structure Plan

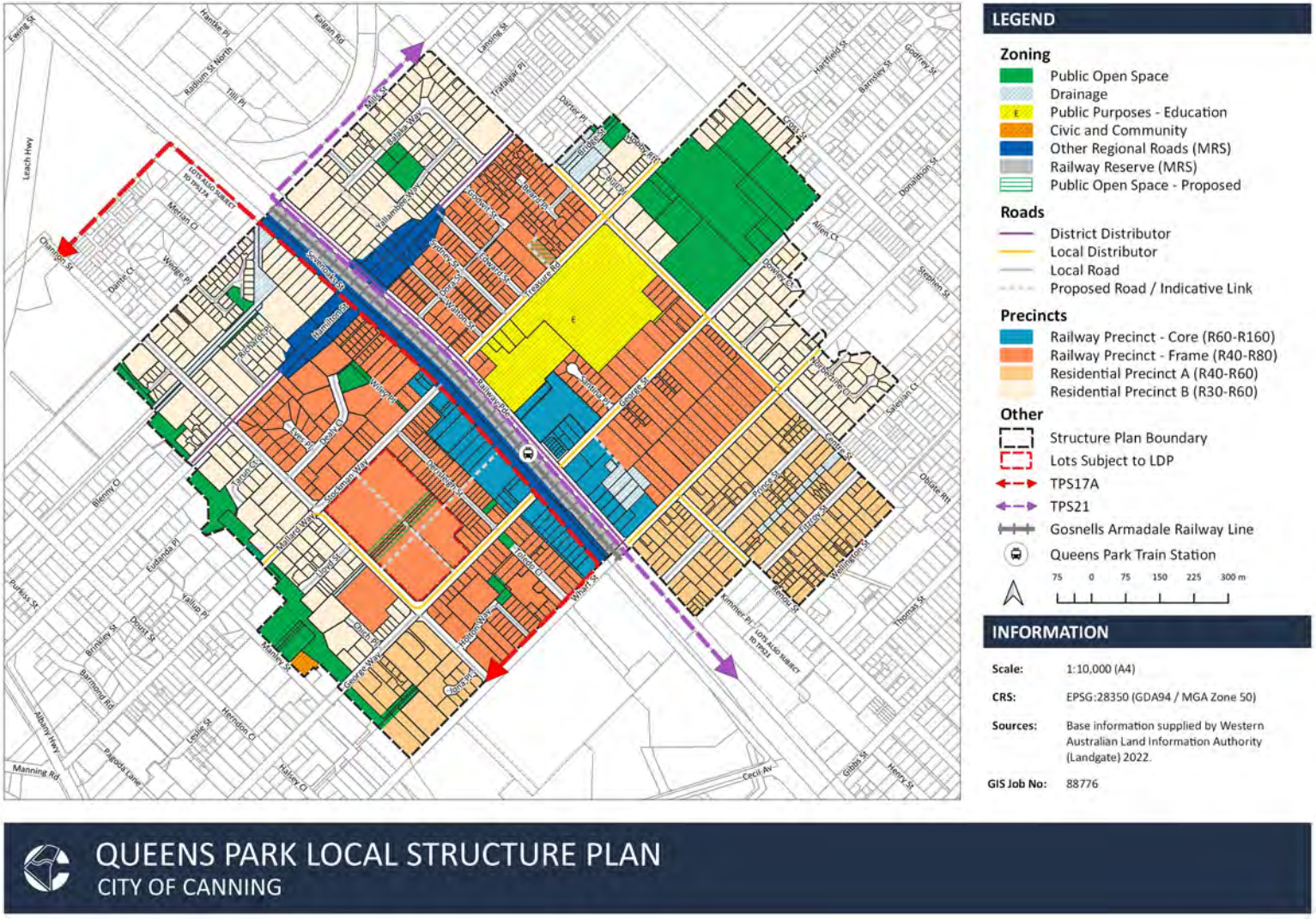


Figure 3: Private interface and hierarchy of frontages and movement improvements

3 Preferred Land Uses

The preferred uses for each precinct within the Queens Park LSP area are detailed in Table 3 – Preferred uses in each precinct.

Table 3: Preferred uses in each precinct

Railway Core Precinct	Railway Core Precinct	Railway Frame Precinct	Residential Precincts (A and B)
Ground Floor	**Upper Floors**	**All floors**	**All floors**
Amusement Parlour	Aged Care Facility	Aged Care Facility	Aged Care Facility
Bulky Goods Showroom	Amusement Parlour	Car Park	Child Care Premises
Car Park	Bulky Goods Showroom	Child Care Premises	Community Purpose
Child Care Premises	Car Park	Community Purpose	Consulting Rooms
Community Purpose	Child Care Premises	Consulting Rooms	Educational Establishment
Consulting Rooms	Community Purpose	Educational Establishment	Family Day Care
Educational Establishment	Consulting Rooms	Family Day Care	Grouped Dwelling
Exhibition Centre	Educational Establishment	Home Business	Home Business
Fast Food Outlet	Exhibition Centre	Home Occupation	Home Occupation
Hotel	Family Day Care	Home Office	Home Office
Market	Home Business	Industry – Cottage	Home Store
Medical Centre	Home Occupation	Multiple Dwelling	Industry – Cottage
Office	Home Office	Public Utility	Multiple Dwelling
Place of Worship	Hotel	Place of Worship	Place of Worship
Restaurant / cafe	Medical Centre	Residential Building	Residential Building
Restricted Premises	Multiple Dwelling	Telecommunications Infrastructure	Single House
Shop	Night Club	Veterinary Centre	Telecommunications Infrastructure
Small Bar	Office		Veterinary Centre
Tavern	Place of Worship		
Telecommunications Infrastructure	Reception Centre		
Veterinary Centre	Residential Building		
Warehouse / Storage	Restaurant / cafe		
	Restricted Premises		
	Shop		
	Small Bar		
	Tavern		
	Telecommunications Infrastructure		
	Veterinary Centre		
	Warehouse/Storage		

4 General Development Requirements

a) The R-Codes Volume 1 and Volume 2 apply except where varied by the development requirements of this LSP.

b) The local government may consider 25% variations to plot ratio and height requirements for developments in the LSP area that demonstrate compliance with an adopted built form sustainability policy and related documents. A comprehensive report demonstrating the reductions detailed above is required to be submitted along with any development application seeking the height and/or plot ratio bonuses.

c) In the absence of an adopted policy, developments are to demonstrate a minimum 30% reduction of energy and water use when compared to the Business as Usual (BAU) scenario for the design and construction phases of the development (refer to BCA Section J requirements for BAU).

d) Non-residential developments which meet one of the following Energy Efficiency criteria may seek the extra height allowed in this Structure Plan.

   i. Incorporate at two sustainability design considerations listed in Section 7.7; or

   ii. Proponents are also encouraged to submit proposals and draw the local government's attention to what they believe are worthy of bonus that are not mentioned specifically in Section 7.7 such as 'design excellence' or a 'green wall'. This is likely to be assessed by the Design Review Panel.

4.1 Movement, Access and Parking

a) In mixed use development the residential component is to comply with the R-Codes Volume 1 and Volume 2 and the non-residential component is to comply with car and bike parking requirements of the Scheme.

b) Visitor parking may be provided within road reserves directly in front of the development site subject to the local government's approval.

c) On-street publicly available parking directly in front of the property can be credited as parking for non-residential uses. The construction of any car park bay on the street will be at the developer's cost.

d) Should on-site and on-street parking be insufficient, the applicant may contribute towards cash-in-lieu for parking as per the local government's policy.

e) Open lot car parking is to be minimised, with car parking on larger sites sleeved with active uses. The use of undercroft parking is supported where practicable.

f) Carpark entrances are to be shared with adjoining properties where possible.

g) Vehicular entry and exit points that are permitted on Sevenoaks Street, future local streets and rights of way are indicated in Figure 3 to limit any potential conflicts with pedestrian activity areas and to protect the transport function of Sevenoaks Street.

h) Future local streets and new links are to be provided at the subdivision stage in accordance with Figure 3. The links are to be accessible at all times.

i) The public links identified within Figure 3 are to have a minimum width of 10 metres and are to be developed as a low-speed shared vehicle and pedestrian zone to the satisfaction of the local government.

j) The nature and the width of the link between Sevenoaks Street and Mallard Way is indicative and its details will be determined by the local government.

k) Interim solutions such as temporary culs-de-sac may be constructed before all future links are fully built.

4.2 Open Space

a) Provision of Public Open Space (POS) – Some sites within the LSP area are required to contribute 5% of the land area as Public Open Space on the ground. An indicative placement of Public Open Space is outlined in Figure 3.

b) Communal Open Space requirements, as required by the R-Codes, may be varied at the discretion of the City of Canning for sites that require a Local Development Plan (LDP) under Section 6.3 and depicted in Figure 5.

4.3 Waste Management

a) For non-residential development or where a development includes 10 or more dwellings, a specialist waste management plan is to be provided to the satisfaction of the local government.

b) Refuse collection vehicles must be able to drive in and out in forward gear where on-site servicing is proposed.

c) Where a development includes 10 or more dwellings, general waste disposal is to be provided via a 1100 litre or 660 litre shared bin. Provision for additional bins will be mandatory based on the number of dwellings.

4.4 Drainage

a) It is the proponent's responsibility to undertake the necessary reviews, assessments and modelling to demonstrate that the proposed development will manage small, minor and major rainfall events, to the satisfaction of the Local government. Stormwater Management shall be in accordance with the Stormwater Management Manual for Western Australia and National Construction Code of Australia.

i. Roads and public open spaces are to be designed to cater for the surface overflow for 1 in 100 year storm events.

ii. The post-development critical one-year average recurrence interval peak flow and volume is required to be equal to or less than pre-development flows at the discharge points of all plan and/or development areas.

iii. The peak stormwater runoff from the site is not to exceed the peak runoff from the site prior to development.

iv. Runoff from events is to be managed in accordance with the agreed post-development scenario, to the serviceability requirements of Australian Rainfall and Runoff (Engineers Australia, 2001) for minor/major system, when:

- greater than the one in one year average recurrence interval event;
- up to the five year average recurrence interval event in residential areas; and
- 10 year average recurrence interval event in commercial/industrial areas.

v. Rainwater is to be collected and stored for controlled release and preferably for re-use (as irrigation, toilet flushing or other non-potable use). Harvested stormwater from impervious areas (excess roof water, paved areas and roads) to recharge superficial aquifers where appropriate, is encouraged (subject to approvals).

vi. All flows from constructed impervious surfaces and from subsoil drains are to

receive treatment prior to infiltration or discharge, for example through bio filters or rain gardens.

b) Many development sites within the LSP area are not suitable for disposal of storm water via infiltration. Where infiltration is not-suitable, the local government will allow a connection into the local drainage network providing:

i. Some development sites require payment for Drainage Headworks prior to the local government approving a connection.

ii. If an overland flow path is provided, internal detention/retention capacity shall be designed for a 5% annual exceedance probability (AEP) rainfall event, otherwise internal detention/retention capacity shall be designed for a 1% AEP rainfall event.

iii. All connections must be designed to restrict peak discharge.

5 Acceptable development for the Railway Core Precinct

Table 4: Key development provisions for developments in the Railway Core Precinct

Key development provisions for developments in the Railway Core Precinct	
Preferred ground floor land use (could be extended to upper floors)	All buildings in the Railway Core Precinct are to provide for an activated ground floor use. Cafes and shop activities are to be located at the front of buildings to activate the street frontage. Residential use on the ground floor is not accepted.
Required setbacks	Nil front setback (to primary and secondary streets) on ground floor up to a height of 9.0 metres. Parts of the building above a height of 9.0 metres are to be stepped back by a minimum of 3.0 metres. ** Nil side setbacks on the ground floor unless required for access.
Height	Minimum 9.0 metres (3 storeys) Maximum 15 metres* Maximum 18 metres for *Corner Elements*
Residential Plot Ratio	Minimum 0.8 Maximum 2*
Ground floor to ceiling height	Minimum of 3.5 metres.

* In accordance with subclause 4(b), the local government will consider variations of plot ratio, height and car parking requirements for developments that demonstrate compliance with an adopted built form sustainability policy and related documents.

** Where a development site is situated in close proximity to existing power lines, the developers are to liaise with Western Power to obtain approval with regards to proposed setbacks. In that case, 2nd and 3rd storeys could be stepped back from the boundary.

5.1 Landmark and Gateway Sites

a) Development on landmark corners as identified on Figure 3 is to be designed and constructed in a manner that recognises the strategic location of the identified site, by having distinctive architectural expression through one or more of the following features:

- Additional height on the Corner Element (as per Table 4);
- Unique geometric or volumetric design;
- Architectural feature elements such as enhanced vertical articulation or modulation;
- Additional windows;
- Decorative windows, variety in building material and corner entrances to create a focal point and landmark;
- Enhanced palette of materials and textures; and
- Major openings and balconies.

b) **Specific sites on Railway Parade and Sevenoaks Street** – Developments are to incorporate a diverse and interactive facade as well as weather protection suitable for a neighbourhood commercial centre in the form of awnings to encourage pedestrian movement in the area. These developments are to facilitate a casual and relaxed experience that supports pedestrians and provides strong delineation between the carriageway and kerb side activity. Development design of the landmark sites is to have good landmark articulation and accommodate interaction between the building occupant and the pedestrians on the street.

c) **Old library site** (164 Railway Parade and 145-149 George Street) – the site represents an opportunity for a development to enhance the area adjacent to the train station. The development on this site is to become a design icon in the neighbourhood, integrated with the drainage basin next to it which is to be enhanced as a landscaped feature. An activated ground floor is to connect the train station to the drainage basin.

5.2 Density

Within the Railway Core Precinct, multiple dwelling developments are to have a minimum density of R60 and a maximum residential density of R160 in accordance with Figure 2. This includes the residential components within mixed use development. Single houses and grouped dwellings are not supported.

5.3 Built Form

a) Building Setbacks

i. For developments along Railway Parade and Sevenoaks Street, the building may include a recess from the street boundary for alfresco dining areas.

ii. For Sevenoaks Street, the alfresco dining area may spill on to the street if not interrupting pathways along footpaths for pedestrians.

b) Verandahs and Awnings

i. All balconies along Active Frontages are to be constructed within the lot boundary.

ii. Awnings are to be of high quality architecture, integrated with the design of the building, and provide a unifying element within the streetscape.

iii. Awnings are to be provided with:

- A minimum clearance of 3.2 metres;
- A depth of 2.5 metres cantilevered over the footpath;
- A minimum 2.7 metre clearance to structures, signage and lighting, and
- 1 metre clearance from street trees trunks if necessary.

Figure 4: Awning

iv. Stepped awnings for design articulation or to accommodate sloping streets are to have a maximum of 0.7 metre differential.

v. Awnings are not to be supported by pillars located outside of the lot boundary.

vi. Signage is restricted to one under-awning sign for a residential building and one per commercial or retail tenant. Signage is to have a minimum clearance of 2.7 metres above finished pavement level if located below awnings.

6 Acceptable Development outside the Railway Core Precinct

Table 5: Key development provisions for developments in the Railway Frame and Residential A and B Precincts

Key Development Provisions	Railway Frame	Residential Precinct A	Residential Precinct B
Preferred ground floor land use (could be extended to upper floors)	Non-activated. Residential at ground floor must address the street through visually permeable fencing, passive surveillance, open courtyards and communal areas.		
Required setbacks	Front setbacks to primary and secondary streets are to be a maximum of 4 metres. **	Front setbacks to primary and secondary streets are to be a minimum of 2 metres and a maximum of 4 metres. **	
Height	Minimum 6.0 metres (2 storeys) Maximum 12.0 metres*	Minimum 6.0 metres (2 storeys) Maximum 9.0 metres*	
Residential Plot Ratio	Minimum 0.6 Maximum 1.0*	Minimum N/A Maximum 0.8*	

* In accordance with subclause 4(b), the local government will consider variations of plot ratio, height and car parking requirements for developments that demonstrate compliance with an adopted built form sustainability policy and related documents.

** Where a development site is situated in close proximity to existing power lines, the developers are to liaise with Western Power to obtain approval with regards to proposed setbacks. In that case, 2nd and 3rd storeys could be stepped back from the boundary.

6.1 Density

a) Within the Railway Frame Precinct, multiple dwelling developments are to have a minimum density of R40 and a maximum residential density of R80. This includes the residential components within mixed use development. Single houses and grouped dwellings are not supported.

b) Within the Residential Precinct A, the maximum densities are as follows:

- R40 for single and grouped dwelling development; and
- R60 for multiple dwelling development.

c) Within the Residential Precinct B, the maximum densities are as follows:

- R30 for single and grouped dwelling development; and
- R60 for multiple dwelling development.

6.2 Built Form

Finished floor levels: A residential property should be built above road level sufficient to allow for water to drain from the residential property to the road except in the case of properties in a depression in the road where they should be built 300mm above the crown of the road. Where the developers consider this impractical, they should submit an application to the local government explaining the reasons why and what is being proposed to manage drainage.

6.3 Local Development Plan (LDP)

a) The local government will not support subdivision or approve development within landholdings marked in Figure 5 unless a Local Development Plan has been prepared and adopted pursuant to Part 6 of the Deemed Provisions.

b) A LDP can be prepared for each lot individually or as a joint LDP.

c) In preparing a LDP, the following aspects are to be addressed:

i. consolidation and/or subdivision of land;

ii. building envelopes;

iii. distribution of land uses within a lot;

iv. public and private open space;

v. services;

vi. vehicular access, parking, loading and unloading areas, storage yards and rubbish

vii. collection closures;

viii. the location, orientation and design of buildings and the space between buildings;

ix. landscaping, finished site levels and drainage;

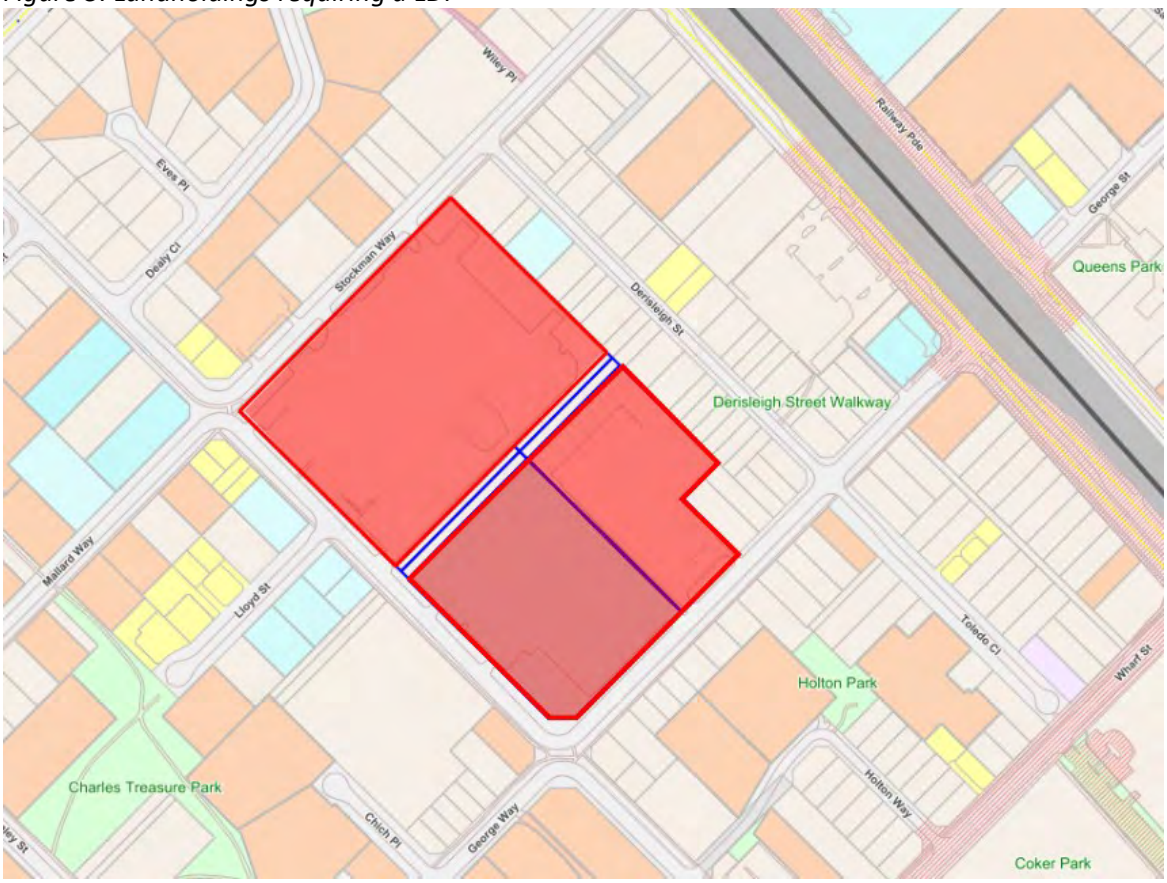
x. protection of sites of heritage, conservation or environmental significance;

xi. special development controls and guidelines; and

xii. other information considered relevant by the local government.

d) At the discretion of the City of Canning, the required LDP can include site specific development provisions that vary the requirements of the R-Codes and the LSP.

Figure 5: Landholdings requiring a LDP



7 Non-residential Development Requirements

In addition to the precinct specific requirements, all non-residential development in all precincts is to comply with the following requirements:

7.1 Pedestrian and Vehicle Access

a) Carparking on the ground floor is to be screened and/or landscaped from the public realm.

b) Pedestrian and vehicle access should be designed to ensure legibility while minimising conflict between the two by separating pedestrian and vehicle access wherever possible and or prioritising pedestrians over vehicles.

c) Building entries are to be readily identifiable and designed for universal access with pedestrian access facing the street, utilising architectural detailing, materials, colours and landscape treatments to differentiate between vehicles and pedestrians to improve legibility for users.

d) Vehicular access is to be provided from a secondary street where possible.

e) Vehicular access width to a minimum and avoid vehicle standing areas within the street setback.

f) Position ramps, gates and roller doors behind the main building frontage.

g) Loading, delivery and car parking areas are to be well lit and provide for surveillance.

7.2 Public domain interface and CPTED

Development should enhance the visual interest and amenity of the public realm and be designed in accordance with 'Crime Protection Through Environmental Design' principles and have a positive interface with the public domain. This can be addressed through the following:

a) The inclusion of entries, balconies and windows interfacing the street.

b) Where development adjoins the public realm (roads, public parks, open space or bushland) the design positively addresses this interface. Potential design solutions include:

- direct street access, pedestrian paths and clearly defined building entries
- paths, visually permeable or low fences and planting minimising the use of blank walls, solid fences and ground level parking.

c) Lighting is to provide visibility and enable pedestrian use of key paths and public spaces. Blind-spots are to be avoided.

d) All developments fronting the street must respond to and address the street in a safe, attractive and integrated manner for the purposes of safety and creating a desirable streetscape.

e) No tinted, translucent, opaque or reflective screening is permitted on the ground floor of buildings with activated uses Area of windows which may be used for advertising signs are to be no more than 20%.

f) The use of shutters or visually impermeable security measures over windows is not preferred. Allow for alfresco dining or windows that open the façade out to the street. Restaurants, cafes and bars are to use bi-fold, stacker or operable glazed doors to encourage street activation.

g) Doors to commercial premises are accessible (open) at all times that the commercial use is open for business.

h) Ground floor windows and doors are to be designed to ensure they do not protrude into the road reserve (i.e. doors open into the building).

i) Small windows and repetitive arrangements are to be avoided.

j) Interface between activated uses and the street:

- The design of Active Frontages is to provide for direct access from the footpath with minimal change of level, and incorporate provision for visual interaction between ground floor activities and the pedestrian environment.
- Ground level street frontages are to contribute to the safety, visual interest and vitality of the street by minimising the extent and visual impact of blank walls, office lobbies, vehicle entrances and utilities.
- Cohesion with adjacent buildings is to be achieved by providing continuity of the built form. Gaps in frontages and significant changes in building alignment are to be avoided.
- Developments are to be designed to integrate each ground floor tenancy in a manner that achieves a seamless appearance.
- A floor to ceiling display window and/or entrance that covers at least 70% of the length of the building at the street level is to be provided on ground floor tenancies. Where there are multiple ground floor tenancies within a building that face the street; each tenancy is to have an opening or window that is at least 70% of the width of the tenancy's frontage.
- Façade design is to incorporate lighting to add to security at night.

k) Integrate signs and building numbers into the overall façade.

7.3 Landscaping

a) Landscape plans should consider a landscape design that is environmentally sustainable, considering local environmental conditions and constraints. The landscape plan should consider the following:

- diverse and appropriate plant selection, preferencing the use of native, endemic species, non-invasive or Waterwise plants
- minimising the use of turf unless sustainable water harvesting and reuse systems are used
- vegetated stormwater management systems and passively irrigated gardens
- use of sub-surface irrigation and irrigation systems with rain and soil moisture sensors
- opportunities to harvest and re-use rainwater collected and stored on-site
- maximising the use of permeable surfaces to allow infiltration of rainwater and irrigation
- green walls
- planting to provide shade
- retention trees where practical

b) Landscaping will be required along the street frontage of the development where practical.

7.4 Utilities

a) Utilities, such as distribution boxes, power and water meters are integrated into design of buildings and landscape so that they are accessible for servicing requirements but not visually obtrusive from the street or open space within the development.

b) Hot water units, air-conditioning condenser units are located such that they can be safely maintained, are not visually obtrusive from the street.

7.5 Façade and Roof design

Development should be designed and constructed to a high architectural standard and finish. This can be addressed through the following:

a) Façade design should include articulation and visual interest through the composition of different elements and changes in texture, material and colour.

b) The roof form or top of building is to complement the façade design and desired streetscape character. Design solutions to achieve a roof design that complements the façade and streetscape can include:

- prominent elements at the street frontage and/or corners
- skillion or very low pitch hipped roofs
- use of generous eaves and overhangs that assist with shading
- concealed roofs.

c) Building services located on the roof are not visually obtrusive when viewed from the street.

7.6 Flexible Design / Adaptability

Buildings are to be designed for adaptability, and to have the capacity to accommodate change. A building that is more adaptable will be utilised more efficiently, and stay in service longer, because it can respond to changes at a lower cost. A longer and more efficient service life for the building may, in turn, translate into improved environmental performance over the lifecycle. Applications are to consider:

a) Flexibility on enabling minor shifts in space planning

b) Convertibility in allowing for changes in use within the building

c) Expandability (alternatively ability to shrink) in facilitating additions to the quantity of space in a building.

7.7 Sustainability Considerations

The following Energy Production design considerations are encouraged:

- Integrate solar panels for water heating and photovoltaic electricity technological systems.
- Incorporate energy recovery and storage such as tri – or co-generation and centralised cooling, heating and power.
- Energy management systems that enable load sharing between different uses and/or groups of buildings.
- Masonry adjustments through reverse brick veneer.
- Use of waste material cement-substitutes.

- Use alternative low energy finishes.
- Recycle and re-use of demolition and construction materials.

The following Energy Control design considerations are encouraged:

- Integrated building automation systems with IT infrastructure, such as: sensors, controls and Smart Controls to control loads based on occupancy, schedule and/or the availability of natural resources such as daylighting and natural ventilation.
- Include electrical vehicle changing points.
- Incorporate highest possible rating fixtures to reduce electricity consumption.

The following *Thermal Comfort* design considerations are encouraged:

- Natural Light: The building plan is to optimise solar access to work, study, common and habitable spaces, by maximising indoor and outdoor areas that have a northerly orientation and minimise uncontrolled summer sun.
- Natural Ventilation: To lessen energy consumption, design is to use natural ventilation to reduce the need for air conditioning. This can be done by including operable windows or hybrid air conditioning systems.

The following is encouraged for water appliances and fixtures:

- Low energy and water rating appliances such as refrigerators, dishwashers, air conditioning etc. (with a WELS rating of five or more stars) are desirable.

Part 2
Explanatory Section

8 Planning background

The purpose of the explanatory section of the LSP report is to provide background for the preparation of the LSP itself, present the main issues relevant to the future planning and provide a concept for its ultimate development.

The LSP will help to guide the planning and decision making in order to achieve the vision outlined in the introduction of this LSP.

8.1 Land description

The LSP area comprises a portion of Cannington and Queens Park, located within the City of Canning, 11km from Perth CBD. It has a population of 3,495 according to the 2016 Census.

Existing lots

The area subject of this LSP generally comprises properties within 800 metres walking distance from Queens Park Train Station, as illustrated in Figure 7. A complete table listing all the lots included in the LSP area can be found in Appendix 1.

Physical barriers were considered when deciding on the LSP boundary location including Charles Treasure Park, the Canning City Centre Activity Centre Plan, open drains and existing streets alignments. Where possible selecting only one of the side of roads that ended in a cul-de-sac was avoided to ensure uniform development intensity along the entire street.

The LSP area is immediately adjacent to the Canning City Centre Activity Centre Plan area, and in close proximity to Albany Highway and Leach Highway. As shown on Figure 8 and Figure 9, the Perth-Armadale railway divides the area in two.

The suburbs around the LSP area are:

Figure 6: LSP area in relation to surrounding suburbs

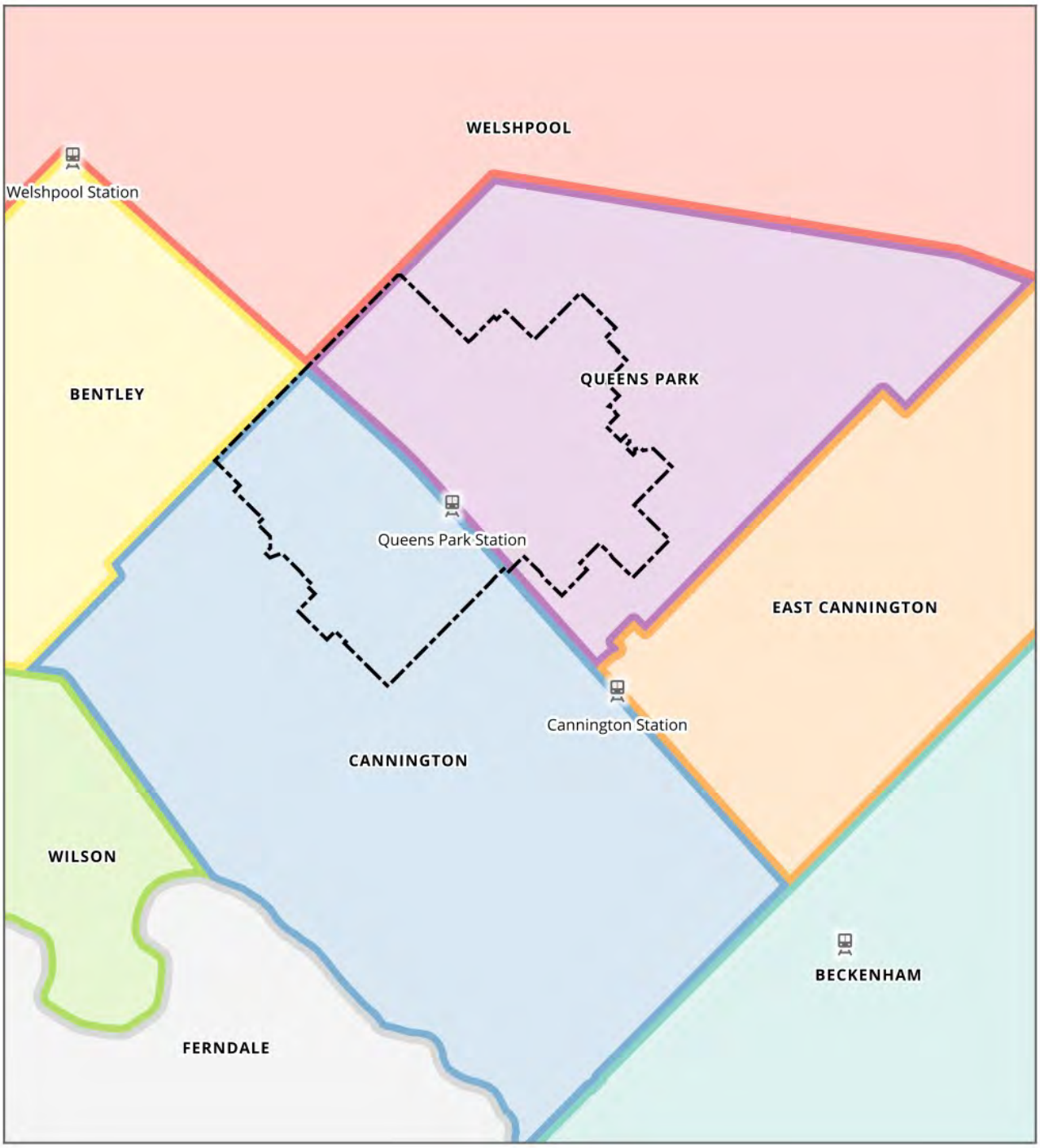


Figure 7: 800 metre walking distance from Queens Park Train Station- 800 metre walking distance from Queens Park Train Station

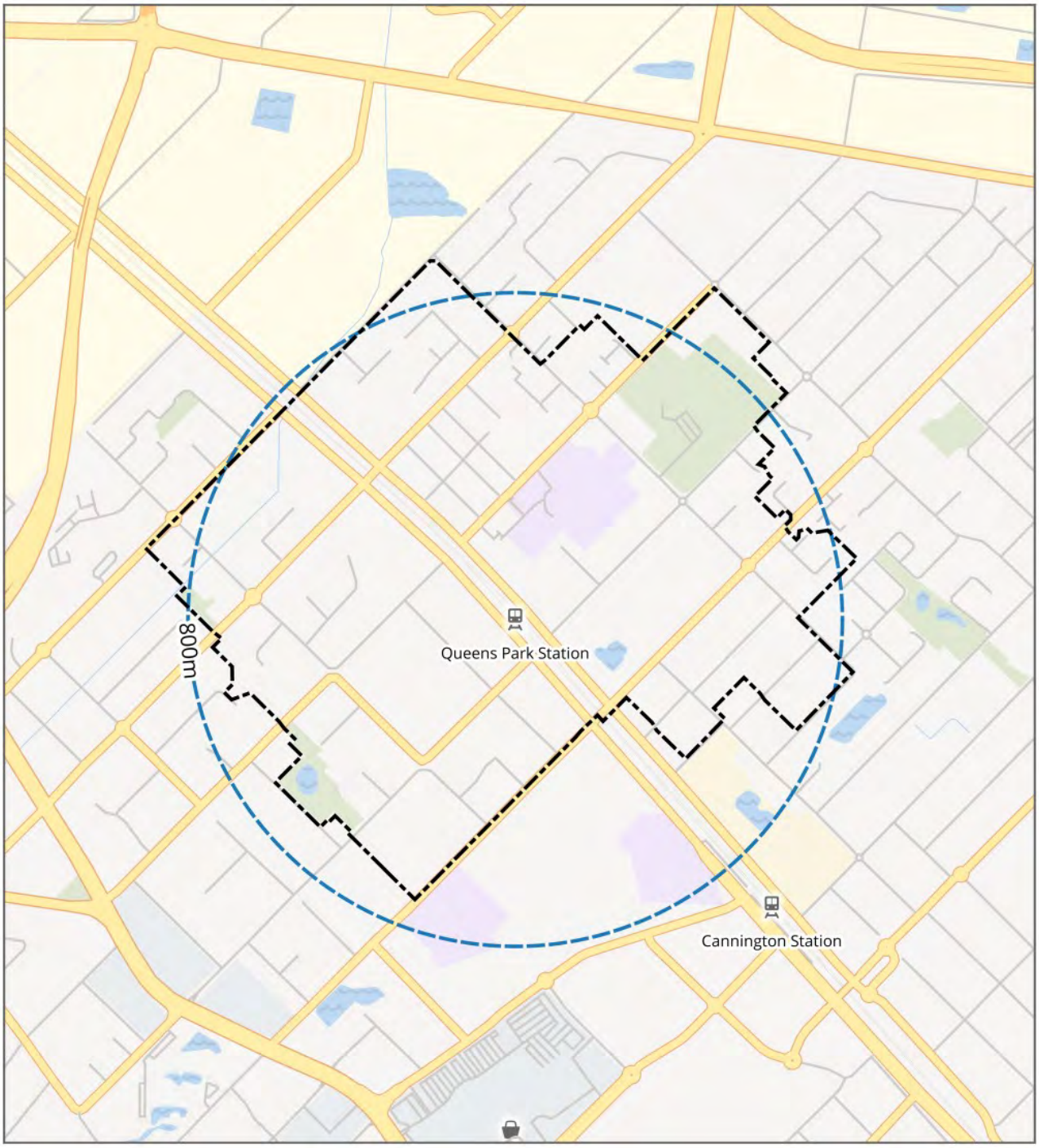
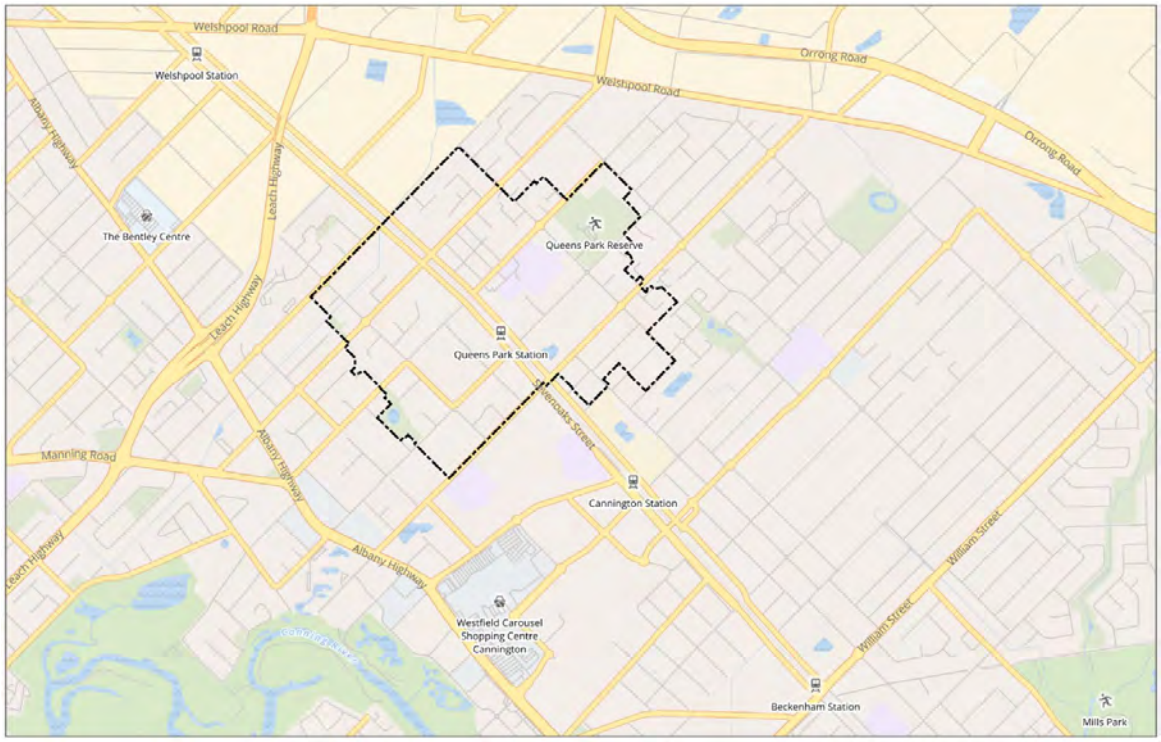


Figure 8: The location of the LSP site in relation to the area and region



The LSP area developed from a semi-rural character into a predominantly residential suburb that contains a mix of single, detached houses and semi-detached grouped dwellings. The original lots (generally around 2000 to 3000 square metres) have been subdivided into single and grouped dwellings. This has increased the density of dwellings in the suburb to around an R40 code (40 dwellings per hectare). However, there are still large areas of land that have not been subdivided and developed and retain a blighted character.

The initial focus for the Queens Park LSP is the train station and a small commercial centre around it. A neighbourhood sized supermarket, a small collection of offices / service businesses, delicatessen, newsagent, Cannington Leisureplex and its library provide for the daily needs of the surrounding area, act as a convenient alternative to the nearby regional shopping area of Cannington and are a focal point of the local community. The local IGA represents the core of the community as it has a high social function, where residents gather and where they are known to the supermarket staff by name. The local government is supportive of this neighbourhood character retail, which should be maintained and complemented. A tavern within this central area has recently been demolished and has developed into a group of town houses with commercial space fronting Railway Parade.

8.2 Area and land use

The area covered by the LSP comprises of a total of 154 hectares and the predominant land use is residential, followed by industrial and shopping (as per Figure 8).

The Queens Park LSP area encompasses an area located on either side of the Armadale/Thornlie railway line including parts of the suburbs of Cannington and Queens Park.

The LSP area is zoned Centre. The current population density is 21.89 persons per hectare.

The Queens Park LSP area is close to the Welshpool Industrial area and a relatively small amount of industrial development has occurred historically within the Cannington portion of the LSP area. A small number of light industrial uses are still in operation; however the majority of the land is suitable for redevelopment. The former Spicers Warehouse is currently being used as a storage facility, and there are also a collection of small workshops that contain vocational training activities (carpentry, bricklaying and associated activities).

The industrial functions in Cannington, whilst of low impact, are isolated from other industrial functions, located away from arterial or integrator roads and surrounded by residential development. This LSP will focus on facilitating redevelopment of those few old light industry sites which are classified as Urban in the MRS.

The major features of the area include Queens Park Reserve, Charles Treasure Park, Cannington Leisureplex and library, St Norbert College, St Joseph's Catholic Primary School and the Queens Park Train Station.

8.3 Demographics

The Queens Park LSP area accommodates more than 3,495 people and has a multi-cultural community, with a large proportion of residents being born overseas (only 60.8% of residents are Australian born).

The LSP area is split into two localities for the Census, being Queens Park to the east of the railway, and Cannington to the west of the railway. The settlement of the area dates from the mid-1800s. Population was minimal until the 1880s, with land used mainly for farms, market gardens, orchards and nurseries. Growth took place from the late 1800s into the early 1900s, spurred by the opening of the railway line. Significant residential development occurred from the post-war years. The population increased substantially from the mid-1990s as new dwellings were added to the area, including medium density housing.

The community contains a large Asian population, most being from south-east Asia and India. Queens Park contains a slightly higher than average proportion of the community in the workforce, which accounts for the population largely being working age.

The workforce tends to be employed in low paid jobs in the labour and service industries. 1,515 people living in Queens Park LSP area are employed, of which 59% are working full time and 29.3% part time. Between 2006 and 2011, the number of people employed in the area showed an increase of 500 persons and the number unemployed showed an increase of 105 persons.

The average household weekly income in Queens Park LSP area was $1,423 in 2011, which is slightly above the WA weekly average of $1,415. A high proportion of Queens Park households are rentals, at 35%, where the national average is 28% and the Perth metropolitan average is 27%. Like Queens Park, Cannington has a high proportion of working aged people in the labour and service professions. Rental accommodation in Cannington is very high, at 45% of the total housing stock. The average weekly income for Cannington residents is lower than Queens Park at $794 per week.

The project area is therefore a relatively low socio-economic suburb comprising of many migrant households. The quality of the urban form to date has catered for this market, with many low cost grouped dwelling developments being constructed. The location of the project area in relation to tertiary education facilities and high rate of rental properties also suggests a high proportion of shared student households. This would also account for the relatively low weekly household income in Cannington.

The titles ownership is in Appendix 1.

8.4 Dwelling Target

The Queens Park LSP area represents a strategic area that would leverage existing infrastructure and amenity in order to improve the sustainability of the local government.

The dwelling target will be high in the core and medium to high in the Residential Precinct to support the retail activity in the core.

There are currently 1575 dwellings in the area. This LSP provides for a total of approximately 3400 dwelling units, however, the number may vary according to the development industry response.

The expected increase in dwellings was calculated by determining what the maximum yield would be under the proposed densities based on the available land within the LSP and subtracting the existing dwelling stock from this number. For the purposes of calculating the total number of dwellings, ancillary dwellings are not included in the total dwelling yield.

The assessment of the potential development yield based on an increase in density was first considered however demolition activity, the current age of dwelling stock and where amalgamation might occur was also taken into account in this assessment.

Population forecasts for the local government suggest that it will have a growing aged population and a higher proportion of young couples without children, resulting in smaller household sizes. The housing types available to the market will need to cater for this demographic, and also provide more affordable housing options. Strategic centres and corridors such as areas around train stations are attractive locations for people to live.

The local government will encourage ageing in place and affordable housing wherever possible. In this context, “Clause 4 – Development Requirements” has provisions for adaptable dwellings. The City’s Local Housing Strategy discusses affordable and accessible dwellings in this context.

8.5 Consultation Process

The consultation process has focussed on local residents, land owners, local businesses and institutions such the St. Norberts College and St. Joseph Catholic Primary School. Consultation was designed to obtain public feedback on analysis, alternatives and decisions. Through this ongoing process the local government will keep the community informed, acknowledge the concerns and provide feedback when required.

The first formal workshop in 2010 sought to understand what the local issues were, what issues needed to be addressed and enhancement opportunities. The second workshop in 2011 tested ideas within the preliminary design proposals. The third workshop in 2013 was to present to the community the local government's intention of improvement and the presentation of design ideas for streetscape projects.

The feedback from the consultation relating to intensification of development and the shift of use from 'light industries' to 'residential' was generally positive.

Some of the concerns raised through the extensive consultation helped shape this LSP. These concerns include:

- Promote surveillance of the street;
- Include more lighting and trees;
- Encourage community interaction;
- Traffic intensification, parking and railway crossings;
- Avoid fencing and barriers;
- Promote businesses and retail; and
- Deliver quality design.

The LSP was developed in accordance with the Strategic Community Plan which identifies strong community aspirations for the built environment, for community prosperity and for development across the local government. The LSP investigates and recommends mechanisms which will facilitate the following aspirations:

Built Environment – Community goals:

- Protect and enhance the amenity and lifestyle within the local government; and
- Provide a range of housing for different lifestyles.

Prosperity – Community goal:

- Provide greater variety of activities, entertainment and shopping.

9 Planning framework

9.1 Zoning and reservations

Under the provisions of the Metropolitan Region Scheme (MRS) the LSP area is zoned 'Urban'. Development in the LSP area is currently controlled by three schemes:

- Town Planning Scheme 17A (Cannington Lakes Guided Development Scheme) is a guided development scheme that provides for coordinated development of the area west of the railway line;
- Town Planning Scheme 21 (Queens Park/East Cannington Guided Development Scheme) provides for coordinated development of the Queens Park area east of the railway line; and
- Local Planning Scheme No. 42: the local government wide district local planning scheme for the City of Canning, establishing zones, reserves and general development standards.

9.2 Strategies and Policies

Directions 2031 and Beyond (Directions 2031) is a strategic plan and spatial framework for the metropolitan Perth and Peel region. Directions 2031 establishes a vision for future urban growth, addressing population growth, land use patterns with a view to the medium and long term population increase of more than 35%, potentially reaching 3.5 million people in Perth and Peel in 2056. It proposes a strong role for urban infill and consolidation to accommodate this increase in population, and identifies the importance of inner and middle suburbs in contributing to meeting this demand.

Delivering Directions 2031 – Annual Report-Card 2013 (WAPC, 2013) highlights a number of achievements by State Government agencies, local government and the planning and development industry that have contributed to the ongoing implementation of Directions 2031. It aims to assess the impact and facilitate the future development proposed to accommodate a local government of 3.5 million people. It states a target of 11,440 dwelling yield for the City of Canning.

Perth and Peel @3.5million

The suite includes the over-arching Perth and Peel @3.5million report and four draft planning frameworks for the Central, North-West, North-East and South Metropolitan Peel sub-regions.

These documents will guide the sustainable growth of the Perth and Peel Region to accommodate a population of 3.5 million people. Consistent with the principles of Directions 2031, the Draft Frameworks focus on the efficient use of existing and future urban land and infrastructure, the provision of employment opportunities close to population centres and the protection of areas of environmental significance and basic raw material sources.

Draft Central Metropolitan Perth Sub-Regional Strategy 2016 (CMPSRS)

The draft framework focuses on achieving higher infill and densities of residential and employment development within the existing built environment by making better use of established infrastructure.

It advocates for greater use of activity centres, transport corridors and station precincts to support a diversity of higher-density accommodation that is close to jobs and amenities, while ensuring urban development does not encroach on existing industrial centres and the green network.

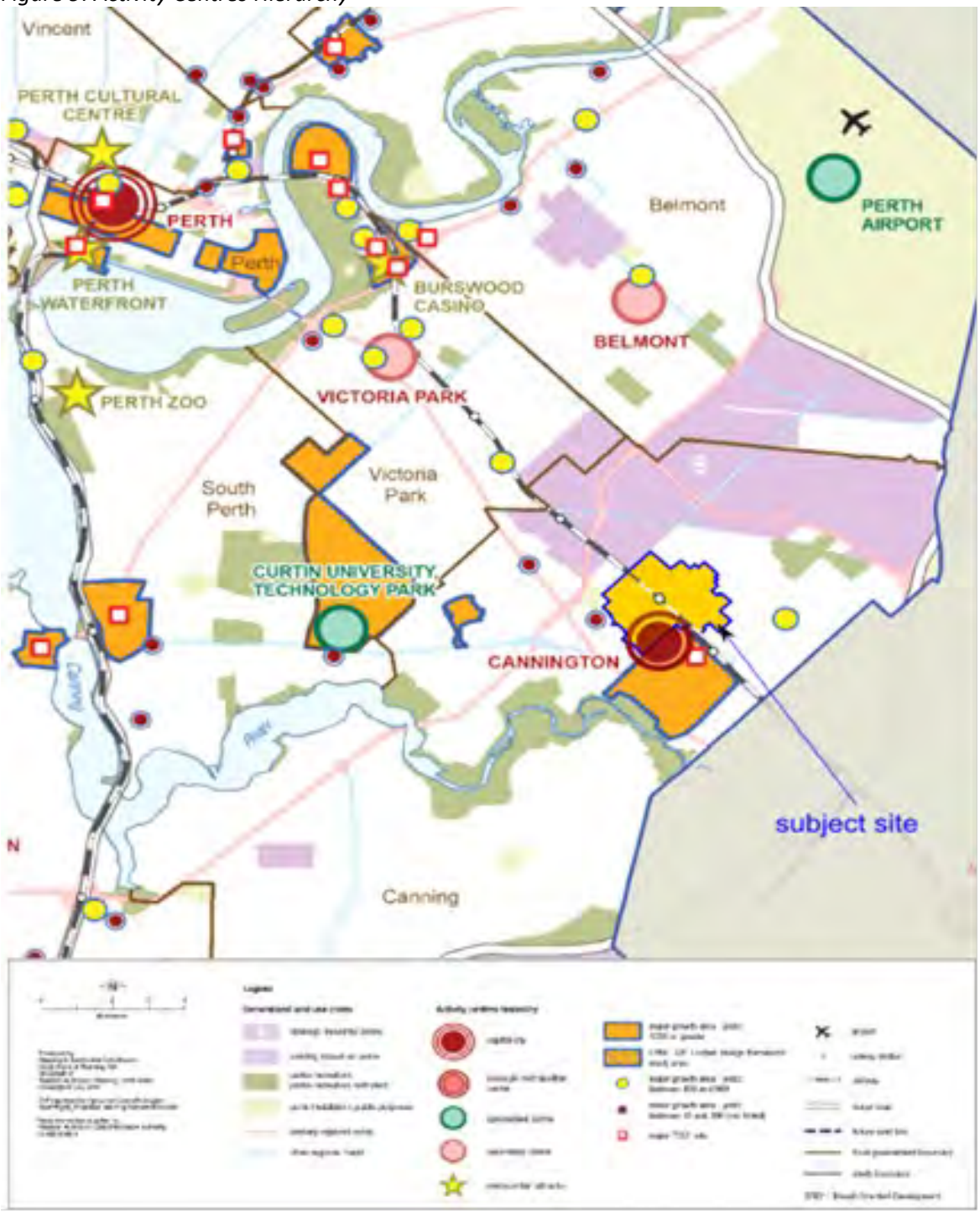
It identifies Queens Park as a 'Station Precinct' in Sections 4.4 and 4.5. 'Station Precincts' are areas around train stations and other major public transport infrastructure have been identified as having the potential to accommodate increased development.

The City of Canning development of this LSP will help deliver transit oriented mixed use development and medium-rise higher density housing for Queens Park. The LSP provides for both medium and high density development with anticipated dwelling yield of approximately 2,550 dwellings, calculated at 60% efficiency rate, thus contributing to the infill development requirements of the CMPSRS in this regard.

State Planning Policy No.4.2 (SPP4.2): Activity Centres for Perth and Peel - Figure 9 specifies broad planning requirements for the planning and development of new activity centres and the redevelopment and renewal of existing centres in Perth and Peel, identifying targets according to each centre hierarchy. It is mainly concerned with the distribution, function, broad land use and urban design criteria of activity centres, and with coordinating their land use and infrastructure planning. Also, the basic walkable catchments and target densities are listed in SPP4.2.

Liveable Neighbourhoods addresses both strategic and operational aspects of structure planning and subdivision development in a framework. Element 7 outlines in some detail the types of mixed use walkable activity centres envisaged under Liveable Neighbourhoods.

Figure 9: Activity Centres Hierarchy



State Planning Policy No.3 (SPP3): Urban Growth and Settlement applies to the whole of the State in promoting sustainable and well planned settlement patterns that have regard to community needs and are responsive to environmental conditions. The objectives and principles of Directions 2031 and Liveable Neighbourhoods are enshrined in this Policy.

SPP3 recognises that a majority of new development in metropolitan Perth has been in the form of low density suburban growth. This form of development intensifies pressure on valuable land and water resources; imposes costs in the provision of infrastructure and services; increases the dependence on private cars; and creates potential inequalities for those living in the outer suburbs where job opportunities and services are limited.

To promote growth that is sustainable, equitable and liveable, the LSP encourages a more consolidated urban form. In this regard, the LSP will enable:

- The creation of a compact, cohesive and walkable community with a strong emphasis on high quality streets and pedestrianism;
- A diversity of housing types and lot sizes (including medium and high densities);
- A mixed-use community that includes retail, education and community uses within easy walking distance; and
- The connection between new development and the train station.

Development Control Policy 1.6 Planning to Support Transit Use and Transit Oriented Development

This policy seeks to maximise the benefits to the community of an effective and well used public transit system by promoting planning and development outcomes that will support and sustain public transport use, and which will achieve the more effective integration of land use and public transport infrastructure.

City of Canning Local Housing Strategy

The City of Canning Local Housing Strategy outlines the future direction for residential development over the next 10 years. The Local Housing Strategy draws on community aspirations identified in the Strategic Community Plan, and outlines locations for residential intensification consistent with Directions 2031. The specific elements of the Local Housing Strategy have been developed from detailed spatial and housing profile analysis conducted by the Curtin University Sustainability Policy Institute, and culminating in the 2012 City of Canning Local Housing Study.

The Local Housing Strategy, adopted by Council in October 2014, predominantly focuses residential intensification in locations where there is recognised redevelopment potential, and those served by high quality public transport. The Local Housing Strategy also explores the introduction of greater housing diversity and sustainability into the local government of Canning. It is envisaged that the Local Housing Strategy will deliver approximately 7,900 additional dwellings into the City of Canning, excluding the Queens Park and Bentley Regeneration Precinct Structure Plan and Canning City Centre Activity Centre Plan areas.

State Planning Policy 5.1 (SPP5.1) – Land use planning in the vicinity of Perth Airport and Aircraft Noise Insulation for Residential Development in the Vicinity of Perth Airport, 2004

SPP5.1 applies to land in the vicinity of Perth Airport, which is, or may in the future, be affected by aircraft noise. SPP5.1 applies to land above the 20 ANEF (Australian Noise Exposure Forecast) noise contour. SPP5.1 impacts on this LSP as it aims to protect Perth Airport from what is considered an unreasonable encroachment by incompatible (noise sensitive) development. Clause 4.3.2 restricts residential development to R20, however this LSP is based on the exemption that allows density greater than R20 "where there is a strategic need for more consolidated development and a higher density coding is desirable to facilitate redevelopment or infill development of an existing residential area" (Clause 5.3.2).

State Planning Policy 5.4 "Road and Rail Transport Noise and Freight Considerations in Land Use Planning", 2009.

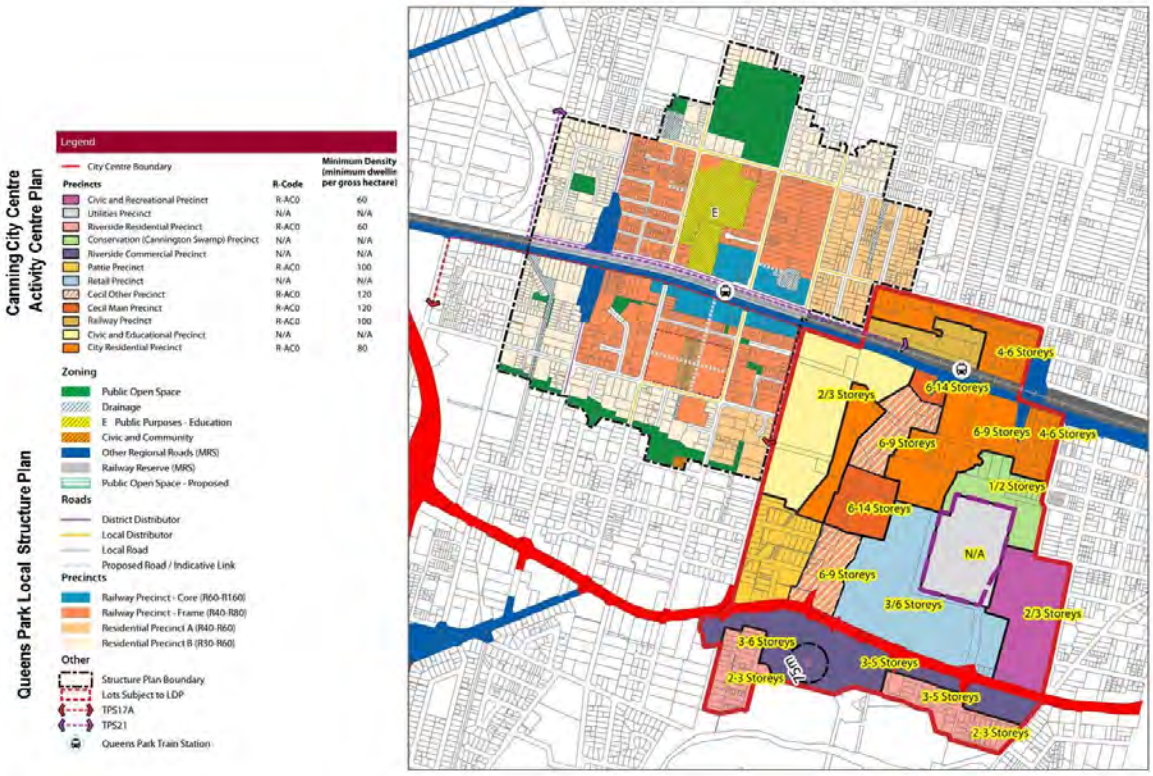
Lots facing the railway line require noise attenuation features and may also require vibration isolation design and notification on titles to ensure compliance with the internal LAmax criteria of 50 dB(A) within bedrooms and 55 dB(A) within living areas construction. In order to achieve the noise limits, special treatment to sleeping and living spaces could be applied to windows, doors, walls, roofs and eaves.

Conditions of approval of subdivisions may refer to the need for a noise management plan, but more likely the undertaking of components of these plans such as walking distances, noise bunds or noise walls. In this case, the preparation of a noise management plan would need to be signed off by the local government.

Canning City Centre Activity Centre Plan – Queens Park is immediately adjacent to the Canning City Centre where future development is guided by an activity centre plan. The Canning City Centre Activity Centre Plan vision is to produce a city centre that brings new energy to the south east corridor, building on its strengths by creating connections down Cecil Avenue through three squares, from Cannington Train Station to the Canning River. Cecil Avenue will be transformed into a main street, with alfresco dining, generous shaded footpaths, bicycle lanes and improved public transport. Cannington Train Station will support multi-storey residential, office and convenience shopping and is close to Cannington Leisureplex. The vision will create more diversity including retail, recreation, entertainment, housing and offices and provide more opportunities for work and play.

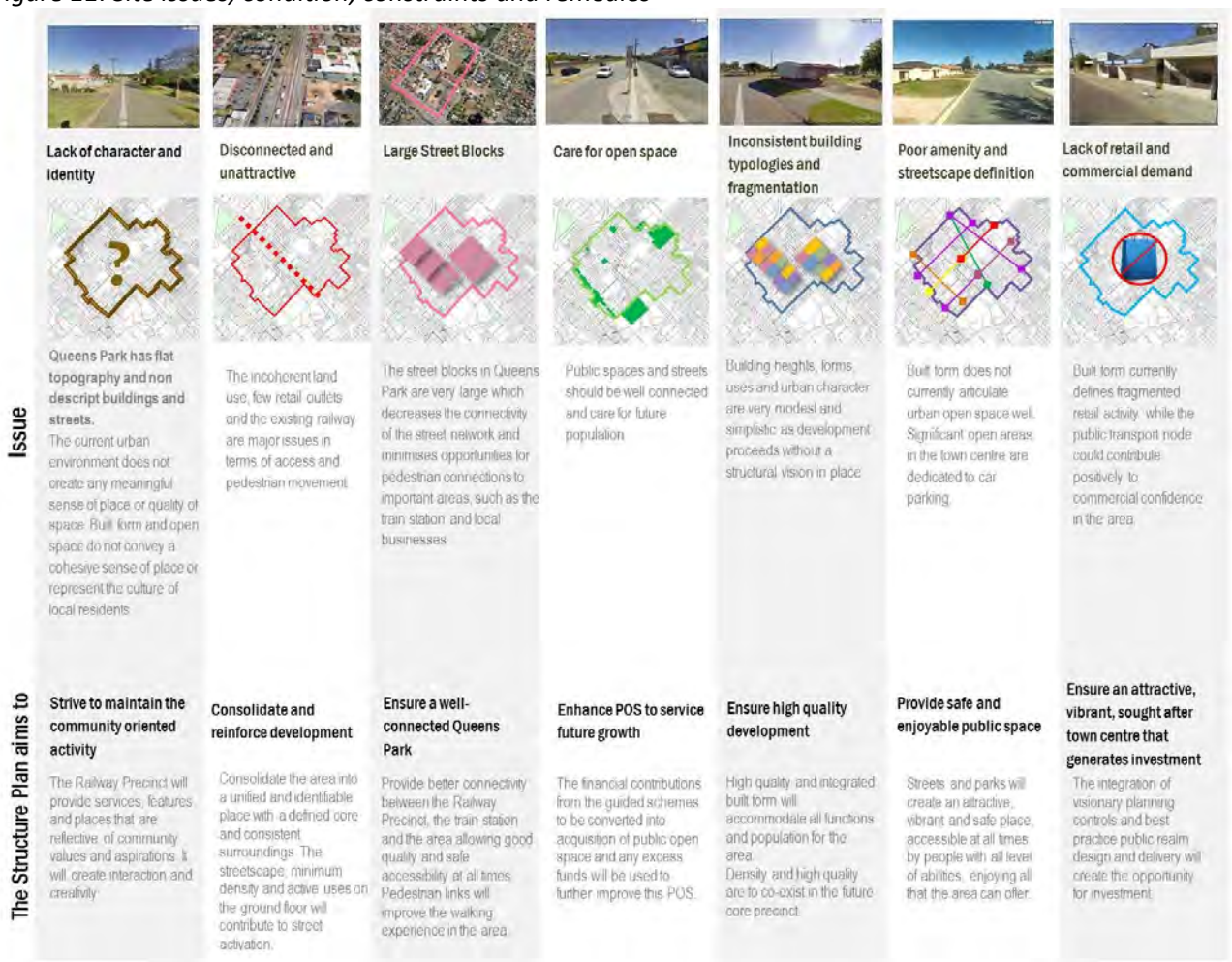
The Queens Park LSP represents a minor TOD (Transit Oriented Development) next to the Canning City Centre Activity Centre Plan area. They will be complimentary to each other and contribute to the extension of development along the railway line.

Figure 10: The integration between Queens Park LSP and Canning City Centre Activity Centre Plan



The table below shows an analysis of context, constraints and potential impacts. It also indicates how the LSP is to be integrated into the surrounding area.

Figure 11: Site issues, condition, constraints and remedies



10 Site conditions and constraints

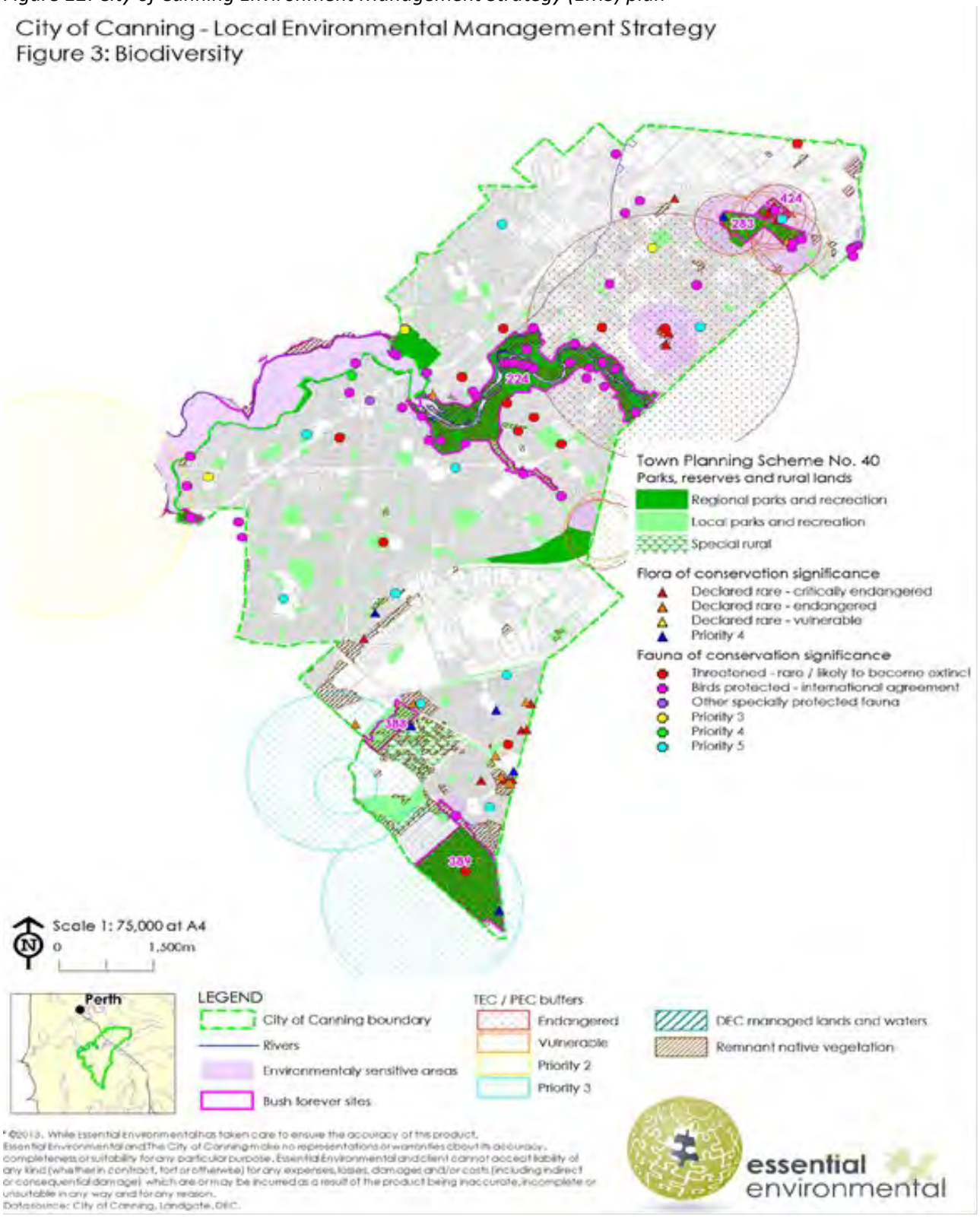
10.1 Biodiversity and natural area assets

The LSP area is highly urbanised with virtually no remnant vegetation. Queens Park Bushland is located in the Queens Park Regional Open Space. It is listed as Bush Forever Site number 283, identified on the City of Canning Environment Management Strategy (EMS).

The Department of Parks and Wildlife lists a number of threatened fauna and flora species in the local government of Canning which are summarised in the City of Canning EMS. Two of those places are in the LSP area: Queens Park Reserve (listed as 'Priority 3') and Charles Treasure Park (listed as 'Protected under international agreement' due to the presence of birds).

A number of future considerations came out of the EMS and the local government's Natural Areas Team is preparing work plans outlining long term and short term goals to describe the ecological value of all sites, including those sites mentioned above. The plans include current and future projects and conservation actions.

Figure 12: City of Canning Environment Management Strategy (EMS) plan



10.1.1 Biodiversity Strategy

The Local Biodiversity Strategy (2019) aims to protect and enhance the biodiversity assets within the City of Canning. The Strategy identifies local biodiversity conservation priorities considering the regional and local context and establishes specific objectives and targets for protection and management of biodiversity assets. With only 7% of the pre-European extent of native vegetation remaining in the local government, the focus of conservation efforts are on establishing adequate mechanisms to protect all high conservation value vegetation and other natural areas, to increase their long term viability by providing buffers, linking them to other natural areas through restoration and revegetation and actively managing threatening processes. Additional biodiversity links are identified and suggested to increase the overall percentage of natural areas within the local government.

While no native vegetation is mapped within the LSP area, it is within a designated Water Quality Improvement Plan Catchment (Canning Plain). Management of water runoff from the study area to improve water quality in the wider catchment also provides an opportunity to improve connectivity between conservation significance natural areas outside the Structure Plan area. More importantly, the Strategy identifies opportunities for establishment of ecological linkages across the City Centre and the Queens Park LSP areas. The Strategy proposes to increase vegetation cover using locally indigenous species. It aims to improved environmental outcomes within the Structure Plan area and outside. The benefits are expected to be:

- Increased vegetation within the sub catchment will contribute to improved water quality in the catchment and in the Canning River, a major biodiversity asset in the local government and the Region.
- Increased vegetation along local ecological linkages will facilitate connectivity between high conservation value areas identified outside the LSP area. One of the proposed local linkages is a continuation of a local linkage identified in the City of Belmont (Collective Local Biodiversity Strategy 2010) and joins a local linkage within the City Centre Activity Centre Plan. The second local linkage connects a high conservation value natural area outside the study area to the Queens Park Bushland (Bush Forever Area 283) and to the Canning River. While the long term protection of vegetation on this site (corner of Andrea Way and Hamilton Street, Queens Park) is not yet secured, the results of local natural area prioritisation undertaken for the local government's local biodiversity strategy identify numerous conservation criteria being met at the site.

To support connectivity between the high conservation value areas outside the Structure Plan area, the following considerations should be made when planning for POS and street scaping upgrades (see Figure 12).

- On all existing POS lands and lands zoned Private Community Purposes (e.g. Private Clubs and Institutions), establish and provide incentives to establish vegetation within portions of land not actively used for the designated purpose.
- Provide incentives to private and commercial development within the buffer lines of the proposed local linkages, to increase vegetation cover (e.g. by replacing lawns with local groundcovers, easy to maintain small shrubs and mulch). Increase tree canopy within streetscapes.

- Upgrade drain lines and drainage sumps to create 'living streams' and provide new opportunities for walking/cycling.

10.2 Sustainability Policy

The City of Canning revised Sustainability Policy was adopted in June 2019. The policy defines sustainability as:

"…The City of Canning commits to striving for leadership in sustainability at a local, national and international level. The City aspires to go beyond best practice and look towards becoming a sustaining organisation for the community and an inspiration for the Western Australian local government sector."

The application of these principles in this Structure Plan relate to environmental performance through built form controls, protection and enhancement of biodiversity, provision of high quality public open space and community services and facilities and ensuring safety and wellbeing as a key design consideration for developments.

10.3 Landform and soils

The Department of Mines and Petroleum environmental geology mapping of Canning and surrounds describes the soils of the LSP area as:

- Bassendean sands – light grey at surface yellow at depth (S8)
- Thin Bassendean Sand over Guildford Formation – thin layer of sand over clays (S10)
- Muchea Limestone – white-cream limestone (LS5)

The majority of the Queens Park LSP area comprises a thin layer of sandy soils over clay (S10). The north of the Queens Park LSP plan area abuts a pocket of swampy soils in the form of peaty clays. However, the northern half of Queens Park itself contains areas with deeper sand (S8) and the southern half is situated over limestone (LS5).

The sandy and limestone soils described above generally have moderate or high permeability and are therefore expected to achieve good infiltration rates. However, areas comprising more silty and clayey soils typically have lower infiltration rates and may not be suitable for onsite drainage.

The LSP area has a moderate to low risk of acid sulfate soils occurring within 3 metres of the natural surface in the vast majority of its land (soils and sediments that contain iron sulphides).

The low risk acid sulfate soils are harmless when left in a waterlogged, undisturbed environment. However, when exposed to air, through drainage or excavation, the iron sulfides in the soil react with oxygen and water to produce iron compounds and sulfuric acid. This acid can release other substances, including heavy metals, from the soil into the surrounding environment and waterways (DEC, 2012a).

Contamination investigations and possible remediation may be required for industrial sites.

10.4 Groundwater and surface water

The Queens Park LSP area is located in an area of predominantly sandy soils with shallow groundwater, which imposes restrictions in terms of land coverage and drainage impacts for current and future developments.

There is an existing drainage system which actively manages stormwater and groundwater levels throughout the area, typically resulting in a net export of shallow groundwater to the Canning River throughout the year. This export of groundwater, together with the nutrients and other contaminants have contributed to poor water quality in the Swan Canning River system and in recent years have been the focus of efforts by the Swan River Trust and others to improve drainage water quality.

There are three major groundwater aquifers present within the LSP area; these are (in order of increasing depth):

- Superficial (unconfined)
- Leederville (confined)
- Yarragadee (confined)

Locally, the Superficial and Leederville Aquifers are used for irrigation of Public Open Space under the local government of Canning's consolidated licenses and a separate license is held by the Catholic Church for irrigation of St Norbert College playing fields.

A series of open drains run through the LSP area, denoting the presence of a high water table. These drains generally run at the rear of properties, are poorly maintained and create opportunities for anti-social behaviour. At present, there is no evidence of Water Sensitive Urban Design (WSUD) functions being implemented and this LSP represents a major opportunity to introduce nature into the built environment. Increasing native vegetation and providing adjacent properties with a beautiful, unique living stream along the back boundary would be suitable for the area. Once the drains are appropriately improved and landscaped, the houses and lots can open on to them with permeable fencing and living areas.

With the exception of Queens Park compensating basin, each of the compensating basins is 'wet' throughout the year which means that they intercept with the local superficial groundwater aquifer. Although the Queens Park compensating basin is not always wet, groundwater is close to the surface in the basin and it is likely that groundwater is intercepted throughout winter and much of spring. There are three surface water catchments present within the boundaries of the LSP area, these are:

- Cockram Street
- Wharf Street
- Mills Street

Surface water features within the LSP area include three short sections of open drainage and five Water Corporation compensating basins as follows:

- Cockram Street catchment

  - Fitzroy Street open drain
  - Centre Street compensating basin
  - Queens Park compensating basin
  - Railway Parade compensating basin
- Wharf Street catchment
  - Mallard Way open drain
  - Manly St compensating basin
  - Tarun Court compensating basin
- Mills Street catchment
  - Mills Street open drain

10.5 Heritage

Any government agency, organisation or individual who is the proponent for strategic or statutory planning documents, construction of individual developments or engaged in any ground-disturbing activities should seek advice from the Department of Aboriginal Affairs (DAA) on their requirements and obligations under the Aboriginal Heritage Act, and any other investigations that may be required.

A preliminary search of the Aboriginal heritage register has been undertaken and returned one record of a heritage site classified as 'insufficient information' (ID 3633) within the Queens Park LSP area, identified in Figure 13.

Figure 13: Aboriginal register site 3633

The site was listed in 1999 as “artefacts/scatter”; however, there is no information about restrictions or protection requirements.

11 Land Use and Subdivision Requirements

11.1 Land Use and Public Open Space (POS)

Regardless of the location and function, the POS in the LSP area will represent more than 11% of the area.

A dispersed network of open space exists in Queens Park LSP area as a consequence of earlier subdivision. Much of this POS is located to the south west of the railway reserve and this is expressed as a linear POS in conjunction with an easement for high voltage power lines and drainage infrastructure. A large area of open space is also located to the north east of the railway line that provides an active recreation function.

Figure 14 shows existing building footprints (as at 2013) in black and highlights the dispersed form of development around the train station as well as the propensity of grouped dwelling development.

The POS in the area is largely associated with the schools (sports ovals) or district level playing fields, and also the linear open space corresponding to the electricity transmission corridor. A series of open drains are considered to be a liability to the visual and spatial quality of Queens Park, being areas that may attract anti-social behaviour; these drains are unsightly and may collect rubbish. However, there is opportunity, through development alongside the drains, to rejuvenate these items of infrastructure such that they add to the amenity and character of Queens Park. This would be required to be carried out in conjunction with the Water Corporation who own and manage these drains.

The following parks make up the POS within the LSP area:

Table 6: POS within Queens Park LSP area

POS	Area (ha)
Queens Park Reserve	8.6
Charles Treasure Park	5.18
Dealy Park	0.2
POS within TPS 17A	0.76
Hobby Retreat (TPS 21)	0.19
Yalambee Way POS (TPS 21)	0.87
Treasure road POS (TPS 21)	0.09
POS along drains + 5% of light industry sites	0.58
TOTAL	**16.55 (10.6% total area)**

Figure 14: Existing footprint in the LSP area

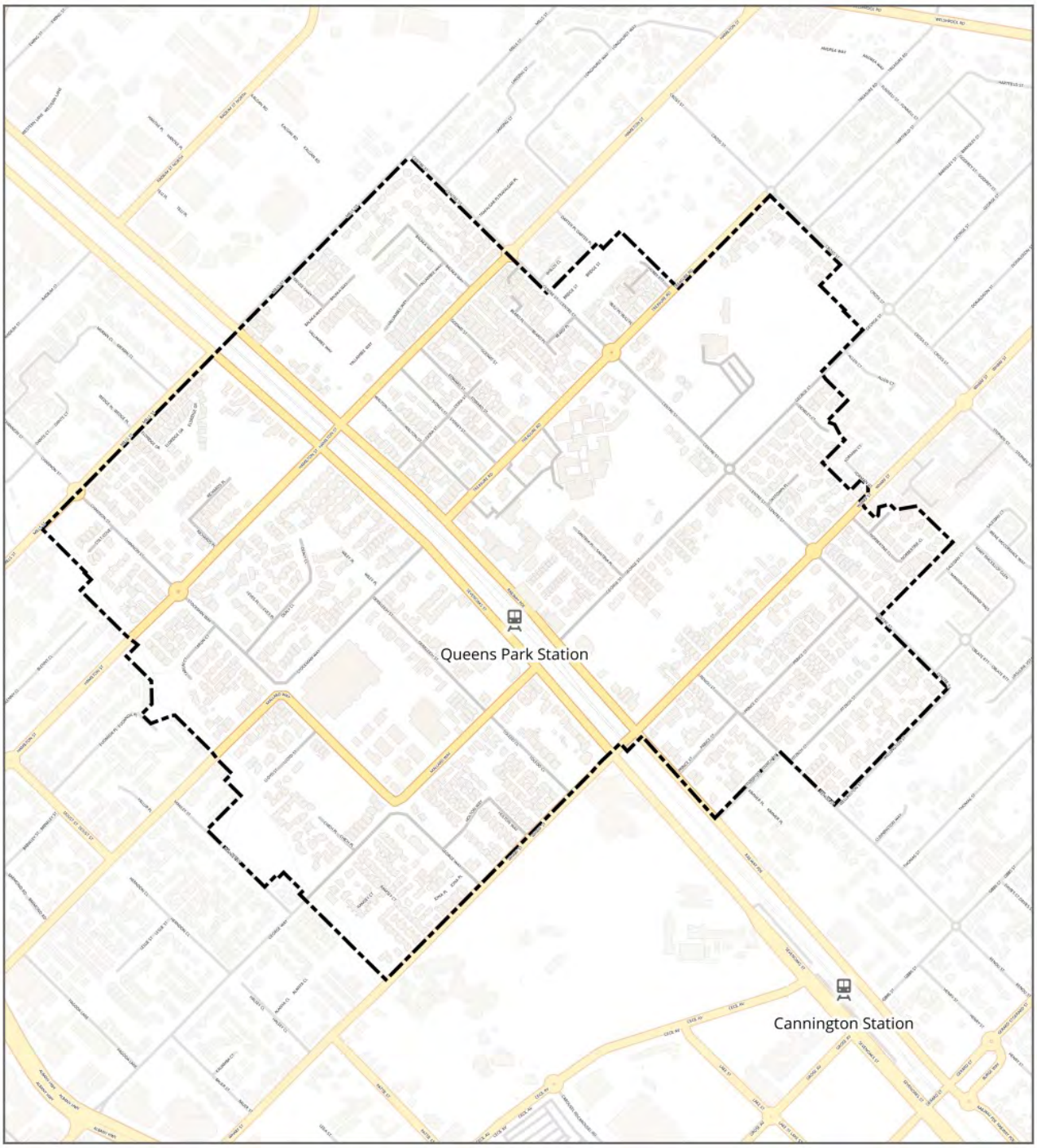
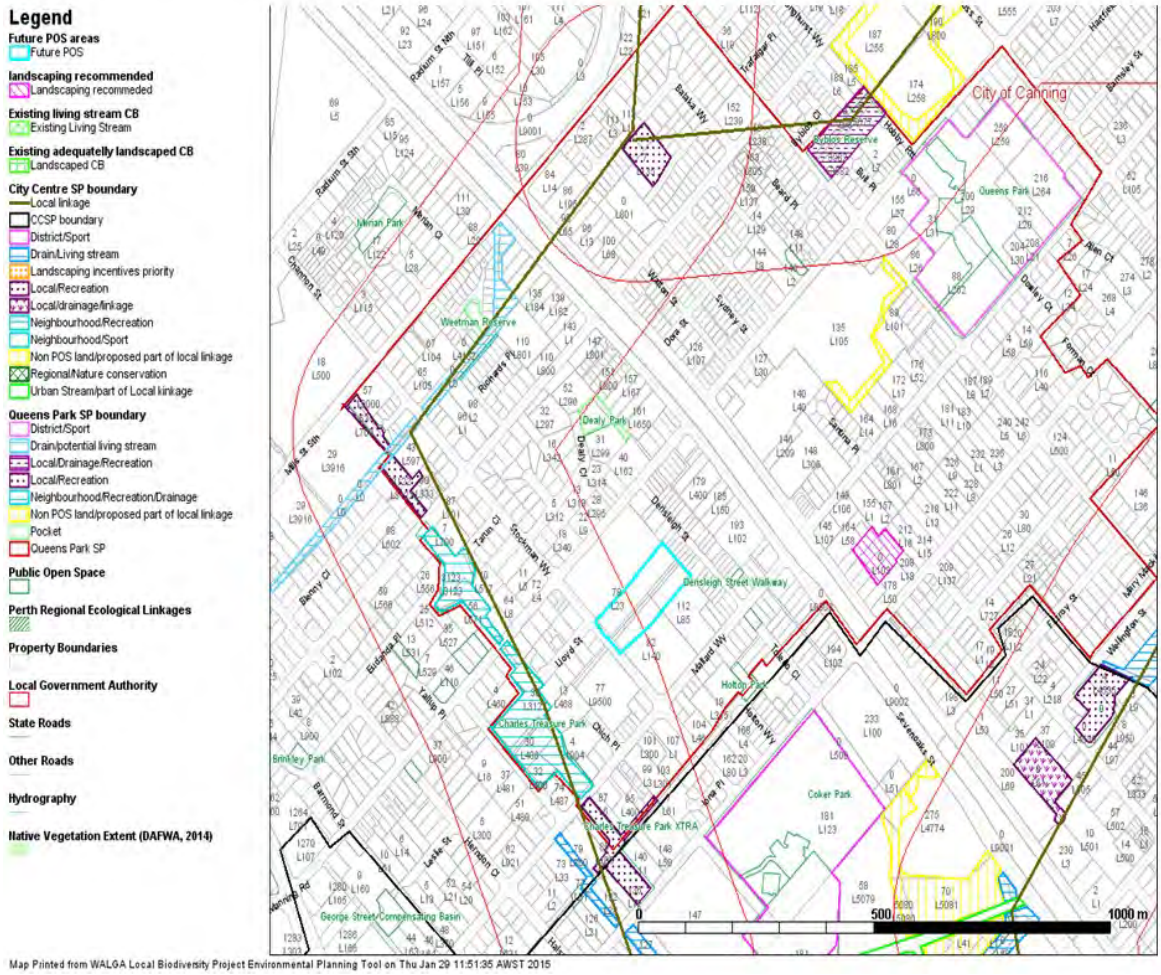


Figure 15: POS and reserve distribution



There is no POS associated with the train station, however the streetscape design for the neighbourhood street area is being shaped to provide for an outstanding urban realm to support the retail and community activities in the area.

- **Queens Park Reserve** (8.5 hectares) is an important 'green space' for the area and, more broadly, for the local government. It includes an Australian Rules football grassed area, central synthetic cricket wickets, 2 synthetic cricket practice nets, gazebo, playground, change rooms with kiosk, floodlights and parking, all suitable for football, cricket, little athletics, teeball, softball, fairs, fetes and school carnivals.
- **Cunnington Park** (approximately 1.0 hectare) parks project completed in 2015.
- **Mills Reserve** is a drainage corridor occupied by a trapezoidal drain. The reserve is generally narrow with limited opportunity for improvements;
- **Weetman Park** (0.16 hectares) is a pocket park adjacent to the Mills Street Drain and has some opportunity for 'water sensitive' integration with the Mills Street Drain, which is under the management of the Water Corporation;
- **Charles Treasure Park** (5.18 hectares) is a well-used linear park. Work in recent years has included improvements of compensating basins to strip nutrients and improve water quality and, with improvements of amenity in the vicinity of the basins both the environmental and visual quality of the park has been improved. In addition, lighting was upgraded in 2012 and the park is more accessible and safer for night time use. The result is

that the park does get used more frequently in the evening. There is opportunity for further work in the future, such as the improvement of play areas, provision of barbeques and the introduction of exercise equipment along the pathways;

- **'Ancillary' Open Space** – Access to school grounds, whether private or public schools, may be restricted due to safety concerns that the school management may have. From that perspective school grounds are not considered as 'Public' open space. Nevertheless, access for the community, whether broadly accessible or more limited, may be negotiated with the schools. However, 'visual access' to the grounds can provide some benefit to the broader community as studies have shown that visual access to the green environment has mental health benefits.

As this LSP provides for increased density in accordance with Liveable Neighbourhoods, the local government may consider the following:

- Improve the quality and functionality of existing open spaces;
- Improve lines of access to and from existing spaces – make them legible and universally accessible and ensure, at early planning stages, the application of Crime Prevention through Environmental Design (CPTED) principles are considered;
- Establishing a community garden. A potential site of 2,000m^2 has been identified in the Queens Park Reserve, as per Figure 16;
- Ensure that sufficient POS, in various forms including the future POS that will be provided in the current light industry sites, is integrated into the LSP and that it responds appropriately to the anticipated demographic needs of the community; and
- Ensure the protection of the larger recreation facilities for formal sports such as Queens Park Reserve and Coker Park (acknowledging that Coker Park is outside of the LSP area).

Figure 16: Potential site for a community garden

11.2 Planting palettes

The planting palettes for the POS and streetscape will help create an identity that is unique to Queens Park. Using a variety of species that are endemic to the area, native to WA and even exotics that thrive in coastal sandy soils will help create a colourful softness to the urban setting. Street trees particularly are perceived as being important and integral to creating a 'liveable' environment as they bring many social, environmental and economic benefits to the community.

The local government is currently developing a streetscape masterplan for the Railway Precinct. This will guide the species as well as the pattern of trees that will be utilised within the Queens Park LSP area. Correct planting techniques, ongoing maintenance and management of street trees are an important consideration in a successful street tree programme. In this regard, the following principles will be followed:

- **Urban native mix / planted roundabouts –** Predominantly drought tolerant native species and selected drought tolerant exotic species and bold interesting planting patterns
- **Parkland native mix** – Based on water efficient and adaptable principles choose decorative planting which are predominantly drought tolerant native species with carefully selected drought tolerant exotic species.
- **Green corridors / verges –** Predominantly drought tolerant native species which are bird attracting. Combination of low to medium sized shrubs and ground covers. Development of verge landscaping is to be in accordance with the local government's Verge Policy.
- **Swales, retention basin and rain gardens –** Predominantly native species adapted to both wet and dry conditions. Simple, bold planting patterns.

11.3 Current built form

The proposed configuration for the Queens Park LSP area may change the current scenario as far as it would establish minimum densities, minimised setbacks and street activation.

Buildings throughout Queens Park are of a domestic scale. They are generally residential in nature, most having been constructed between the 1960s and current day. The predominant height throughout Queens Park is single storey. For this reason, and because of the flat topography, there are no visual cues as to important nodes within Queens Park. Whilst the buildings are generally sound, they are modest in construction and quality. Around the train station, where there is commercial development, building quality is generally poor. Newer buildings tend to be set back from the street and are designed to support vehicle movement and accommodation. The quality of the centre suffers because of an inconsistency of form, a sparseness and low intensity of development.

The establishment of a mixed use area in the neighbourhood activity centre will provide for a shift from vehicle to pedestrian oriented environment.

11.4 Landmark Sites

The LSP identifies as landmarks or gateway sites the main links and specific places near the train station. Development adjacent to landmark sites will have special guidance.

Figure 17: Landmark sites

Developments facing landmark or gateway sites are to be developed in a manner that will facilitate way-finding and reflect the natural hierarchy and land uses of the LSP.

11.5 "Development Requirements" analysis

"Clause 4 –Development Requirements" provides the built form for the Queens Park LSP area.

The objectives for each precinct outline the desired outcomes to be achieved by the LSP. The objectives have been grouped under the categories of land use; movement, access and parking; built form; streetscape character; landscaping and public realm; service and storage; and stormwater management.

The objectives are not listed in any priority or ranked order, but need to be read as a whole and in each of the precincts and understood as a complete package.

Developments are required to meet a performance based approach by addressing all the requirements.

The "Development Requirements" are to be read in conjunction with the following statutory documents:

- State Planning Policy 7.3 (Vol 1 and 2);
- Local Planning Scheme No. 42;
- Town Planning Scheme No. 21;

- Town Planning Scheme No. 17A;
- Local government's Local Planning Policies
- The Building Code of Australia.

The diagrams and drawings contained within the guidelines are intended as a guide only and are not provided to define the final built form on any particular lot within the LSP area. Developments are to be designed to meet specific site conditions.

11.5.1 The Precincts

There are three precincts in this LSP, the Railway Precinct (Core and Frame) and the Residential Precinct. Each precinct makes an important contribution to the overall Queens Park LSP vision. However, each precinct will serve a different function and this will be reflected in the future built form and land use identified for each of them. This document provides an estimate of the likely dwellings; retail and office units for the precinct based on land use demand and built form capacity.

The Railway Precinct requirements provide a framework for the major changes proposed in the area including the interface with properties and the proposed links. The intent of the precinct is to give a combined overview of features, projects and opportunities for the precinct. This will:

- assist developers in preparing a design response and ensure new development contributes to the precinct vision;
- introduce higher density in the 400 metre area around the train station; and
- assist in determining future public realm improvements and capital works.

The Residential Precinct requirements seek to provide guidance to developers to ensure that a quality built form is achieved within the context of the existing Town Planning Schemes 17A and 21 and support the transition toward higher intensification in the area.

The change proposed by the LSP has been classified into three levels. These levels are as follows:

- **Significant change** – the core of the activity centre where redevelopment will transform uses, activity and urban character to implement the objectives of Directions 2031 and the LSP.
- **Medium change** – areas where change that will contribute to the vitality of the activity centre is encouraged, but where change needs to be managed to maintain the established urban character.
- **Incremental change** – areas where change is expected, but where it is to be managed to ensure that it does not dilute the focus on development of the core, and where there are significant interface and urban character considerations.

11.5.2 Railway Precinct description

The Queens Park Railway Precinct encompasses the land around the Queens Park Train Station on the Perth/Armadale Line and aims to provide daily to weekly household shopping and community needs.

The Precinct currently contains medium and low-density housing. The railway line does not have a very high usage rate within the local government. Queens Park Train Station is currently not well-integrated into the neighbouring areas.

The area generally contains single storey dwellings on single lots on either side of the railway line. In addition to the dwellings there are some shops, open space, St. Norbert College and St. Joseph School. The land reserved for the station is relatively narrow, varying between 30 and 40 metres. The rail reserve currently contains car parking bays for the use of people using the train station allowing for a limited 'Park and Ride' service.

The area lacks public parking near the train station and the schools. The predominant commercial activity in this area is the supermarket which plays an important role in the local community. Its car park represents a barrier to pedestrians.

11.5.3 Railway Core Precinct Vision

- Mixed use area
- Total land area: 6.5 hectares
- Level of change: Significant
- Anticipated number of dwellings: 400 (based on 60% efficiency rate)

The Railway Core Precinct will develop as a high-density mixed-use precinct transport hub. The precinct will be focused on the movement of people between the train station, the activities of the Railway Precinct and the adjacent Residential Precinct. This precinct has the potential for major redevelopment and will transform into a vibrant, pedestrian-focused, mixed-use area. It will allow for retail, entertainment, office and community uses in addition to medium to higher density residential development on upper levels of buildings.

This vision will be achieved through the increased intensity of the precinct and the proximity of the new built form to the street. Landscape works surrounding the train station will beautify the area and improve access for all to the centre.

A new built-form character is to be developed, with an increase in scale and intensity to recognise and reinforce the area as the centre of the neighbourhood. A high standard of contemporary design, which maximises passive and active solar design and environmentally sustainable development opportunities, will be expected.

New development will provide a balance between the western and eastern parts of the railway and will incorporate Activated Use to the main streets. Car parking to service the centre is to be provided in basement or sub-basement, ground floor (at the rear of properties), multi-storey buildings or at the back of the buildings ensuring a high level of activity and amenity to the street and allowing for a less interrupted pedestrian environment. Pedestrian paths will improve connectivity in the area and access to POS.

The precinct is linked to the existing Cannington Leisureplex, which has a Library, indoor swimming pools and other water features, sports courts, a function centre, gym, kid's indoor playground, a crèche and a cafe.

In the future, when the Structure Plan is rescinded, the Railway Core Precinct will be rezoned to a Mixed Use zone, or comparable zone under the Local Planning Scheme.

11.5.4 Railway Frame Precinct Vision

- Anticipated number of dwellings: 1500 (based on 60% efficiency rate)
- Residential area
- Total land area: 40.15 hectares
- Level of change: incremental

The Frame of the Railway Precinct will develop as a medium-high density area with a focus on increased intensity accommodation, greater precinct amenity and improved surveillance of the streets. The precinct will incorporate residential uses only.

In the future, when the Structure Plan is rescinded, the Railway Frame Precinct will be rezoned to Residential, or comparable zone under the Local Planning Scheme.

11.5.5 Residential Precinct A and B description

- Residential area
- Total land area: 44.9 hectares
- Level of change: Medium at the frame and incremental at the edge of the LSP area
- Anticipated number of dwellings: 1600 (60% efficiency rate)

The Queens Park Residential Precincts encompass the land immediately after the Railway Precinct in a 400 metre walking distance from its edges. The precincts contain mostly low density housing and will represent a zone of transition between high and low density and deliver a development potential intended to result in broad-scale coordinated development.

The area generally contains single storey dwellings on single lots. There is some vacant and underutilised land in the area, especially the industrial land which has great potential for residential development.

11.5.6 Residential Precinct A and B vision

The Residential Precincts will develop as a medium density area with a focus on increased intensity accommodation, greater precinct amenity and improved surveillance of the streets. The precinct will incorporate residential uses only.

A new built-form character is to be developed, with an increase in scale and density to recognise and reinforce development in the Railway Precinct. A high standard of contemporary design, which maximises passive and active solar design and environmentally sustainable development opportunities, is expected. Improved pedestrian links will be developed through the precinct. The precinct will foster a safe and enjoyable public realm.

A mix of residential development types to accommodate the future population in the area is expected. The existing road network and future improvements are illustrated in this section of the LSP.

In the future, when the Structure Plan is rescinded, the Residential Precincts (A and B) will be rezoned to Residential or comparable zone under the Local Planning Scheme.

Figure 18: Outcome example for the Residential Precinct: multiple dwelling

Figure 19: Outcome example for the Railway Core Precinct: multiple dwellings

Figure 20: Outcome example for the Residential Precinct: multiple dwelling

Figure 21: Outcome example for the Railway Frame Precinct: multiple dwelling

Figure 22: Outcome example for the Railway Frame Precinct: Multiple dwellings

12 Movement Network

The area is well served by roads, footpaths and public transport however improvements may be required along the journey.

The character, form and function of Queens Park and Cannington has changed from rural to suburban during the past few decades and as a consequence it has inherited the current road layout. The large plots of land that accommodated market gardens and other rural activities were serviced by the former and current grid street block pattern. Under Town Planning Scheme No. 21 (reviewed in 2010) new roads were designated to accommodate residential development within the northern portion of the Queens Park Railway Precinct. Many of the new roads are cul-de-sacs which do not contribute to improved connectivity and legibility.

The railway is a strategic corridor running north-south along the Perth/Armadale Line. This route connects destinations to the south of the Swan River to Queens Park including Belmont Park, Burswood, Victoria Park, Welshpool, Cannington, Gosnells and Armadale and ultimately connects to Perth CBD.

12.1 Roads

As development occurs, road enhancements will be considered by the local government aiming to improve movement and accommodate parking within the area.

12.1.1 Existing networks

Figure 23 shows the current road hierarchy for the LSP area.

The Access Roads are those that contain the lowest traffic volumes and generally service a small number of lots or are cul-de-sac roads. These roads are narrower than other roads throughout Queens Park and Cannington, generally between 14 and 20 metres wide. Due to low traffic volumes, cyclists are able to share the road with vehicles, whilst footpaths are constructed for pedestrians only. No changes are proposed to those streets.

The Local Distributor Roads (Wharf Street, Treasure Road, Mallard Way, George Street and Centre Street) are those that provide access across the locality between District Distributor Roads. They are to be safe and attractive as they provide access to train stations and local centres. The suggested road section foresees approximately 20 metre width with 3.5 metre traffic lane width to allow sufficient space for public transport, should buses be routed through these roads in the future. In this model, trees could be accommodated within the 5.5 metre verge. Placing the footpath adjacent to the property boundary allows pedestrians to be separated from street traffic and located close to the property boundary. A landscape area with trees separates the footpath from the street pavement, consistent with Liveable Neighbourhood guidelines.

The District Distributor Roads: The following District Distributor Roads provide access to and from neighbouring localities and carry higher volumes of traffic and public transport. They are important in setting the entry into Queens Park:

- Railway Parade – which runs parallel to the railway and provides an alternative route

to Albany Highway;

- Hamilton Street – which connects Albany Highway to Welshpool Road across the railway line; and
- roads in a higher hierarchy (Sevenoaks Street).

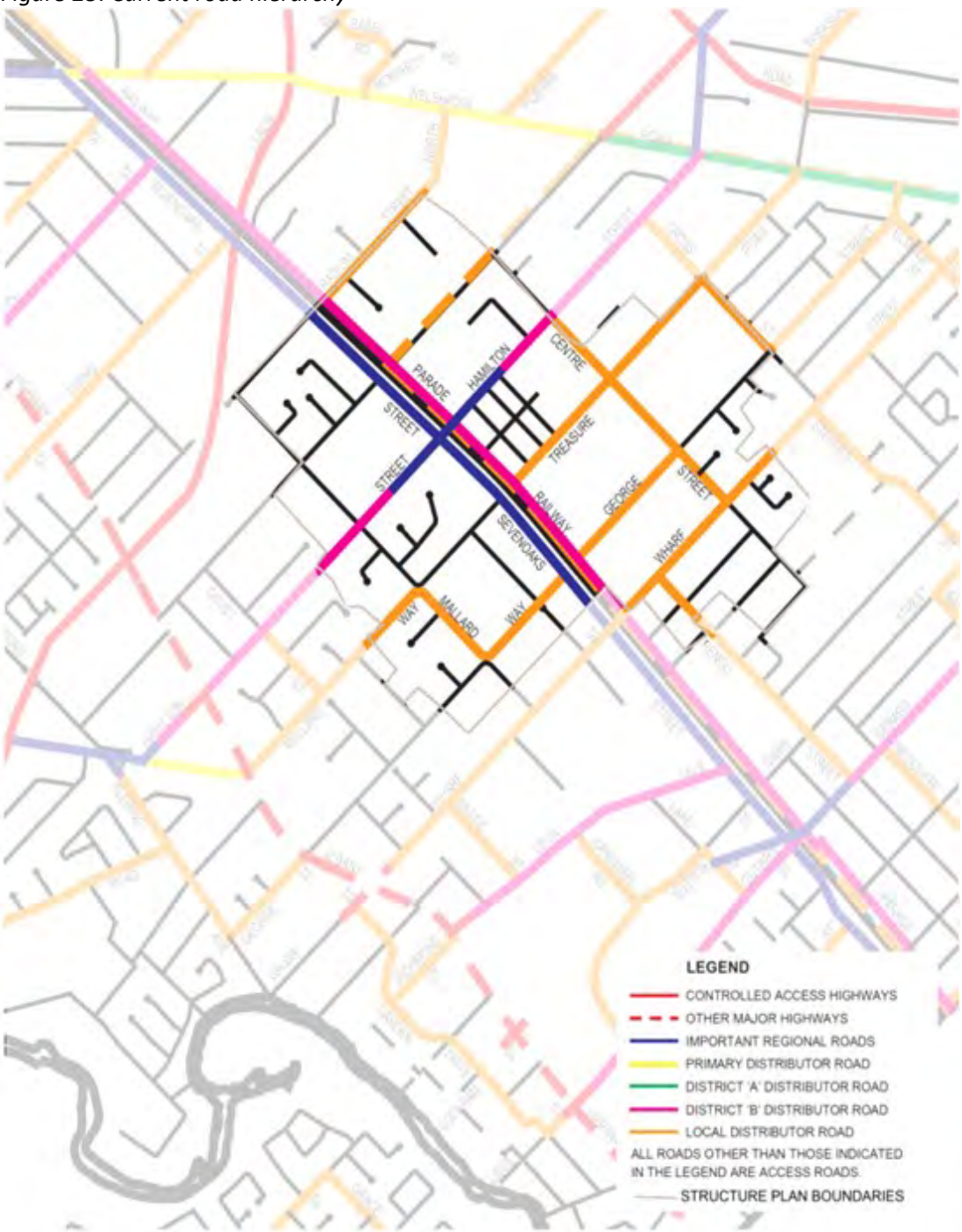
For the roads that have medians, those should allow for a substantial tree planting area to provide a pedestrian refuge given the higher traffic volumes. With more street trees added to the medians, a lush and vegetated character will be given to the Queens Park area over time. Hamilton Street connects Albany Highway and Welshpool Road to Sevenoaks Street. This road should allow for a footpath on both sides of the carriageway as it is identified as an "Other Identified Link" in the City of Canning Cycling and Walking Plan, 2018, where pedestrians should share paths with bicycle users.

Sevenoaks Street is classified as an Other Regional Road which has progressively been upgraded. Railway Parade is classified as a District Road and also carries less traffic than Sevenoaks Street.

The following table shows the current road widths for all roads in the LSP area:

Current road widths					
Less than 6 metres	7.4 metres		9 metres	22 metres	30 metres
Dora Street	Stockman Way (perpendicular to railway)	Balaka Street	Stockman Way (parallel to railway)	Railway Parade	Sevenoaks Street
Sydney Street	Mallard Way (perpendicular to railway)	Walton Street	Mallard Way (parallel to railway)		
Godwit Street	Mills Street	Edward Street	George Way (West of railway)		
	Channon Street	George Street	Wharf Street	**Colour Legend**	
	Hamilton Street	Centre Street	Renou Street		Access roads
	Prince Street	Treasure Road			Local distributor road
	Fitzroy Street	Wellington Street			District "B" distributor road
					Important regional road

Figure 23: Current road hierarchy



12.1.2 Issues and future changes

The local road network has a low degree of attractiveness due to the varying intensity of development that is not related to location or a desirable urban framework.

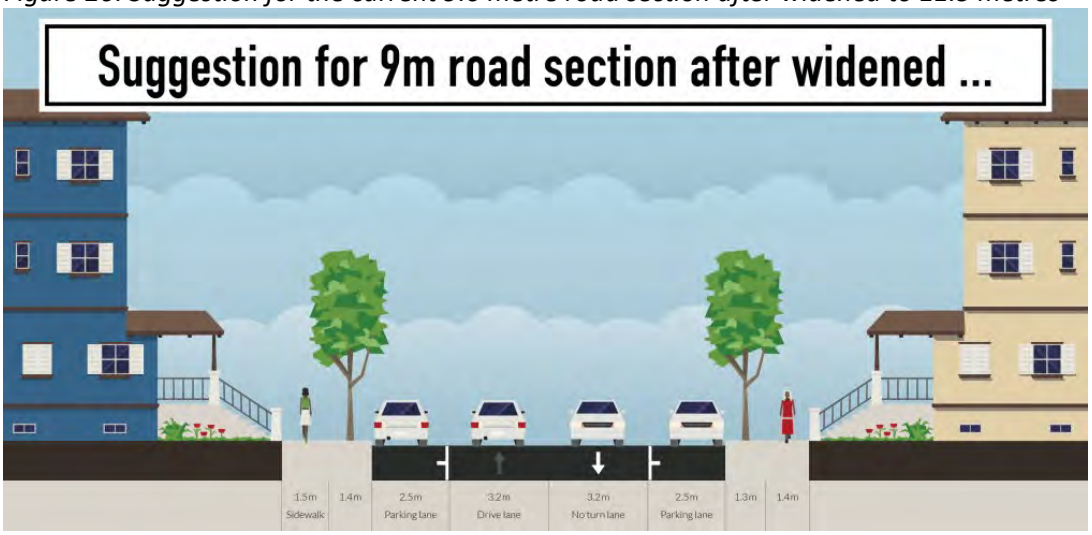
The LSP will provide for a comfortable environment for pedestrians, cyclists, cars and public transport. As development occurs, the ideal road sections are outlined in the figures below which are illustrative street sections for a 7.0 metre road and for a 9-metre road. All Local and District Distributor Roads should allow for a 1.5 metre footpath on either side of the carriageway and ideally all the 9.0 metre roads would be widened to add parking embayment to both sides of the carriageway. Hamilton Street and Wharf Street may require wider paths as proposed in the Cycling and Walking Strategy (2018).

Figure 24: Access Street – Diagram of physical determinants for width based on Liveable Neighbourhoods

It shows that 7.2m is wide enough for two vehicles to pass each other while passing a parked car.

Figure 25: Suggestion for the 7 metre road section

Figure 26: Suggestion for the current 9.0 metre road section after widened to 11.5 metres



Current road works and traffic management provisions are being assessed in order to improve connectivity and movement in the area. All indicative location of suggested improvements are shown in Figure 27.

Current road works

Sevenoaks Street has already had partial improvements made from Station Street to Mallard Way. This has resulted in a four-lane road with a dividing median. These works have recently been expanded to continue along Sevenoaks Street between Mallard Way and Ewing Street to create two lanes in each direction. Public utility services are currently being relocated to accommodate the works.

The local government has approved the Integrated Transport Strategy and the following issues were considered in this process:

Proximity of Canning City Centre

In order to improve connectivity and the traffic flow between Queens Park and Cannington, Lake Street and Carousel Road (both located in the Canning City Centre) may be extended near Cannington Leisureplex to connect traffic to/from Wharf Street as shown in Figure 27 as part of Canning City Centre Activity Centre Plan.

Traffic management

Further traffic modelling may be undertaken targeting the specific area of the Queens Park LSP to confirm those additional changes would be necessary. Moreover, all changes will be subject to specific public consultation.

The local government plans to improve traffic conditions in the area that will cater for present and future demands in the context of raised residential density, and may assess the following issues (also represented in Figure 27):

- The diagonal closure at the intersection of Mallard Way and Stockman Way may be replaced by a roundabout to improve connectivity depending on further studies; and

- The diagonal closure at the intersection of Mallard Way and George Way may be replaced by a roundabout to improve connectivity depending on further studies.

Future road works

- The intersection between Hamilton Street and Sevenoaks Street that is currently at grade level needs to be improved. Ultimately, grade separation may be a future solution. The land needed for any improvement in this intersection has already been acquired.
- Gerard Street will connect to Welshpool Road to the north and to Albany Highway to the south to improve connectivity; and
- The crossing of Wharf Street and the railway (Sevenoaks Street and Railway Parade) represents a concern surrounding the length of time that traffic halts due to the high flow of trains at these intersections. No land has been acquired at this intersection to improve or grade-separate it. Ultimately, there may be need for closure of this crossing in the future.

Figure 27: Traffic enhancements map showing indicative location of Access Streets

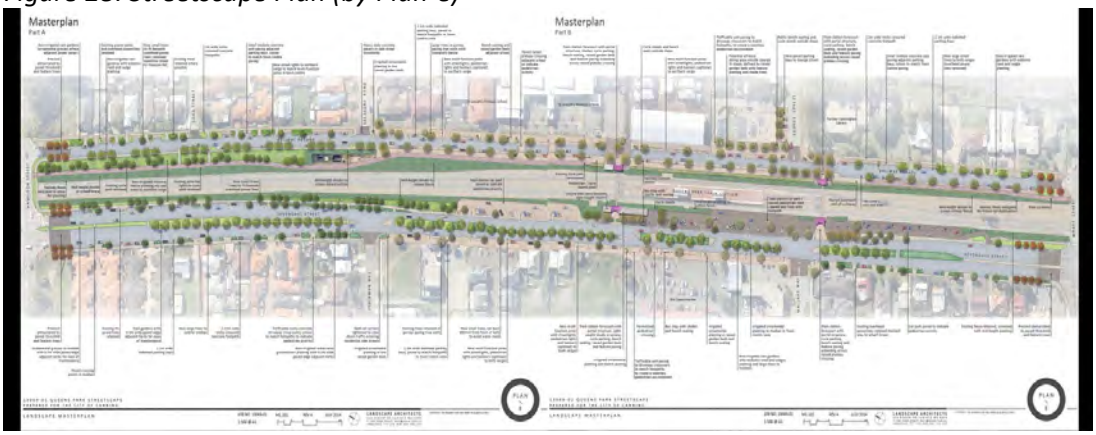
Neighbourhood Centre Streets will be created along Sevenoaks Street and Railway Parade in the Railway Core Precinct. The streetscape project took into account the type of high activity mixed use developments which are predicted. Also, main street developments with alfresco dining and related activities were considered to shape the new streets in order to limit the number of cars, traffic volumes and associated congestion.

Developments within the Railway Core Precinct will have a minimum 3 storey height and allow for an activated ground floor. Buildings are to be constructed to the street boundary.

Outside the Railway Core Precinct, residential land use is mandatory and the setback is to be used for landscaping purposes. For more details, see "Clause 4 - General Development Requirements" in Part 1 of this LSP.

The streetscape plan illustrated below is based on the masterplan developed by Plan-e to allow for more sedate traffic movement providing for street tree planting, a shared path, and on street parking where appropriate. The full Streetscape Plan is in the Appendices.

Figure 28: Streetscape Plan (by Plan-e)



12.2 Cyclists and Pedestrians

The bicycle network in the LSP area will be reviewed once this LSP is endorsed.

12.2.1 Existing network

There are cycling facilities within the Queens Park Train Station which are represented in the City's cycling and Walking Plan. The area is also fully served by footpaths. The current wide roads provide important district road functions; however, the pedestrian and cyclist environment could be improved. There are limited opportunities for pedestrian and cyclists to cross the railway.

12.2.2 Issues and Future changes

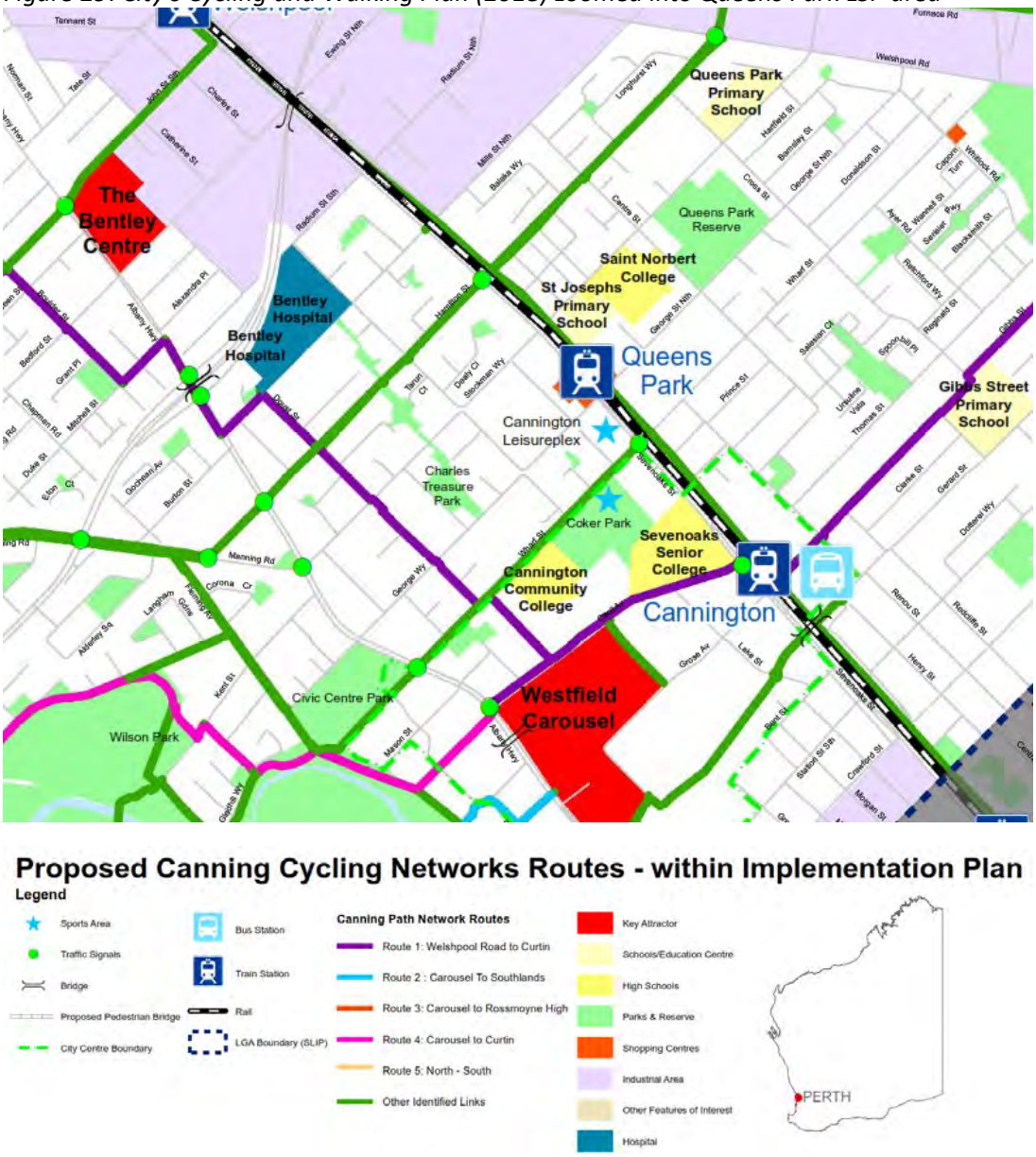
Considering the extra number of dwellings and population that the LSP facilitates, it would be appropriate to improve the character of the roads in order to:

- Improve the quality and impression of the area;
- Promote comfortable pedestrian and cycling environments; and
- Promote the identity of Queens Park.

In this context the local government has reviewed the Bike Plan and has developed a streetscape design for Sevenoaks Street and Railway Parade in the core area of the LSP.

An on road cycling facility is identified as part of the Cycling and Walking Plan (2018).

Figure 29: City's Cycling and Walking Plan (2018) zoomed into Queens Park LSP area



12.3 Public Transport

The area is well serviced by public transport however the ITS will inform the need for changes in the network and reaffirm the need for grade separation between roads and railway and changes to bus routes.

12.3.1 Existing network

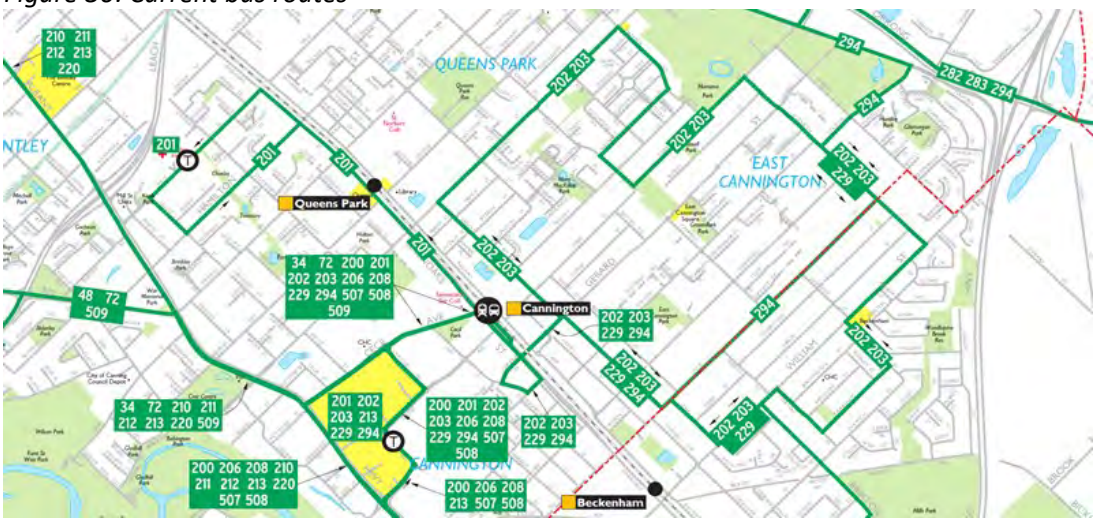
Rail

The railway represents a major barrier that divides the LSP area into two parts. Pedestrian and vehicle crossings are an issue in the area. Within the local government's boundaries there are currently four vehicle crossings along the railway: Gerard Street (grade separated), Wharf Street, Hamilton Street and Welshpool Road.

Bus

There are three bus services that run through the LSP area (route numbers 201, 202 and 203) and 15 bus stops in the area – mainly along Sevenoaks Street, Wharf Street and Renou Street as shown in Figure 30. In general, there is demand for more bus routes connecting Queens Park and East Cannington to Cannington and Queens Park Train Stations.

Figure 30: Current bus routes



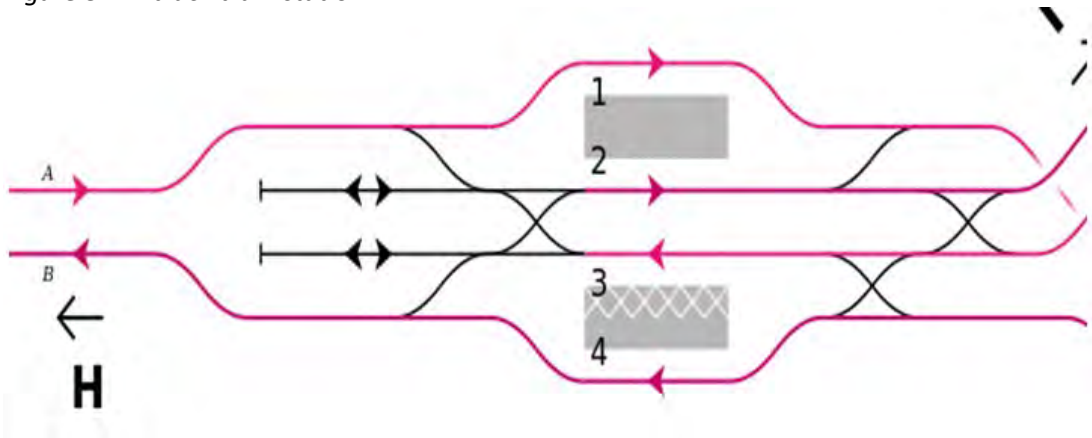
12.3.2 Issues and Future changes

The capacity and operation of railway crossings will be analysed in the Metronet Project. It will define the need for duplication, improvements of the crossings, and the need for grade separation or closures of the following railway crossings: Welshpool Road, Hamilton Street and Wharf Street.

Future Rail Expansion

The local government needs to consider the possibility of having four tracks instead of the current two tracks running through the Perth/Armadale line. To maximise the crossing efficiency, grade separation may be considered in the future, however the issue will be discussed further with the Public Transport Authority (PTA).

Figure 31: 4-track train station



Future changes in bus routes

Overall, the bus network may also change according to demand. If in the future, the extension of Gerard Street connects Albany Highway to Welshpool Road, a bus route may be included or shifted to this route.

12.4 Parking

Parking is allowed in most of the streets throughout the Queens Park LSP area however some changes may be considered for the future, considering the higher densities in the area.

Parking restrictions currently apply along parts of Railway Parade, Sevenoaks Street, Wharf Street and Treasure Road as shown in Figure 32.

Due to higher densities in the area, possible changes for the Queens Park LSP area may be:

- Street widening to fit parking embayments on both sides of the 9.0 metre carriageway streets (Figure 27); and
- Cash-in-lieu collected to fund future public car parking infrastructure.

Figure 32: Parking prohibition

The Queens Park neighbourhood centre will mainly cater for local residents' daily needs.

Future development may result in a potential reduction in parking demands due to various factors associated with transit oriented development, high activity and neighbourhood centre developments.

The types of high activity mixed use development that are typically located within easy walking distance of public transport are predicated on shared trips between the various uses. Typically once the residential component increases there is greater allowance for activity to take place without the need for a vehicle trip. Main street developments are designed to a human scale with alfresco dining areas and open spaces to make the pedestrian experience more interesting and enjoyable. In order to create and maintain a human scale it is necessary to limit the direct impact of the vast number of cars in the area and thus traffic volumes and associated congestion should be limited as far as possible.

Reciprocal arrangements to provide for visitor parking in the area during the transition to a denser population could be accepted by the local government to facilitate the establishment of commercial activities in the Railway Precinct.

13 Major services and infrastructure

All lots within the development area are served with reticulated potable water supply delivered by a piped system and fully covered by sewerage.

As part of the Queens Park LSP the major services were analysed to ensure a coordinated approach to the delivery of service infrastructure across the LSP area and to guide the preparation of this LSP and subsequent developments in the area. Generally, the Queens Park LSP area is well serviced with regard to water, wastewater headworks, power lines and other infrastructure. The water, sewer, main drainage plan from Water Corporation is in Appendix 2.

13.1 Sewer

The LSP area currently is fully served by a reticulated gravity sewer system. The existing system consists of the following:

- Gravity sewer lines serving all existing lots in the area. Typically pipe sizes are 300mm and over;
- The major pump stations serving the local government are Cannington and Lynwood which pump via a DN700 main into the Cannington Main Sewer. The LSP area is split into pump stations (Kewdale and Cannington) that pump into the Cannington Main Sewer;
- The RC discharge line would only operate in an emergency situation;
- Kewdale Section 1 Main Sewer in Treasure Road and Stockman Way. There are small reticulation mains connected to this, which may need upgrading.

All sewerage infrastructure is owned and managed by the Water Corporation.

The need to upgrade reticulation mains on the Kewdale Section 1 Main Sewer may be avoided by collecting and treating the grey water component of wastewater. Treated grey water may be used for non-potable uses including watering of POS and flushing of toilets. In doing so, money spent on upgrading the sewer reticulation pipes can be used to fund a local treatment system for grey water. Inclusion of a localised treatment system for grey water has the added benefits of:

- Better water cycle management
- Quality of water fit for purpose usage of water
- Reliable of source of water for non-potable uses

13.2 Water Supply

All lots within the development area are served with reticulated potable water supply delivered by a piped system which exists within existing road reserves in accordance with minimum Water Corporation criteria regarding quality and pressure. All water supply assets are owned and managed by the Water Corporation. The LSP area is served from the Canning and Serpentine Trunk Mains and the Kewdale-South Perth branch.

Reticulation mains of 610mm diameter in Treasure Road and Stockman Way are small and may need assessment for upgrading as new reticulation pipes to be connected from the trunk mains will not be permitted by the Water Corporation. The 1065mm trunk main in Railway Parade and 915mm trunk main in Sevenoaks Street feed the 610mm mains.

Water Corporation water and wastewater infrastructure

The Water Corporation has made a commitment to service development and population targets specified in Directions 2031. Work required to determine what water distribution and sewerage upgrades may be required to service the growing population will be undertaken by the Water Corporation as specific development requirements are defined, typically at Structure Plan stage. In this case, the local government predicts a future dwelling increase of approximately 3200 dwellings.

Generally the Water Corporation will schedule necessary upgrades to main pipe network as 'headworks' upgrades (DN300 and above) and the developer will be required to undertake necessary reticulation upgrades. Where significant development is proposed in specific locations coordination and funding of upgrades may be recouped through developer contributions mechanisms.

Water Management

Local water management is a key component to water cycle management and should consider the integration of water supply, sewerage and storm water while considering water-sensitive urban design principles. The local government's Local Water Management Strategy (LWMS) has informed this LSP in accordance with the requirements of State Planning Policy 2.9: Water Resources and Better Urban Water Management (WAPC, 2006).

Water use

To reduce the annual water consumption in the development, in particular potable scheme water consumption, it will be necessary to be efficient in the use of water, and to use water that is fit-for-purpose and appropriately sourced. Efficient water use will be encouraged by following recommendations outlined in the water sustainability principle and within "Clause 4 – Development Requirements" for the LSP area. Fit-for-purpose water sources to be adopted will be scheme water, groundwater, and wastewater reuse for landscape irrigation.

13.3 Stormwater management

Existing main drainage system

The Queens Park LSP area is served by a network of Water Corporation main drains and connecting City of Canning drains which cover the entire area. There are three Water Corporation main drainage catchments present within the boundaries of the site, these are: Cockram St Main Drain; Wharf St Main Drain and Mills St Main Drain.

The northern part of the LSP area (north east of Sevenoaks Street) is served by the Cockram Street Main Drain and there are three compensating basins located in the area on this system, one of which is located within the core of the potential redevelopment area. Substantial water quality and aesthetic improvements are possible at these basins and this should be considered as a part of the redevelopment of this part of the LSP area.

The Wharf Street Main Drain serves the area south west of Sevenoaks Street and includes two compensating basins located along the south western boundary of the LSP area. These basins have been modified recently to improve water quality outcomes and are surrounded by interconnecting public open spaces. There is also a section of open drain along the boundary of existing light industrial lots where substantial improvements could potentially be made to environmental and aesthetic outcomes as a part of redevelopment in this area.

There is a small section of the Mills Street Main Drain and its catchment along the north eastern boundary of the LSP area. There are no compensating basins in this section of the catchment although there is a section of open drain where improvements could potentially be made to environmental and aesthetic outcomes as a part of development in the area. Current drainage requirements for developments in the LSP area are represented in Figure 33.

Capacity review

A capacity review of the Cockram Street and Wharf Street Main Drains has been undertaken in the Arterial Drainage Plan (Appendix 7) including consideration of the proposed redevelopment and intensification within the Queens Park LSP area.

It has been identified that the existing drainage system needs to be improved to allow for redevelopment of the Queens Park LSP area. The local government is working collectively with the Water Corporation to review priorities and catchment based solutions due to the proposed increase in density and runoff. Land may need to be acquired in the identified locations as per Appendix 7.

The proposed improvements to the Arterial Drainage Plan (Figure 37) include:

- Increase capacity (not necessarily size) in existing basins: Railway Parade Basin and Queens Park Basin;
- Construction of new basins: Treasure Road Basin and St. Norberts College Basin; and
- Upgrades to pipework and construction of an urban stream in the Mallard Way Precinct.

All those improvements are subject to an agreement with the Water Corporation.

Requirements for development: If catchment based solutions are not provided, developments within the Queens Park LSP area will be required to maintain pre-development discharge flows and quality, and be protected from flooding in the 100-year ARI event. To this extent, the following storm water management measures are proposed:

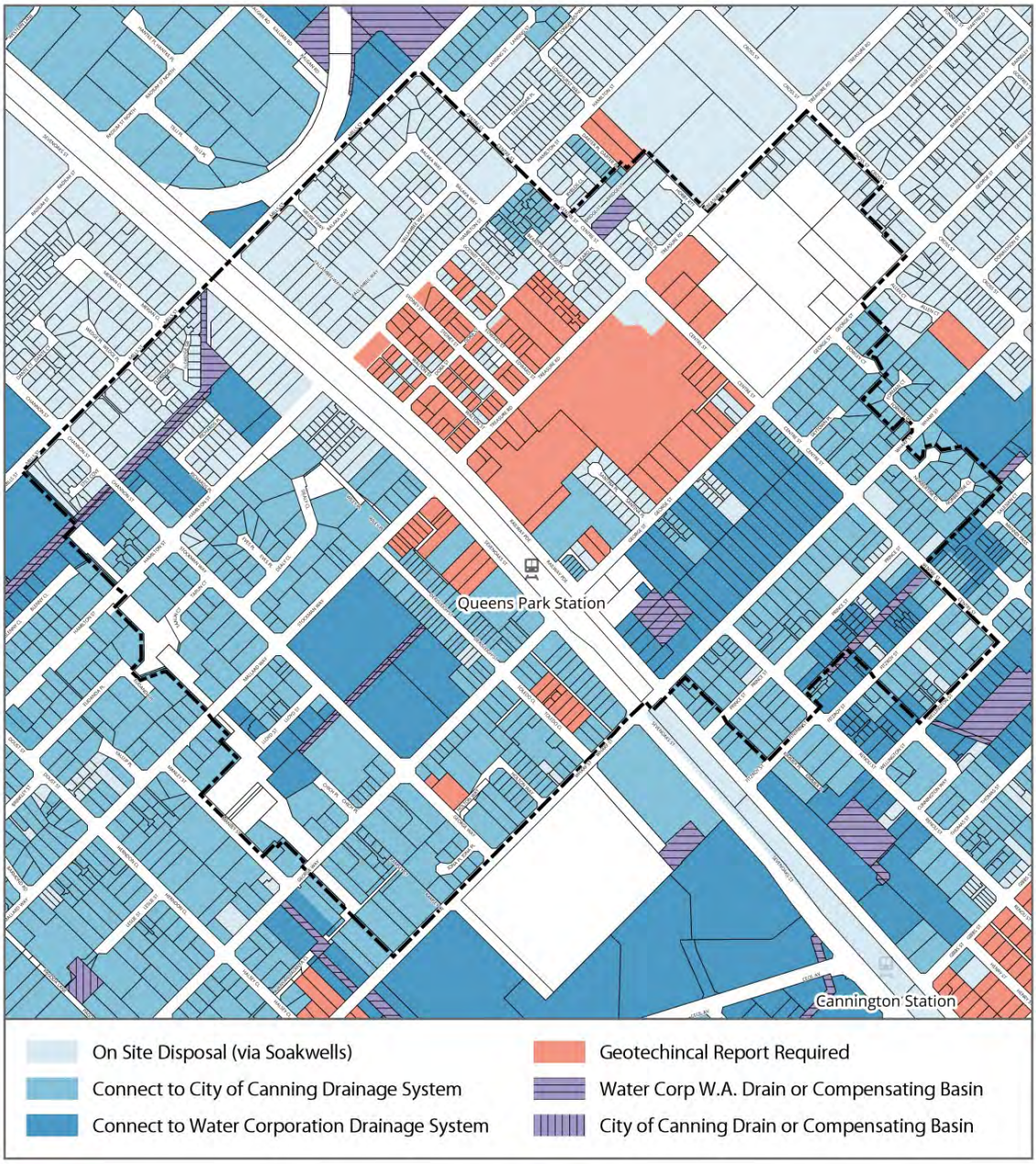
- Treating the first flush of the storm using source control;
- Conveyance of the minor storm event to the outlet via pit and pipe; and
- Protection of properties against the major storm events.

Groundwater management

As previously discussed, groundwater is shallow throughout the LSP area but is managed by the existing drainage system. Management of groundwater quality should be a key focus to improve water quality within the drainage system and thereby reduce the negative impacts of groundwater and nutrient exports from the LSP area. Developments within the LSP area are required to incorporate the following strategies to contribute to improving groundwater quality:

- Soil amendment (where the tested phosphorous retention index is less than 10 within all storm water infiltration areas and public open space);
- Infiltration will not be promoted in areas of known soil contamination; and
- Where possible reduce the dependence on groundwater for watering of POS and use alternate sources of water for this purpose. Increasing salinity has been identified as an issue in the local government's groundwater aquifers due to reduced recharge and over abstraction.

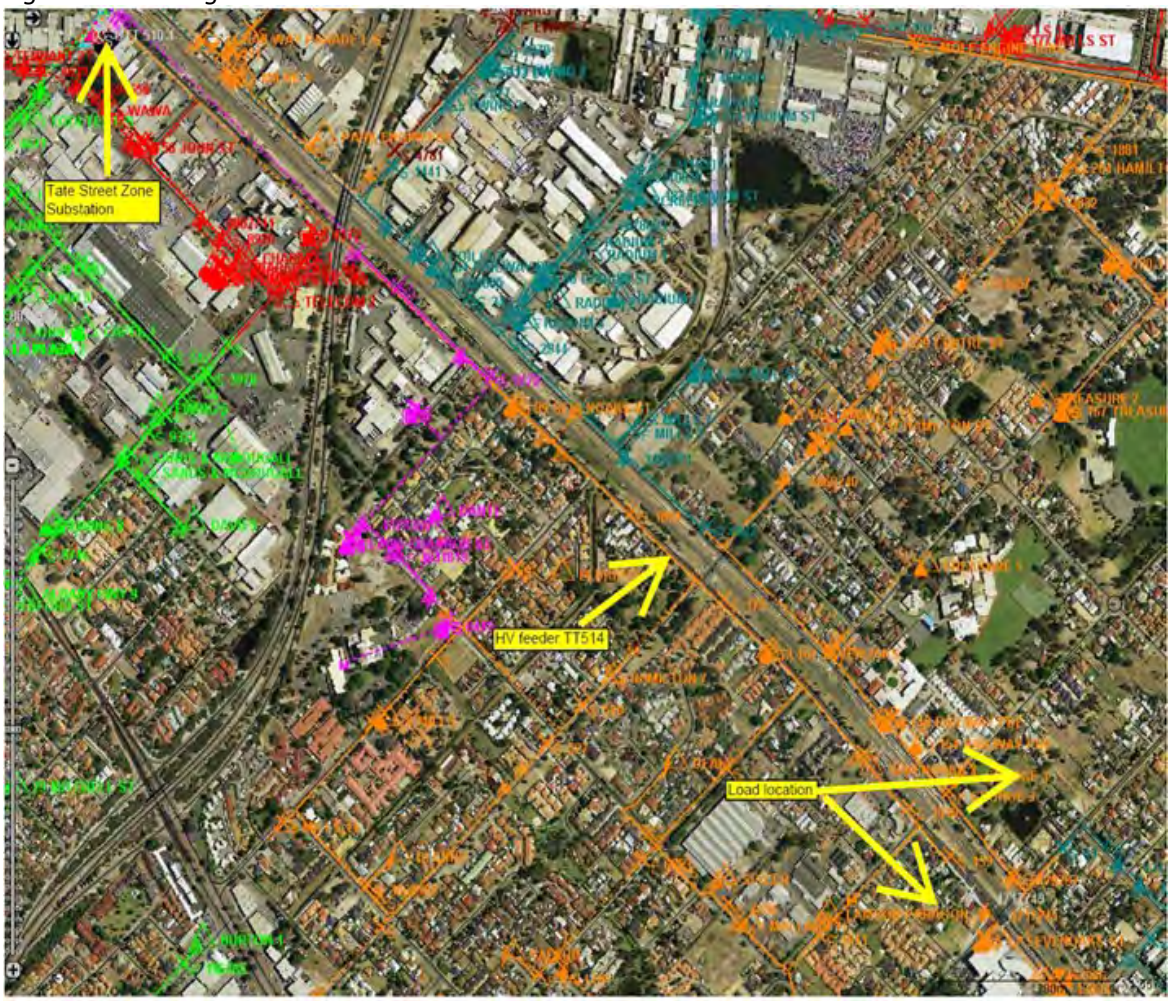
Figure 33: Drainage requirements



13.4 Power

Western Power has carried out a feasibility study looking at how the development may be served with power supply staged through to the ultimate development from a distribution point of view. Western Power has analysed the first stage of load increase at this stage. The studies show that the load increase of 483 KVA can be connected to HV feeder TT514, which means a total of 1410 dwellings in the area estimated for 2016. Western power has also confirmed that Tate Street substation has enough capacity to supply all the stages of the development. For future stages, once a formal application to Western Power has been lodged, further in-depth study and analysis will be required to determine if any reinforcement works are necessary. For stage 1 of the development (up to 2016), no reinforcement is required to supply the 483 KVA load. However, additional costs for protection setting change and appropriate switchgear also needs to be taken into account.

Figure 34: Existing 22kV around the LSP area



13.5 Telecommunications

Telecommunication system exists to a reasonable level in the area. The National Broadband Network (NBN) would be involved in the provision of telecommunications for the development area. Current policy is that for developments greater than 100 dwellings the NBN will provide optic fibre cabling to each dwelling.

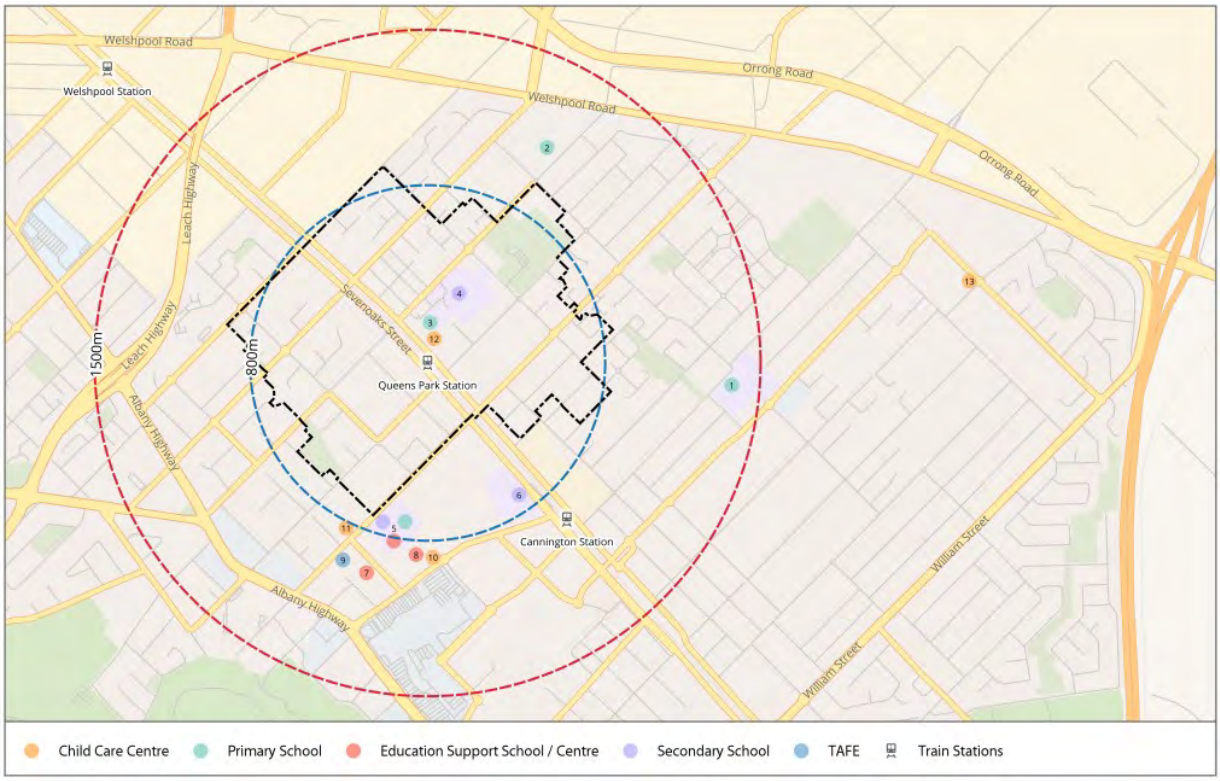
14 Education facilities

The area is well served by 9 education facilities within 1km distance from the train station (Figure 35). They are:

- Cannington Community College (primary and secondary)
- Queens Park Primary School (primary)
- Gibbs Street Primary School (primary)
- Sevenoaks Senior College (secondary)
- Cannington Community Education Support Centre (education support)
- Good Start Early Learning (childcare centre)
- St. Joseph's Catholic Primary School (primary and secondary)
- St. Norbert College (secondary)
- East Cannington Out of School (childcare centre)

Based on its calculations the Department of Education has determined that the current local primary schools, Queens Park Primary School, Cannington Community College (which this development is located within the catchment boundaries) will accommodate the anticipated student yield from the proposed development.

Figure 35: Education facilities



1	Gibbs Street Primary School
2	Queens Park Primary School
3	St Joseph's Primary School
4	St Norbert College
5	Canning Community College
6	Sevenoaks Senior College
7	Communicare Academy
8	Technical College of Western Australia
9	Treasure Island Child Care Centre
10	Tumbleweed Child Care Centre
11	Good Start Early Learning
12	YMCA East Cannington Early Learning

15 Activity Centres and employment

The retail floorspace in Queens Park is well within the threshold required to meet the future (Directions 2031) demand for its catchment.

It is anticipated that 6,000 m^2 of retail floorspace will be added within the Queens Park LSP area by 2031. The current retail floorspace is approximately 900 m^2, bringing the total to roughly 7,000 m^2 by 2031. The projected turnover ($) in the Queens Park LSP area will support between 5,300 and 8,480 m^2 of retail floorspace (again, by 2031).The projected turnover is generally based on the population within the catchment and what that population would be expected to spend at a given centre based on its attractiveness. With approximately 7,000 m^2 of retail floorspace projected in Queens Park by 2031 it sits comfortably between the minimum and maximum supportable floorspace (5,300 and 8,480 m^2).

The future retail floorspace is considered in the City of Canning Local Commercial and Activity Centre Strategy (LCACS).

16 Funding arrangements

There are currently two Guided Development Schemes in the LSP area, Town Planning Scheme No. 21 and Town Planning Scheme No. 17A.

The financial contributions from the Guided Development Schemes are converted into acquisition of POS that are well defined in the Scheme Text and Maps. The financial contributions in excess of that required for the purchase of POS within Town Planning Schemes No. 21 and No. 17A may be used for further improvement of POS in accordance with the provisions of the Guided Development Schemes. If further upgrades to the Infrastructure are required in the future (i.e: undergrounding of power lines), the local government may pursue a Special Area Rate or Developer Contribution Plan to fund upgrades.

17 Implementation

Part One of this document sets out a framework to implement the Queens Park LSP by aligning the LSP intent and vision the statutory planning framework. The LSP establishes planning mechanisms required to guide private and public investments to transform the area beyond its present condition.

18 Complementary plans and images

Figure 36: LSP area in Local Planning Scheme No. 42

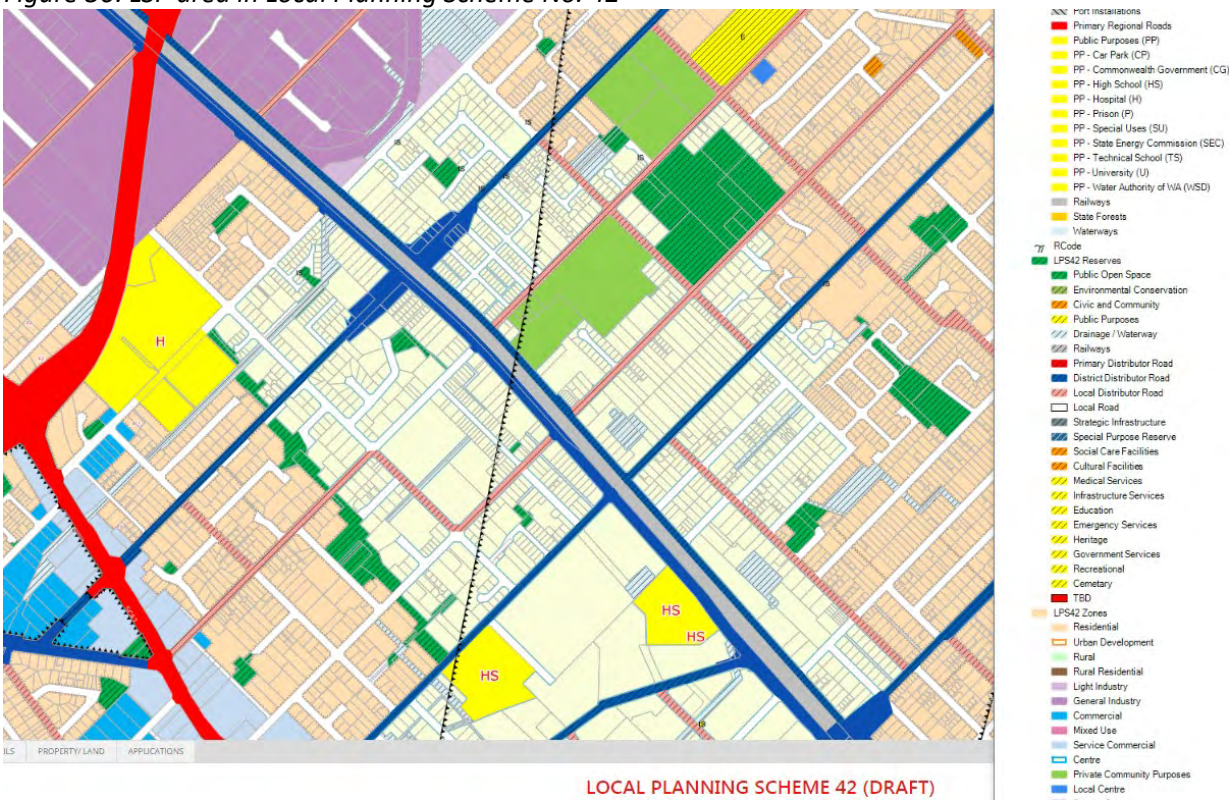


Figure 37: Urban Streams identified in the Arterial Drainage Plan

19 References and Resources

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20 Glossary of Terms/Definitions

The following glossary outlines the intended meaning of some terms as used in this document. The meanings in as simple language as possible without diluting the meaning, and are not intended to be comprehensive or to define every technical dimension of the terms.

Activation	To make a place full of life. To facilitate, stimulate and accelerate creation of activity and liveliness, such as in terms of economic, social and physical activity.
Activity Centre	Community focal points, including activities such as commercial, retail, higher density housing, entertainment, tourism, civic/community, higher education, and medical services.
Activated Use	Businesses such as shops and cafes with visible entrances, glazing etc that promote integration with the public realm.
Affordable housing	Housing that low income households can afford. Housing cost (eg. rent) that can be paid from a household's income in addition to also meeting the cost of other basic needs such as food, clothing, transport, medical care and education. Affordable housing is typically targeted at low income households which are most sensitive to housing costs.
Amenity	The things about a place that make it desirable, pleasant, enjoyable, useful, convenient, comfortable and valuable. Amenity can be tangible such as a facility, or intangible such as the sense of security, proximity to something, sense of community, or climate.
At grade	At the same level as surrounding ground levels.
Building envelope	A defined area within which a building should be contained. A building envelope may be 2 or 3 dimensional.
Built Form	The position, shape, size, height, style and appearance of buildings.
CBD	Central Business District, usually of the capital city.
Communal Open Space	The R-Codes define communal open space as open space set aside for the recreational use of the occupants of the dwellings in a common development and does not include driveways or car parking areas. Communal open space is expected to include outdoor areas that promote gathering and social interaction and may in some instances be accessible to the public. It does not include primary external circulation areas for vehicles or pedestrians (such as driveways and footpaths) however a seating niche or small gathering space within a circulation area is acceptable. A minimum dimension is applicable for the main (largest) component.
Corner Element	An architectural feature or element which is only part of the building that addresses the corner and has a special or distinctive character or treatment that is visually distinguishable from the main facades of the building. The element is only part of a building and not the entire building itself.
CPTED principles	Crime Prevention through Environmental Design principles.
Elevation	A scale drawing of the side, front, rear or one vertical plane of something such as a building.

Integrated Transport Strategy – ITS	A transport plan prepared by a single local government or groupings of local governments to address local or sub-regional transport issues in their areas of jurisdiction. Integrated transport plans are useful tools for the comprehensive analysis of existing and future transport system requirements within an area.
Intensity, Intensification	In relation to development, usually translates to higher density residential development and more economic activity in the same space or place.
Legibility	The ability for people clearly to find their way around a place.
Local Planning Scheme	A legal document administered by local governments to manage land use and development within a defined scheme area.
Metropolitan Region Scheme 'MRS'	A legal document setting out the broad land use zones and reserves for the entire Perth metropolitan region.
Non-Residential Development	Development to which the Residential Design Codes (R-Codes) do not apply.
Place	An area with definite or indefinite boundaries, usually in urban design terms referring to a distinct identifiable area.
Plot Ratio	Plot ratio for developments is assessed based on the definition of plot ratio in the Residential Design Codes.
Public Open Space 'POS'	POS Tool defines public open space (POS) as all land reserved for the provision of green space and natural environments (e.g. parks, reserves, bushland) that is freely accessible and intended for use for recreation purposes (active or passive) by the general public.
Public realm	Any areas and buildings that are open to access by the general public, and include areas that are visible to the public from such areas.
R-Codes – Residential Design Codes	The R-Codes provide the basis for controlling the siting and design of residential development throughout Western Australia.
Regeneration	The action of renewing a place, usually involving a change for improvement, and includes physical elements such as roads and buildings and intangible elements such as community.
Sense of place	An identifiable set of traits of a place which define the place and its uniqueness.
Setbacks	The distance between a building and a lot boundary, usually measures at right angles to the boundary.
Spatial	Of, relating to, involving, or having the nature of space.
Special Control Area – SCA	Mechanism of town planning schemes to deal with a wide range of planning and environmental issues has been proposed by many local governments and state government agencies.
Statutory Planning	The making of legal land use plans and approval of subdivision and development. Processes concerned with fulfilling legal requirements of land use planning laws such as the creation and amendment of Local Planning Schemes, structure plans, and approvals to subdivision and development applications.

Strategic	Careful focus on achieving favourable results for the essential or highly important overall long term interests and aims.
Suburban	Traits of a suburb, usually being low density residential development in the outer areas of a city that is largely reliant of private car use.
Transit Oriented Development (TOD)	Development around train stations that increases use of public transport. Locating moderate to high-intensity commercial, mixed use, community and residential development close to train stations and/or high-frequency bus routes to encourage public transport use over private vehicles.
Urban design	The practice of arranging the elements of urban areas to create places with distinct beauty and identity that are functional, attractive, and sustainable. Urban design principally addresses the public realm and relationships between people and places, movement and urban form, and nature and buildings at the scale of groups of buildings and streets but also extends to whole neighbourhoods and districts, and even entire cities.
Urban fabric, Urban form	The design and layout of the structural elements of an urban area or city. The structural elements include natural features, open spaces, transport/road systems, infrastructure, streets, land uses, built form, and the like.
Walkable catchment	The area within a specified walking distance along publicly accessible pedestrian routes from a given place. The distances is usually 400m or 800m from an activity centre or a public transport stop or station.
Western Australian Planning Commission – WAPC	The WAPC is the statutory authority with statewide responsibilities for urban, rural and regional land use planning and land development matters. The WAPC responds to the strategic direction of government and is responsible for the strategic planning of the State.

21 Appendices

Appendix number	Document
1	Queens Park Local Structure Plan Intramaps addresses
2	Supporting studies – Western Power and Water Corporation
3	Community consultation outcomes
4	Final Local Housing strategy map – September 2014
5	LCACS Draft Chapter 3 – Floorspace demand assessment
6	City of Canning Water Management Strategy
7	Arterial Drainage Plan (Draft)
8	Environmental Management Strategy
9	Supportive guidance for development
10	Queens Park Streetscapes Plan-e
11	Ordinary Council Meeting (February 2015)
12	GIS files