250A TAYLORS RD, DELAHEY
URBAN DESIGN GUIDANCE

Prepared for Broadcast Australia
September 2019

Front cover image: Broadcast Australia, Sydenham. Photography by National Drones

Document control			
Rev	Date	Approved by	Description
31	September 2019	Broadcast Australia	Final Report inc 21.09.19 mods

01 Introduction

Broadcast Australia (BA) is a national broadcaster of television and radio services. They own and operate one of the world's most extensive transmission networks from sites located across Australia including a 95ha site in Sydenham. BA has determined that the southern portion of the Sydenham site (the site), measuring 46ha in area, is surplus to the current operational requirements of the existing facility.

Located 20km from the Melbourne Central Business District (CBD), the 46ha site was recently sub-divided from the 95ha parcel of land. Future development of the site for a mixed use development requires a Planning Scheme Amendment to rezone the land and to provide urban design guidance for future development.

The site is the largest urban renewal opportunity in the municipality and is ideally located near existing rail and bus services and key arterials providing direct access to Activity Centres, Melbourne Airport, Melbourne CBD, regional Victoria and retail and employment areas.

The significance of these aspects of the site's location and context is reflected in its identification as a unique infill opportunity in Brimbank City Council's Housing Strategy *Home and Housed* as the largest of three Strategic Redevelopment Sites (SRS). As a result, diverse housing options, potential for higher built form and medium density housing are anticipated outcomes on this site where such development will not adversely impact the valued character of existing residential areas or environmental values of the site.

The site presents significant opportunity for mixed use development to diversify the future character of the area.

01 Introduction

1.1 Purpose of this document

This Urban Design Guidance (Guidance), for the 46ha portion of the site, informs potential development outcomes and supports a Planning Scheme Amendment for a land rezoning process. The Guidance also serves as a prospectus that promotes the site's potential in relation to the surrounding context and its broader strategic intent.

This unique site has the potential to establish a benchmark within the area and maximise the perceived value of the site and surrounding area by leveraging off improved connectivity to the Keilor Plains Station and open space opportunities. The 46ha site can support an exemplar mixed use community, with a recognisable brand, high quality and diverse housing and open space with sustainable modes of transport.

The Guidance incorporates investigations undertaken that cover strategic planning, urban design, civil and hydrological, environmental, demographic and land use analysis, traffic and transport requirements, flora and fauna and geomorphological studies, and EME/radio transmission requirements.

A series of principles and potential design strategies have been provided to be considered in the preparation of future proposals for comprehensive master planning activities/development plans for the site.

The Guidance informs the preparation of a future planning framework for the site.

1.2 Scope of Guidance

Site
The site measures 46ha in area and comprises the southern portion of BA's Sydenham transmission facility. This portion of the site is bounded by the Sydenham Rail Reserve to the east, Taylors Road to the south, Kings Road to the west and the balance of BA's Sydenham site to the north.

Approach
The Guidance considers site constraints and opportunities identified by the consultant team related to stormwater, flooding, drainage and site servicing; biodiversity and native vegetation retention and offsets; traffic and sustainable modes of transport; and planning related aspects of the site.

It considers the site's strategic positioning based on existing planning policy and anticipates Council and approval authority support for medium density residential infill development with diverse uses (i.e. potential for health, childcare, retail and other facilities and open space to be agreed with Council), enhancing the site's proximity to rail (existing and proposed).

The Guidance provides urban design analysis of the site at three scales, with the larger scale positioning the site within a strategic context and an understanding of the factors that impact the site such as environmental systems, transport considerations, the urban planning context, utilities and services infrastructure.

An understanding of the site at a medium and smaller site scale has identified opportunities and constraints that have been captured in the site-wide Guidance.

1.3 Supporting Information

The Guidance has been informed by and prepared in conjunction with a suite of supporting multi-disciplinary site investigations and assessments supporting the proposed rezoning of the site. These include:

_Planning Report 2019, Planning & Property Partners Pty Ltd
_Strategic Land Use Options Report 2019, Deep End
_Stormwater Management & Utility Services Infrastructure Report 2019, Cardno
_Sydenham Flora and Fauna Assessment 2019, Brett Lane & Associates
_Transport Impact Assessment 2019, One Mile Grid
_EME Building Envelope 2019, BPD Surveyors and
_Geological Review and Planning Advice Broadcast Australia Site Taylors Road Sydenham 2006, Golder Associates
_Report on Preliminary Site Investigation for Contamination Proposed Rezoning 250 Taylors Road, Delahey, Douglas Partners January 2019
_Project Positioning by Broadcast Australia
_Urban Design Guidance 2019, Hassell Studio.

1.4 Assumptions

Project assumptions have been summarised below.

These include:
_Technical matters rely on supporting material prepared by others and
_Future detailed Master Planning to be undertaken by others.

1.5 Project Team

The project team for the rezoning process is comprised of the following consultants who have contributed to the Guidance:
_Hassell Studio
_Planning & Property Partners
_Brett Lanes & Associates Pty. Ltd.
_One Mile Grid
_Cardno
_Deep End Services
_Golder Associates and
_Douglas Partners.

Planning & Property Partners are responsible for preparing the Planning Scheme Amendment documents and Planning Report.

Brett Lane & Associates have provided the Flora and Fauna Assessment and advised on the potential Spiny Rice-flower Reserve.

One Mile Grid have provided advice on the potential street hierarchy, site entry/egress locations, future proofing the site for public transport and the Transport Impact Assessment.

Cardno have advised on the location, area and setbacks required for the Waterway Reserve, and combined Wetlands and Retarding Basin to address stormwater and flooding, utilities and services infrastructure.

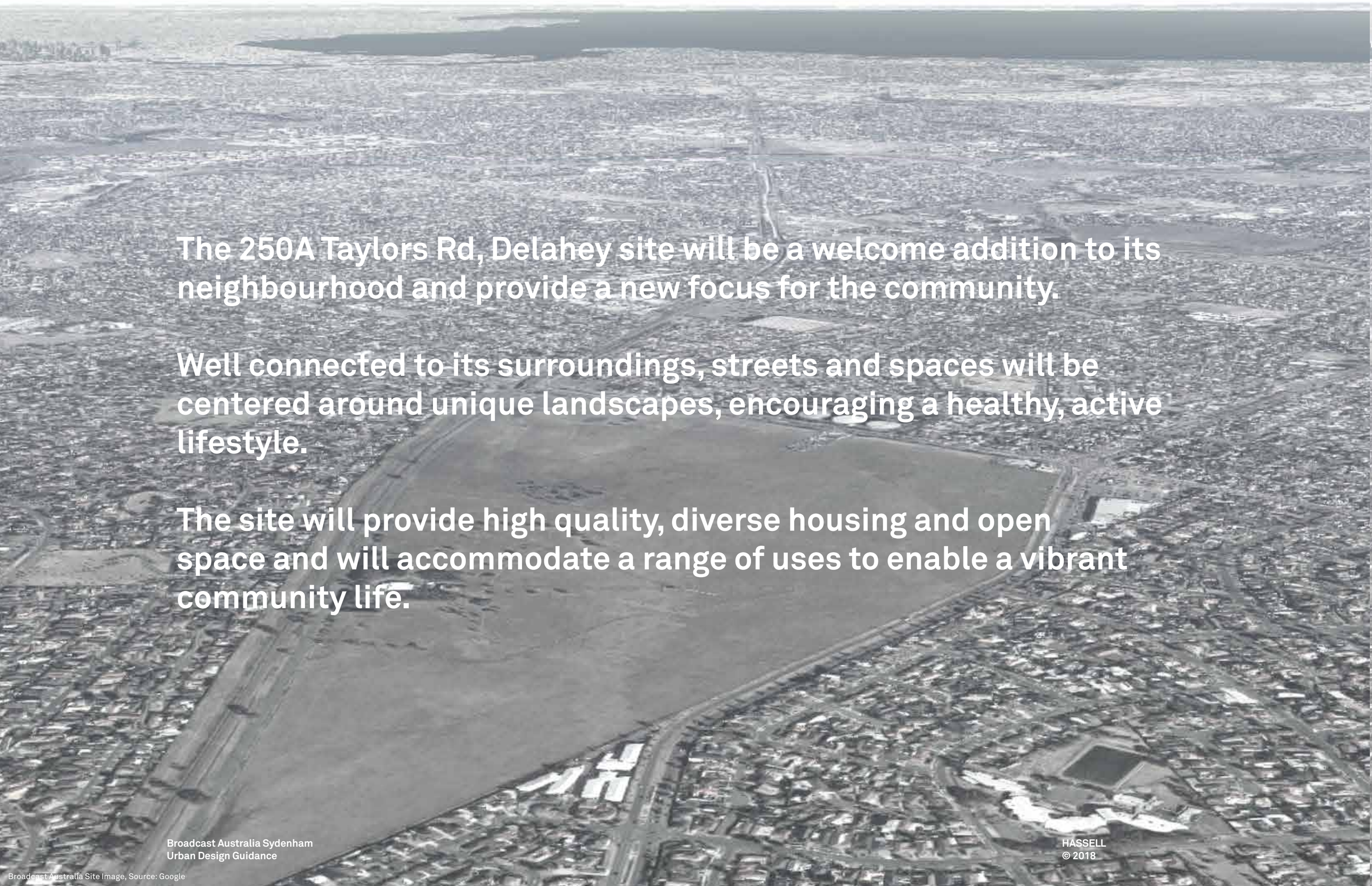
Deep End prepared advice and recommendations on strategic land use options for the site.

Golder Associates have advised on the significance of the site's geological features.

Douglas Partners have provided a report to Broadcast Australia on the Preliminary Site Investigation for Contamination for 250 Taylors Road, Delahey.

Hassell Studio provided urban design advice.

Broadcast Australia provided direction for the final report.



The 250A Taylors Rd, Delahey site will be a welcome addition to its neighbourhood and provide a new focus for the community.

Well connected to its surroundings, streets and spaces will be centered around unique landscapes, encouraging a healthy, active lifestyle.

The site will provide high quality, diverse housing and open space and will accommodate a range of uses to enable a vibrant community life.

Broadcast Australia Site Image, Source: Google

MELBOURNE CBD

PORT PHILLIP BAY

Range of Housing Densities

Wetlands & Retarding Basin

Community Garden

Shared Paths

KEILOR PLAINS STATION & BUS INTERCHANGE

250A TAYLORS ROAD, DELAHEY SITE

DELAHEY VILLAGE

Active Recreation

BROADCAST AUSTRALIA MELBOURNE DISTRICT OFFICE

Passive Open Spaces

Community Gathering Spaces

Retail & Services

Diverse & Adaptable Housing

2.2 Place Principles & Strategies

The following five Place Principles have been crafted to underpin the Urban Design Guidance. The Place Principles and Strategies address key themes around:

1. Connectivity
2. Diversity & choice
3. Healthy & green environments
4. High quality in all aspects and
5. Community cohesion.

The Principles are designed to embed resilience into the future development of the 250A Taylors Rd site. They also address key Council policies and strategies identified for this site.

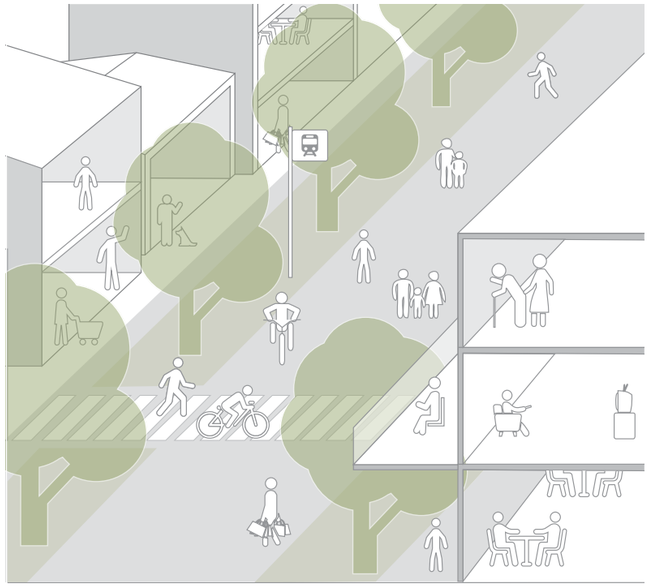
Strategies to deliver these principles have been developed and inform the Urban Design Guidance.

1. CONNECTIVITY
Provide local connections and networks

Strategies

Explore opportunities to:

_Enhance access and connectivity with surrounding public transport routes
_Provide direct and safe pedestrian and cycling access and links, connecting existing and planned bicycle and pedestrian movement networks
_Provide and enhance safe and efficient access to nearby destinations and services
_Provide internal links that connect transit, services, open space, residential and other uses
_Provide for connection to the public transport network
_Create a sense of arrival at major site entry points
_Prioritise local traffic movement, with low traffic speeds and discourage through traffic



2. DIVERSITY & CHOICE
Create density, diversity and choice of housing and land use provision

Strategies

Explore opportunities to:

_Develop a mixed use neighbourhood(s) that offers a range of housing types to cater for a broad demographic, different household types and aging in place, as well as other services, facilities, retail and commercial uses in appropriate locations
_Include a diversity of vibrant and activated public open spaces that cater for formal and informal activities, with different roles and functions that complement the uses and types of spaces within the broader area
_Encourage a range of dwellings recognising the site's walkability and access to services and facilities, including the Principal Public Transport Network

3. HEALTHY & GREEN ENVIRONMENTS
Create a healthy & green environment that supports an active lifestyle

Strategies

Explore opportunities to:

_Provide an area or areas of open space equivalent to 5 per cent of the site
_Consider optimal location(s) of open space, having regard to considerations such as accessibility; solar access; and possible co-location strategies as appropriate
_Utilise landscape treatments to manage and mitigate overland flow considerations
_Upgrade the St. Albans West Drain with a retarding basin/ landscaped wetland and potentially realign or upgrade the watercourse or replace with an engineered solution in consultation with, and to the satisfaction of Melbourne Water
_Provide energy and resource efficient buildings and open spaces, waste minimisation and recycling
_Consider the types of open space that can be provided to complement the broader open space network
_Create a permeable, sustainable and accessible neighbourhood that encourages walking and cycling

4. HIGH QUALITY IN ALL ASPECTS
Support a vibrant and thriving community with high quality places, buildings & facilities

Strategies

Explore opportunities to:

_Create a local civic focus with retail, community services and facilities that are well-located and accessible to the surrounding context
_Develop a legible street hierarchy with varied street scales that facilitates wayfinding and connectivity
_Create attractive streetscapes and active street edges to enhance walking, cycling and social interaction and to generate street activity throughout the day
_Provide a quality urban environment defined by accessible, safe, and diverse streetscapes and quality design, development and built form with distinct landscape and architectural qualities
_Create an identifiable neighbourhood with fine urban grain recognising the ability of this site to create its own character
_Terminate key views and vistas on key features/focal points
_Encourage a block structure that enables uses to transition over time
_Create an attractive, comfortable and welcoming environment, fit for purpose and built to last
_Incorporate CPTED principles to create safe environments

5. COMMUNITY COHESION
Foster community mindedness

Strategies

Explore opportunities to:

_Create neighbourhood focal points for social interaction and community participation well-located to key movement patterns and open space systems
_Encourage a range of facilities and services to cater for diverse needs to a variety of people
_Provide for a range of spaces and uses that encourage people to work and visit the locale
_Ensure that spaces cater for all age groups and abilities
_Encourage place making opportunities that invite community participation and encourage and contribute to cultural life

03 Strategic Context

3.1 Metropolitan Context

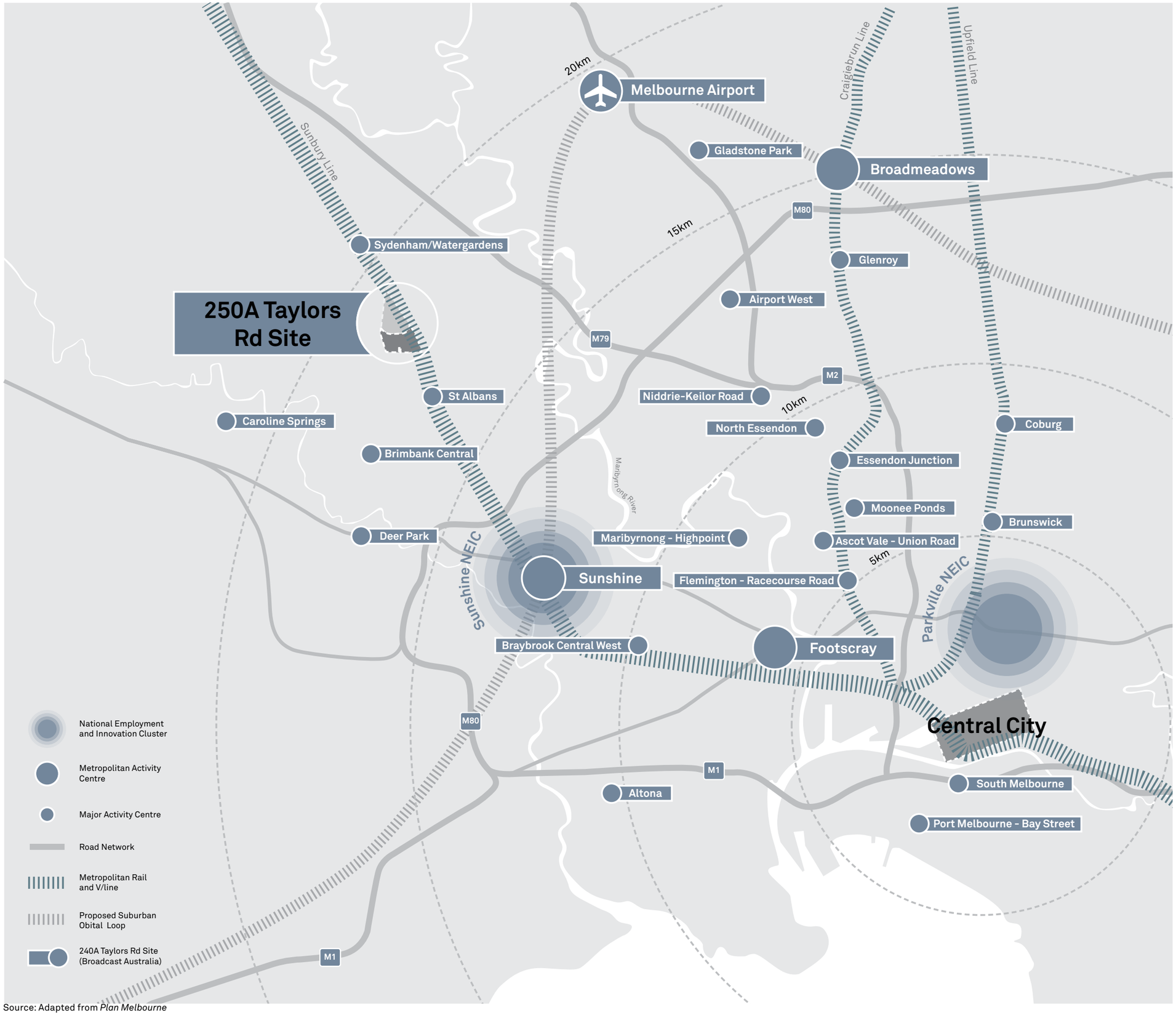
INTRODUCTION

The site is located 20km north of the Melbourne CBD within an area of significant anticipated growth. It is 8km north of the Sunshine National Employment and Innovation Cluster (NEIC) and Sunshine Metropolitan Activity Centre and 14km to the Footscray Metropolitan Activity Centre.

Located mid-way between two Major Activity Centres—Sydenham/Watergardens is approximately 2.5km to the north and St. Albans 2km to to the south.

The site is located between Keilor Plains Station and Watergardens Station on the Sydenham rail line, which marks its eastern boundary. This line carries both Melbourne metropolitan services and V/Line services to Kyneton and Bendigo.

The south eastern corner of the site is within 4.5km of the Calder Freeway (M79), providing direct access to the Western Ring Road and Melbourne Airport which is a 20 minute drive.



Source: Adapted from *Plan Melbourne*

03 Strategic Context

3.1 Metropolitation Context

STRATEGIC TRANSPORT

The south east corner of the Sydenham site is within 200-250m of the Keilor Plains Station/Bus Interchange providing a 30 minute train journey to Southern Cross Station.

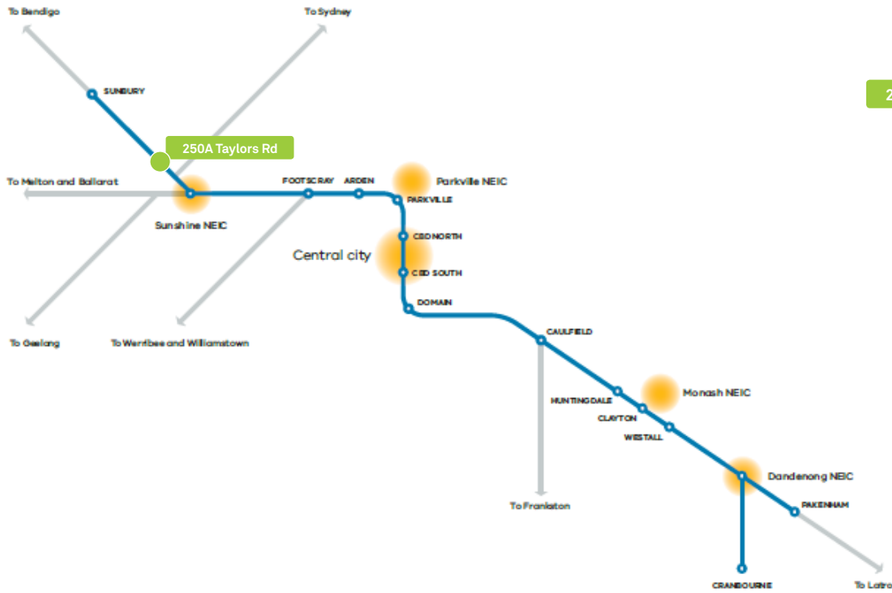
Keilor Plains Station is a 10 minute train journey to Sunshine Station and 20 minute journey to Footscray Station. Sunshine Station provides links to the Geelong V/Line Service through growth areas to the west, and Footscray Station access to the Williamstown and Werribee lines.

Regional towns such as Bendigo, Castlemaine, Kyneton and Woodend can be reached within 2hours by taking the V/Line service from Watergardens Station.

Current and planned improvements to the rail network include high capacity rail between two of the outer growth areas on the Sunbury and Pakenham/Cranbourne lines—directly linking the new Melbourne Metro Stations of Parkville, CBD North, CBD South and Domain to Sunshine Station.

In addition, Federal and State Government approval in November 2018 of a rail link to Melbourne Airport will create a station hub at Sunshine linking metropolitan and regional services.

The Andrews Government's announcement in 2018 of a new suburban rail loop including 12 new stations would connect Werribee, Sunshine and Melbourne Airport with middle ring suburbs of Broadmeadows, Fawkner, Reservoir, Heidelberg, Bundoora, Doncaster, Box Hill, Burwood, Glen Waverley, Monash, Clayton and Cheltenham, providing access to existing and expanding employment areas.



High Capacity Train Network
Source: Plan Melbourne, Figure 5, pg.23

Suburban Orbital Loop
Source: The Age, 28 August 2018

Airport Rail Link
Source: bigbuild.vic.gov.au/projects/airport-rail-link

Bendigo to Melbourne

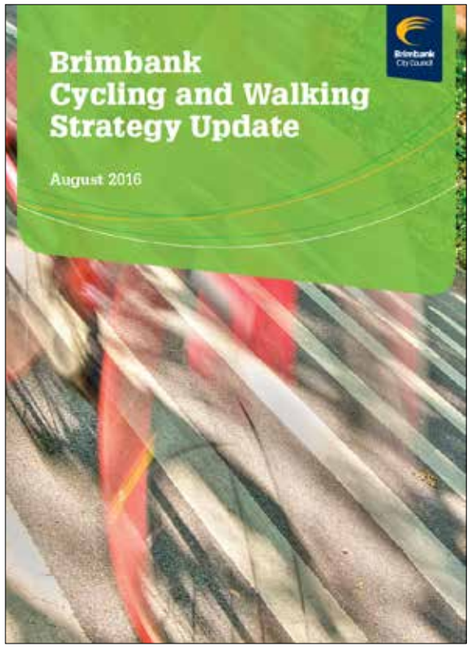
		Monday to Friday						
Service		TRAIN	TRAIN	TRAIN	TRAIN	TRAIN	TRAIN	TRAIN
Service information		♿	♿	♿	♿	♿	♿	♿
EPSOM STATION	*depart*				05.58			07.00
EAGLEHAWK	*depart*			05.31	–	06.22		–
BENDIGO	*arrive*			05.39	06.06	06.30		07.08
BENDIGO	*depart*		05.07	05.41	06.08	06.32		07.10
Kangaroo Flat			05.11	05.45	06.12	06.36		07.14
Castlemaine			05.28	06.02	06.29	06.53		07.31
Malmsbury			05.40	–	06.41	–		07.46
Kyneton		05.13	05.48	–	06.49	07.11	07.23	07.54
Woodend		05.21	05.56	–	06.57	07.19	07.31	08.02
Macedon		05.27	06.02	–	07.03	07.25	07.37	08.08
Gisborne		05.31	06.06	06.29	07.07	07.29	07.41	08.12
Riddells Creek		05.36	06.11	–	07.12	07.34	07.46	08.17
Clarkefield		05.41	06.16	–	07.17	07.39	07.51	08.22
Sunbury		05.52	06.28	–	–	–	08.00	–
Watergardens		–	–	–	07.38d	07.56d	–	08.39d
Footscray		06.15d	06.50d	07.09d	07.56d	08.14d	08.29d	08.58d
SOUTHERN CROSS STATION	*arr*	06.25	07.00	07.19	08.06	08.24	08.39	09.08

V/Line Timetable
Source: vline.com

3.2 Policy Context Overview

INTRODUCTION

Key local policies and strategies informing the Urban Design Guidance are introduced here.

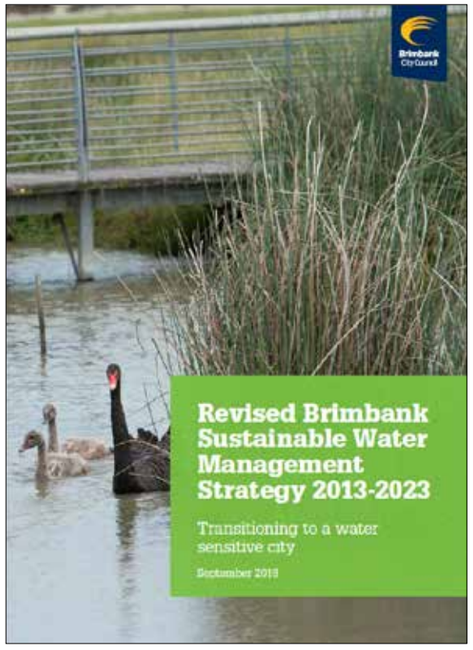


Brimbank Cycling and Walking Strategy Update, August 2016

The updated *Brimbank Cycling and Walking Strategy* outlines 32 strategic network improvements which have been categorised into High, Medium and Low priority. The top eight highest priority network improvements have been broken into 12 sub-routes, costing approximately $9 million.

Brimbank City Council has a clear plan for implementation for Brimbank's cycling and walking network over the next 7-10 years.

For this Strategy, Council undertook consultation with the public via an online public survey and through workshops with two key cycling groups in Brimbank: The Brimbank Bicycle User Group (BrimBUG) and My Time Cycling.

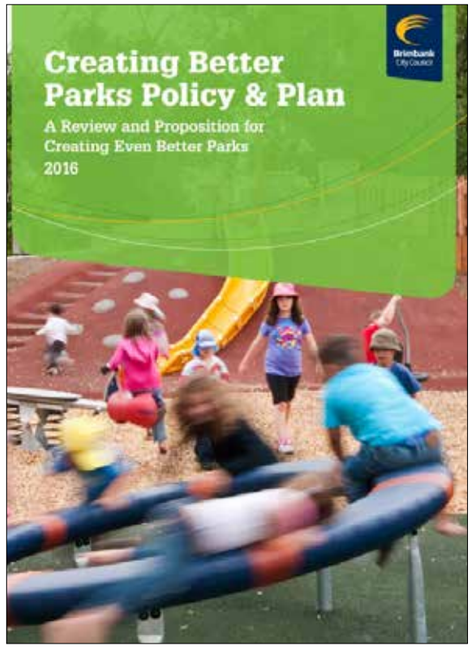


Revised Brimbank Sustainable Water Management Strategy 2013-2023, September 2018

This Strategy is part of Brimbank's vision for a water sensitive city with healthy waterways, under the Brimbank Sustainability Framework.

It provides strategic direction, targets and actions to be delivered over 10 years.

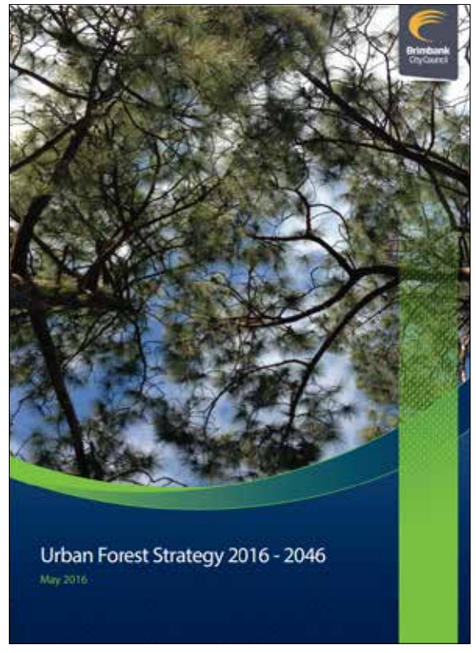
The Strategy outlines Council's commitment to capturing the social, economic and environmental benefits of an Integrated Water Cycle Management approach. This approach involves integrating effort to improving water efficiency, using 'fit-for-purpose' alternative water sources, managing stormwater, and improving water quality reaching creeks and rivers.



Creating Better Parks Policy & Plan, 2016

The above Policy directs how to improve Brimbank's parks and playgrounds.

This Policy covers (among other issues):
- Scope and Project Objectives
- Analysis of Existing Open Space and Playground Condition
- Consultation
- Directions for the Policy
- Open Space and Playground Guiding Principles: Parks, Reserves, Waterways, and Playgrounds
- Key Recommendations of the Open Space and Playground Plan and
- Funding.

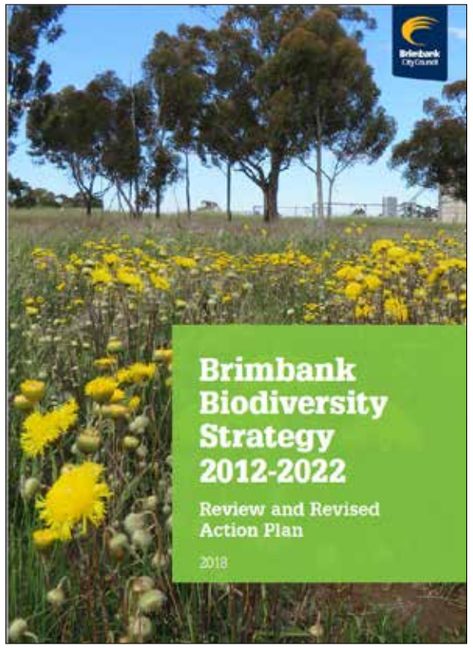


Urban Forest Strategy 2016-2046

Brimbank plans to increase tree canopy coverage from 6.2 per cent to 30 per cent over the next 30 years. The Strategy builds upon the Council endorsed *Greening the West* and is intended to guide the future greening of Brimbank.

The Strategy proposes to:
- Increase canopy cover in Brimbank to 30 per cent to reduce urban heat island effects
- Maximise carbon sequestration through green infrastructure
- Protect existing trees through planning and enforcement
- Decrease the amount of impervious surfaces to reduce urban heat island effects
- Integrate grasslands with open space
- Improve water quality through the use of water sensitive urban design
- Encourage trees to be planted on private property and
- Create understanding and positive community attitudes towards the Brimbank Urban Forest.

3.2 Policy Context Overview



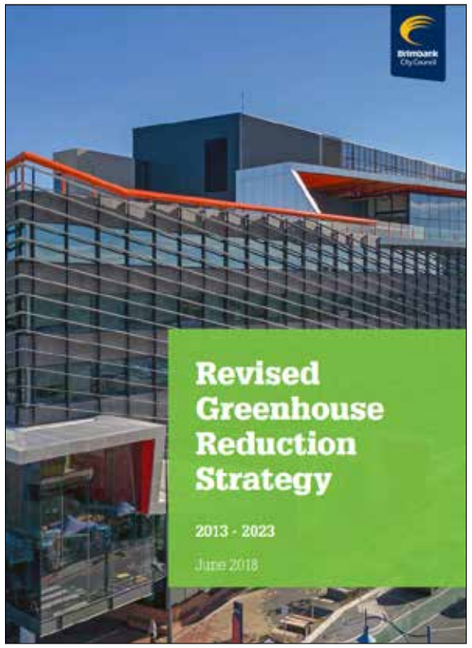
Brimbank Biodiversity Strategy 2012-2022, 2018

The *Brimbank Biodiversity Strategy* has been developed to protect, maintain and enhance biodiversity within the municipality.

The 10 year Strategy will provide the direction to protect and increase the diversity and sustainability of remnant vegetation and fauna habitat across the municipality.

This will be achieved by using best practices available in biodiversity protection, the use of adaptive management techniques, and increased connectivity of biodiversity.

This Strategy covers:
_Influences
_Protects Biodiversity
_Adaptive Management of Biodiversity
_Biodiversity Connectivity
_Engage and Promote Biodiversity and
_Biodiversity Strategy Action Plan and Reporting.

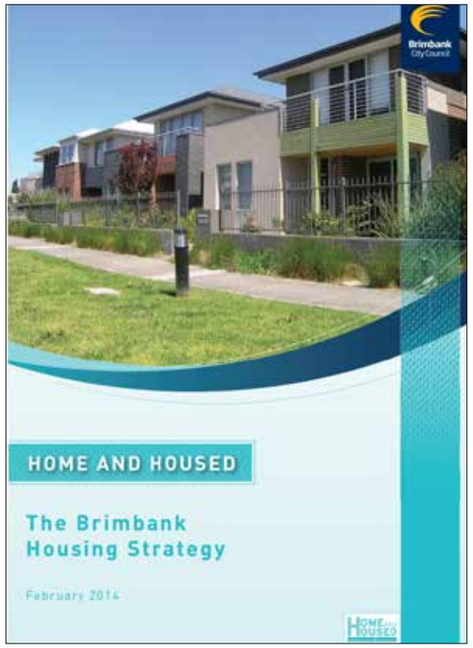


Greenhouse Reduction Strategy 2013-2023, June 2018

The *Greenhouse Reduction Strategy* has been developed as part of Brimbank City Council's commitment to significant reduction of greenhouse emissions (climate change mitigation) under the Brimbank Sustainability Framework.

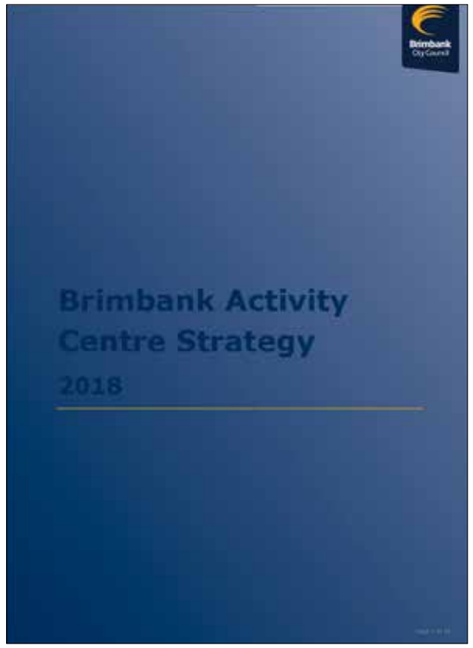
It provides the strategic direction, targets, and actions to be delivered over 10 years.

The strategy will see Council reducing its corporate greenhouse emissions by 50 per cent by 2023 and continued support for community greenhouse reductions and energy efficiency across the municipality.



Home And Housed, February 2014

Brimbank's Housing Strategy ensures that housing growth is managed into the future. It emphasises the importance of location, good design, housing diversity, and neighbourhood infrastructure.



Brimbank Activity Centre Strategy, 2018

The *Brimbank Activity Centre Strategy* establishes principles and supporting guidelines to inform Council's approach to activity centres. This approach identifies ways to support activity centres and their stakeholders, ensuring planning for economic viability and ongoing improvements into the future. The Strategy provides an overarching policy and work program for both smaller and larger centres, and includes actions for a number of areas in Council including strategic planning, economic development, business engagement and capital works.

3.3 Environmental Systems

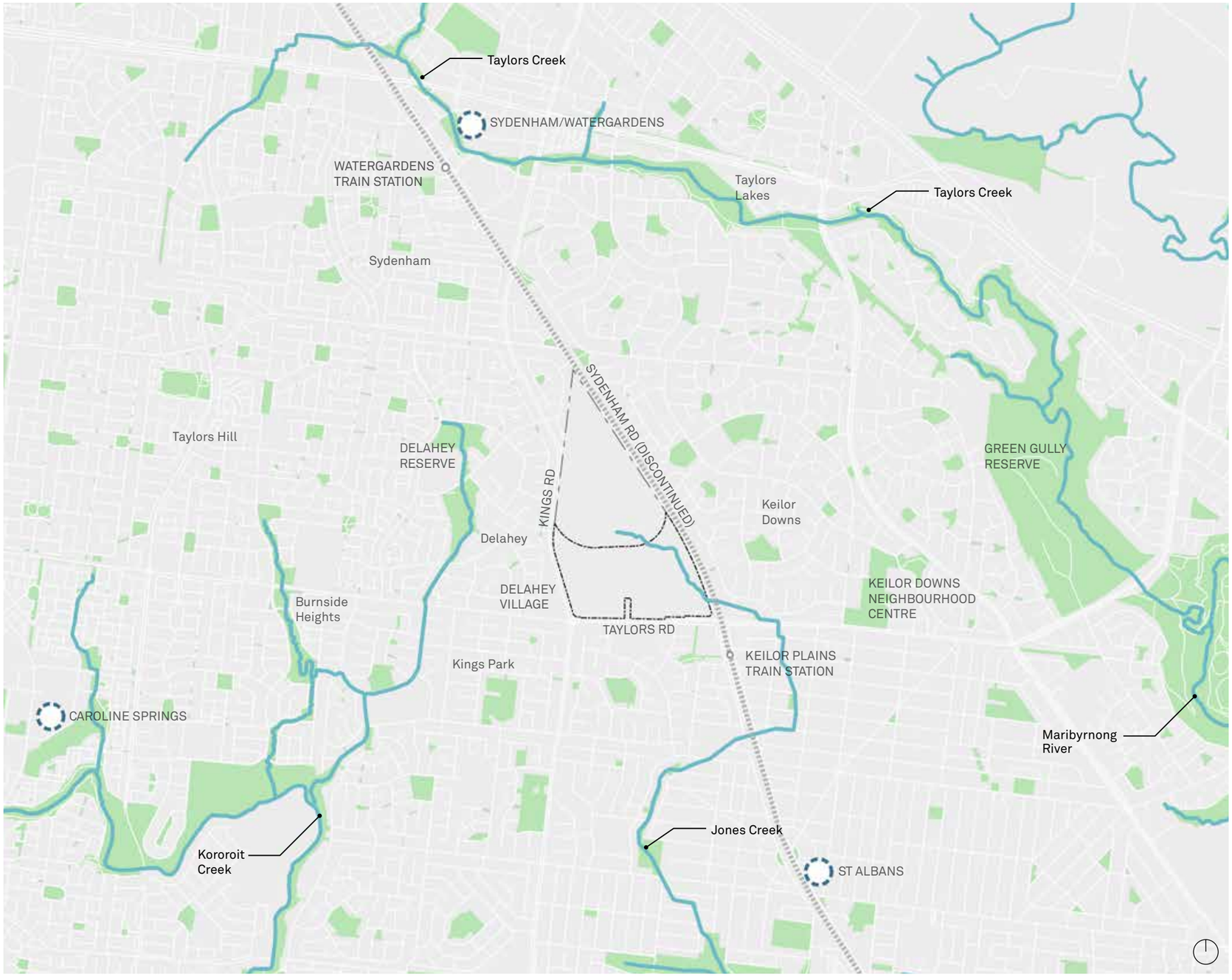
WATERCOURSE

The large scale drawing opposite shows the existing watercourses and broader catchment within the suburbs of Delahey, Sydenham, Taylors Hill, Kings Park, Burnside Heights, St. Albans, Taylors Lakes, Kealba and Keilor Downs.

The watercourses closest to the site are:
_Maribyrnong River to the east connecting to Taylors Creek in the north east
_Jones Creek to the south and
_Kororoit Creek to the south west.

The St. Albans West Drain runs north south along the eastern side of the site connecting to Jones Creek in the south. The Drain is considered to be a natural waterway providing an environmental and social asset.

The open space network is associated with existing watercourses creating opportunities to continue the network on the development site linking it with the broader area and existing infrastructure.



Source: Vicmap Data

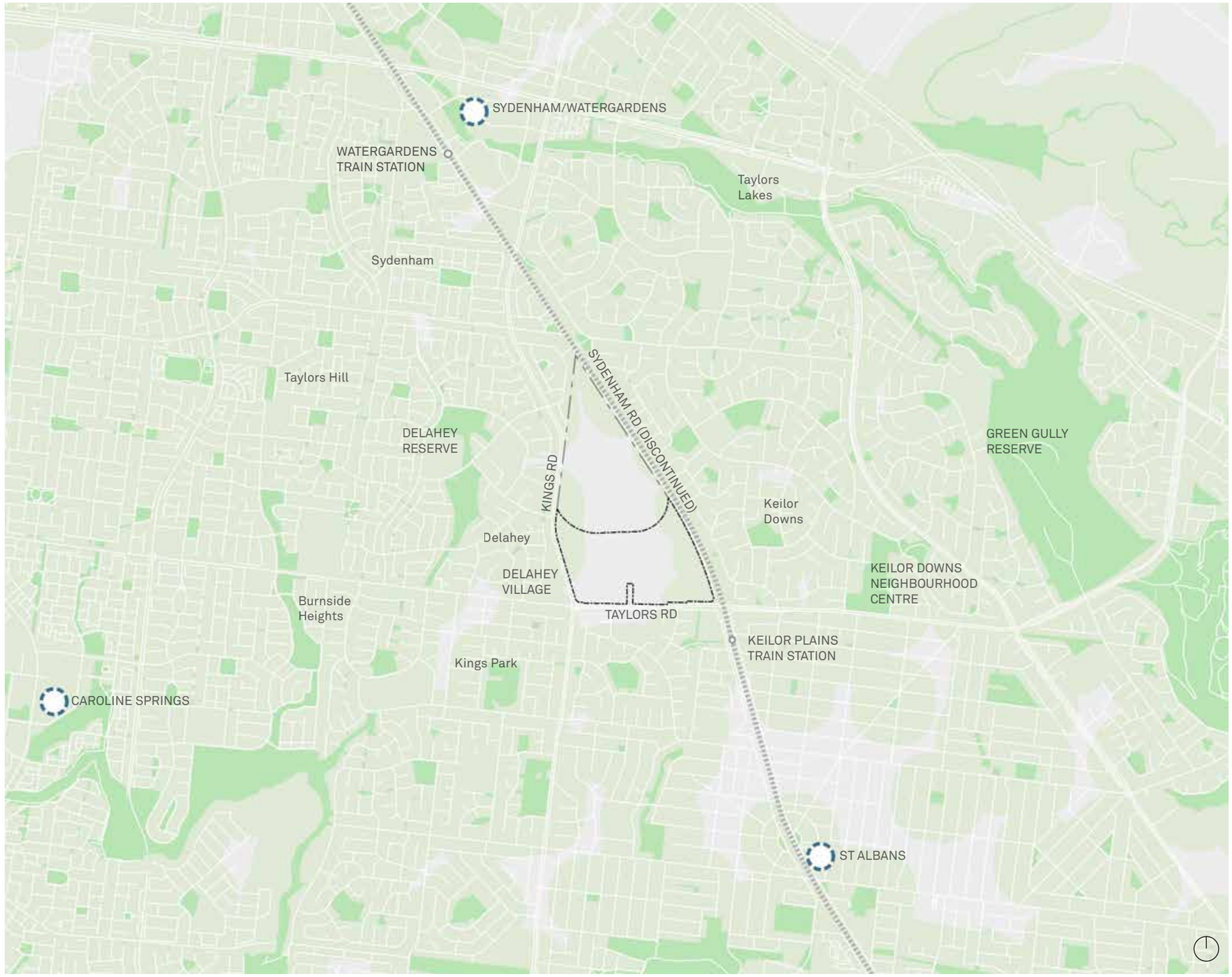
3.3 Environmental Systems

OPEN SPACE

Public open space captured in the opposite plan is shown in dark green. The light green colour indicates the 400m walkable catchment from existing open space.

It is apparent from the drawing that there are serveral key gaps within the Melbourne metropolitan area, namely St. Albans, Sydenham/Watergardens and the site.

There is an opportunity to provide additional open space(s) on the site that connect and contribute to the broader green network within the surrounding district.



Source: Victorian Planning Authority, VPA Open Space

3.3 Environmental Systems

CITY OF BRIMBANK OPEN SPACE HIERARCHY

Brimbank Council's open space hierarchy identifies six types of open spaces:
_Flagship Parks
_Heritage Gardens
_Suburban Parks
_Neighbourhood Parks
_Local Reserves and
_Waterways.

The role, function, user groups, facilities, service radius and in some instances size of each park is defined by the hierarchy. The drawing below illustrates the open spaces by hierarchy (excluding Local Reserves and Waterways) surrounding the site.

The drawing to the right maps the service hierarchy of each park in proximity to the site. It represents the radius as a cone and does not take into account barriers or actual walking routes. If these factors are to be taken into account, access to the site from Suburban and Neighbourhood Parks would be reduced. There is an opportunity to provide Suburban/Neighbourhood Parks on the site.

Source: Creating Better Parks Policy Plan 2016

Source: Creating Better Parks Policy Plan 2016

3.3 Environmental Systems

ECOLOGICAL VEGETATION CLASS

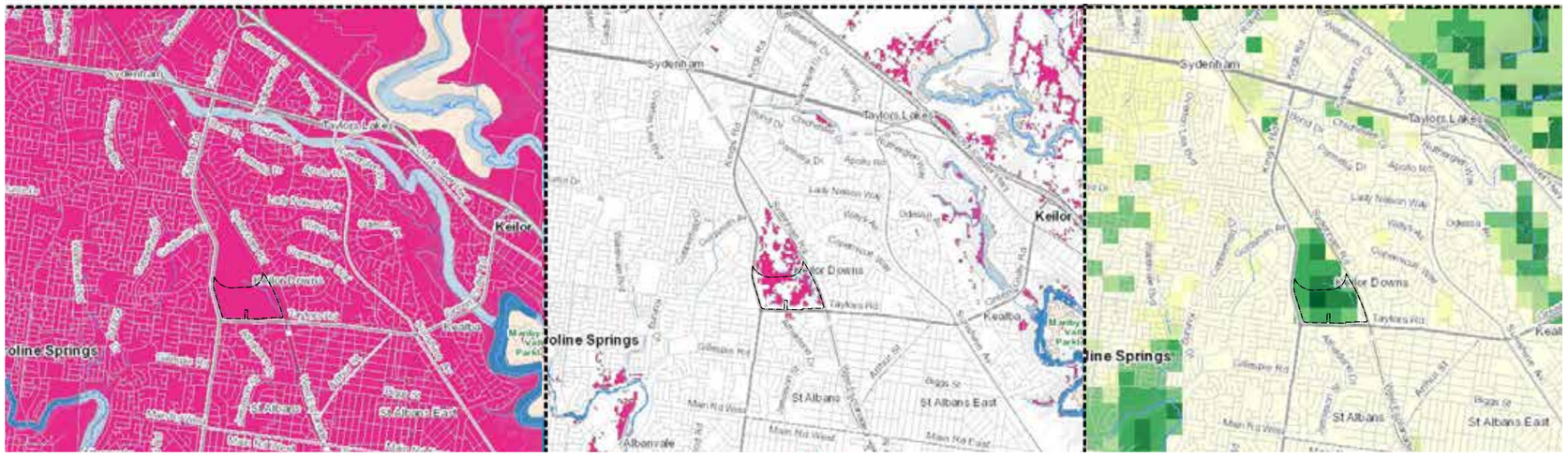
Ecological Vegetation Classes (EVC) are the standard unit for classifying vegetation types in Victoria.

The site is predominantly Plains Grasslands. Plains Grasslands are characterised by the presence of native grasses as the dominant feature on the ground and a lack of significant tree canopy. Small areas of Plains Grassy Wetlands are present on site in shallow, seasonally wet depressions. They are typically present in these loosely defined drainage systems where water content in the soil is higher.

VBA Specie recorded on site (1980):
Pimelea glauca
Smooth Rice-Flower

Pre-1750 EVC: Plains Grassland
Bioregion: Victorian Volcanic Plain
Group: Plains Grasslands and Chenopod Shrublands
Subgroup: Clay soils

2005 EVC: Plains Grassland
Bioregional Conservational Status: Endangered
Bioregion: Victorian Volcanic Plain
Group: Plains Grasslands and Chenopod Shrublands
Subgroup: Clay soils



Source: NatureKit

3.4 Social Infrastructure

COMMUNITY INFRASTRUCTURE

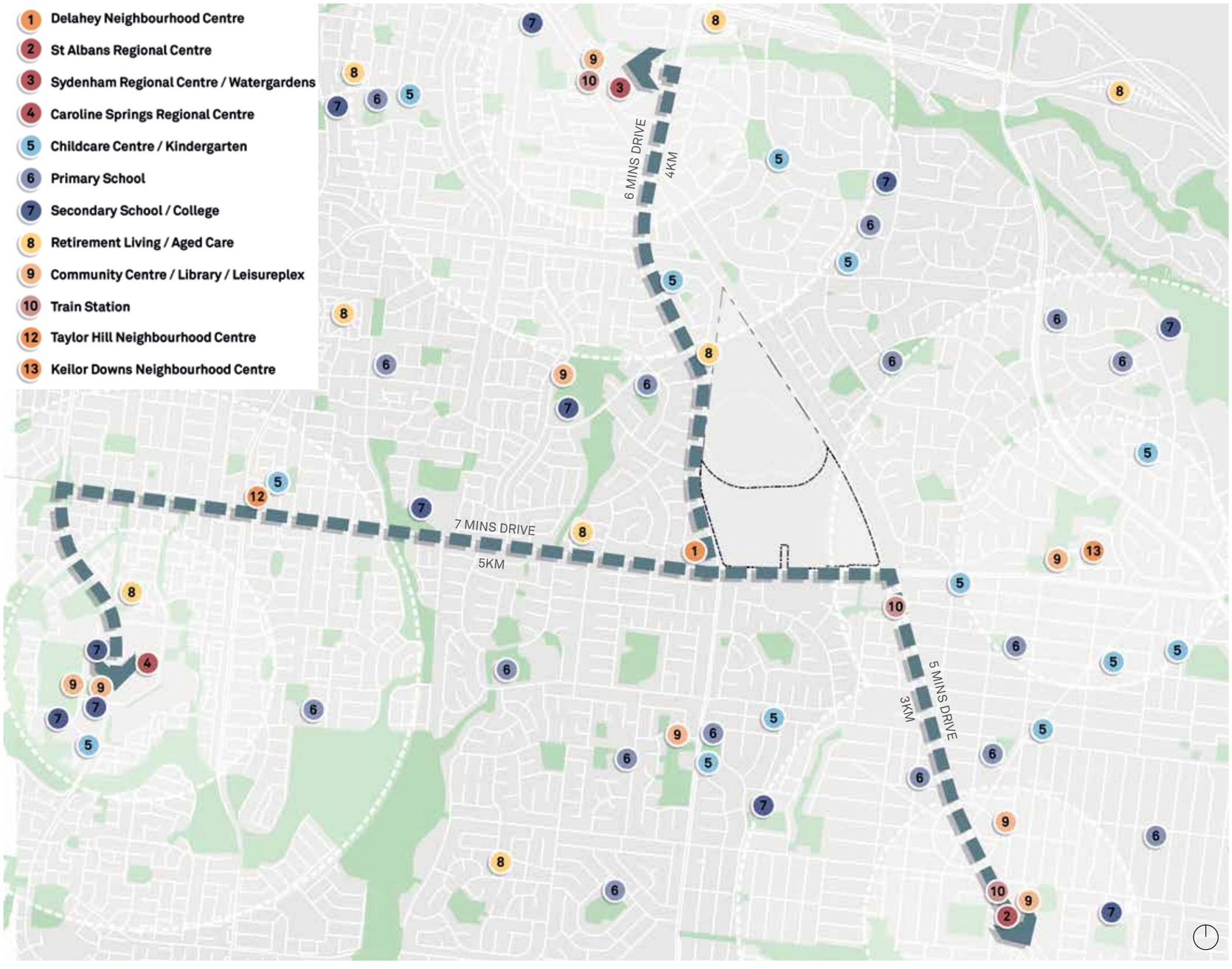
Community infrastructure was mapped around the site to understand what types of facilities and services exist in the local area and to suggest any potential gaps the site could accommodate.

The site has two retail shopping centres within close proximity, Delahey Village and the larger Keilor Downs Shopping Centre and neighbourhood hub, approximately 1.2km to the east. In addition to providing retail, the hub also provides a Leisure Centre, Skate Park and Neighbourhood Centre.

Watergardens to the north, St. Albans to the south and Caroline Springs to the west provide additional shopping centres and main street retail.

The site is relatively well serviced by schools, however poor connectivity to the surrounding area particularly to the east, increases travel times.

Delahey Reserve provides a community hub combining primary and secondary schools with a community centre and playground.



Source: Google

0 200 400 800m 1:30000

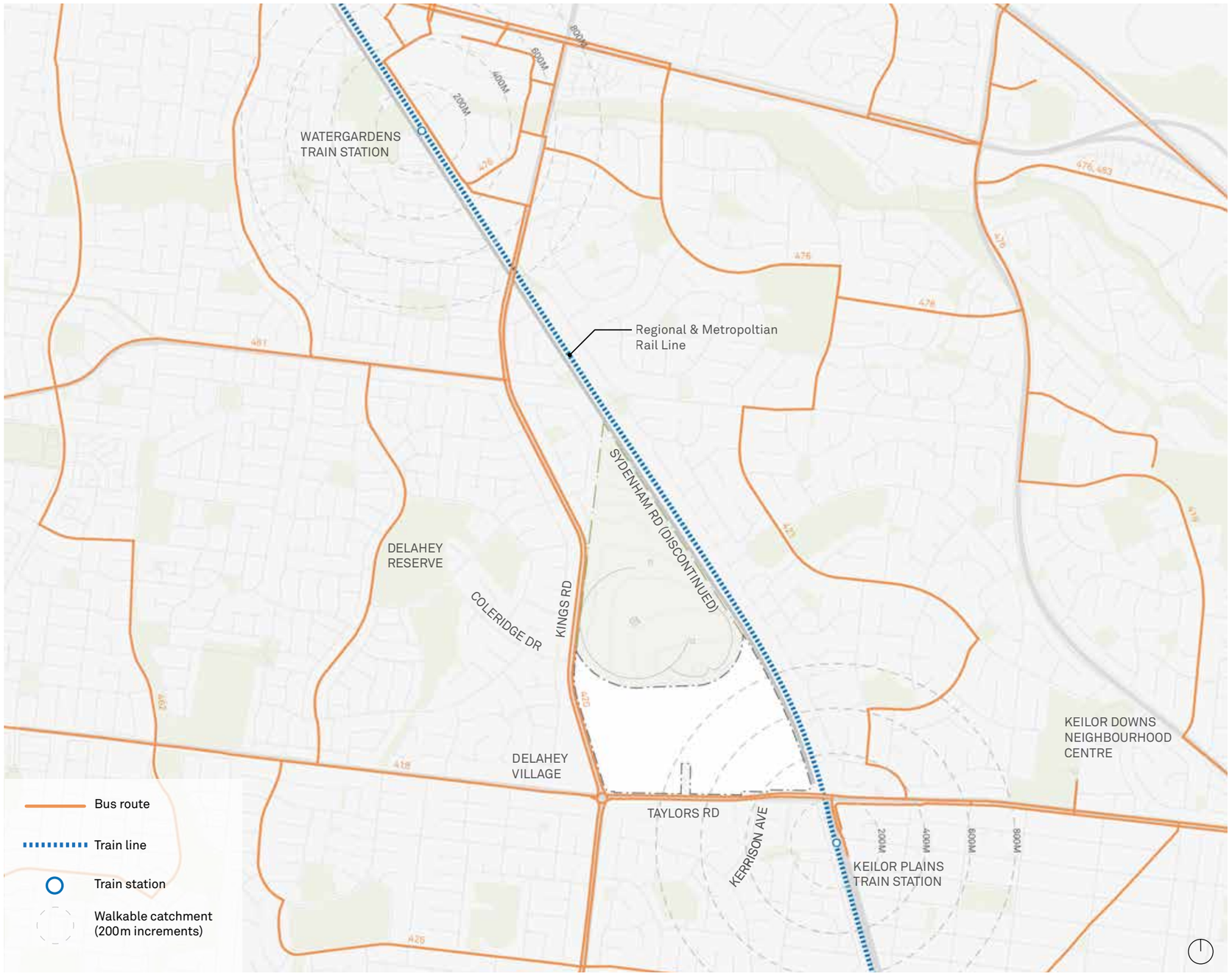
3.5 Movement & Access

PUBLIC TRANSPORT – BUS & RAIL NETWORKS

The site is well serviced by rail at Keilor Plains Station 200m to the south and the bus interchange a little further to the east. Access to the station is impacted by the grade separation along Taylors Road and the location of the existing signalised intersection at Kerrison Avenue.

The rail line provides metropolitan services on the Sunbury line between the Melbourne CBD and Sunbury/Watergardens and access to V/Line services to Bendigo. A more extensive network can be accessed via Sunshine and Footscray Stations along the Sunbury Line providing good connectivity to some parts of the metropolitan area.

Bus routes servicing the local area include:
_420 Sunshine to Watergardens Station along Station/Kings Road
_421 St. Albans to Watergardens Station via Keilor Plains Station—a meandering route to the east of the site
_418 St. Albans to Caroline Springs via Keilor Plains Station—along Taylors Road and
_425 St. Albans to Watergardens Station via Delahey—a route that skirts the surrounding area to the west of the site.



Source: Data Vic

3.5 Movement & Access

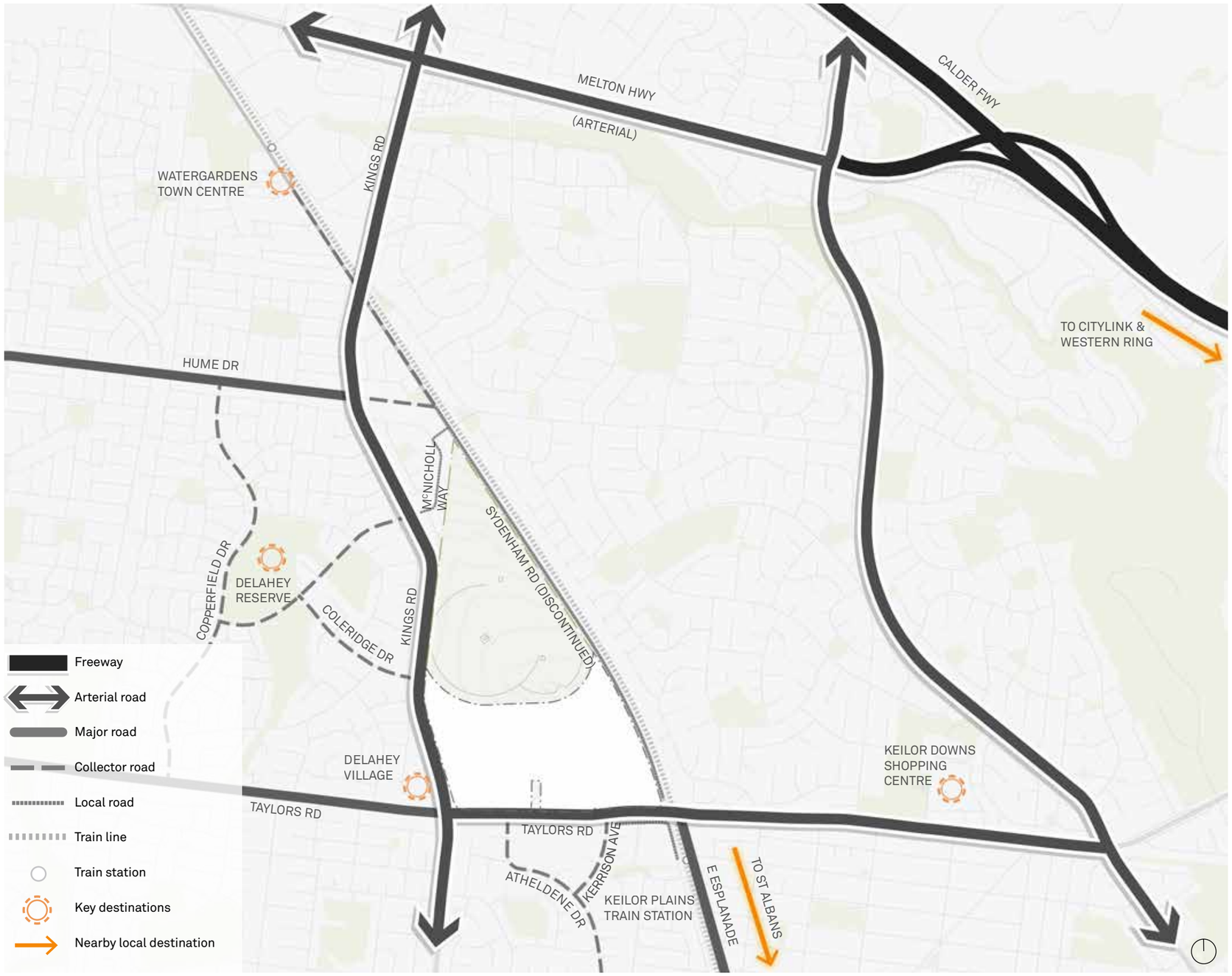
ROAD NETWORK

The road network shown on the opposite map highlights that the site is bound by two arterial roads along its west and south boundaries, severing the site from adjoining neighbourhoods.

Current site access is via McNichol Way to Sydenham Road, which was discontinued when grade separation works were undertaken along Taylors Road for the Sydenham metropolitan rail line and V/Line service.

Coleridge Drive is a key collector road linking the site to a community hub located at Delahey Reserve with community centre, playground and schools.

The site has good access to the Calder Freeway (M79) providing direct access to the Western Ring Road (M80) and Citylink (M2).



Source: Melway

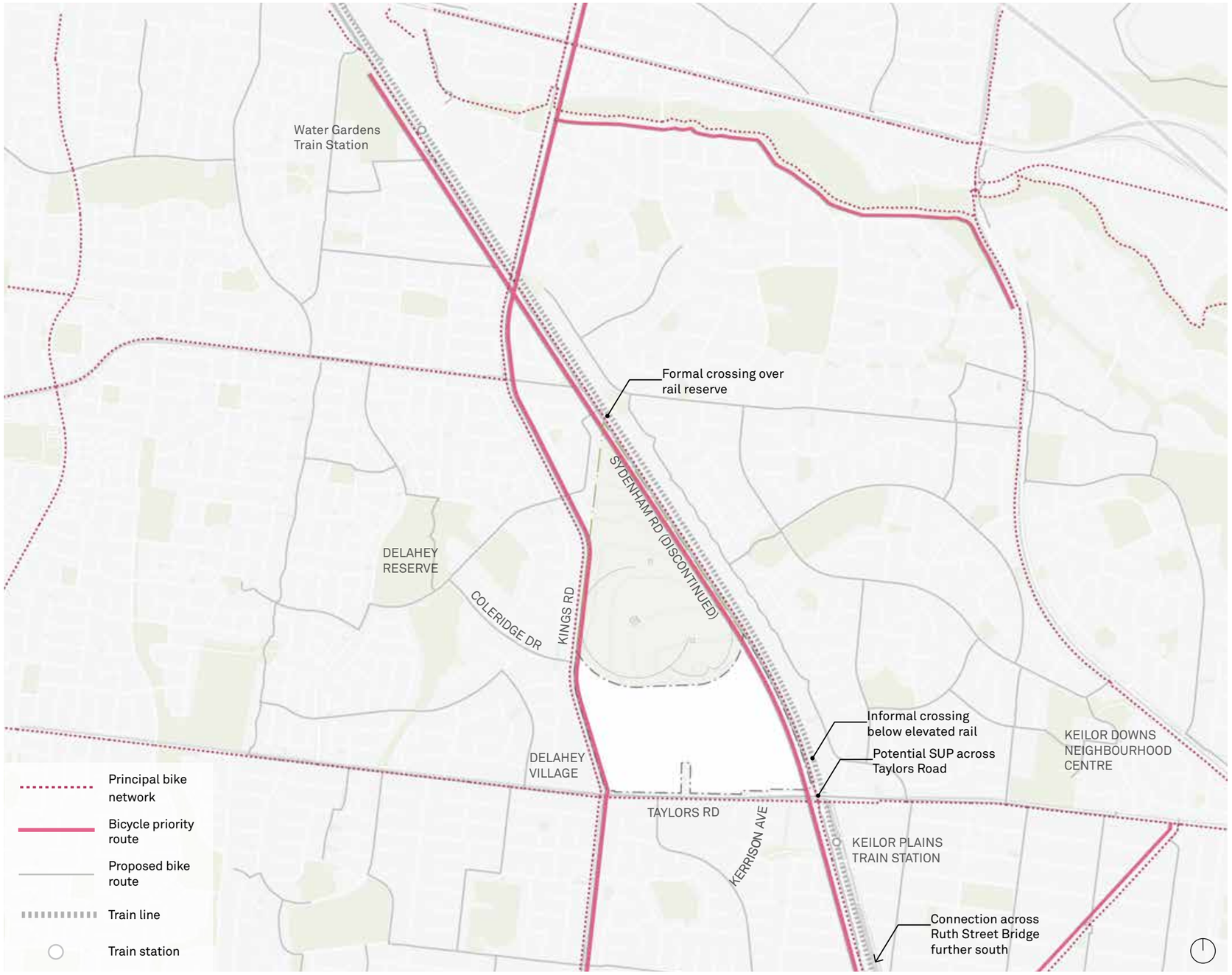
3.5 Movement & Access

BICYCLE NETWORK

The site has good access to the Principlal Bicycle Network and Bicycle Priority Routes (BPR). The bicycle routes along the rail reserve are severed by the grade separation at Taylors Road.

Brimbank Council has identified a potential link across Taylors Road to extend the 3m wide Shared User Path (SUP) along the rail reserve connecting the Melbourne CBD to Watergardens.

Current plans include extending the SUP to Ruth Street in 2019, Keilor Downs Station in the next two years, followed by a connection over Taylors Road in the 2022-23/2023-24 financial years.



Source: Brimbank City Council

3.6 Demographics & Needs

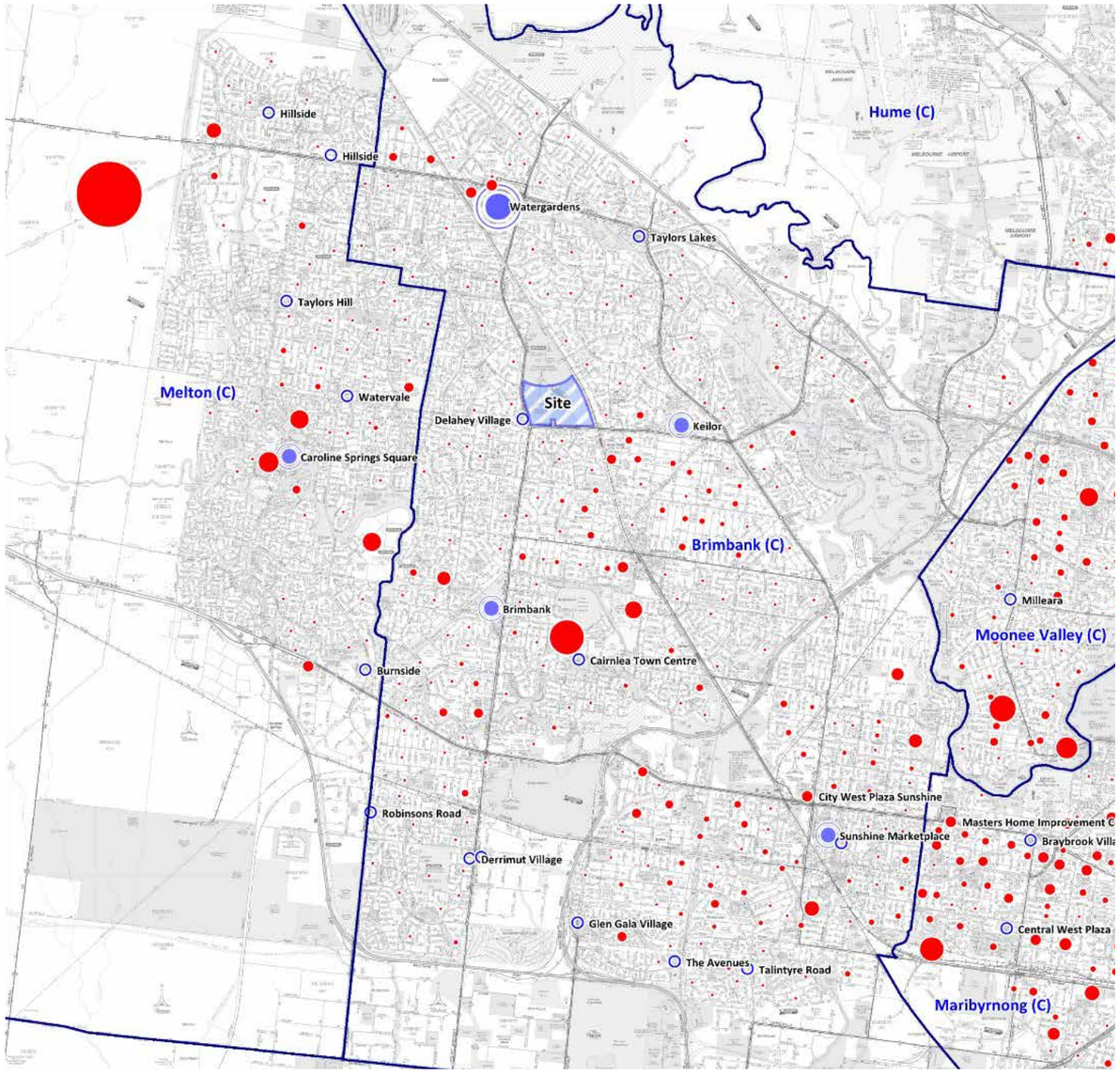
The following is based on preliminary economic assessment called the *Strategic Land Use Options Report 2019* by Consultants Deep End.

DEMOGRAPHIC SHIFTS
Recent demographic shifts can be summarised as:
_4 of the 6 suburbs adjoining the site have declining population levels
_The population is ageing:
  _2006: 13% aged over 60 years
  _2016: 20%
  _2026: 24% (projected)
_Population over 60 will increase in the 6 suburbs by 4,700 in the next 10 years & by 9,000 in the City of Brimbank
_'Couples with children' are still the dominant family type (45%) however smaller families are increasing in number.

LITTLE DIVERSITY IN HOUSING STOCK
Existing housing stock can be summarised as:
_Housing stock built for the young families who moved to the area from the 1970s onwards
_Detached homes make up 85-95% of dwellings in Keilor Downs, Taylors Lakes and Kings Park (Average 80% across 6 suburbs).
_Current housing mix:
  _80% detached homes
  _15% semi-detached / town houses
  _5% units / apartments
  _77% of homes have 3 or more bedrooms (Melb. avge 62%).
_Not typically wellsuited to the elderly, downsizers, single parents or other families wanting lower home maintenance.

LITTLE OR NO REDEVELOPMENT OF ESTABLISHED HOUSING AREAS
Current development trends can be summarised as:
_Some redevelopment of dwellings in the General Residential zone in St Albans but little or no change in areas zoned Neighbourhood Residential north of Taylors Road
_Higher density residential zones around the Watergardens and Keilor centres have seen little activity in the last 2 years.

HOUSING OPPORTUNITY
Opportunities in housing can be summarised as:
_A mix of housing lots providing options for smaller dwellings including townhouses and apartments
_Small lots will be attractive to buyers where they are close to shopping and public transport
_Potential aged living options
_Possible aged care facility.



Source: Deep End

4.1 Existing Site

EXISTING SITE USES

The 95ha BA site is a triangular shape measuring approximately 900m at it's southern boundary, 1.9km along it's eastern boundary and 1.6km along it's western boundary. The site accommodates three radio broadcast masts and infrastructure associated with it's operations. A cluster of small buildings housing the broadcasting equipment, a small car park and planted areas located at the mid-point along the site's eastern boundary, accessed from Sydenham Road. Vehicular access to BA's headquarters is restricted to the public.

A smal portion of BA's site located on the south west corner at the Kings and Taylors Roads intersection, is currently leased to a business selling building materials.

Another business located mid-way along the southern boundary at Taylors Road selling gardening supplies, is not owned by BA.

SUB-DIVISION

The 46ha site for this project was sub-divided from the BA site in 2018. Conditions attached to the Plan of Sub-division for Lot B on PS 817647S include:

- 2m drainage easement (E1) across the south eastern corner of the site
- 2.5m sewerage easement along the eastern boundary commencing at the northern tip and spanning until the 2m drainage easement
- Land in the top north west and north east corners of the site is not to form part of the Public Open Space Contribution.

SITE AREA

The 46ha site is approximately 900m wide and 475m deep and is fenced off restricting public access. The 238 Taylors Road is 40m wide and 135m deep.

1:10000

4.2 Existing Planning Controls

ZONES & OVERLAYS

The current zone is Special Use Zone, Schedule 2 (SUZ2) specifically for utility installations and does allow for other uses but not residential. The current zone does not provide design guidance for the development of the land.

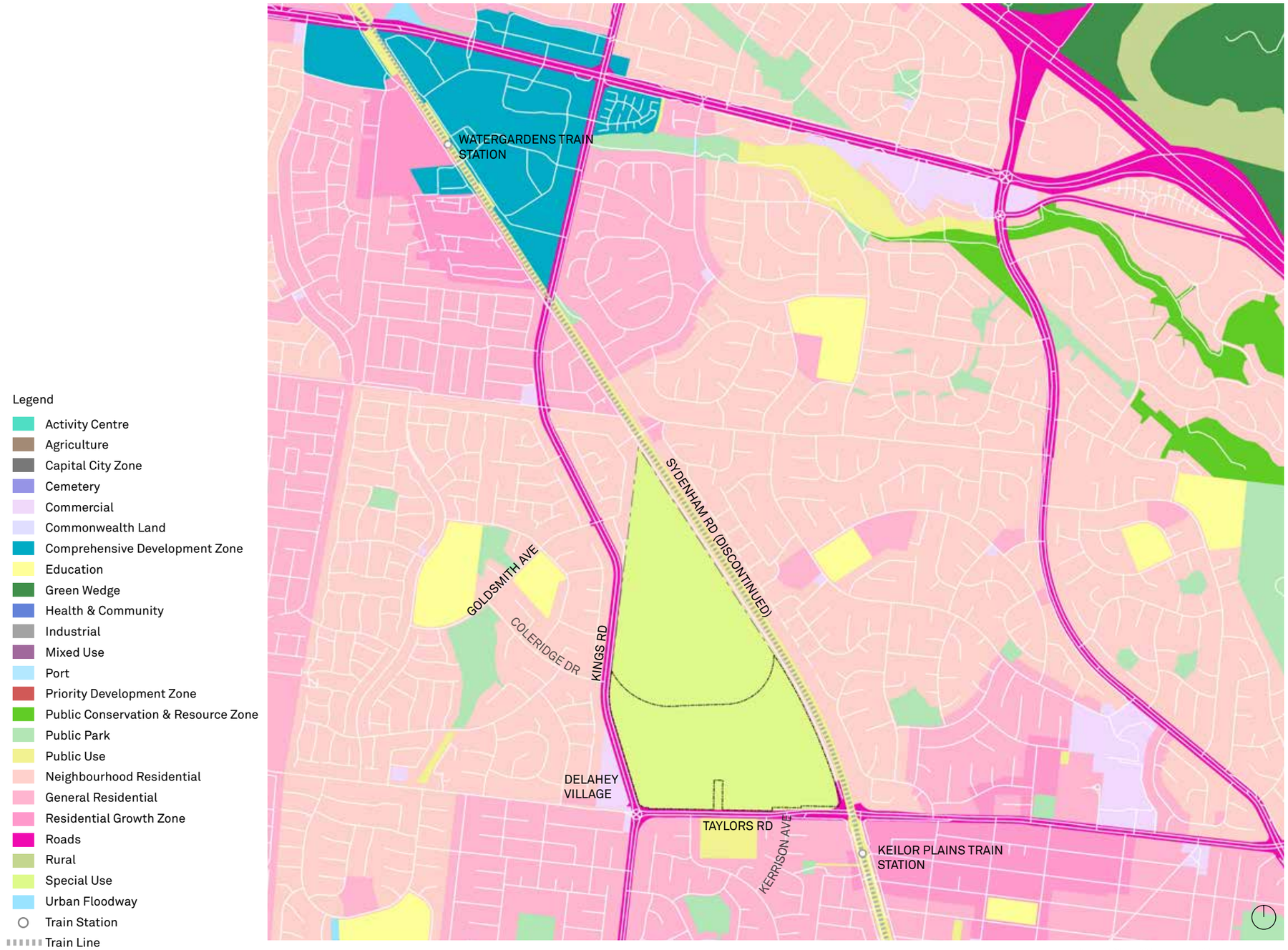
The site is surrounded by residential zones to the west, east and south with a Commercial Zone to the south west corner for Delahey Village, Public Use Zone 4 for the rail reserve to the east and Public Use Zone 1 for the Melbourne Water facility to the south.

Neighbourhood Residential Zones are located in the west and east. These zones restrict the type and form of development with a total of 50 per cent site coverage, 60m² minimum of Private Open Space with 40m² of Secluded Open Space.

General Residential Zones are located to the south and support some level of change. The level of change must respond to the site context and the existing/preferred neighbourhood character with a minimum of 40m² Private Open Space with 25m² of Secluded Open Space.

For both zones, lower density housing is encouraged however there is no guidance on what constitutes low density housing.

The following Overlays apply to the site:
_Development Contributions Plan Schedule 2 (DCP02)
_Environmental Audit Overlay (EAO)
_Environmental Significance Overlay Schedule 1 (ESO1) and
_Environmental Significance Overlay Schedule 2 (ESO2).



Source: Planning Maps Online

4.3 Post-contact Historic Context

RADIO MAST & TRANSMITTER STATION

The radio masts at Sydenham are on the Victorian Heritage Database, recognised for their association with the early years of the Australian Broadcasting Commission which was established in 1932. The main Sydenham mast built in 1938 measures 215m high, was a major technical achievement and remains one of the highest radio masts in Australia.

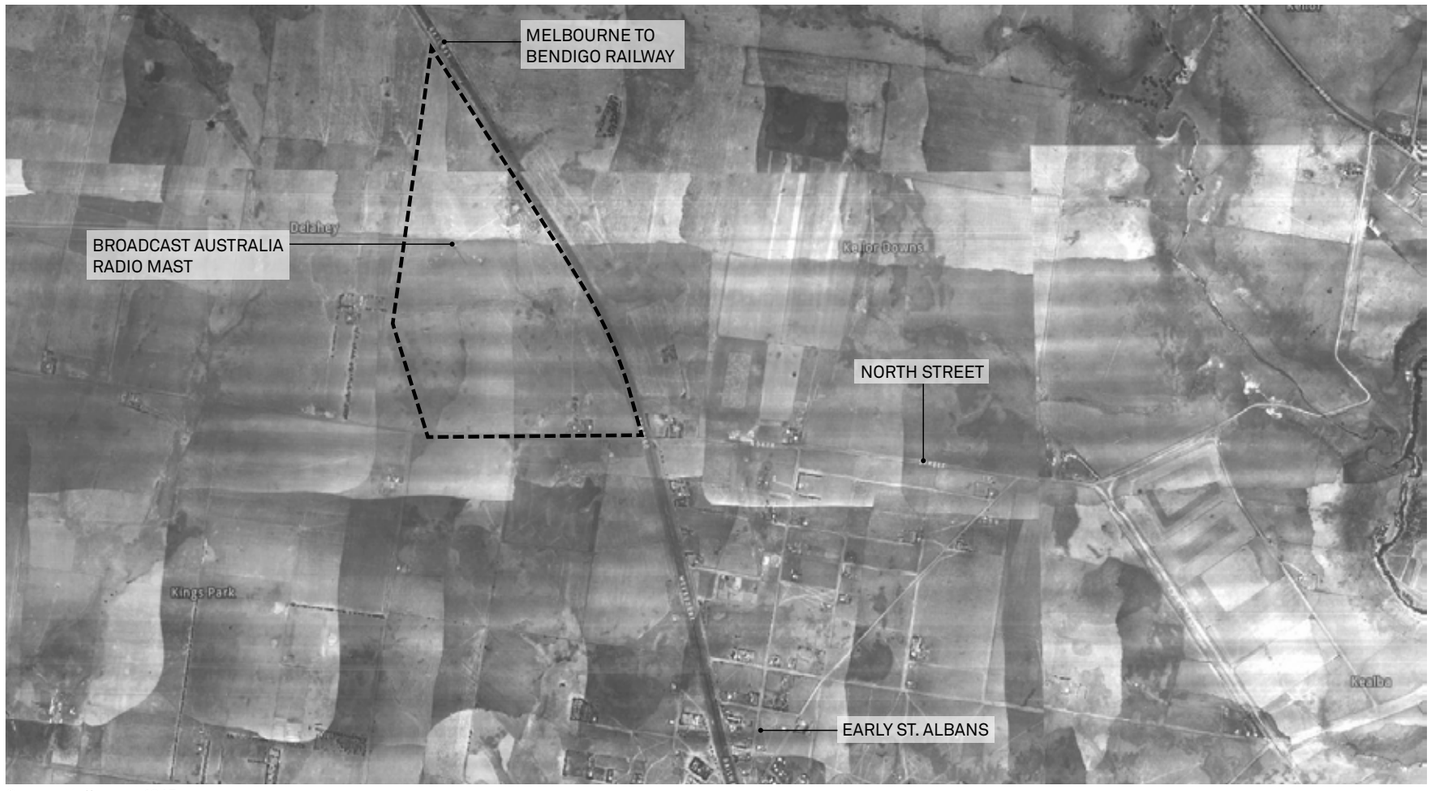
The location was chosen for it's realtively high position on the edge of the Melbourne metropolitan area, providing signals to the north and west of Melbourne. (Source: Victorian Heritage Database).

Historic photos of the site indicate that prior to being used for broadcasting services, the land was most likely used for grazing.

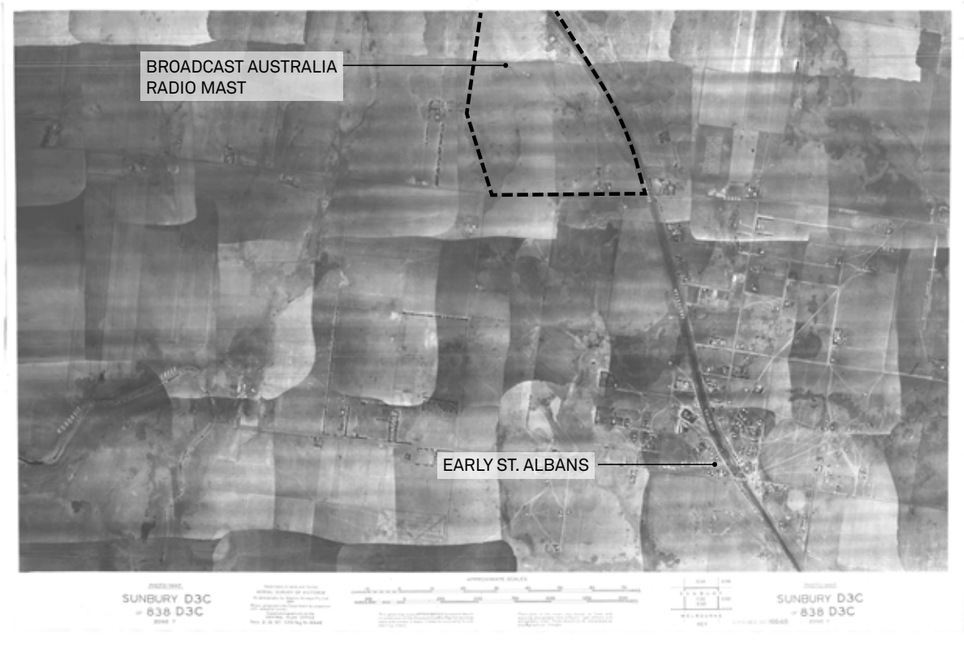
An aerial photo from 1946-7 captures the southern portion of the Broadcast Australia site, with the radio mast tower built in 1938. It also shows the presence of a cluster of buildings and a dam in the south east of the site, the Bendigo Railway and a small settlement at St. Albans.

Photos from 1974 show the development of new sub-divisions to the south of Taylors Road with the Tullamarine Airport to the north east, which remained on the periphery of the metropolitan area.

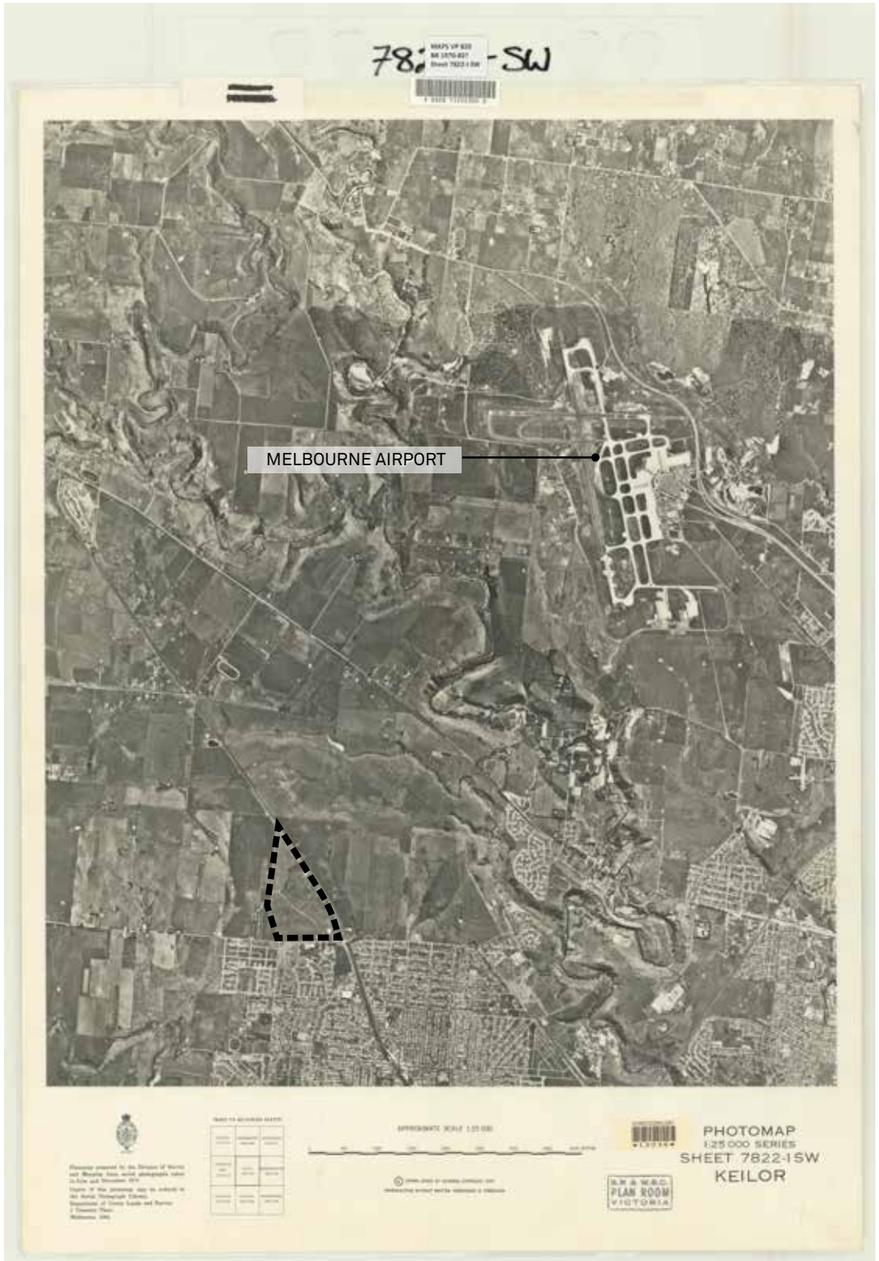
While the metropolitan area has expanded around the BA site, the site itself appears to have changed relatively little.



Source: Melbourne 1945



Source: Photo-map 1946-7, Sunbury D3C or 838 D3C Zone 7, Aerial Survey of Victoria, Plan Room State Library Victoria



Source: Photomap 1974, 1:25,000 Series, Sheet 7822-15W Keilor, Plan Room State Library Victoria

Source: Zoomed in detail of Photomap 1974, 1:25,000 Series, Sheet 7822-15W Keilor, Plan Room State Library Victoria

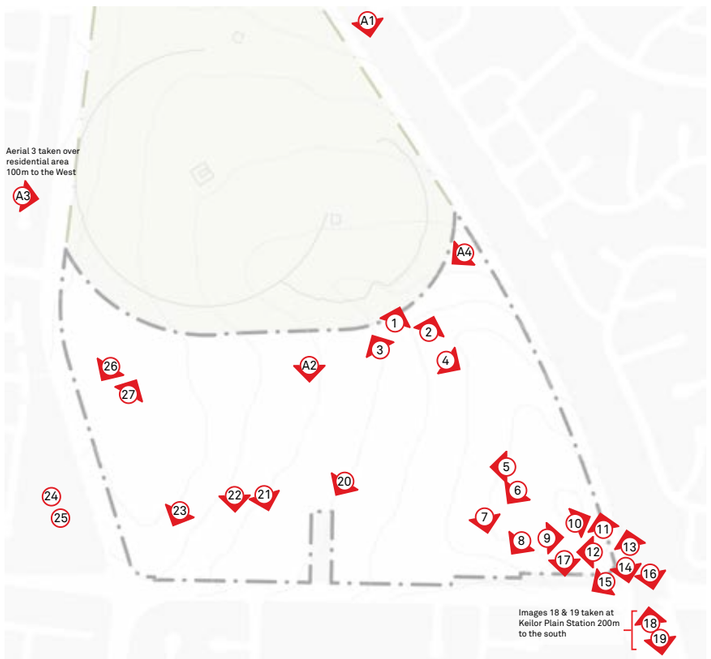
4.4 Urban Context

BROADCAST AUSTRALIA & SURROUNDING AREA

The following photos illustrate the urban context surrounding the site. Images opposite provide recent aerial views of the site showing:
_Rail Reserve and Sydenham Road with the rear of residential properties facing the Reserve
_Melbourne Water facility mid-way along Taylors Road
_Two of the three Broadcast Australia radio masts
_Delahey Reserve/community hub with schools to the west of Kings Road and Delahey Village at the Kings and Taylors Road intersection.

The surrounding context can be described as consisting predominantly of detached single and double storey residential buildings with hip roofs. The street network varies from grid pattern for older sub-divisions to winding roads with cul-de-sacs for sub-divisions from the 1970's.

Site photos follow, showing the existing features of the 250A Taylors Rd site consisting predominantly of a mixture of native and introduced grasslands with scattered trees, natural waterway, drain, culvert and connections to existing interfaces.



Site plan with location key for site images

Aerial 1: Looking south along Sydenham Road from northern end of site

Aerial 2: View from the east of site looking west

Aerial 3: View from the west of site looking over adjacent residential area and Delahey Reserve

Aerial 4: View from the east of site looking towards Broadcast Australia radio masts and Delahey Village

Photography by National Drones

View at the northern site boundary looking towards the Subject site

Small rock outcrop in the plains grassland

Fenced northern boundary looking towards the mast

Looking east to the metropolitan and rail line

Photography by HASSELL

Scattered trees amongst primarily plains grasslands landscape

Scattered trees amongst primarily plains grasslands landscape

Area of more diverse vegetation arising in areas with wetter soils

Existing drain in south east corner of site

Mobile phone tower in the south east corner of site

Photography by HASSELL


10

Existing culvert tunnel under the elevated rail on the eastern boundary of site


11

Existing underground culvert pipe


12

Existing concrete base


13

Looking north from the end of the discontinued Sydenham Road

Photography by HASSELL

Rail line and footbridge overpass across Taylor Road at south eastern corner of site

Large grade separation/barrier at Taylors Road at south eastern corner of site

Footbridge overpass (no public access) across Taylor Road at south eastern corner of site

Looking south at below grade section of Taylors Road Keilor Plains Station

Keilor Plains Station carpark

Keilor Plains Station platforms

Photography by HASSELL

238 Taylors Road at the site's southern boundary

View across Taylors Road towards Melbourne Water facility

Looking south across Taylors Road at residential interface

Existing building material outlet on south west corner of site

Photography by HASSELL

24

Delahey Village shopping centre

25

Delahey Village shopping centre entrance looking towards site

26

Typical plains grassland landscape

27

Looking towards Broadcast Australia radio mast from western boundary of site

Photography by HASSELL

TYPICAL STREETS IN SURROUNDING AREA

Four typical streets in the surrounding neighbourhoods have been selected to represent the urban structure of adjoining residential neighbourhoods:
_Acfold Court, St. Albans to the south of the site
_Wilmot Drive, Delahey to the north west
_Shakespeare Drive and to the west and
_Bianchi Court, Keilor Downs to the east.

Acfold Court: 15m approx. wide road reserve with 4.5m wide planted nature strips, few mature trees and 1.8m wide pedestrian paths on both sides of the street. Predominantly brick, single with some double storey detached dwellings with garage or open car port and single width cross-overs, a mixture of open/planted fences to high fences of varying materials. The central planted area in the court is used informally for car parking.

Wilmot Drive: 17.5m approx. wide road reserve with 6-7m wide planted nature strips, some mature trees, varied planting and 1.8m wide pedestrian paths on both sides of the street. Predominantly brick, single storey detached dwellings with garage or open car port port and single-double width cross-overs, a mixture of open/planted fences to high fences of varying materials.

Shakespeare Drive: 17.5m approx. wide road reserve with 6m wide planted nature strips, few mature trees, varied planting and 1.8m wide pedestrian paths on both sides of the street. Predominantly brick, single with some double storey detached dwellings with garage or open car port and single-double width cross-overs, a mixture of open/planted fences to high fences of varying materials.

Bianchi Court: 16m approx. wide road reserve with planted nature strips, many mature trees and 1.8m wide pedestrian paths on both sides of the street. Predominantly brick, single storey detached dwellings with garage or open car port and single width cross-overs, a mixture of open/planted fences to high fences of varying materials. The central planted area in the court contains a mature tree.

Acfold Court, Source: Google

Wilmot Drive, Source: Google

Shakespeare Drive, Source: Google

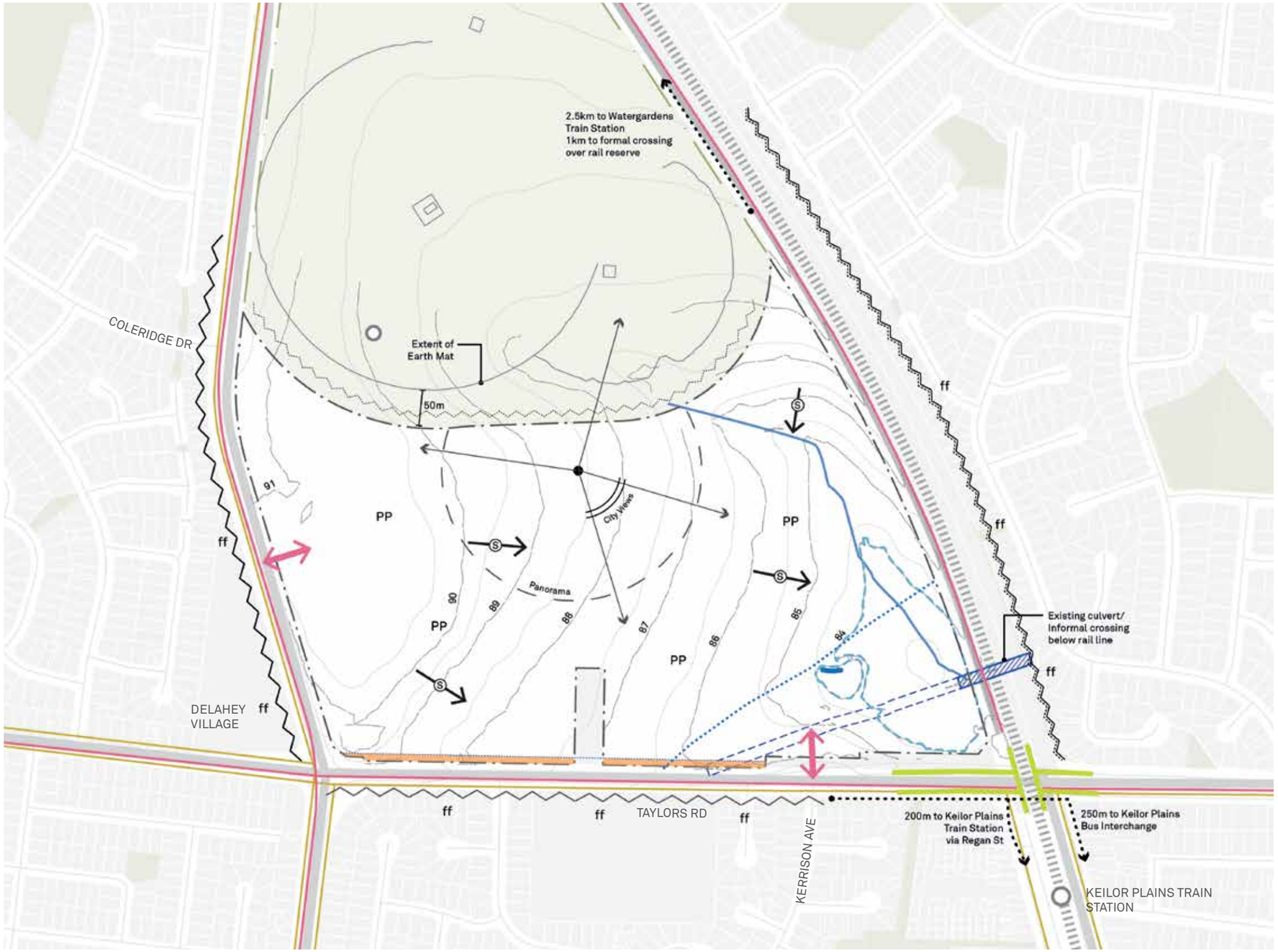
Bianchi Court, Source: Google

4.5 Site Features & Constraints

SUMMARY

The site is characterised by some of the features and constraints captured in the opposite map.

_Good connectivity to nearby train stations, bus interchange and arterials create barriers to surrounding neighbourhoods while providing a buffer to manage transitions to existing urban areas.
_Site vehicular access points have been determined with advice from VicRoads.
_Despite the 9m fall from the north west to south east corner, the site appears flat.
_The site features a natural waterway and existing infrastructure to manage stormwater (Council drain, Melbourne Water scour drain and culvert) at the lowest point. A Melbourne Water Licence Area located along the southern boundary hosts a mains supply.
_The site provides expansive views.
_While the site interfaces are noisy from trains and vehicles, the site itself is very quiet and peaceful.
_There are no pedestrian paths around the site.



Train Station
Metropolitan Line/ V/Line Services
Slope/ Gradient (Stormwater Runoff)
City Views
Panorama Views
Noise
Quiet
Barrier Type 1 - Rail
Barrier Type 2 - Road
Barrier Type 3 - Broadcast Australia

Bicycle Network
Footpath
Main vehicular entry & exit signalised intersection
Taylors Road grade separation
Existing easement with Melbourne Water scour drain
Existing Culvert
Existing Natural Waterway
Existing 100 Year Flood
Melbourne Water Licence Area
Council drain line

4.6 Movement & Access

PUBLIC TRANSPORT & VEHICULAR ACCESS

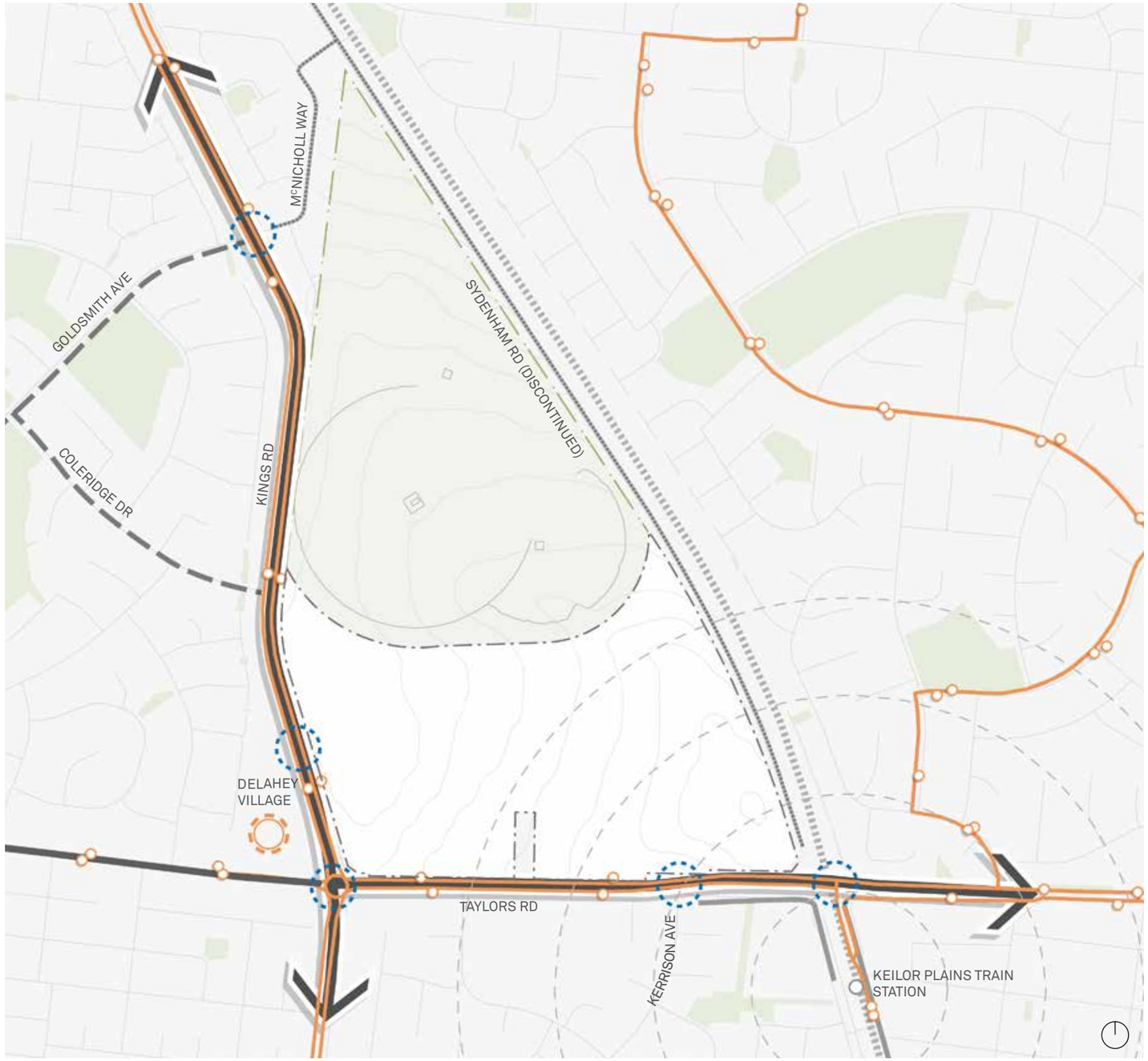
At a more granular scale, the opposite drawing illustrates the:
_Locations of existing signalised intersections around the site
_Bus routes and stops servicing the local area and
_Access to the Keilor Plains Station and Bus Interchange.

All access to the Station and Bus Interchange is via the signalised intersections along Taylors Road and footpaths are located only on the south side of Taylors Road.

The Keilor Plains Station can be accessed from Regan Street off Kerrison Avenue via the signalised intersection. The Bus Interchange can be accessed via East Esplanade from a signalised intersection at Taylors Road.

Coleridge Drive provides a key link to existing schools, playground and community centre. The existing intersection is not signalised.

The two existing signalised intersections at Delahey Village on Kings Road and the intersection of Taylors Road and Kerrison Avenue provide the two key access opportunities into the site. Existing bus stations more or less align with these two key access points into the site, but will need to be considered in light of any future development.



4.7 Ecological Vegetation, Flora & Fauna

FLORA & FAUNA ASSESSMENT

The site area lies within the Victorian Volcanic Plain bioregion and is comprised of heavy basalt clay on a gently undulating landscape. The area to the south west supports a rocky rise, with large basalt boulders. The remaining area is relatively flat and lacking rocks. Small wet depressions were found across the site, and a drainage line runs from the central point to the south east corner of the study area.

Flora and native vegetation
Vegetation in the site consists of native grassland dominated by wallaby and spear grasses, while some sections are dominated by introduced grass species such as Serrated Tussock. The drainage lines and small wet depressions across the study area support grassy wetland vegetation. The rocky rise was dominated by native Kangaroo Grass. High levels of invasive Serrated Tussock grass were observed across the majority of the study area.

Evidence on site suggests that Plains Grassy Wetland (EVC 125), and Heavier Soils Plains Grassland (EVC 132_61) were present.

One population consisting of 19 Spiny Rice-flower individuals was recorded during the surveys. Individuals of Spiny Rice-flower were found to occur within areas dominated by Kangaroo Grass and where the cover of Serrated Tussock was relatively low.

Threatened fauna species
Results of the assessment indicated that one listed mammal species, five listed bird species, one listed reptile, one listed frog and one listed invertebrate had the potential to occur on site. Two threatened fauna species were identified on site; Striped Legless Lizard and Golden Sun Moth.

Environmental Weeds
The following noxious weed species have been recorded in the site:
_Artichoke Thistle
_African Boxthorn
_Chilean Needle-grass
_Prickly Pear and
_Serrated Tussock.

Scattered Trees
No remnant indigenous scattered trees were recorded in the study area. All trees in the study area have been planted for amenity purposes and are non-indigenous species.

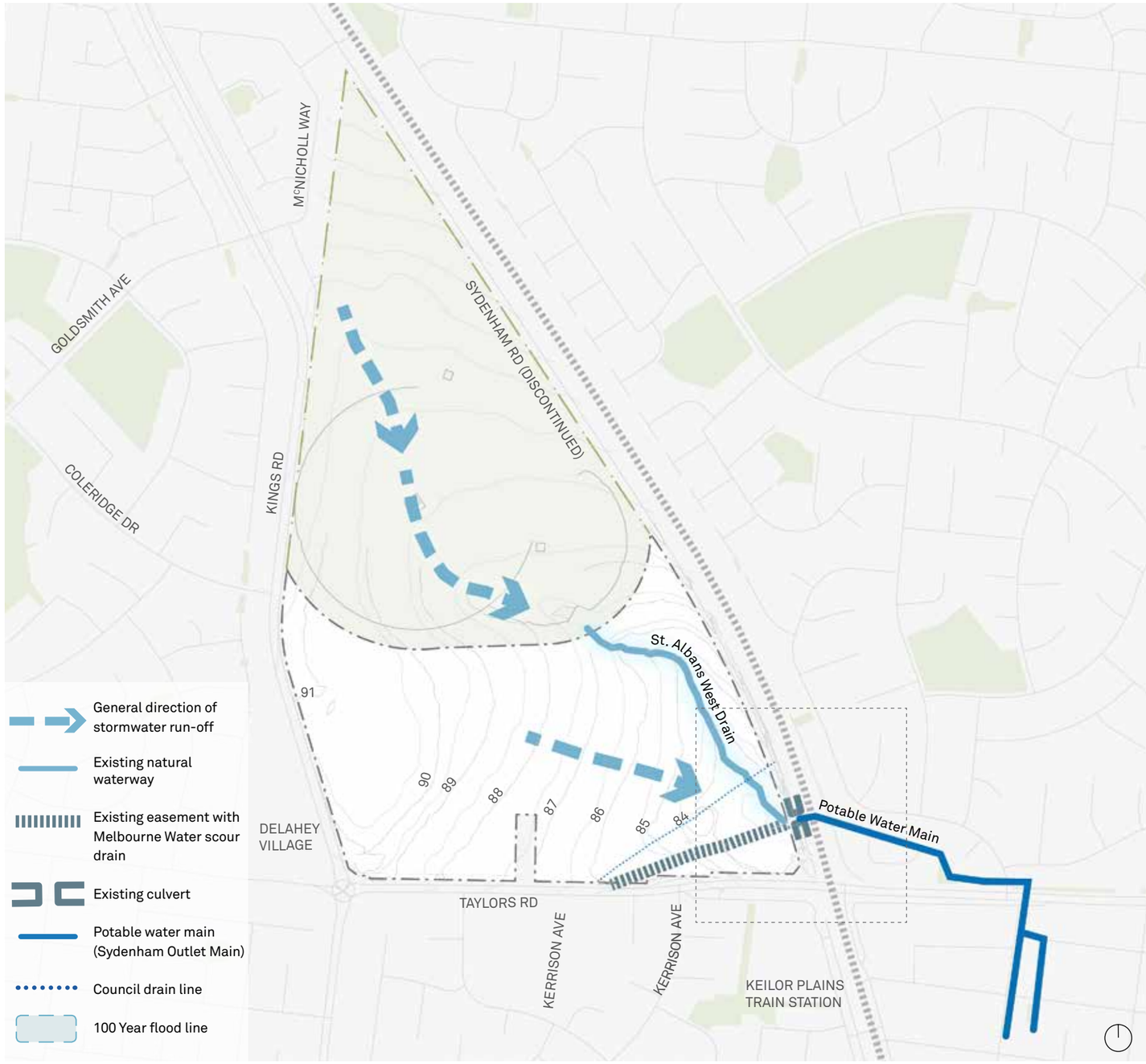
4.8 Hydrology & Water Flows

WATER FLOWS

The general direction of stormwater run-off follows the contours of the land, with the highest point in the north west falling towards the south east. An underground drain provides the drainage outfall for the site with a raised rail bridge adjacent the drain providing an informal crossing point. Melbourne Water's St. Alban's West Drain outfalls through the underground drain.

Melbourne Water has indicated that the property is subject to flooding from the St. Albans West Drain in the south east corner of the property when the capacity of the drainage system is exceeded. The applicable flood level for the property is 83.88 metres to Australian Height Datum (AHD) based on a flood event which has a probability of 1% occurrence in any one year. The area of flooding is indicated in the diagram below.

Extent of flooding as it currently exists for 1 in 100 year event.
The existing flood level is 83.88m to AHD.



4.9 Infrastructure Services

WATER, ELECTRICITY, GAS & TELECOMMUNICATIONS

The Sydenham Outlet Main is located along the western and southern boundaries of the property. Existing water transfer mains feeding the water reservoirs on the southern side of Taylors Road are owned and operated by Melbourne Water. Any development including footings and eaves are required to be set back a minimum of 5m from the outside edge of these assets. City West Water has advised that there is sufficient supply capacity available in the adjacent potable water infrastructure to cater for future development of 1,400 dwellings.

Two easements are shown on this diagram—one for a Melbourne Water scour drain in the lower south east corner of the site and the other for a future sewer along the eastern boundary. Both easements are shown on the Plan of Sub-division.

The scour drain provides the outfall for Melbourne Water's reservoir tanks in overflow or emergency dewater events. Council records show a drainage line to the north of the Melbourne Water scour drain providing outfall for drainage of Taylors Road and a catchment to the south of the site.

A 10m wide Melbourne Water Licence Area along Taylors Road—from the time of Commonwealth ownership pre-1999—running along the front of the old property boundary (prior to road widening and road-rail separation), hosts mains supply for Melbourne Water and is to be considered within future detailed design.

In-gound electricilty supply is located to the west, south and east of the site with existing overhead power cables located on north side of Taylors Road between the existing telecommunications towers, the south side of Taylors Road and on Sydenham Road. Powercor have advised that the existing electrical network can be augmented and extended to support a future development of 1,400 dwellings.

High pressure gas mains are located on the south side of Taylors Road. Ausnet has advised that there is sufficient capacity to support a future development of 1,400 dwellings.

Two telecommunications towers are located along Taylors Road frontage, one opposite Kerrison Avenue and the other opposite the Melbourne Water facility. Broadcast Australia have indicated that both towers can be relocated.

5.1 Site-wide Design Guidance

SUMMARY

Site constraints and potential opportunities are illustrated in the opposite diagram. Key constraints include provision for a:
_St. Albans West Drain—Waterway Reserve enhancement or an alternative design solution
_Combined Wetlands and Retarding Basin to manage stormwater/flooding
_Two easements, one for drainage and the other sewerage
_Two main vehicular entry and exit locations at existing signalised intersections
_Primary connector & potential boulevard to provide public transport, cycling and pedestrian paths connecting the two key entry/egress points above, and
_Five per cent Public Open Space Contribution
_10m wide Melbourne Water Licence Area along the Taylors Road boundary is to be considered within future detailed design.

The following potential opportunities have been identified:
_Integration of Sydenham Road with the future development and surrounding area
_Co-location of Public Open Space with the Waterway Reserve
_Retail at the south west and south east corners
_A range of dwelling densities, housing and land use diversity in suitable locations
_Integration of 238 Taylors Road into the future development.

Site Constraints

- Wetlands & Retarding Basin
- Main entry & exit signalised intersection
- 5% Open space contribution. Location to be confirmed through subsequent planning process
- Open space in hatched area will not be counted towards 5% contribution
- Melbourne Water Licence Area
- Council drain line
- Easement for sewer & drainage Melbourne Water scour drain (in-ground)

Potential Opportunities

- Mixed use & residential development
- Potential integration of Sydenham Road Reserve
- Primary connector & potential boulevard access and egress points
- Potential retail/commercial uses. Location(s) and sizes to be investigated
- Potential for a range of building heights based on permissible building envelope
- Potential to integrate 238 Taylors Road with future development

5.2 Movement & Access

SUSTAINABLE TRANSPORT

The two existing signalised intersections provide the main entry and egress opportunities for vehicles, cyclists and pedestrians to connect the site to the surrounding area.

Additional left in/left out locations could be provided at different points along the road frontages as required.

A hierarchy of internal streets which provide for safe and efficient access, amenity and enjoyment for vehicles, cyclists and pedestrians, and opportunities for the site to be connected to public transport (bus) services should be considered.

5.2 Movement & Access

STREET HIERARCHY

A potential street hierarchy might include:
_25m Connector Road
_16m Local Access Road
_14m Local Access/Service Road
_12m Local Access / Service Road and
_7m Laneways.

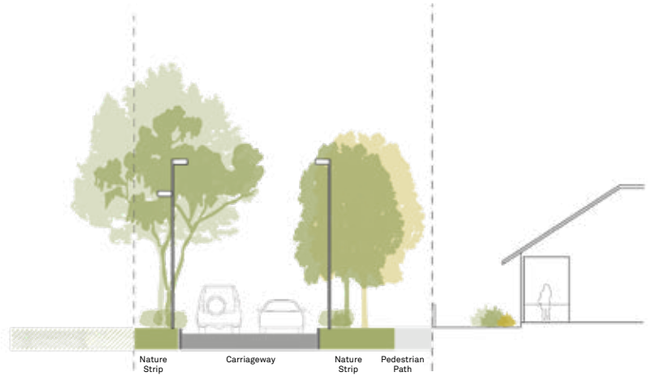
Each street typology is shown opposite representing the potential make-up of each street. The connector road includes provision for public transport/bus route, cycle paths, pedestrian paths, car parking on both sides and verges for trees, planting and water sensitive urban design. As the key through-route for the site the connector provides an opportunity for greening with a new boulevard. The width of the street can support medium to higher density dwellings.

The 16m local access road would make up the majority of the residential street network with a dual carriageway, car parking bay on one side and nature strip and pedestrian path on both sides of the street.

The 14m local access/services road is intended for residential land uses interfacing the site's boundary and includes provision for a dual carriageway, car parking bay, pedestrian path on one side of the street and a nature strip on two sides of the street.

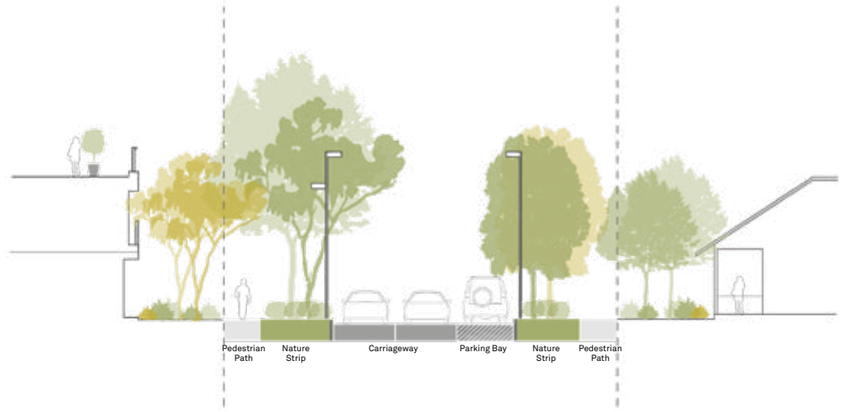
A 7m laneway has been included to accommodate rear access to dwellings, particularly for narrower lots where the width of the lot does not support a garage from the street or where cross-overs are to be avoided.

Type 1: 7m Laneway, 1:250

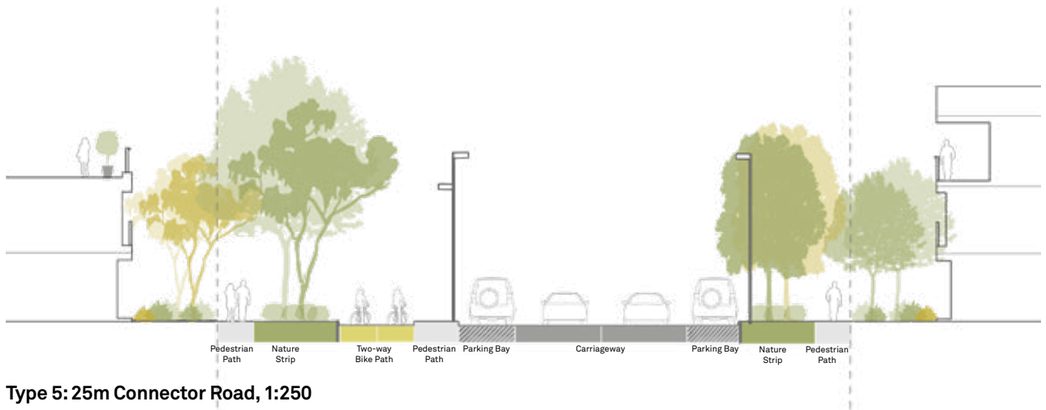


Type 2: 12m Local Access Service Road at park and 148 Sydenham Road, 1:250

Type 3: 14m Local Access/Service Road at Taylors & Kings Road, 1:250



Type 4: 16m Local Access Road, 1:250



Type 5: 25m Connector Road, 1:250

5.3 Landscape & the Environment

WETLANDS, RETARDING BASIN AND ST. ALBANS WEST DRAIN

A combined Wetlands and Retarding Basin has been proposed for the site to address flooding and water quality. Melbourne Water have advised that the retardation of stormwater is to be at pre-development levels to protect the quality of downstream waterways. A Wetland will treat the water from the future development before it is discharged, and will be accommodated within the footprint of the Retarding Basin.

The Wetlands/Retarding Basin has been located approximately at the lowest point of the site to reduce the extent of earthworks, however some flexibility in it's location may be desirable to locate higher density housing in close proximity to Keilor Plains Station.

The St. Albans West Drain is a natural waterway and an environmental and social asset. A flora and fauna assessment of the site demonstrates that the waterway habitat is of low quality due to the degree of modification and disturbance. On this basis it is proposed that the Waterway can be developed either as a "constructed waterway" based on *Melbourne Water's Waterway Corridors Guidelines for Greenfield Development* or an alternative solution as approved by Melbourne Water.

GEOLOGICAL CONSIDERATIONS

Based on the 2006 Golders Report, the Round Hill vent has been found to be located off-site. A small portion of the basal dome extends into the site; it is advised this contributes little to geological values and is understood not to be an impediment to development.

ENVIRONMENTAL CONDITIONS

Site investigations and testing by Douglas Partners confirm the site is considered to have low potential for contamination and no sources of contamination were identified in the investigation.

5.3 Landscape & the Environment

WATERWAY RESERVE & RETARDING BASIN

Future development of the site will need to continue to capture, retain and transfers flows from external northern catchment and flows generated on the site through to downstream catchments. Whilst currently the land drains via the St. Albans West Drain, there is an opportunity to upgrade or realign this existing waterway with an engineered solution. Typically a Waterway Corridor of approximately 40-45m would be provided based on Melbourne Water's *Waterway Corridors Guidelines for Greenfield Development*, however there may also be opportunities for a subsurface engineered solution to convey flows pending further detailed design and consultation with Melbourne Water. A typical section through a typical Waterway Corridor is shown opposite.

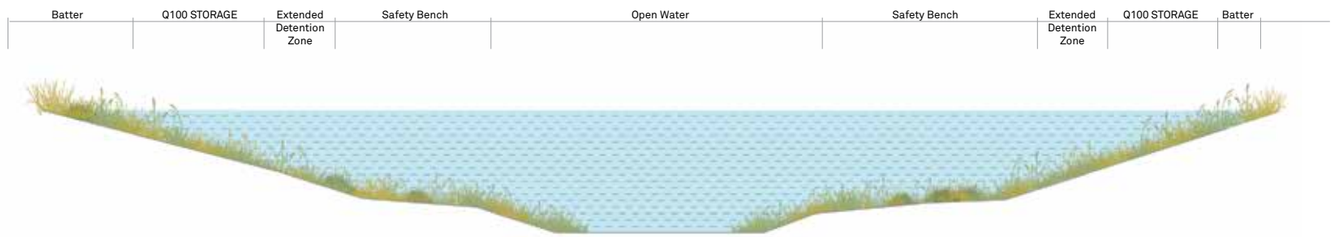
The retention volume required for the Retarding Basin is anticipated to be 25,000m^3 incorporating a 14,000m^2 Wetland. It is expected that this infrastructure would be a Melbourne Water asset for future care and maintenance. A typical section of the combined Wetlands/Retarding Basin is shown opposite.

The Retarding Basin presents opportunities for:
_Passive irrigation
_Slow and mitigate water flow
_Storage of water
_Cleaning stormwater and
_Active reticulation/re-use.

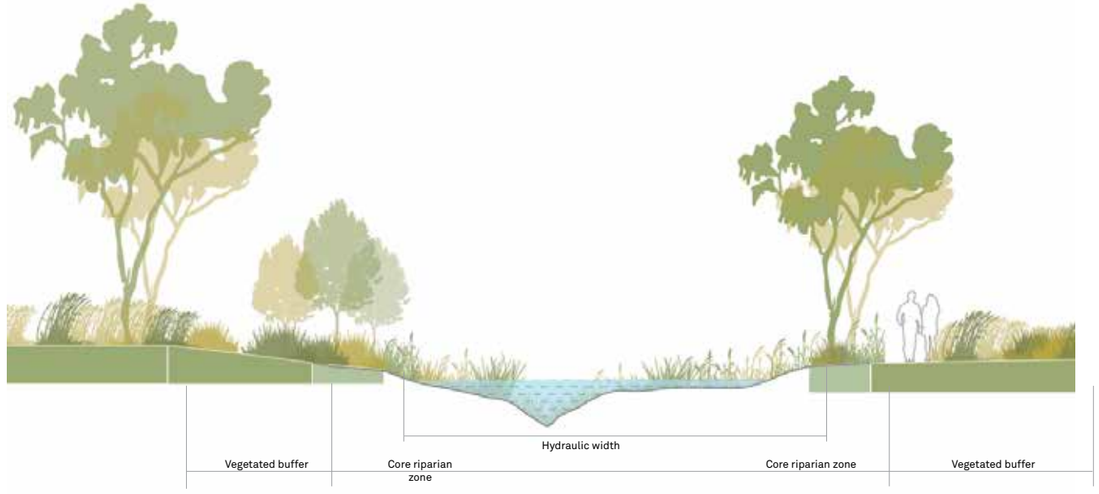
The *Revised Brimbank Sustainable Water Management Strategy 2013-2023* guides sustainable water management through a program logic shown in the diagram below.

The program logic identifies core project areas for consideration:
_Reduce reliance on drinking water
_Diversify water supply and improve efficiency
_Continue urban water sensitive urban design success and
_Achieve maintenance best practise.

Program logic for sustainable water management, Figure 3 Revised Brimbank Sustainable Water Management Strategy 2013-2023



Typical Wetland & Retarding Basin Section (NTS)



Typical Waterway Corridor (NTS)

5.3 Landscape & the Environment

OPEN SPACE

Five per cent of unencumbered land for residential and commercial land uses are required for the Public Open Space Contribution towards the future development based on the current provisions within the Brimbank Planning Scheme. Under the conditions of the Plan of Sub-division and the Section 173 Agreement, land adjacent the northern boundary of the site on the eastern and western boundary corners where it intersects with Kings and Sydenham Roads, can not be utilised to constitute the Public Open Space Contribution.

There are many approaches that can be taken towards the size and distribution of Public Open Space on the site—ranging from larger open spaces to a series of smaller open spaces distributed throughout the site shown in the adjacent drawing. In this example, each open space creates a focal point for the surrounding neighbourhood. The final role, size, function, intended users and spatial allocation of public open space will be determined by the future developer in consultation with Brimbank City Council and aligned with Council's open space hierarchy. The diagram below illustrates the existing open spaces surrounding the site.

Source: Creating Better Parks Policy Plan 2016

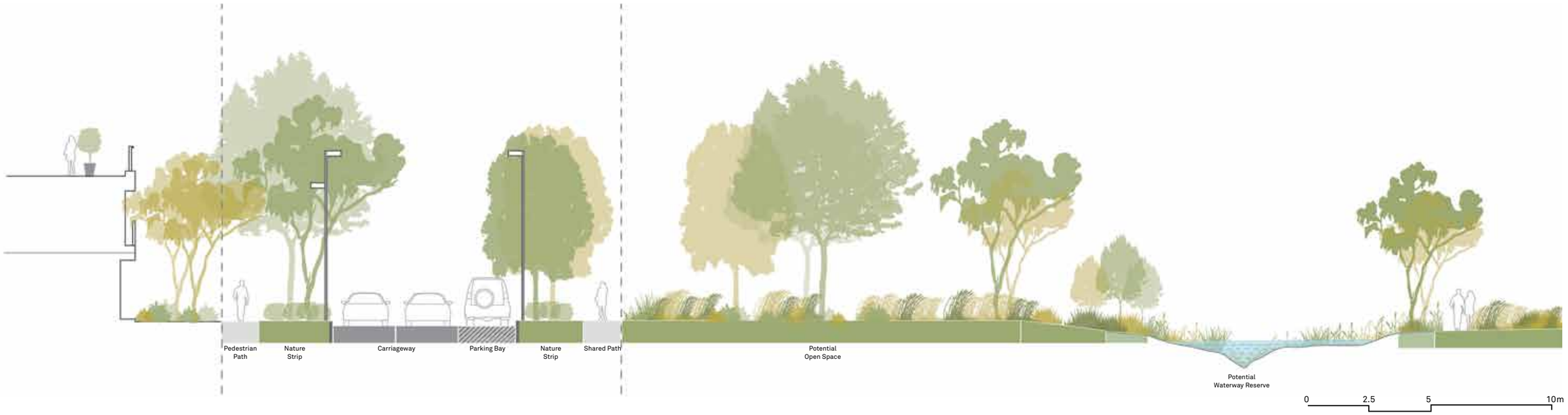
5.3 Landscape & the Environment

SITE-WIDE PLANTING OPPORTUNITIES

Site-wide planting includes trees, plants and grasses. The three areas we have identified for planting opportunities applying to the site are:
_Public Open Spaces – parks and the Waterway Reserve
_Street Network and
_Private allotments.

Brimbank City Council's *Urban Forest Strategy 2016 - 2046* covers street trees, parks, grasslands, waterways, vegetation in schools and privately managed land, green roofs, green walls and balconies. The Strategy aims to increase canopy cover from 6.2 to 30 per cent over the next 27 years and sets a strategic framework for planting trees on streets, urban parks, along waterways and to encourage planting in private open space. It recognises the value of planting to add value to the site while addressing:
_Climate change and heat island effect through canopy cover providing shade and reducing impervious surfaces and air temperatures
_Reducing flooding by absorbing stormwater before it enters the drainage system and waterways
_Wind protection protecting damage to infrasructure and creating a comfortable environment
_Providing habitat for a variety of species through trees, shrubs, grassland and waterways
_Air and water filtration improving air and water quality and absorbing pollution and dust
_Carbon sequestration and nutrient cycling
_Reducing the impacts of noise by absorbing sound
_Provide a connection to nature
_Enhancing the character and uniqueness of an area and
_Increasing amenity through planting and open spaces creating a sense of place and fostering healthy active lifestyles.

The Strategy supports integrating grasslands with trees and other vegetation without compromising each landscape type. The drawing below covers each of the areas identified by the Strategy—streets, urban parks, along waterways and private open space. A diverse Urban Forest is encouraged to create diverse landscape characters and improve the resilience of the ecosystem.



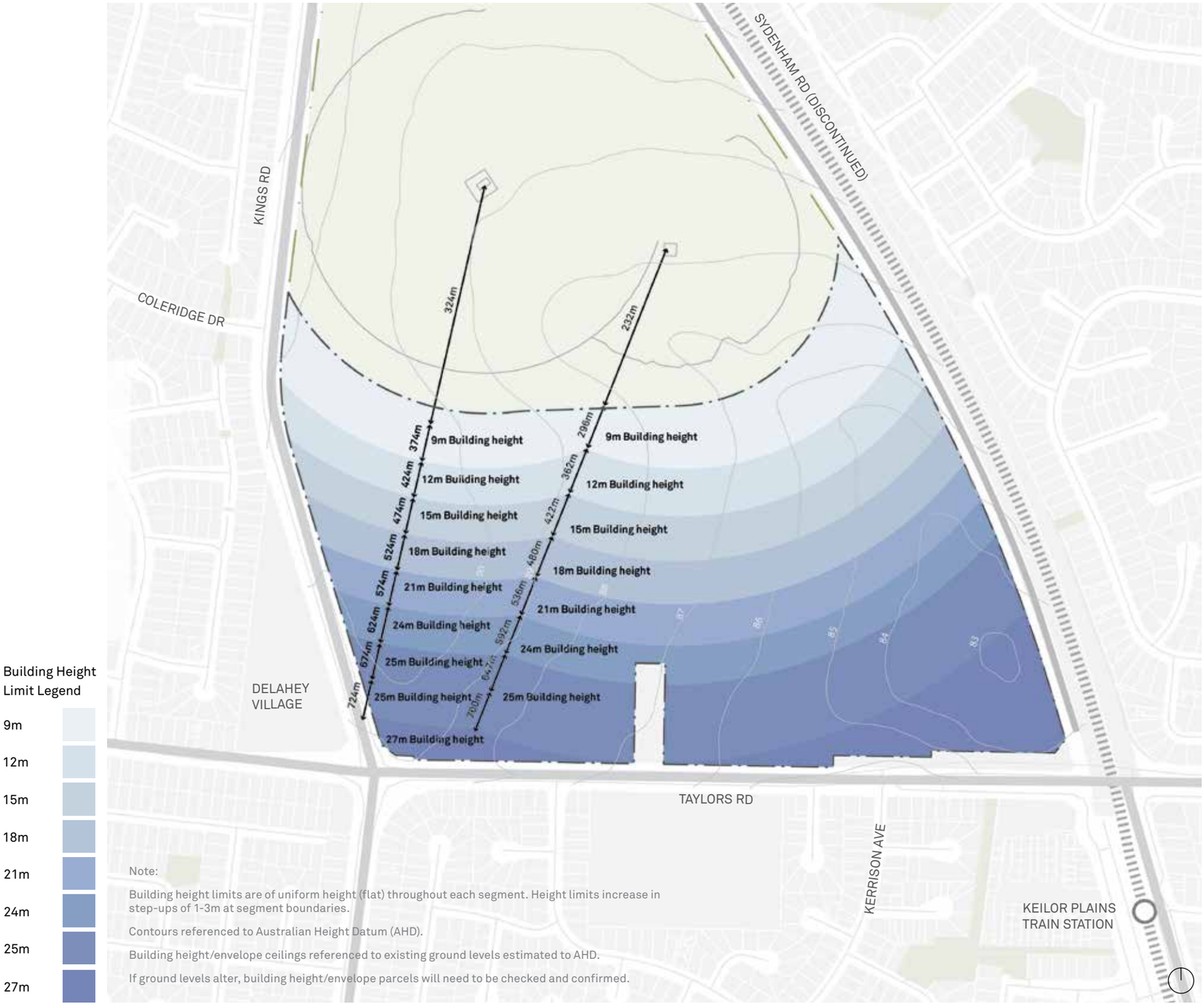
Typical Section through Private Allotments, Local Access Street, Public Open Space and St Albans West Drain indicating planting opportunities

5.4 Land Use & Built Form

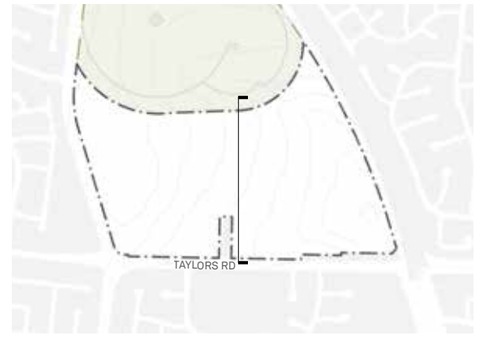
BUILDING HEIGHT ENVELOPE

Electromagnetic Energy (RF EME) from the two radio transmission towers have been modelled to inform the maximum building envelope for the site. The adjacent drawing captures the maximum building heights measured from the centrepoint of each tower.

_Each level is measured from the existing ground surface and follows the existing contours of the site.
_Building heights increase with greater distance from the towers and follow a radial pattern.
_The width of each segment varies and is captured on the drawing.
_The segment closest to the towers indicates a maximum building height of 9m (three storey building) up to 27m (eight to nine storey building) based on 3m floor to floor dimensions.
_Any future proposed changes to the ground level will need to be confirmed in accordance with the 250A Taylors Road Building Height Control



5.4 Land Use & Built Form



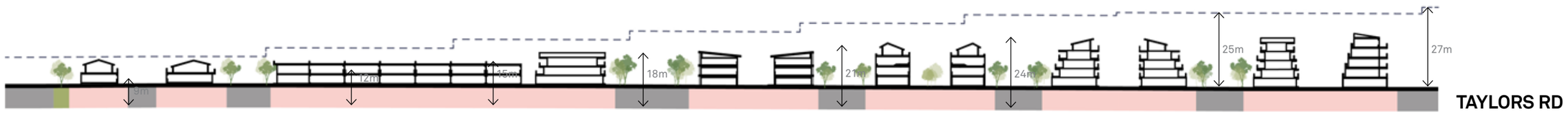
Section Location Plan

BUILDING HEIGHT

The indicative section below illustrates a typical section through a residential area indicating the building envelopes that can be achieved in the context of the radio transmission tower envelope. These range from two storey dwellings with large roofs to multi-storey apartment buildings.

While eight to nine storeys can potentially be achieved in the tallest segment of the site, higher floor to ceiling heights for adaptive reuse at ground levels, parapets and other architectural features require consideration and can impact the overall number of storeys that can be achieved.

It is acknowledged that proposed building heights will be guided and informed by a variety of factors and inputs including market conditions and council requirements.



Note:
Building height limits are of uniform height (flat) throughout each segment. Height limits increase in step-ups of 1-3m at segment boundaries.
Contours referenced to Australian Height Datum (AHD).
Building height/envelope ceilings referenced to existing ground levels estimated to AHD.
If ground levels alter, building height/envelope parcels will need to be checked and confirmed.

5.4 Land Use & Built Form

RETAIL & COMMERCIAL OPTIONS

_The distribution of retail and commercial uses across the local catchment suggests there are gaps in service provision and scope for one or more commercial nodes on the site. The node(s) could take different forms depending on developer capability, future market conditions and tenant interest at the time. There are also multiple location options along the two main road boundaries of the site.

_An indicative local catchment of 20,000 people (or 24,000 with the site developed) suggests the area is not oversupplied with supermarket floorspace. Spatial mapping and analysis of various retail and commercial uses indicates a neighbourhood centre of 6,000-8,000 sqm could be planned for, including:
  _A full-line supermarket with supporting shops
  _A small provision of office space
  _Medical centre
  _Child care centre
  _Fuel, car wash and restaurant sites
  _Gym or fitness club and
  _Hotel and/or tavern.

_One possible location for a neighbourhood centre is the south-west corner of the site (being the north-east corner of Kings Road and Taylors Road) which has good visibility, potential connections to both roads and builds on an existing commercial node on the north-west corner of the intersection – the Delahey Village Centre. Delahey Village is an IGA-based centre built in 2006 and recognised in Council's centres hierarchy as a Large Neighbourhood Centre. It performs an adequate role in its local area although there are elements of a large neighbourhood centre which are absent from the centre.

_The future population of the BA site alone will justify some elements of any new centre while others will be supported by underlying gaps and deficiencies in the local area and by passing and through traffic.

_There are other potential locations for a neighbourhood or smaller convenience based commercial node including a mid-block location on Taylors Road or further east on Taylors Road, close to the Keilor Plains Station.

_A second or alternative, single smaller commercial node may also be appropriate including:
  _A smaller neighbourhood centre consistent with the Section 1 'supermarket' (up to 1,800 sqm) and 'shop' (up to 500 sqm) uses in the Commercial 2 zone;
  _A smaller convenience-base centre of (say) 1,000 sqm; or
  _A community facility node which may have little or no retailing but could colocate a medical centre, child care centre, MCH or other uses.

_Based on the likely development time frame and the prospect of changes in community and market demand, a flexible zone, such as the Mixed Use Zone that can accommodate uses envisaged in 2019 but which may change over time, is supported.

5.4 Land Use & Built Form

SITE AREA

The diagram opposite and table below summarise land take by type, area and percentage of overall site area. The areas are summaried below:

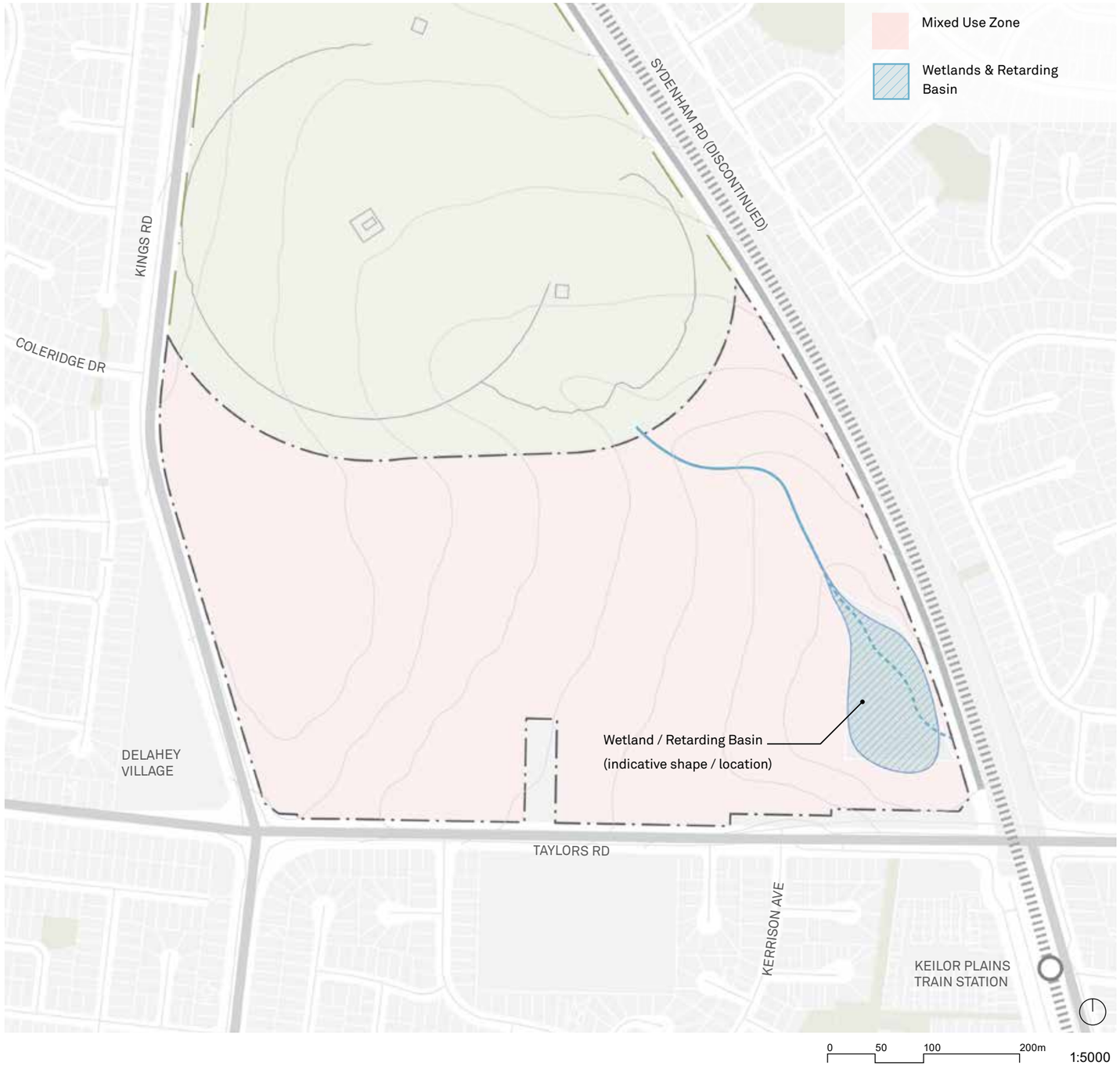
- Public Open Space is determined by Brimbank City Council's requirement for a five per cent contribution and is applicable to all commercial and residential land use.
- The area required for the combined Wetlands/Retarding Basin is based on requirements by Melbourne Water to provide a retention volume on site to ensure that flows downstream of the site are to pre-development levels.

The remaining Developable Area is designated mixed use to allow for a combination of retail, commercial and residential uses as well as associated road / access infrastructure.

The Wetlands/Retarding Basin will be encumbered and does not count towards the five per cent Public Open Space Contribution required by Brimbank City Council.

TOTAL SITE AREA	46 ha	% OF SITE AREA
Public Open Space	2.1	5%
Wetlands / Retarding Basin (Encumbered)	2.5	6%
Developable Area*	41.4	89%

* Subject to future resolution of St. Albans West Drain and Melbourne Water License Area. This area is inclusive of land required for neighbourhood roads, associated infrastructure and services.



View of the site along the southern boundary (Taylors Road) looking west towards 238 Taylors Road and the telecommunications tower

5.4 Land Use & Built Form

DENSITY COMPARISON & PRODUCT TYPE

The site provides an opportunity for a diverse range of dwelling types and densities ranging from generally lower densities (medium / conventional density lots) in the north to generally higher densities in the south or as otherwise appropriately justified.

Three scenarios are represented in the diagrams opposite. Each scenario shows a block with lot layout and indicative dwelling type and precedent images.

Dwelling yield has been calculated for a range of dwelling densities in the table below.

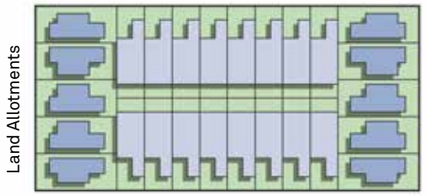
Dwelling Typology	Dwelling Density dw/ ha	No. of Dwellings	
		Low Range	Upper Range
Conventional Medium	20 - 30	300	500
Medium	30 - 35	600	700
High	35 - 45	0	300
Total		**900**	**1,500**

1

25 DWELLINGS/HECTARE

26 lots total
_Front loaded land allotment
9x30m = 270m2 lots
_Front loaded townhouse
12x26.5m = 318m2 lots

Townhouses



1:2000

Metricon 10m Metro

Metricon 12m Ashwood

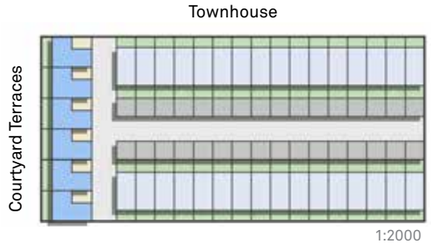
Evolution South London
Maccreanor Lavington Architects

The Knutsford Fremantle
Space Agency

The Knutsford Fremantle
Space Agency

2

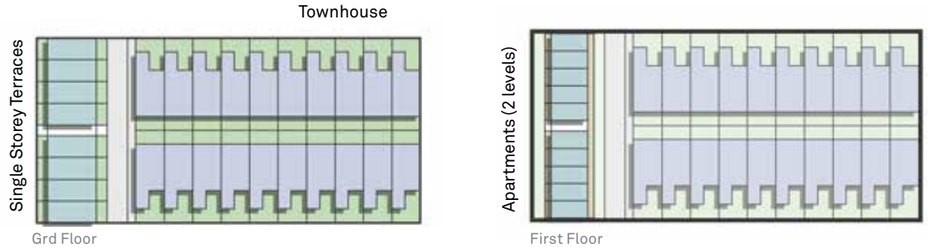
35 DWELLING/HECTARE



38 lots total:
_Front loaded courtyard typology
10x16.5m = 165m² lots
_Rear loaded townhouse
6.3x26m = 182m² lots

3

45 DWELLING/HECTARE



48 lots total:
_Front loaded townhouse
7x23m = 161m² lots with 2 bed (75m2) apartments above & surface car parking behind
_Front loaded townhouses 9x30m =270m² lots

The Knutsford Fremantle
Space Agency

Newhall South Chase
Allison Brooks Architects

Ijburg Blok 4 Amsterdam
Maccreanor Lavington Architects

Myrtle Street Apartments Sydney
Derek Raithby Architects

Accordia Sky Villas Cambridge
Allison Brooks Architects Studios

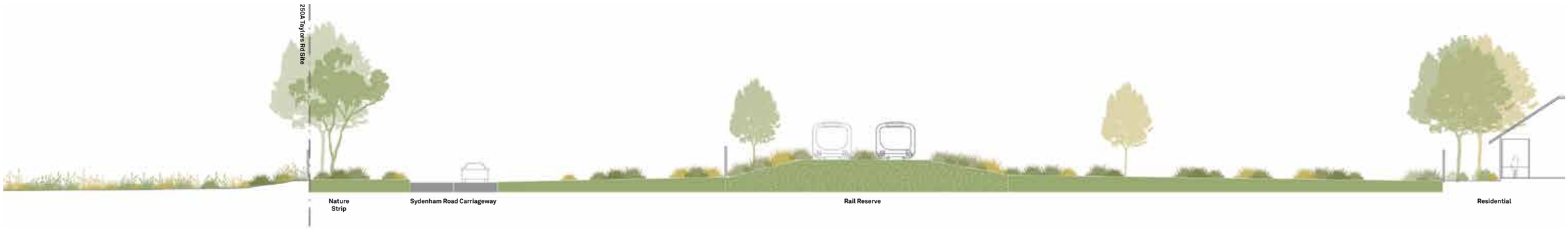
Accordia Cambridge
Feilden Clegg Bradley Studios

5.5 Site Interfaces

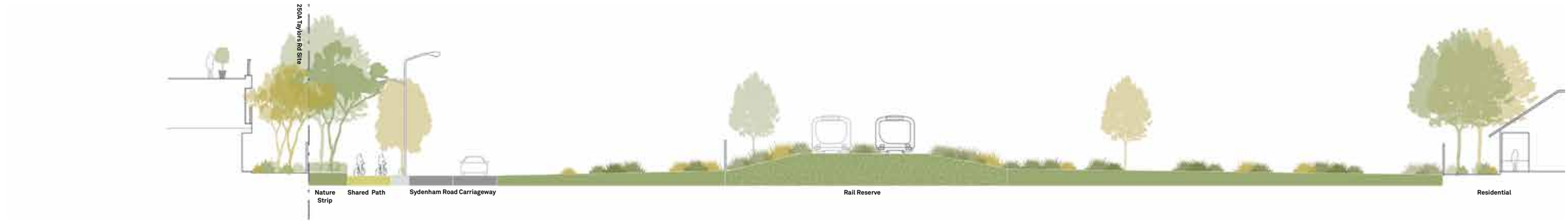
Section Location Plan

SYDENHAM ROAD NORTH & RAIL RESERVE

The existing and potential site interface to Sydenham Road and the Rail Corridor at the northern part of the site is shown below. The raised Corridor provides opportunities for informal crossing over the rail and vehicular access along the Rail Reserve is evident. Opportunities to provide an active residential interface with a formalised shared path for pedestrians and cyclist could be explored, providing a link to future connections to Keilor Plains Station. Integration of Sydenham Road into the future development can also be explored to provide local access rather than through traffic. Planting provides opportunities to improve local amenity and mitigate noise from the rail reserve.



Existing northern interface to Sydenham Road & rail reserve



Potential residential interface to Sydenham Road & rail reserve

0 5 10 20m

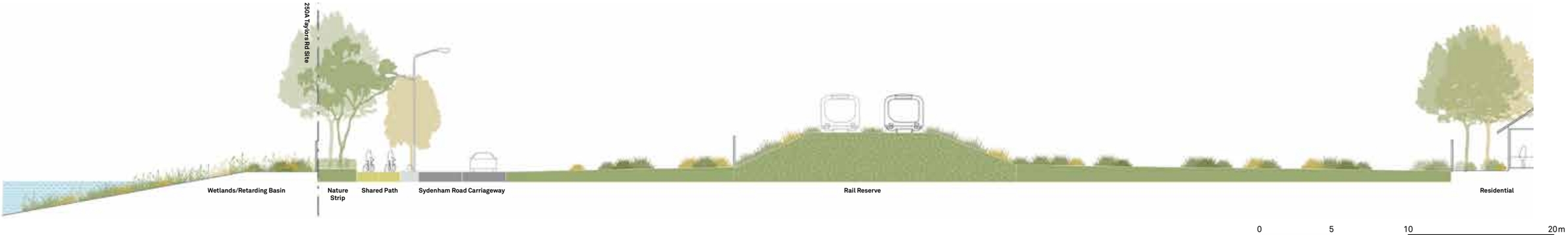
5.5 Site Interfaces

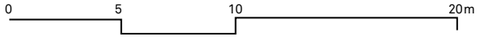
Section Location Plan

SYDENHAM ROAD SOUTH & RAIL RESERVE

The existing and potential site interface to Sydenham Road and the Rail Corridor at the southern part of the site is shown below. The raised Corridor provides opportunities for informal crossing below the rail and vehicular access along the Rail Reserve through the culvert is evident. Opportunities to provide an attractive planted interface to the Wetlands/Retarding Basin with a formalised shared path for pedestrians and cyclist could be explored, providing a link to future connections to Keilor Plains Station. Integration of Sydenham Road into the future development can also be explored south of the Wetlands/ Retarding Basin to provide local access rather than through traffic. Planting provides opportunities to improve local amenity and mitigate noise from the rail reserve.

Existing southern interface to Sydenham Road & Rail Reserve





Potential Wetlands/Retarding Basin interface to Sydenham Road & Rail Reserve

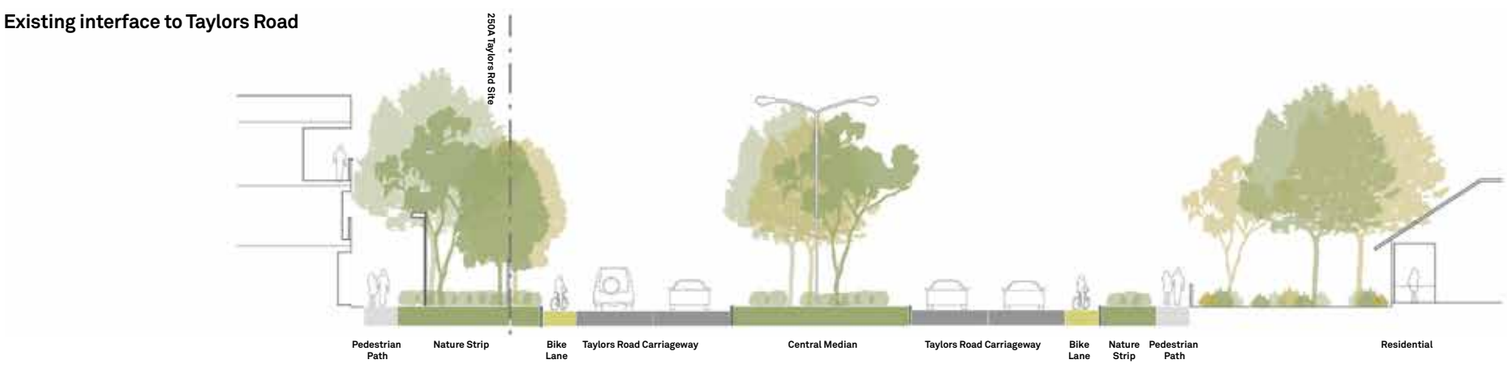
5.5 Site Interfaces

Section Location Plan

TAYLORS ROAD RESIDENTIAL

The existing and potential residential site interface to Taylors Road is shown below. The busy arterial provides on-road bicycle paths on both sides of Taylors Road, however pedestrian paths are only provided on the south side of Taylors Road. A central median includes street lights and trees. Opportunities to provide active interfaces with attractive planting and local access/service roads could be explored. Planting provides opportunities to improve local amenity and mitigate noise from the road reserve.

Existing interface to Taylors Road



Potential residential interface to Taylors Road could include a rear loaded (from north) residences

Potential residential interface to Taylors Road

5.5 Site Interfaces

Section Location Plan

TAYLORS ROAD & MELBOURNE WATER

The existing and potential interface with the Melbourne Water facility on Taylors Road is shown below. The busy arterial provides on-road bicycle paths on both sides of Taylors Road, however pedestrian paths are only provided on the south side of Taylors Road. A central median includes street lights and trees. Opportunities to provide active interfaces with attractive planting and local access/service roads could be explored. Planting provides opportunities to improve local amenity and mitigate noise from the road reserve.

Existing interface to Taylors Road & Melbourne Water

Potential front residential interface to Taylors Road & Melbourne Water

Potential front / rear loaded residential lots to Taylors Road & Melbourne Water interface

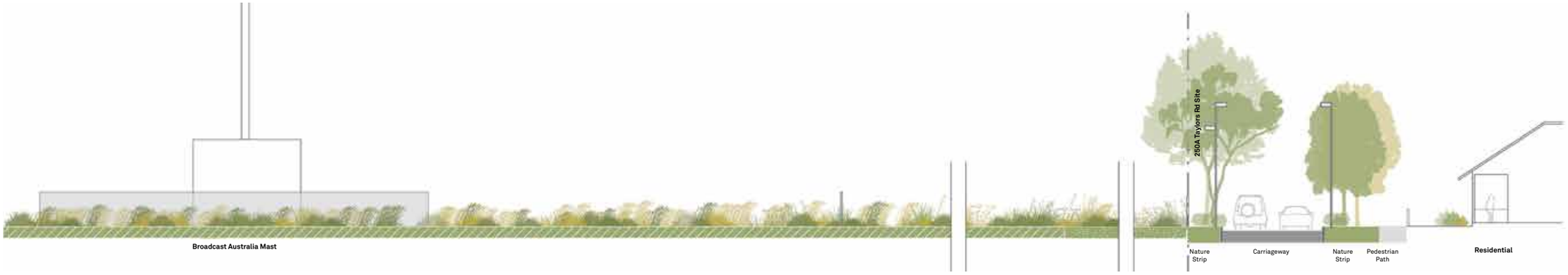
5.5 Site Interfaces

Section Location Plan

BROADCAST AUSTRALIA

The potential site interfaces to the Broadcast Australia site with radio masts to the north of the site is shown below. There is a 50m setback between the extent of earth mats surrounding the radio masts and the sub-division boundary. Opportunities to provide an active residential interface with a formalised shared path for pedestrians and cyclist could be explored, providing a link to potential future development north of the sub-division site. A local access road in this location also provides a buffer between the future development on the sub-division site and the Plains Grassland on the Broadcast Australia site.

Option 1: Potential residential interface to 148 Sydenham Rd



Option 2: interface to 148 Sydenham Rd

0 5 10 20m

5.5 Site Interfaces

Section Location Plan

DELAHEY VILLAGE & KINGS ROAD

The existing and potential interface with Delahey Village on Kings Road is shown below. The busy arterial provides on-road bicycle paths on both sides of Kings Road, however pedestrian paths are only provided on the west side of Kings Road. A central median includes street lights and trees. Opportunities to provide active interfaces (retail/residential) with attractive planting and local access/ service roads could be explored. Planting provides opportunities to improve local amenity and mitigate noise from the road reserve.

Existing interface to Delahey Village & Kings Road Interface

Potential retail interface to Delahey Village & Kings Road

Potential residential interface to Delahey Village & Kings Road