growth areas AUTHORITY

ROAD

HILLVIEW ROAD

MICKLEHAM

BRODIE

NOMINATED GREENVALE MAJOR ACTIVITY CENTRE

Amendment C121 to the Hume Planning Scheme

Greenvale West [R3] Precinct Structure Plan

(including the **Greenvale West [R3] Native Vegetation Precinct Plan**)

December 2010

PLANS

TABLES

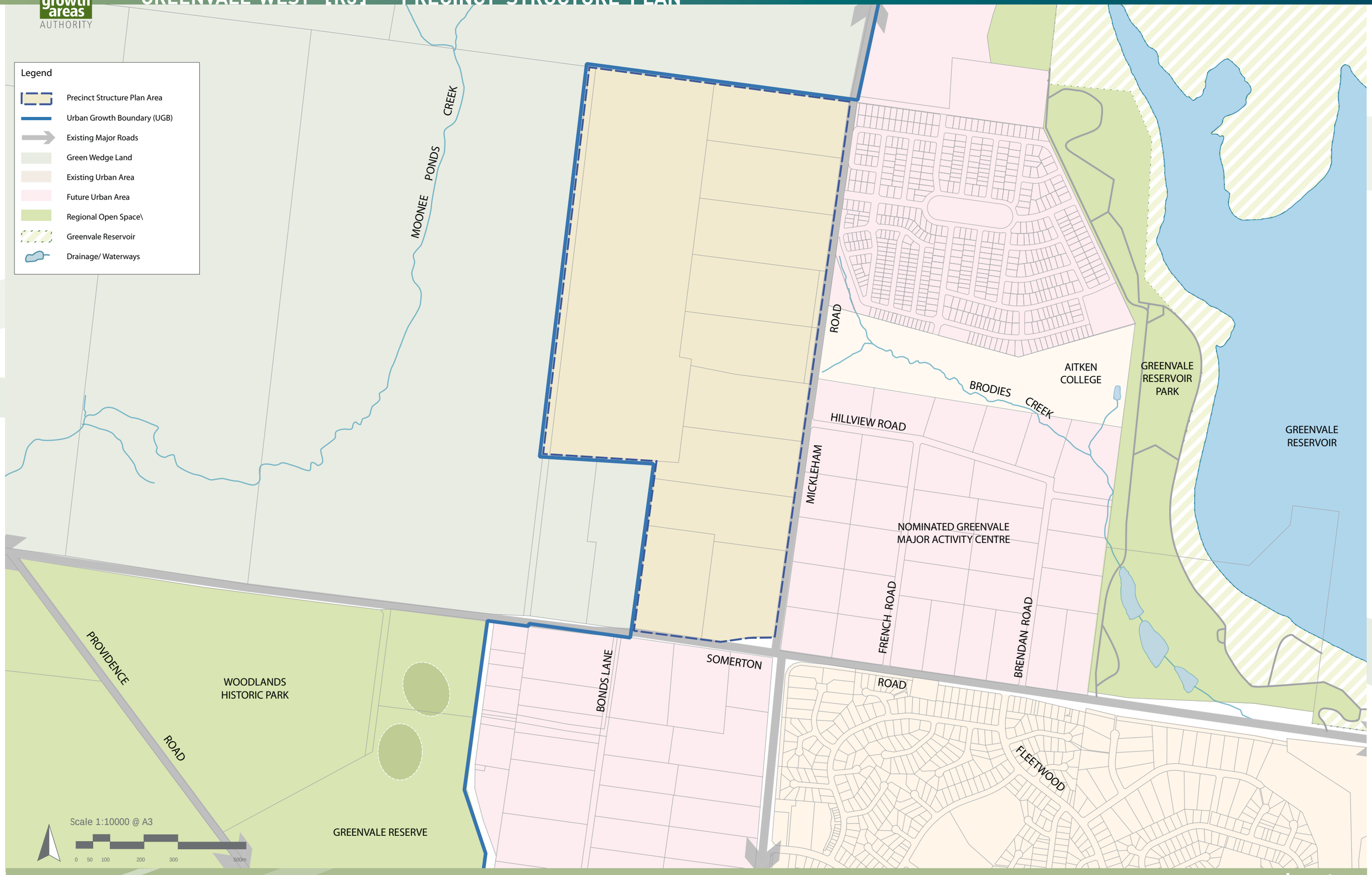
FIGURES & CROSS SECTIONS

DISCLAIMER: All technical reports that support this Precinct Structure Plan (PSP) refer to "Greenvale South". The name of this precinct has been amended to "Greenvale West" following consultation with land holders.

The Greenvale West Precinct Structure Plan has been prepared by the Growth Areas Authority and Hume City Council in conjunction with Roberts Day, Contour Consulting, Traffix Group, SMEC, Heritage Insight, WBCM, government agencies, service authorities and key stakeholders.

CONTENTS

growth areas AUTHORITY



plan 1

precinct structure plan area

greenvale west [R3] precinct structure plan

1.0 INTRODUCTION

1.1 ROLE OF THE PRECINCT STRUCTURE PLAN

The Greenvale West Precinct Structure Plan (the PSP) has been prepared by the Growth Areas Authority (GAA) with the assistance of Hume City Council, government agencies, service authorities and major stakeholders.

The PSP is a long term plan for future urban development. It outlines how the land is expected to be developed, including the provision of infrastructure required to support development.

A Development Contributions Plan (DCP) has been prepared concurrently with this PSP to provide developers, investors and local communities with certainty about future development.

The PSP:

- Is a strategic plan which guides the delivery of quality urban environments in accordance with the Victorian Government guidelines.
- Outlines the vision and desired outcomes for the development of the precinct.
- Sets the framework and objectives in relation to land use, residential density, road network, community and recreational facilities and open space.
- Provides a framework for the consideration of planning permits for urban development under the relevant provisions of the Hume Planning Scheme, including the provisions of the Urban Growth Zone.
- Enables the assessment, protection and enhancement of biodiversity values in the context of the surrounding and long term urban development.
- Provides appropriate planning to ensure that the precinct has timely access to important infrastructure and community services.
- Enables the transition of non-urban land to urban land.
- Provides developers, investors and local communities with certainty about future development.
- Enables the assessment, protection and enhancement of biodiversity values in the Precinct.

This PSP is informed by:

- The State Planning Policy Framework set out in the Hume Planning Scheme, including the Growth Area Framework Plans and the Precinct Structure Planning Guidelines.
- The Local Planning Policy Framework set out in Clauses 21 and 22 of the Hume Planning Scheme.

1.2 ROLE OF THE NATIVE VEGETATION PRECINCT PLAN

The Greenvale West R3 Native Vegetation Precinct Plan (NVPP) has been prepared for the purposes of Clause 52.16 of the Hume Planning Scheme. It identifies:

- Native vegetation which may be removed without a planning permit.
- The offsets that must be provided to remove the native vegetation which can be removed.
- Native vegetation which cannot be removed without a planning permit.

The Greenvale West R3 NVPP has been included within the Greenvale West Precinct Structure Plan as anticipated by Clause 52.16 of the planning scheme and implements the vision as set out in the Precinct Structure Plan. It is also a separate stand-alone document which is incorporated within the planning scheme.

Clause 52.16 forms the statutory basis for the preparation and implementation of the NVPP. Users of this document should note that the statutory basis for the Greenvale West Native Vegetation Precinct Plans is different to the Greenvale West Precinct Structure Plan.

The Greenvale West NVPP applies to land identified in Map 1 of the NVPP.

1.3 LAND TO WHICH THE PRECINCT STRUCTURE PLAN APPLIES

The Greenvale West Precinct is located to the west of Mickleham Road on the north side of Somerton Road, Greenvale.

The Precinct is defined by Mickleham Road to the east, Somerton Road to the south and the Urban Growth Boundary (UGB) generally to the north and west. The Precinct encompasses approximately 106.3 hectares of land, comprising 12 separately titled lots. Existing land use consists of predominantly rural and rural residential uses.

The land to which this PSP applies is illustrated in Plan 1 - Precinct Structure Plan Area.

1.4 IMPLEMENTATION

The PSP is implemented by:

- Proponents who develop land generally in accordance with this PSP and contribute to the provision of services.
- The Victorian Government and the Hume City Council by managing a range of infrastructure and services to support the development of the precinct.
- The Hume Planning Scheme including:
  - The Urban Growth Zone and Schedule at Clause 37.07.
  - The Greenvale West Development Contributions Plan incorporated in the Scheme at Clause 45.06.
  - The Greenvale West Native Vegetation Precinct Plan at Clause 52.16
  - Open space requirement under Clause 52.01 of the Scheme.
  - Other requirements of the Planning Scheme.

1.5 FURTHER REFERENCE MATERIAL

A Glossary and other information such as technical studies supporting the preparation of this PSP are listed at Section 7.0 - Other Information.

1.6 MONITORING AND REVIEW

The GAA and Hume City Council will monitor the implementation of the PSP. The effectiveness of the PSP will be evaluated regularly, at least every five years. The PSP may be revised and updated as required via an amendment to the Hume Planning Scheme to be approved by the Minister for Planning.

CRAIGIEBURN ROAD

FUTURE CRAIGIEBURN TOWN CENTRE MAC

CRAIGIEBURN NAC

HUME FREEWAY

FUTURE E14

CRAGIEBURN GRASSLANDS FLORA & FAUNA RESERVE

INDICATIVE ALIGNMENT OF FUTURE OUTER METROPOLITAN RING ROAD

EXISTING QUARRY

500m

NOMINATED GREENVALE MAC

GREENVALE RESERVOIR

ROXBURGH PARK MAC

SYDNEY ROAD

SOMERTON ROAD

MICKLEHAM ROAD

COOPER STREET

BULLA

WOODLANDS HISTORIC PARK

EXISTING GREENVALE VILLAGE NAC

UPFIELD

MELBOURNE AIRPORT

BROADMEADOWS CAD

plan 2

regional context

greenvale west [R3] precinct structure plan

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2.0 LOCAL CONTEXT AND SITE DESCRIPTION

2.1 METROPOLITAN AND REGIONAL CONTEXT

The Precinct is located within the Hume Growth Area, approximately 20 kilometres from the Melbourne CBD. The Hume Growth Area incorporates Greenvale, Roxburgh Park, Craigieburn and Craigieburn West and traverses a major industrial and employment region. The Hume Growth Area Framework Plan 2006 indicates that the population of the corridor is expected to grow by 50,000 people in the next 20 years to approximately 200,000 people by 2020. Simultaneously, employment in the growth area is expected to grow up to 95,000 jobs. The UGB was expanded on 6 August 2010 which bought additional land within the municipalities of Hume, Whittlesea and Mitchell into the Urban Growth Zone. Additional housing, activity centres and employment areas will be provided within the northern corridor, accessible from the precinct.

The Precinct is located between major employment areas of the Melbourne Airport Node and the 'North Employment Node' (located along Sydney Road in Broadmeadows and Campbellfield). Although not currently serviced by public transport, the precinct's proximity to these two employment areas will provide access to a diverse range of local job opportunities for the incoming population.

This Precinct is well-located in relation to existing high-order activity centres that have been established along the Craigieburn Railway line, including Broadmeadows Central Activities District (CAD) and Roxburgh Park. The Craigieburn Town Centre is a designated Major Activity Centre located on Craigieburn Road to the north of the precinct.

The Precinct is surrounded by existing and proposed transport infrastructure providing access to regional and metropolitan destinations. Roxburgh Park train station is located approximately 5.5 km to the east of the Precinct which allows for public transport access to Broadmeadows (CAD) and central Melbourne. In addition, existing local bus services provide access from the nearby Greenvale Shopping Centre to Roxburgh Park and Broadmeadows.

The existing arterial road network provides regional road access via the Western Ring Road and Hume Freeway, whilst the future Outer Metropolitan Ring Road (OMR) will provide more direct access to western Melbourne. Public transport and road access improvements to local employment nodes, particularly Melbourne Airport, as part of these transport initiatives is strongly supported.

Two regional open space facilities being Greenvale Reservoir Park and Woodlands Historic Park are adjacent to the precinct. These facilities will provide local recreational opportunities and significant landscape amenity for the existing and growing community. Extensions to the metropolitan trail network and principal bicycle network would link the regional parks to the Merri Creek and provide for additional recreational opportunities within the broader precinct.

The existing flora and fauna values and water quality protection requirements in the Precinct have formed the basis by which to organise the parks within the Precinct. Two habitat zones will be set aside for protection within the Precinct and the water quality of the headwaters of the Moonee Ponds, Yuroke and Brodies Creeks will be protected through development of ponds and associated drainage works and wetlands. The Woodland Historic Park environment will continue to be protected through any development in this Precinct.

The metropolitan and regional context of the precinct is illustrated in Plan 2 - Regional Context Plan.

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Legend

- Precinct Structure Plan Area
- Urban Growth Boundary (UGB)
- Existing Major Roads
- Existing Bus Route
- Walking/Cycling Path
- Existing Urban Area
- Future Urban Area
- Green Wedge Land
- Regional Open Space
- Greenvale Reservoir
- Neighbourhood Activity Centre (NAC)
- Hill Top
- (Precinct) Low Point
- Telstra Tower
- Existing Vegetation
- Drainage/ Waterways
- Contour Lines (1m interval)

201 AHD

MOONEE PONDS CREEK

GREENVALE NORTH PSP AREA (R1)

APPROVED RESIDENTIAL DEVELOPMENT 'Providence Estate'

MICKLEHAM ROAD

HILLVIEW ROAD

BRODIES CREEK

AITKEN COLLEGE

GREENVALE RESERVOIR PARK

GREENVALE RESERVOIR

NOMINATED GREENVALE MAJOR ACTIVITY CENTRE (PSP21 - GREENVALE CENTRAL)

FRENCH ROAD

BRENDAN ROAD

181AHD

SOMERTON ROAD

BONDS LANE

PROVIDENCE ROAD

WOODLANDS HISTORIC PARK

R3 - PART B (PSP21 - GREENVALE CENTRAL)

GREENVALE VILLAGE (NAC)

FLEETWOOD DRIVE

GREENVALE RESERVE

Scale 1:10000 @ A3

0 50 100 200 300 500m

plan 3

local context & site features

greenvale west [R3] precinct structure plan

Victoria The Place To Be

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2.2 LOCAL CONTEXT

2.2.1 HISTORY

The land has predominantly been used for rural and rural residential purposes since European occupation which includes grazing of cattle and cropping.

2.2.2 SURROUNDING NEIGHBOURHOODS

The precinct is proximate to the established urban area of Greenvale which is generally located to the south and east of Somerton and Mickleham Roads respectively. This includes residential neighbourhoods comprising conventional residential lots and some neighbourhoods comprising low density residential lots. Further east are the established urban areas of Roxburgh Park and Meadow Heights.

The Precinct is surrounded by the following land uses:

North: The Greenvale North (R1) PSP is located to the north-east of the Precinct. This land is proposed to be developed for residential use with associated open space areas. The Greenvale North R1 PSP does not include community facilities given the land is physically isolated from the remainder of Greenvale by virtue of the position of the Greenvale Reservoir.

East: Land to the east of Mickleham Road, generally opposite the Precinct, currently comprises vacant land. Land north of Hillview Road is currently being developed for a residential estate known as 'Providence'. An activity centre is anticipated as part of the Providence Estate to be located with frontage to Mickleham Road. Land further to the east comprises the Greenvale Reservoir.

Land south of Hillview Road comprises large rural residential properties. This land forms part of the future PSP 21 area which is anticipated to be developed predominately for residential development. This land is a nominated site for a Major Activity Centre which is under review as part of the Growth Area Framework Plan process.

Aitken College is located further east of Mickleham Road and extends to Greenvale Reservoir Park.

South: Somerton Road, which is currently a two lane rural standard road, bounds the site to the south. Land to the southern side of Somerton Road is used predominantly for rural residential purposes and forms part of PSP 21. The Greenvale Neighbourhood Activity Centre is located on the corner of Mickleham Road and Greenvale Drive and serves the existing Greenvale Community. The Greenvale Recreation Reserve and Woodland Historic Park are located south-west of the precinct and accommodates tennis courts, ovals and pavilion facilities.

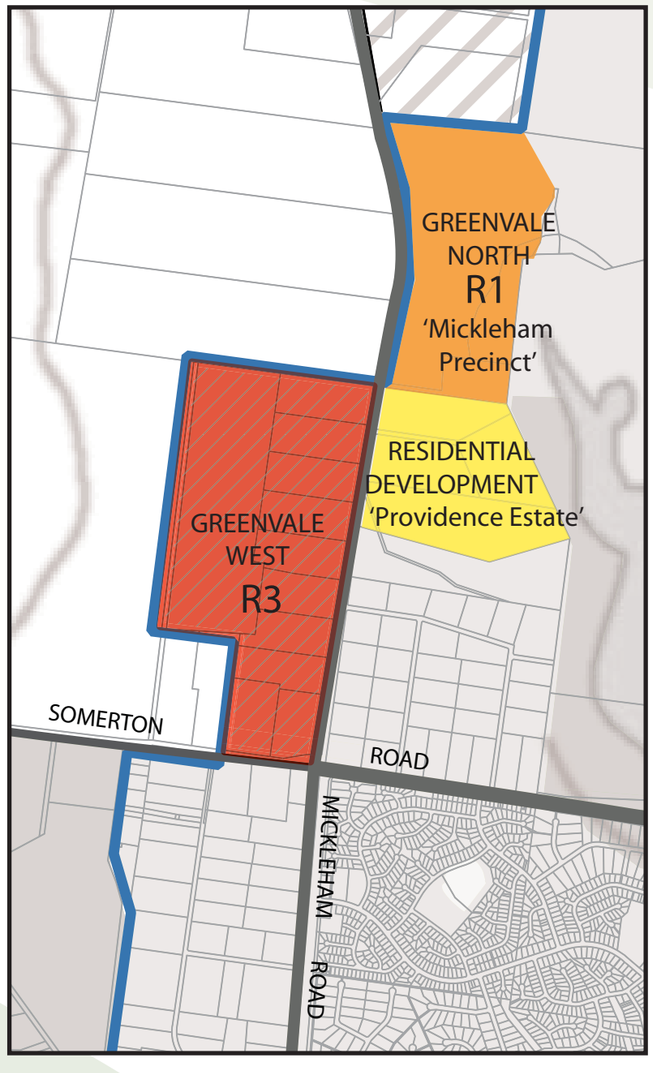
West: Land immediately west of the precinct is used for farming and is not anticipated to be developed for urban purposes.

The location of the Urban Growth Boundary abutting the Precinct to the north and west is not currently proposed to change. There may however be long term potential for this area to be developed for residential or urban purposes and therefore the PSP needs to incorporate the potential for long term connection to its northern and western boundaries.

2.2.3 TRANSPORT AND MOVEMENT

The Precinct adjoins Somerton Road and Mickleham Road which provide convenient access to growing local employment nodes and existing activity centres. Mickleham Road is proposed to be duplicated to a six lane arterial and Somerton Road is also expected to be duplicated, subject to connections to the Outer Metropolitan Ring (OMR) Road. Upgrades to Mickleham Road, in the form of signalised access, will be required as a result of the long term development of the Precinct and adjoining residential developments.

Figure 1: Neighbourhoods contributing to DCP



Public transport is likely to be provided by local bus routes that currently run through existing Greenvale urban areas. Existing walking and cycling opportunities are provided within the adjoining regional parks, with connections into the Precinct to be provided where practical.

2.2.4 EMPLOYMENT AND ACTIVITY CENTRES

A range of existing employment and activity centres exist within the vicinity of the Precinct include Greenvale Village Shopping Centre (Neighbourhood Activity Centre) at the north east corner of Mickleham Road and Greenvale Drive, Roxburgh Homestead Shopping Centre (Neighbourhood Activity Centre) and Roxburgh Park Shopping Centre (Major Activity Centre).

The land at the north east corner of Mickleham and Somerton Roads has been nominated within the Hume Growth Area Framework Plan as a future Major Activity Centre. The future land use composition of this precinct is yet to be finalised. Early indications are that commercial development will have an employment focus rather than a traditional retail activity centre focus. Education and Office use have been identified as potential activities for the Centre. The State Government is currently undertaking a review of the Framework Plan covering this area. It is anticipated that this process will consider the relevant economic studies that have been undertaken for this area.

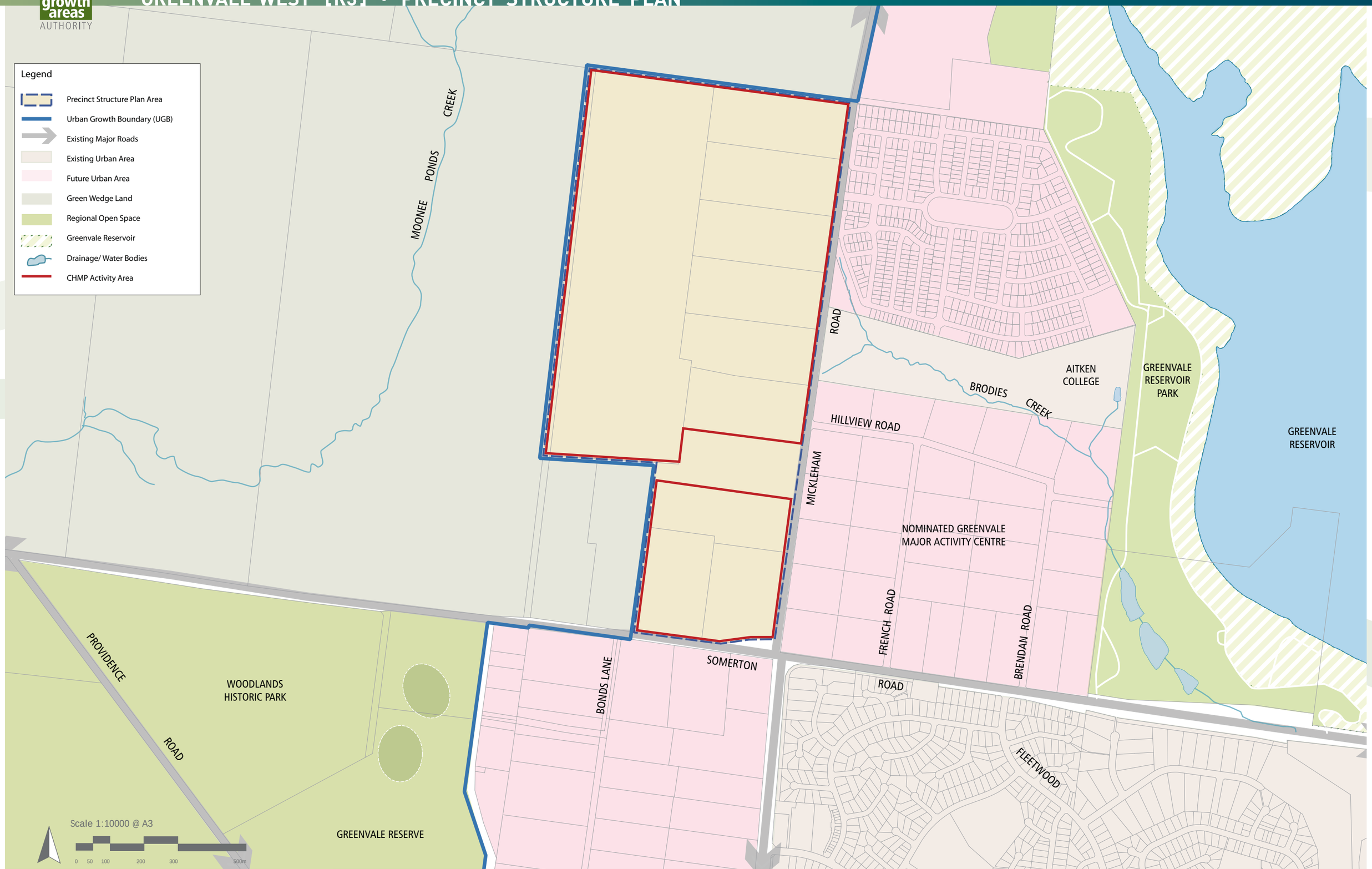
The future residential catchment comprising development of the Greenvale West Precinct, the Providence Estate east of Mickleham Road and designated residential land within the Greenvale North Precinct, creates the opportunity for an activity centre to establish within the Providence Estate. This is most likely to be located proximate to the Mickleham Road intersection to maximise synergies with Community Centre and Primary School proposed within the Greenvale West Precinct.

The Precinct is proximate to these existing and proposed facilities and consequently there is no significant retail or commercial floor space anticipated within the PSP. The new residents situated within the Precinct would form part of the catchment of the existing and proposed activity centres as outlined above.

The Greenvale West R3 Precinct has proximity to the following key employment areas:

- Hume Highway Employment Area
- Expansion to the north of the Hume Highway Employment Area
- Expanded Melbourne Airport Employment Area

The continued growth at both the Hume Highway and Melbourne Airport Employment areas create significant employment opportunities both east and west of the precinct



plan 4
heritage
greenvale west [R3] precinct structure plan

2.2.5 OPEN SPACE

The Precinct is proximate to two major regional recreational facilities managed by Parks Victoria being Greenvale Reservoir Park located to the east and Woodlands Historic Park located to the south of Somerton Road.

In addition, Greenvale Recreation Reserve is located to the east of Woodlands Historic Park on the south side of Somerton Road. Greenvale Recreation Reserve, managed by the Hume City Council, provides district and regional level recreation facilities, in the form of football/cricket ovals, tennis courts and pavilion facilities.

2.2.6 COMMUNITY FACILITIES

The established urban areas of Greenvale and Roxburgh Park contain a broad range of community facilities including schools, churches, retailing and commercial centres.

The Precinct is proximate to, and serviced by, a range of education and community facilities including Aitken College, Greenvale Primary School, Roxburgh Park College and Primary School, Greenvale Seventh Day Adventist Church and the Greenvale Uniting Church.

Due to the small size of the Precinct and its location at the edge of the UGB, the need for community facilities in the Precinct has considered the wider area including the future population of the Providence Estate (1,588) and part of the Greenvale North R1 PSP – Mickleham Neighbourhood (1,525). These neighbourhoods, together with the projected population for Greenvale West R3 (3,704), result in a combined population in the order of 6,800 which has determined the community and open space facilities to be required.

Refer to Figure 1 which identifies the above-mentioned neighbourhoods.

2.3 PRECINCT FEATURES

2.3.1 HERITAGE

The traditional indigenous owners of the precinct are the Wurundjeri tribe. There are no significant indigenous sites identified within the Precinct as determined by the approved Cultural Heritage Management Plan (CHMP) prepared by Heritage Insight (CHMP:10648).

The CHMP has been prepared and approved for all land in the precinct except 965 Mickleham Road. It is noted that access to the property at 965 Mickleham Road was denied for the purposes of the cultural heritage survey and assessment. As a result, the 'Activity Area' in the approved CHMP does not apply to this property. A separate CHMP will be required to be undertaken and approved for the land at 965 Mickleham Road prior to approval of any significant disturbance of that property or as part of a planning permit application.

None of the properties or sites investigated within the Precinct have post-settlement heritage value.

2.3.2 BIODIVERSITY

The Greenvale West Precinct has been used for agricultural purposes however still retains biodiversity values that link to biodiversity assets of the wider landscape being in proximity to large areas of woodlands at the Woodland Historical Park and the Greenvale Recreation Reserve. It is also connected to the Greenvale Reservoir to the east via Yuroke Creek.

A group of significant River Red Gums occupy the south-western corner of the precinct. They form part of the Plains Grassy Woodlands Ecological Vegetation Class (EVC) and are the most notable and consistent feature of the precinct beyond its open paddocks.

The Precinct itself supports native species and vegetation communities that are listed as threatened under the federal Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act) and listed under the Victorian Flora and Fauna Guarantee Act 1988 (FFG Act) and listed in the advisory lists of threatened species in Victoria.

Biodiversity Assets

The following biodiversity values have been identified within the Precinct:

- Golden Sun Moth (Synemon plana) (Listed as Critically Endangered under the EPBC Act listed under the FFG Act and has the conservation status of critically endangered within Victoria) and habitat that supports this species. Habitat includes both native and non-native grassland that provide a tussock formation with gaps of bare ground between tussocks that provide suitable habitat for this species.
- Remnant vegetation that is classified as:
- EVC 55 – Plains Grassy Woodland (endangered within the Victorian Volcanic Plains Bioregion).
- Natural Temperate Grassland of the Victorian Volcanic Plains Bioregion (EPBC Critically Endangered).
- Grassy Eucalypt Woodland of the Victorian Volcanic Plains (EPBC: Critically Endangered)
- Floristic community 55-04 Western Basalt Plains (River Red Gum) Grassy Woodland (FFG listed community).
- Western (Basalt) Plains Grassland (FFG listed community).
- Non-indigenous planted eucalypts and other established tree species along fence lines and roadsides that provide additional habitat.
- Many large old hollow bearing trees that may provide habitat values for a range of arboreal mammals and birds that require hollows to nest and reproduce.
- A total of 10 scattered trees were recorded in the Precinct.

2.3.3 TOPOGRAPHY AND LANDFORM

The precinct is largely on a flat plateau between the Moonee Ponds Creek to the west and Brodies/ Yuroke Creek and the Greenvale Reservoir to the east. The land is predominantly within the 175 Australian Height Datum (AHD) and 190 AHD and generally slopes from the north to the south and to the east.

A minor depression and natural drainage line is located along the western side of Mickleham Road in the northern section of the Precinct, described by Melbourne Water as Brodies Creek.

The south east corner of the precinct also provides a low point within the Precinct.

2.3.4 CATCHMENTS AND DRAINAGE

There are two main catchments to the Precinct. The northern catchment drains to Brodies/ Yuroke Creek, while the southern catchment drains towards the intersection of Mickleham and Somerton Roads.

Rural drainage from the north gathers at the north east corner of the precinct in a minor depression/drainage line, known as Brodies Creek. This then drains towards Yuroke Creek via a culvert under Mickleham Road and through the western section of the Aitken College site.

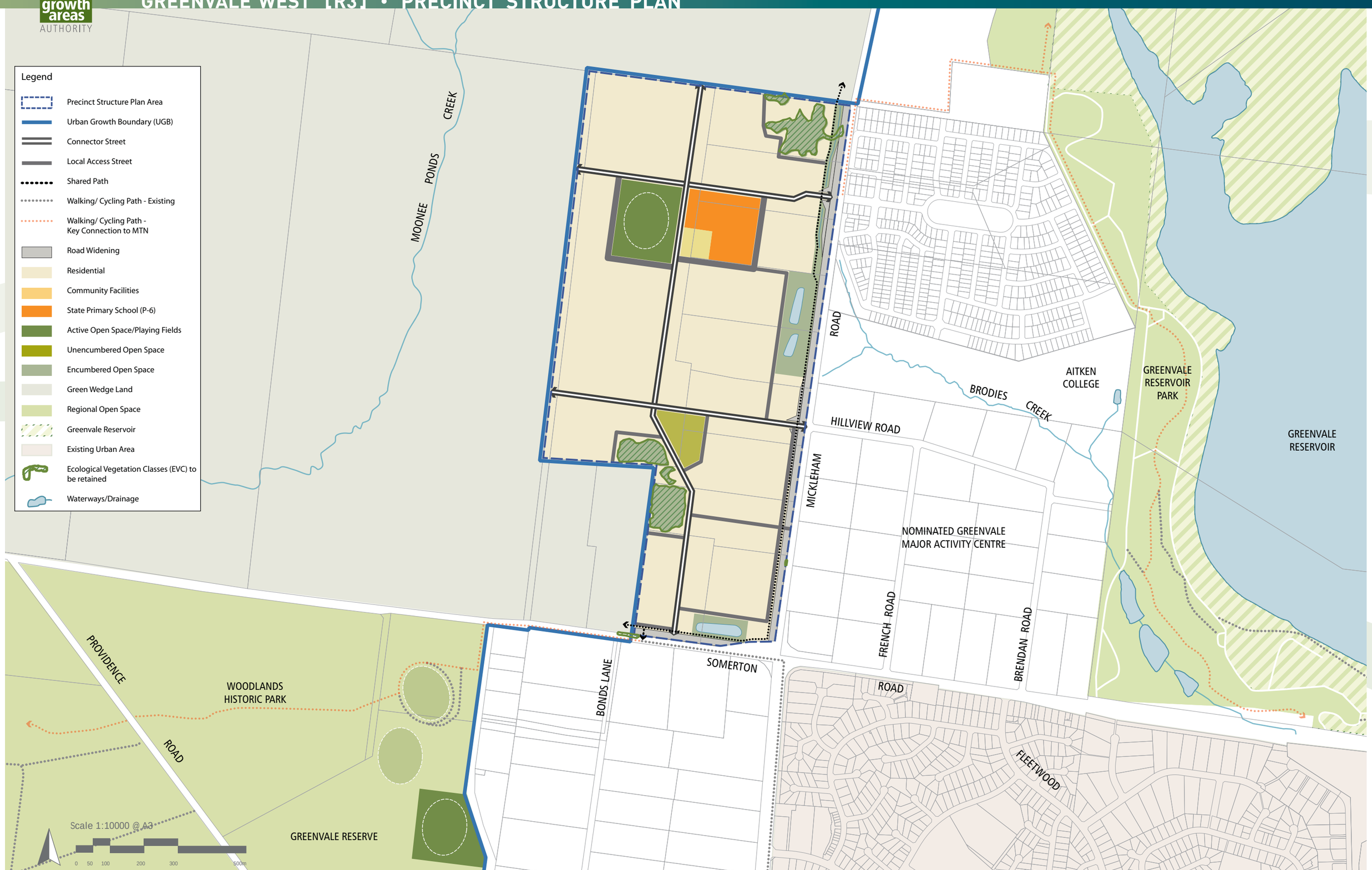
The southern catchment drains to the south via a culvert under Somerton Road (south-east corner of the Precinct) which connects into a drainage system that ultimately feeds into Yuroke Creek at a southern location.

2.3.5 INFRASTRUCTURE

A major Melbourne Water water supply transfer main is located in Somerton Road together with an aviation fuel pipeline owned by Exxon Mobil.

An existing mobile telecommunications tower is located in the southern section of the precinct in a central position within the Precinct.

The site features are illustrated in Plan 3 Local Context and Site Features Plan.



plan 5

future urban structure

greenvale west [R3] precinct structure plan

3.0 VISION + URBAN STRUCTURE

3.1 VISION

Residents of Greenvale West are ideally located to take advantage of proximate community and recreation facilities and retail activity as well maintaining an attractive natural setting by virtue of the large regional open space areas of Greenvale Recreation Reserve, the Greenvale Reservoir and the Woodlands Historic Park. The Precinct itself is a small residential pocket nestled in an area which has a rural outlook to the north, west and southwest but which is also well connected to the existing neighbourhoods within Greenvale. The Precinct will become an integral part of the suburb of Greenvale.

The Precinct will deliver sustainable neighbourhoods which cater for a mix of lifestyles, incomes and households by providing diverse housing types and access to local employment opportunities through the establishment of road and trail connections to local and regional employment destinations.

Greenvale West will provide new community facilities within the Precinct and establish links to existing and planned facilities adjacent to the Precinct to ensure the Precinct integrates with the surrounding neighbourhoods within Greenvale. The Precinct Structure Plan seeks to provide connection between these key open space assets through an integrated pedestrian, cycling and trail network.

3.2 URBAN STRUCTURE

The vision for Greenvale West will be realised through the development of the future urban structure for the precinct as an integrated neighbourhood.

The Future Urban Structure Plan shows how the precinct will be developed over time to achieve the State Government's and Hume City Council's objectives for sustainable growth.

3.2.1 ESTABLISH A SENSE OF PLACE AND COMMUNITY

The Greenvale West PSP establishes the framework for the development of a new community which will have it's own community focus that will also be integrated with the existing and future community of Greenvale. The structural elements of the plan are interlinked to facilitate an attractive built environment, a strong community and sense of place for Greenvale West.

Planning for the development of community infrastructure such as the primary school, sporting fields and other community facilities, which will have a close spatial relationship with residential neighbourhoods on either side of Mickleham and Somerton Roads, will assist in the creation of a 'sense of place' by fostering social interaction within the immediate and wider community. There is also potential for an activity centre to be developed to the east of the Precinct (within the 'Providence Estate'), to complement the community facilities located within the Precinct.

3.2.2 GREATER HOUSING CHOICE, DIVERSITY AND AFFORDABILITY

The future urban structure enables the delivery of a range of lifestyle opportunities to suit the needs of a variety of household sizes and budgets. The PSP encourages the development of a range of residential densities from the conventional to medium density residential development. Medium density housing in a variety of styles will be promoted near services, community facilities, public transport corridors, open space and amenities.

3.2.3 OPEN SPACE AND NATURAL SYSTEMS

The location of the precinct between two regional parks provides a key opportunity to link these facilities for the benefit of the broader community. This is proposed in the form of providing a shared path along Somerton Road abutting the Precinct and establishing the potential for future connections internal to the Precinct. In addition, the shared path along Mickleham Road will provide the opportunity to connect the adjacent development into Greenvale Reservoir Park.

Open space is to be provided in a variety of forms:

Active open space

- A full size oval as an addition to the neighbourhood park.
- A full size oval will be provided at Greenvale Recreation Reserve (outside Greenvale West PSP). Contribution for this oval has been apportioned to the Greenvale West PSP as well as surrounding communities (as per Figure 1).

Unencumbered Passive Open Space

- Public open space reserve over 1 hectare in size.

Encumbered Open Space

- Conservation reserve in south west and northern section of the Precinct.
- Drainage reserves including retention basins along Mickleham Road and at the intersection of Somerton Road and Mickleham Road.

The distribution of the open space ensures that a majority of residential properties have access to open space within a walkable 400 metres and enables the staged provision of open space within the Precinct.

3.2.4 ACTIVITY CENTRES

The PSP does not include an activity centre given the proximity to existing and proposed activity centres within the Greenvale local area, including Greenvale Village (6,500m^2 retail floorspace) to the south and the potential activity centre within the Providence Estate to the east of Mickleham Road. In addition, the Major Activity Centre at Roxburgh Park and the Central Activity District at Broadmeadows are part of the wider network of activity centres which service the Precinct. Land within PSP 21 is nominated to provide a Major Activity Centre which is currently under review as part of the Growth Area Framework Planning process.

The location of the future activity centres will reduce the dependency on private car use by developing a variety of destinations within walking distance for most residents.

3.2.5 PROVIDE FOR LOCAL EMPLOYMENT AND BUSINESS ACTIVITY

Hume maintains a strong base of employment for its residents, with a large proportion of residents being employed within Hume. This trend is expected to continue to 2031. Table 1 illustrates the greater proportion of manufacturing, transport and storage sector employment in Hume, when compared to the Melbourne Statistical Division and the lower proportion of finance, business and health services employment. This is expected to continue into the future with continued growth and development of nearby industrial land and transport infrastructure. Additional employment would be created when additional activity centres come on line on the east side of Mickleham Road.

Based on the land uses designated within the Precinct area it is possible to estimate the employment generation. Table 2 demonstrates the employment anticipated for the Greenvale West precinct which includes a primary school, multi-purpose community centre (including kindergarten) and food and drink premises/shop (up to 100m^2 within applied Residential 1 Zone). Medical and childcare services, home based businesses and retirement village could also be supported within the Precinct and, if developed, would contribute to local employment opportunities. Overall, based on the provision of facilities above, a total of 245 jobs will be generated.

The employment generating land uses within the PSP will minimise average travel times and distances for residents. The urban structure encourages the establishment of localised employment by making room for employment generating land uses within the precinct and on adjoining land. These employment areas are well located on major transit routes and have direct access to cycling and walking trails for alternative modes of transport.

In addition, future residents of the precinct will benefit from the overall growth in job opportunities in the Hume employment corridor and nearby activity centres and employment hubs, including Broadmeadows Activity Centre, Melbourne Airport, Craigieburn Town Centre, Roxburgh Park Activity Centre and the potential Greenvale Activity Centre. Outside of Hume, significant areas of employment land exist at the Cooper Street employment precinct and the proposed intermodal freight and logistics hub in Whittlesea.

These employment precincts are expected to further develop over the next few decades and further reduce reliance on centralised employment within the inner and central Melbourne areas. This is expected to have positive flow-on effects such as reduced congestion on the metropolitan road and rail network, improved travel time and reduction in greenhouse gas emissions. Social benefits will include more leisure time for families as well as reduced travel costs for household budgets.

Table 1: Labour Force to jobs in Hume comparison

EMPLOYMENT SECTORS	RESIDENT LABOUR FORCE (%)	JOBS IN HUME (%)	MSD RESIDENT LABOUR FORCE (%)	MSD JOBS (%)
Agriculture, Forestry and Fishing	0.30	0.4	0.50	0.6
Mining	0.10	0.1	0.20	0.2
Manufacturing	16.20	28.8	12.20	14.3
Electricity, Gas and Water Supply	0.60	0.3	0.70	0.6
Construction	7.70	5.4	6.90	5.4
Wholesale Trade	4.70	6.9	5.20	6.2
Retail Trade	10.90	12.4	10.80	14.9
Accommodation and Hospitality	5.40	3.3	5.30	4.2
Transport and Storage	9.20	18.3	4.40	4.3
Communication Services	1.30	1.6	2.40	2.0
Finance and Insurance	3.30	0.8	4.50	5.2
Property and Business Services	7.90	5.3	12.7	13.3
Government Administration and Defence	5.20	3.4	4.70	4.1
Education	5.00	6.0	7.20	7.9
Health and Community Services	7.40	4.2	9.50	10.7
Cultural and Recreational Services	1.00	0.7	1.60	2.7
Personal and Other Services	3.60	2.0	3.40	3.4
Unemployed or not stated	10.00%	N/A	7.9	N/A

Table 2: Estimated employment demand

LAND USE BASED EMPLOYMENT GENERATORS	MEASURE	JOBS	QTY IN PRECINCT STRUCTURE PLAN	EST. JOBS
Identified in PSP				
Primary School	Jobs/school	40	1	40
Multi Purpose Community Centre	Jobs/centre	10	1	10
Potential to be in PSP				
Medical Centre	Jobs/centre	15	1	15
Private child care centre	Jobs/ 100 places	20	1	20
Home based business	Jobs/ dwelling	0.1	1277	127
Retirement village	Jobs/Living Unit	0.125	150	18
Shop	Jobs/1000 sqm	30	100m^2	15
Total Estimated				**245**

3.2.6 PROVIDE BETTER TRANSPORT AND MOVEMENT OPTIONS

The transport and movement framework has been largely determined by the requirements of VicRoads in providing access to/from arterial roads. This has determined the location of signalised intersections and consequently the connector roads. The ability to access the potential Greenvale Activity Centre to the south east has also been considered in determining the network.

The connector road network is proposed to provide for bus routes and on road cycling lanes.

Widening of the adjoining arterial roads (Mickleham Road and Somerton Road) is required for the greater metropolitan network in the medium to long term. Land provision is identified in the PSP along Mickleham Road in accordance with an existing Public Acquisition Overlay (PAO) of 20 metres. A new PAO is also required in Somerton Road of 20 metres for the greater metropolitan network. It is acknowledged that timing for the road widening of Somerton Road may be influenced by its connection to the OMR. The PAO for Somerton Road to be located on the north side of the existing road reservation, consistent with the widening to the east of Mickleham Road. Estimate traffic volumes and road reserve widths are detailed in Table 11.

The Hume Planning Scheme requires the satisfactory provision of road networks and nomination of road categories. The connector road network has been identified in Plan 5 – The Future Urban Structure Plan.

Cross sections described in the PSP are intended to be used for the relevant road categories, as shown in Section 4.8 - Transport and Movement.

The urban structure established by the Greenvale West PSP will reduce travel distances, travel time and carbon emissions related to travel to work by providing:

An efficient road network and access to the public transport

The location and distribution of the road network grid promotes efficient movement within the precinct with strong connections to the surrounding areas. The grid sets the foundations for a highly permeable and connected precinct which connects directly to the future Precincts within Greenvale and the surrounding arterial roads which are the most likely routes for future public transport services.

A walkable street structure

The range of street types and their gridded distribution will accommodate both pedestrians and cyclists. This arrangement will promote walking and cycling as convenient transport modes for accessing local jobs, services and public transport infrastructure to provide access to other employment destinations.

Connections to the established arterial road network and promoting efficient movement from the precinct to the surrounding areas

Connector streets are located to accommodate direct walking and cycling movements through the precinct to the adjacent future Greenvale Activity Centre and Greenvale Recreation Reserve to the south and urban land to be developed to the east of Mickleham Road.

Well-located local destinations to promote walking to frequently used services

The location of the primary school, community services and passive and active open spaces will promote walking and cycling as safe and convenient modes of transport to these local amenities. This is achieved by their distribution and the street types that connect them which have dedicated space to pedestrians and cyclists. This also has the added benefit of building a sense of place and community by providing local landmarks.

Local employment

The provision of local schools and community oriented services generates opportunities for people to work locally. There is also the high possibility for local employment opportunities at the potential activity centre east of Mickleham Road.

3.2.7 CLIMATE CHANGE AND ENVIRONMENTAL SUSTAINABILITY

Energy Statement

The future urban structure responds to climate change and environmental sustainability by:

- Encouraging greater use and effectiveness of the public transport system by intensifying development of housing, community services and leisure and recreation facilities within the proposed neighbourhoods.
- Encouraging travel by means other than private car by providing walking, cycling, bus links to new residential neighbourhoods and employment areas.
- Encouraging efficient movement by networks of road that have high connectivity and accommodate bus services.
- Integration of the road network with linear open space network to facilitate easy walking and cycling access to key destinations within and outside the precinct.
- Providing connector roads with dedicated on-road bike paths as well as pathways.
- Designing all connector roads to accommodate bus movements.
- Encouraging grid layout design of residential lots at the subdivision stage to feature passive solar orientation, providing the ability to reduce carbon dioxide emissions per household.

Water sensitive urban design

Water Sensitive Urban Design (WSUD) features for the open space network will provide for water quality treatment, retardation and high quality self-sustaining landscapes.

Further opportunities for on-street and onsite WSUD will be explored during the detailed subdivision design phase of development to comply with Hume City Council and Melbourne Water requirements.

Native Vegetation

Locally indigenous street trees to be used where possible to help achieve habitat links through the Precinct.

The two conservation areas are expected to be enhanced through additional plantings and offsets as detailed in the Native Vegetation Precinct Plan (NVPP).

3.2.8 DELIVER ACCESSIBLE, INTEGRATED AND ADAPTABLE COMMUNITY FACILITIES

In determining the location of the community facilities, the urban structure of the Precinct has taken into consideration the surrounding neighbourhoods (both existing and proposed), the main road network, intersection locations, internal connector road layout and the need to provide walkable neighbourhoods. Consequently, the community facilities are proposed as a central focus of the precinct with accessibility to the developing community to the north-east. The facilities within the precinct include the co-location of a Public Primary School and a multi-purpose community centre (including a dual kindergarten, meeting rooms, visting Maternal Child and Health) as well as a nearby active playing field which are all accessed via the proposed four way intersection on Mickleham Road.

Public open space has been distributed throughout the precinct as both passive and active open space. Based on an approximate joint population of 6,800 (which includes PSP 23, part of PSP 22 and the Providence Estate - refer to Figure 1) it has been determined that two AFL sized playing ovals are required for this area. However, given the size of the Greenvale West Precinct and the proximity to the Greenvale Recreation Reserve, one full size active playing field (as an addition to the neighbourhood park) is proposed within the Precinct itself. An additional oval will be provided at the Greenvale Recreation Reserve located south of Somerton Road. Both active open space projects are part of the development contributions for this Precinct. The Greenvale Recreation Reserve currently provides a range of sporting facilities and is considered the optimum location for the second oval.

Proposed community facilities (such as the Community Centre and Active Open Space) will be utilised by neighbourhoods outside of the Greenvale West Precinct. Development contribution to these facilities are apportioned across three neighbourhoods as outlined in the Growth Areas Authority Community Needs Assessment. These 'contributing neighbourhoods' include the Mickleham neighbourhood of the Greenvale North R1 PSP and the Providence Estate development.

growth areas AUTHORITY

Legend

- Precinct Structure Plan Area
- Urban Growth Boundary (UGB)
- Road Widening
- Conventional Residential
- Medium Density Residential
- Community Facilities
- State Primary School (P-6)
- Active Open Space/Playing Fields
- Unencumbered Open Space
- Encumbered Open Space
- Green Wedge Land
- Regional Open Space
- Greenvale Reservoir
- Existing Urban Area
- Ecological Vegetation Classes (EVC) to be retained
- Drainage/ Water Bodies
- 1 Property Reference No.

GREENVALE NORTH R1 'Mickleham Precinct'

RESIDENTIAL DEVELOPMENT 'Providence Estate'

GREENVALE WEST R3

SOMERTON ROAD

MICKLEHAM ROAD

1 2 3 4 5 6 7 8 9 10 11 12

MICKLEHAM ROAD

HILLVIEW ROAD

BRODIES CREEK

AITKEN COLLEGE

GREENVALE RESERVOIR PARK

GREENVALE RESERVOIR

NOMINATED GREENVALE MAJOR ACTIVITY CENTRE

FRENCH ROAD

BRENDAN ROAD

BONDS LANE

SOMERTON ROAD

FLEETWOOD

PROVIDENCE ROAD

WOODLANDS HISTORIC PARK

GREENVALE RESERVE

Scale 1:10000 @ A3

0 50 100 200 300 500m

plan 6

land use & budget

greenvale west [R3] precinct structure plan

3.3 LAND USE BUDGET

The Summary Land Use Budget is outlined in Table 3. Property specific land budget is shown at Table 5 with property specific references depicted in Plan 6 - Land use budget.

Land use budget summary

The Greenvale West PSP covers an area of approximately 106.30 hectares.

The Net Developable Area (NDA) is established by deducting the land requirements for community facilities, state education facilities, public open space (both active and passive) and encumbrances from the site area. The NDA for the Greenvale West PSP is 83.85 hectares, which equates to approximately 78.88% of the PSP area.

The land budget demonstrates that the urban structure established by the Greenvale West PSP achieves a lot density of 15.81 dwellings per Net Developable Hectare. Based on this density, the PSP area is capable of providing at least 1,323 lots.

3.4 DEMOGRAPHIC PROJECTIONS

The preparation of the Greenvale West PSP has assumed an average household size of 2.8 persons as the basis for estimating the future population in the PSP to 2020.

Based on the above, the future population of the PSP area is estimated at approximately 3,704 people.

Anticipated characteristics of the incoming residents are:

- A higher proportion of families with young children compared to the metropolitan average.
- A higher proportion of families without children compared to the metropolitan average.
- A higher proportion of population in the 0-9 and 30-39 age groups than the metropolitan average.
- A lower proportion of population in the 55-65 age group than the metropolitan average.

These projected demographic characteristics are based on analysis of the Greenvale and Roxburgh Park areas and are typical of outer growth area communities.

The assessment of community facilities has been based on the demographic projection for the PSP area as well as the population projection for the adjoining developing residential precincts.

Table 3: Summary Land Use Budget

DESCRIPTION	Hectares	% of Total Precinct	% of NDA
TOTAL PRECINCT AREA (ha)	**106.30**	**100.0%**	
TRANSPORT			
6 Lane Arterial Roads	4.36	4.10%	5.20%
Sub-total	**4.36**	**4.10%**	**5.20%**
COMMUNITY FACILITIES			
Community Services Facilities	0.70	0.66%	0.83%
Sub-total	**0.70**	**0.66%**	**0.83%**
GOVERNMENT EDUCATION			
Government Schools	3.50	3.29%	4.17%
Sub-total	**3.50**	**3.29%**	**4.17%**
OPEN SPACE			
Encumbered Land Available for Recreation			
Waterway / Drainage Line / Wetland / Retarding	4.82	4.53%	5.75%
Conservation	3.67	3.45%	4.38%
Sub-total	**8.49**	**7.99%**	**10.12%**
Unencumbered Land Available for Recreation			
Active Open Space	3.00	2.8%	3.58%
Passive Open Space	2.40	2.3%	2.86%
Sub-total	**5.40**	**5.1%**	**6.44%**
TOTALS OPEN SPACE	**13.89**	**13.1%**	**16.56%**
NET DEVELOPABLE AREA (NDA) ha	**83.85**	**78.88%**	
LAND OUTSIDE PSP AREA			
Unencumbered Land Available for Recreation			
Active Open Space	3.00	N/A	N/A
Subtotal	**3.00**	**2.8%**	**3.58%**
TOTALS OPEN SPACE (within & outside of PSP)	**16.89**	**15.9%**	**20.14%**

Table 4: Estimated Residential Lot Yield

DESCRIPTION			
Residential	NRA (Ha)	Dwell/ NRHa	Dwellings
Residential - Conventional Density	70.73	15	1061
Residential - Medium Density	13.12	20	262
Residential - High Density	0.00	30	0
Sub-total Against Net Residential Area (NRA)	**83.85**	**15.80**	**1323**
Combined Res/ Retail/ Emp/ Other	**NRA (Ha)**	**Dwell/ NRHa**	**Dwellings**
Totals Residential Yield Against NDA	83.85	15.80	1323

Table 5: Property Specific land use budget

PROPERTY NUMBER	TOTAL AREA (HECTARES)	TRANSPORT	COMMUNITY		ENCUMBERED LAND AVAILABLE FOR RECREATION		UNENCUMBERED LAND FOR RECREATION		TOTAL NET DEVELOPABLE AREA (HECTARES)	KEY PERCENTAGES				OPEN SPACE DEL TARGET %	DIFFERENCE
		6 LANE ARTERIAL ROAD / WIDENING	COMMUNITY FACILITIES	GOVERNMENT EDUCATION	WATERWAY / DRAINAGE LINE / WETLAND / RETARDING	CONSERVATION	ACTIVE OPEN SPACE	PASSIVE OPEN SPACE		NET DEVPT AREA % OF SITE	ACTIVE OPEN SPACE % NDA	PASSIVE OPEN SPACE % NDA	TOTAL PASSIVE & ACTIVE OPEN SPACE %		
Property 1	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.21	100.00%	0.00%	0.00%	0.00%	6.44%	-6.44%
Property 2	40.06	0.00	0.23	0.35	0.00	0.85	3.00	1.57	34.06	85.02%	8.81%	4.61%	13.42%	6.44%	6.98%
Property 3	6.72	0.37	0.00	0.00	0.40	1.53	0.00	0.00	4.42	65.76%	0.00%	0.00%	0.00%	6.44%	-6.44%
Property 4	6.73	0.52	0.00	0.88	0.25	0.00	0.00	0.00	5.08	75.47%	0.00%	0.00%	0.00%	6.44%	-6.44%
Property 5	6.73	0.42	0.47	2.27	0.37	0.00	0.00	0.00	3.20	47.57%	0.00%	0.00%	0.00%	6.44%	-6.44%
Property 6	6.74	0.34	0.00	0.00	1.51	0.00	0.00	0.00	4.89	72.56%	0.00%	0.00%	0.00%	6.44%	-6.44%
Property 7	6.57	0.36	0.00	0.00	1.23	0.00	0.00	0.00	4.98	75.78%	0.00%	0.00%	0.00%	6.44%	-6.44%
Property 8	6.07	0.53	0.00	0.00	0.00	0.00	0.00	0.28	5.26	86.66%	0.00%	5.32%	5.32%	6.44%	-1.12%
Property 9	6.24	0.42	0.00	0.00	0.00	0.11	0.00	0.55	5.16	82.68%	0.00%	10.67%	10.67%	6.44%	4.23%
Property 10	6.41	0.32	0.00	0.00	0.00	1.18	0.00	0.00	4.91	76.60%	0.00%	0.00%	0.00%	6.44%	-6.44%
Property 11	6.08	0.40	0.00	0.00	0.19	0.00	0.00	0.00	5.49	90.29%	0.00%	0.00%	0.00%	6.44%	-6.44%
Property 12	5.76	0.68	0.00	0.00	0.87	0.00	0.00	0.00	4.21	73.09%	0.00%	0.00%	0.00%	6.44%	-6.44%
TOTAL AREA	**106.30**	**4.36**	**0.70**	**3.50**	**4.82**	**3.67**	**3.00**	**2.40**	**83.85**	**78.88%**	**3.58%**	**2.86%**	**6.44%**	**6.44%**	**0.00%**

Table 6: Property Specific land use budget - Housing Yields

PROPERTY NUMBER	CONVENTIONAL DENSITY 15 DWELL PER NRHA			MEDIUM DENSITY 20 DWELL PER NRHA			HIGH DENSITY 30 DWELL PER NRHA			TOTAL COMBINED			YIELD PER NDA HA
	NRA HA	DWELL/ NRA	DWELLINGS	NRA HA	DWELL/ NRA	DWELLINGS	NRA HA	DWELL/ NRA	DWELLINGS	NRA HA	DWELL/ NRA	DWELLINGS	
Property 1	2.21	15	33	0.00	20	0	0.00	30	0	2.21	15	33	15.00
Property 2	28.54	15	428	5.52	20	110	0.00	30	0	34.06	16	539	15.81
Property 3	4.42	15	66	0.00	20	0	0.00	30	0	4.42	15	66	15.00
Property 4	2.67	15	40	2.41	20	48	0.00	30	0	5.08	17	88	17.37
Property 5	2.47	15	37	0.73	20	15	0.00	30	0	3.20	16	52	16.14
Property 6	3.82	15	57	1.07	20	21	0.00	30	0	4.89	16	79	16.09
Property 7	4.98	15	75	0.00	20	0	0.00	30	0	4.98	15	75	15.00
Property 8	4.52	15	68	0.74	20	15	0.00	30	0	5.26	16	83	15.70
Property 9	4.27	15	64	0.89	20	18	0.00	30	0	5.16	16	82	15.86
Property 10	4.02	15	60	0.89	20	18	0.00	30	0	4.91	16	78	15.91
Property 11	4.62	15	69	0.87	20	17	0.00	30	0	5.49	16	87	15.79
Property 12	4.21	15	63	0.00	20	0	0.00	30	0	4.21	15	63	15.00
TOTAL AREA	**70.73**	**15.00**	**1061**	**13.12**	**20.00**	**262**	**0.00**	**0.00**	**0**	**83.85**	**15.78**	**1323**	**15.78**

4.0 ELEMENTS

This chapter sets out objectives and planning and design guidelines for the following elements:

1. Image and Character
2. Housing
3. Employment and Activity Centres
4. Community Facilities
5. Open Space and Natural Systems
6. Transport and Movement
7. Utilities and Energy

Each element includes:

Objectives: an objective describes the desired outcome to be achieved in the completed development.

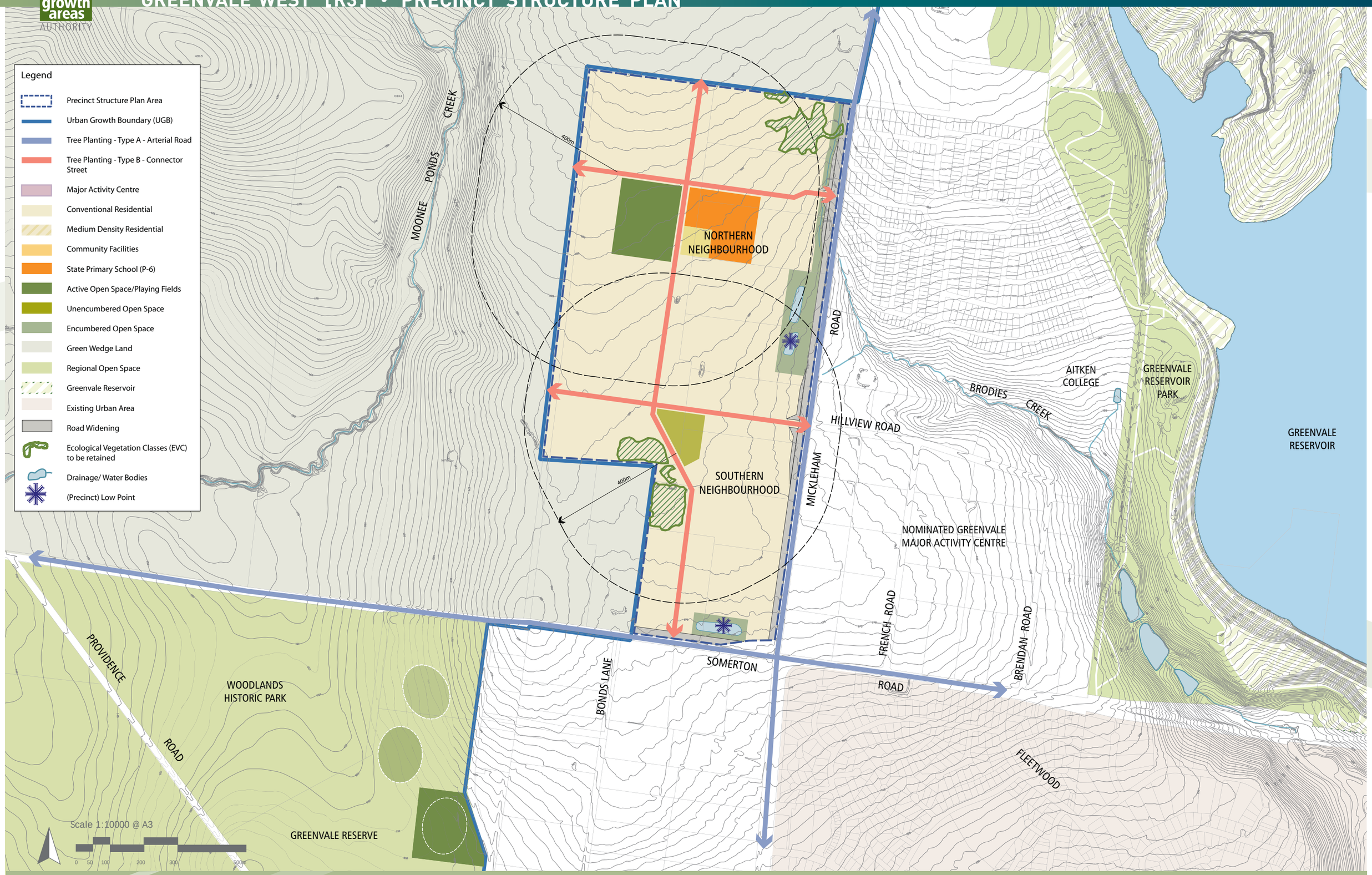
Plans: the plans are a spatial expression of objectives.

Planning and Design Guidelines: planning and design guidelines including figures and tables that:

- must be met; or
- should be met.

Where a planning and design guideline is listed as "must be met" no alternative shall be considered.

Where a planning and design guideline is listed as "should be met" an application for an alternative design solution or outcome envisaged by the planning and design guideline, which meets the objectives, may be considered to the satisfaction of the Responsible Authority.



plan 7

image & character

greenvale west [R3] precinct structure plan

4.1 IMAGE AND CHARACTER

4.1.1 IMAGE AND CHARACTER OBJECTIVES

The image and character objectives are to:

- Establish a built environment that is functional, safe, aesthetically pleasing and promotes a sense of place for future residents.
- Develop a distinctive neighbourhood character with an emphasis on elements which contribute to community identity.
- Conserve identified areas of conservation values to contribute to the amenity of the area.
- Foster connections between Greenvale Reservoir Park, Greenvale Recreation Reserve and Woodland Historical Park.
- Provide street trees with spreading canopies to 'green' the Precinct.
- Ensure the interface between development and parkland/ conservation areas is appropriately treated through architectural treatments and landscape design that are in keeping with the conservation area (ie: muted colours and materials which respect the conservation area).

4.1.2 IMPLEMENTATION

The objectives for image and character are met by implementation of all of the following:

» ***Plan 5: Future Urban Structure Plan***
» ***Plan 6: Land Use and Budget***
» ***Plan 7: Image and Character Plan***
» ***Table 10: Open Space and Planning Design Guidelines***
» ***Planning and Design Guidelines set out in 4.1.3 and 4.1.4***
» ***Road and street sections set out in 4.8.3***

4.1.3 PLANNING AND DESIGN GUIDELINES

In addition to the requirements of Clause 56, the site analysis and design response, as part of any planning application, must show or address the following to the satisfaction of the Responsible Authority:

- A table setting out the amount of land allocated to the proposed uses and expected population and dwelling yields.
- To ensure residential development addresses parkland and conservation areas.

4.1.4 STREET TREE PLANTING

The planning and design objectives listed below should be met. Street tree planting should:

- Support the general native and indigenous landscape vision of the precinct, with targeted use of exotic species as feature planting.
- Be suitable to the scale of the streets and the planting space available, with larger tree species chosen for wider roads.
- Form strong avenues and spreading canopies to provide shade and definition to streetscapes.
- Be suitable for local soil and climatic conditions.
- Be selected to provide visual cues and definition to different classes of roads, park frontages and key intersections and entrances.
- Use appropriate indigenous trees suitable for the urban environments within 100m of conservation areas. Use of indigenous trees along the key pedestrian and bicycle trails is also desirable.
- Be in accordance with the clear zone guidelines to the requirement of the Responsible Authority.

Table 7: Street Tree Planting

Planting Space Width	Selected From: (*Botanical Name* , Common Name)	Selected From: Common Name
Arterial Roads		
5m+	• *Corymbia citriodora*	Lemon Scented Gum
	• *Corymbia maculata*	Spotted gum
	• *Eucalyptus melliodora*	Yellow Box
	• *Eucalyptus sideroxylon*	Ironbark
	• *Eucalyptus microcarpa*	Grey Box
Connector Road		
3m+	• *Acacia implexa*	Lightwood
	• *Allocasuarina verticillata*	Drooping Sheaoak
	• *Pyrus calleryana*	Callery Pear
	• *Pyrus calleryana 'Aristocrat'*	Aristocrat Callery Pear
	• *Eucalyptus leucoxyon 'Eukie Dwarf'*	Dwarf Yellow Gum
	• *Eucalyptus scoparia*	Wallangara White Gum
	• *Eucalyptus mannifera*	Little Spotty
	• *Pistacia chinensis*	Chinese Pistachio
	• *Melia azederach*	White Cedar
	• *Ulmus parvifolia*	Chinese Elm
Access Street		
3m+	• *Pyrus calleryana*	Callery Pear
	• *Acacia implexa*	Lightwood
	• *Pyrus calleryana 'Aristocrat'*	Aristocrat Callery Pear
	• *Corymbia eximia*	Yellow Bloodwood
	• *Lagerstroemia 'Tuscarora'*	Crepe Myrtle
	• *Acacia pendula*	Weeping Myall
	• *Banksia integrifolia*	Coast Banksia
	• *Gleditsia triacanthos var. inermis 'Elegantissima'*	Honey Locust
	• *Pittosporum angustifolium*	Native Apricot
	• *Eucalyptus viridis*	Green Mallee

Legend

- DCP Area
- Community Facilities
- Active Recreation/ Open Space

OS01 & OS02
Active Playing Fields 1
Land & construction of full size Active Playing Oval (3 hectares as an addition to neighbourhood park,)
landscaping and car parking.

OS03
Public Amenities
Construction of public amenities (including change rooms & umpire rooms) to service Active Playing Oval.

CI03 & C104
Craigieburn Library & Indoor Active Recreation Centre
Outside of PSP Area.

CI01 & C102
Community Centre
Land & Construction of Multi-purpose community centre (including dual kindergarten), landscaping & carparking.

OS04 & OS05
Active Playing Fields 2 & Pavilion
Construction of Full size Active Playing Oval (Senior football/cricket oval), landscaping, & car parking.
Construction of Pavillion to service Active Playing Field. Outside of PSP Area.

ROAD
AITKEN COLLEGE
BRODIES CREEK
GREENVALE RESERVOIR PARK
HILLVIEW ROAD
MICKLEHAM
GREENVALE RESERVOIR
NOMINATED GREENVALE MAJOR ACTIVITY CENTRE
FRENCH ROAD
BRENDAN ROAD
SOMERTON
ROAD
BONDS LANE
PROVIDENCE
WOODLANDS HISTORIC PARK
ROAD
FLEETWOOD
GREENVALE RESERVE

Scale 1:10000 @ A3
0 50 100 200 300 500m

plan 8

community facilities & open space network

greenvale west [R3] precinct structure plan

4.2 HOUSING

4.2.1 HOUSING OBJECTIVES

The housing objectives are to:

- Provide opportunities throughout the neighbourhood setting that can support home based business including spaces within dwelling sites that may be used for small home office uses.
- Provide a robust neighbourhood structure that accommodates a range of housing types, particularly those which allow for whole of life-cycle use.
- Develop higher residential densities throughout the Precinct, and specifically encouraged proximate to open space and community facilities.

4.2.2 IMPLEMENTATION

The objectives for housing are met by implementation of all of the following:

» ***Plan 5: Future Urban Structure Plan***
» ***Plan 6: Land Use and Budget***
» ***Plan 7: Image and Character Plan***
» ***Table 10: Open Space and Planning Design Guidelines***
» ***Planning and Design Guidelines set out in 4.2.3***

4.2.3 PLANNING AND DESIGN GUIDELINES

Residential development should include a range of dwelling densities including, 'conventional' density residential lots and 'medium' density residential lots. These terms are defined in the glossary in Section 6.1.

Proposals within areas designated for the following housing densities should be developed as specified below.

- Conventional density housing must achieve a minimum of 15 lots per NRHa.
- Medium density housing must achieve a minimum of 20 dwellings per NRHa.
- Development of medium density housing is encouraged in the following circumstances:
- As part of an integrated development site.
- As part of a specialised housing project such as retirement living or an aged care facility.
- Generally in areas within 400m walkable catchment of the main street core of an activity centre or the planned rail station.
- Overlooking, abutting or within close proximity of public open space and community hubs.
- Be provided in a variety of forms such as shop top, terrace / townhouse development, smaller 'town' lots, shared driveway housing, integrated development sites as well as retirement villages / nursing home care facilities.

The PSP encourages higher housing density to be achieved for individual development sites above the minimum requirements specified.

Unless the site is constrained by topography or other site conditions, lot distribution should provide for 95 percent of dwellings to be located no more than 400 metre street walking distance from the nearest existing or proposed bus stop.

Dwelling and lot densities are distributed across the Precinct as a percentage of the total area available for residential development. Table 4 illustrates that the Precinct Structure Plan can achieve the objectives for housing diversity.

4.3 COMMUNITY FACILITIES

The assessment of community facilities has been based on an anticipated lot yield of 1,323 for the precinct, resulting in a population of 3,704. In addition the assessment has taken into account the future population of the surrounding areas including the Providence Estate (1,588) and the Greenvale North Mickleham Precinct (1,525). The Community Facilities Assessment has also taken into account the existing social services available in the area including at Bradford Avenue Maternal and Child Health and Preschool.

The assessment has determined the need for community facilities as outlined in Table 8.

4.3.1 COMMUNITY FACILITIES OBJECTIVES

The community facilities objectives are to:

- Provide an appropriate level of community infrastructure and services to ensure a high level of self sufficiency.
- Provide community services to cater for the residents within the Precinct as well as the Providence Estate and part of the R1 PSP as identified in Figure 1.
- Provide multi purpose facilities capable of being adapted to changing community needs.
- Ensure any future urban growth is considered in the organisation and provision of infrastructure.
- Ensure community facilities are accessible by public transport, walking and cycling.
- Support the early provision of facilities such as local parks and playgrounds as informal community meeting places.
- Seek contributions to community facilities from those developments outside the PSP area that have been included in the catchment for the community facilities.

4.3.2 IMPLEMENTATION

The objectives for community facilities are met by implementation of all of the following:

» ***Plan 5: Future Urban Structure Plan***
» ***Plan 7: Image and Character Plan***
» ***Plan 8: Community Facilities and Open Space Network***
» ***Table 8: Community Facilities Table***
» ***Table 10: Open Space Planning and Design Guidelines***

4.3.3 PLANNING AND DESIGN GUIDELINES

The following planning and design guidelines should be met:

- Community infrastructure should be integrated with Council facilities and open space.
- Community centres should be co-located with proposed children's playgrounds, schools, recreation infrastructure and other early learning facilities.
- Education and community services (public and private) and other activities such as childcare centres and nursing homes are encouraged:
  - Within or adjoining community hubs.
  - Within or on the edge of activity centres.
  - On connector roads or local arterial roads.

4.3.4 COMMUNITY FACILITIES DELIVERY STATEMENT

It is important that community facilities are delivered in an integrated and co-ordinated manner to maximise early and cost effective provision. The following statements guide these outcomes:

- Integrated, efficient and timely facility provision.
- Funding opportunities and partnerships will be sought to support the early provision of community facilities.

The Growth Areas Authority have worked with the Hume City Council through the infrastructure working groups to explore opportunities for partnership approaches to support integrated and timely provision of key community facilities.

Potential funding sources for the delivery of these facilities include::

- Greenvale West Development Contributions Plan.
- Hume City Council Capital Works Program.
- Development Proponent Funding. This may include an injection of additional funding, or potential for a development proponent to deliver an item in the Development Contributions Plan through in-kind works. Provision of in-kind works requires approval by the Hume City Council as the Collecting Agency (refer to Greenvale West Development Contributions Plan 2010).
- State Grants Programs. The State Government has many grants programs with funding potential across a broad range of community facilities and services.
- Growth Areas Development Fund. The Hume City Council may make application to the Growth Areas Authority for funding to support the provision of community facilities in the precinct.
- Non-government organisations. Some community infrastructure may be able to be developed by the Council working in partnership with non-government organisations.

Table 8: Community Facilities Table

Infrastructure Item	Facilities + Services	Estimated Land Allocation (ha)	Location	Responsibility / Lead Agency
Community Hub				
State Primary School	• Indoor Sports Centre	3.5	Central to the PSP	DEECD
Multi-purpose Community Centre	• Dual kindergarten • Maternal health care • General community meeting/activity space • Outdoor play area"	0.07	Central to the PSP and colocated with Primary School.	Hume City Council
Active Open Space	• Full size oval • Public amenities (including umpire rooms and change rooms)	4	Central to the PSP	Hume City Council
Childcare Centre		0.25	Ideally located near community centre	Private provider
Sub-Regional Active Open Space	• Full size oval • Pavillion	3	Greenvale reserve	Hume City Council

4.4 EMPLOYMENT AND ACTIVITY CENTRES

4.4.1 EMPLOYMENT AND ACTIVITY CENTRES OBJECTIVES

The objectives for employment and activity centre includes to:

- Provide access to local employment and commercial facilities.
- Ensure the transport network in the PSP area supports the wider network in providing access to employment areas across the broader Hume Corridor.
- Build on the opportunities afforded by being proximate to a future activity centre on the east of Mickleham Road.
- Provide opportunities for home based businesses within the precinct.
- Encourage diverse dwellings with work space and storage opportunities.

4.4.2 IMPLEMENTATION

The objectives for employment and activity centre are met by implementation of the following:

» ***Plan 5: Future Urban Structure Plan***
» ***Plan 8: Community facilities and open space network***
» ***Plan 12: Road and Public Transport Network Plan***

Table 9: Hierarchy of Activity Centres

ACTIVITY CENTRE	ROLE AND FUNCTION
Broadmeadows Town Centre Central Activity Centre	Broadmeadows CAD has a significant catchment extending to Craigieburn and beyond. Regional education, recreation and health activities already exist as well as 51,700 square metres (sqm) of retail space. Broadmeadows is an appropriate location for further higher order community services and office-based jobs.
Roxburgh Park Major Activity Centre	A MAC with two supermarkets and supporting specialty shops with a floor area of approximately 9,400 sqm of retail. (A further 22,600 sqm of retail floor space can be accommodated).
Proposed Craigieburn Town Centre Major Activity Centre	A large planned MAC with supermarkets and specialty shops with a floor area of up to 55,000 sqm of retail. Also the location for health services and the potential for 20,000 sqm of office.
Nominated Greenvale Major Activity Centre	An employment based MAC is nominated on the existing Hume Growth Area Framework Plan. This plan is under review as part of the current Growth Area Framework Plan process to the east of the precinct with up to 5,000 sqm of retail and 5,000 sqm of office complementing the existing facilities at Greenvale Village.
Craigieburn Plaza Neighbourhood Activity Centre	A NAC with a supermarket and supporting specialty shops with a floor area of approximately 10,000 sqm of retail.
Greenvale Village Neighbourhood Activity Centre	A local town centre with retail floorspace of approximately 6,500 sqm containing a supermarket, specialty shops and local health services.

4.5 OPEN SPACE AND NATURAL SYSTEMS

4.5.1 OPEN SPACE AND NATURAL SYSTEMS OBJECTIVES

The objectives for open space are to:

- Provide a variety of open space types to meet the active and passive recreation needs of the community.
- Establish a network of appropriately sized, connected and distributed open spaces to meet local and district open space needs.
- Establish an attractive urban environment with a strong sense of place through the provision of well designed landscaping of open spaces as well as the road and corridor networks.
- Link into and connect the unique natural features of the district by providing pedestrian/cycle links that connect to existing path networks in Greenvale Reservoir Park, Woodland Historic Park and Greenvale Recreation Reserve.
- Protect, conserve and enhance areas of identified environmental value.
- Implement the open space development standards as per the Precinct Structure Plan Guidelines which provide for a sustainable use of land.
- Support the early development of public open space, both active and passive, via the development contribution plan and Council's capital works program.
- Contribute proportionally to regional active open space provision outside the PSP area which will serve the future community within the PSP area.

4.5.2 HOW TO MAKE A PUBLIC OPEN SPACE CONTRIBUTION IN THIS PRECINCT

Further to the public open space contribution required at Clause 52.01 of the Hume Planning Scheme, this provision sets out the amount of land to be contributed by each property (refer to Plan 6 for property numbers) in the precinct and consequently where a cash contribution is required in lieu of land. Where Table 5: Property Specific Land Use Budget (Passive Open Space % NDA) specifies:

- 0% of land as Passive Open Space ('POS'), the contribution is a cash contribution of 2.86% of the site value.
- More than 0% and less than 2.86% of the land as POS, the contribution is a land contribution equal to the percentage specified in Table 5 as POS and a further cash contribution that is equal to the difference in value between the land contribution and 2.86% of the site value.
- More than 2.86% of the land as POS, the contribution is a land contribution equal to the percentage specified in Table 5 as POS.

In the latter instance, the subdivider may request that the responsible authority reimburse the subdivider for the difference in site value between 2.86% and the amount of POS specified for that land in Table 5 to the satisfaction of the responsible authority.

4.5.3 IMPLEMENTATION

The objectives for open space and natural systems are met by implementation of all of the following:

- ***Plan 5: Future Urban Structure Plan***
- ***Plan 8: Community Facilities and Open Space Network Plan***
- ***Plan 13: Walking and Cycling Network Plan***
- ***Table 10: Open Space Planning and Design Guidelines***
- ***Greenvale West Native Vegetation Precinct Plan***

Melbourne Water's Constructed Waterways in Urban Developments Guidelines also (2009) support these objectives.

4.5.4 PLANNING AND DESIGN GUIDELINES

The guidelines outlined in Table 10 should be met.

Table 10: Open Space Planning and Design Guidelines

Design Issue	Planning and Design Guidelines
General	• Open spaces should be designed and constructed to a fit for purpose standard with an appropriate mix of facilities. • Design of open spaces should be contemporary in nature, innovative and draw upon appropriate design themes. • Passive parks should cater for a broad range of users by providing a mix of spaces and planting to support both structured and informal recreational activities. • Active recreation reserves should be designed to maximise co-location and sharing opportunities between complementary sports and adjoining school facilities. (Sharing of Council managed facilities with schools will require a formal management agreement). • Parks should contain both cleared open areas for unstructured activities, as well as areas for shade and shelter. • The appropriate mix of infrastructure in parks should be provided to the satisfaction of the Responsible Authority.
Interface with road network	• Open spaces should have a road frontage to all edges except where these are otherwise addressed by active frontage from careful design of residential, commercial or community facility development. • Streetscape planting and paths should complement and integrate with the adjoining parkland design. • Open space corridors adjoining roads should incorporate park benches along footpaths at least every 250m.
Interface with adjoining development	• The open space network should be enhanced by careful design of residential, community and commercial development adjacent to it. • The primary frontage of development that immediately abuts open space areas should address and promote use and surveillance of the parkland. • Development abutting open space should be well articulated and facilitate passive surveillance with windows, balconies, and pedestrian access points. • Development should avoid the rear of properties or blank walls abutting parklands. • Where fencing is required it should be low scale and permeable to facilitate public safety and surveillance. • Landscaping of adjoining development should complement the park landscape design.
Interface with conservation areas	• The design of parks and open space corridors should enhance and preserve areas of conservation significance. • Open space containing native vegetation conservation areas should be designed to protect sensitive areas from vehicle or pedestrian traffic. • Native vegetation conservation areas should not include 'hard' infrastructure such as paths, furniture, picnic shelters or street furniture. • Development surrounding conservation areas must provide a sensitive interface treatment which does not detract from the significance of the native vegetation to be retained. • Passive or low impact activities should occur closest to offset/conservation areas, with more high impact or formal activities to be located further away. • Conservation areas should be surrounded by local roads where practical to enhance adequate access management for wild fire and residential amenity.
Interface with Drainage system	• Pedestrian and bicycle paths should be integrated into the land used for the drainage system to enhance and connect to the open space and street network. • Pedestrian bridges and boardwalks should be incorporated into the path network along the drainage system to facilitate permeability of neighbourhoods. • Paths, bridges and boardwalks should be designed to be at least above a minimum of the 1:10 year flood line to the satisfaction of the Relevant Authority. • Park seating should be provided along footpaths at regular intivals.
Park buildings	• Park buildings should be sited and designed to integrate with and complement landscaping and should not dominate the parkland. • Park buildings should be sited to frame park spaces and should avoid splitting up otherwise usable and effective spaces. • Park buildings should be contemporary in design with orientation, materials choices, design detailing and plant and equipment to minimise resource use and maximise sustainability performance. • Material choice should complement the proposed landscape character.

Public safety and Lighting	• Open spaces should be designed to be safe, comfortable places that encourage use by a wide range of people.
	• The use of the design principles known as "Crime Prevention Through Environmental Design" ("CPTED") must guide the design of open spaces and the infrastructure it contains:
	  ◦ Surrounding land uses should provide passive surveillance to adjoining open space and planting design should promote a highly visible public realm.
	  ◦ The detailed design of open spaces that immediately abut development should complement and enhance the function and safety of that development.
	  ◦ Open space path systems should facilitate clear, direct and easy movement to and from key destinations.
	  ◦ Lighting in open spaces should be restricted to key pedestrian thoroughfares to encourage safe pedestrian movement throughout the network, but discourage inappropriate use of main parkland areas after dark.
	  ◦ Light fittings should be energy efficient and 'cut-off' type to direct light where it is required and reduce unnecessary spill to sides or above.
	  ◦ Light fittings should be compact fluorescent or similar that emit white light.

Landscape character and vegetation	• A predominantly indigenous and Australian native planting theme supporting the biodiversity values of the precinct should characterise the open space network. Exotic species may be supported in key locations to the satisfaction of the Responsible Authority. • Species chosen should be appropriately robust to perform adequately in the local the urban environment prior to finalising plant schedules. • Target use of exotic and Australian native species and cultivars to achieve particular planting effects throughout the precinct such as highlight planting at entries and key focal points as well as avenues. • Advice should be sought from qualified botanic gardens and Council staff regarding suitability of proposed species prior to confirming plant schedules. • Trees with spreading canopies to provide shade and definition to streetscape utilised.
Other park landscape elements and infrastructure	• The design and siting of landscape elements and infrastructure should complement the area. • Park infrastructure such as playgrounds, shelters, BBQ's picnic tables, toilets etc should be clustered in nodes. Park planting themes should enhance and complement these nodes. • Park seating should be provided at regular intivals along any open space path networks. • Public toilet facilities should be integrated with pavilions and clubhouses. • Park infrastructure should be contemporary in design with materials choices and design detailing complementing the planting character and drawing upon contemporary design themes. • Use of bollards and fencing should be well targeted, maximise transparency and generally kept to a minimum. • Where car parking is required within parks, it should be sensitively designed to minimise large areas of hard surfaces and maximise tree and ground level planting. Safe pedestrian access should be integrated within car park designs.
Park buildings	• Park buildings should be sited and designed to integrate with and complement landscaping and should not dominate the parkland. • Park buildings should be sited to frame park spaces and should avoid splitting up otherwise usable and effective spaces. • Park buildings should be contemporary in design with orientation, materials choices, design detailing and plant and equipment to minimise resource use and maximise sustainability performance. • Material choice should complement the proposed landscape character.

Melbourne Water's ***Constructed Waterways in Urban Developments Guidelines*** (2009) further support the guidelines listed above.

growth areas AUTHORITY

plan 9
biodiversity
greenvale west [R3] precinct structure plan

Victoria The Place To Be

4.6 BIODIVERISTY

4.6.1 BIODIVERSITY OBJECTIVES

The biodiversity objectives are to:

- Achieve the long term conservation management of areas of significant native vegetation and fauna habitat in accordance with the Greenvale West Native Vegetation Precinct Plan and the Biodiversity Plan within the PSP.
- Enhance the ecological communities proposed to be retained through strategic revegetation and appropriate management.
- Secure offsets for vegetation that cannot be retained.
- Achieve ecological connectivity from the Precinct to Greenvale Reservoir Park, Greenvale Recreation Reserve and Woodlands Historical Park through the provision of indigenous plantings as part of streetscapes and drainage lines as the area develops in accordance with Greenvale West PSP.

4.6.2 IMPLEMENTATION

The objectives for biodiversity are met by implementation of the following:

» ***Plan 9: Biodiversity Plan***
» ***Plan 10: Threatened Species Action Plan***
» ***Section 4.6.3. Biodiversity Planning and Design Guidelines***
» ***Greenvale West Native Vegetation Precinct Plan including the Offset Plan at Part 2 of the PSP.***
» ***Provision of the Urban Growth Zone including relevant schedules.***

4.6.3 BIODIVERSITY PLANNING AND DESIGN GUIDELINES

The following planning and design guidelines should be met.

- Street trees and public open space landscaping are to contribute to habitat for indigenous fauna species in particular arboreal mammals and avifauna (birds). Where appropriate, the use of indigenous trees is encouraged along streets and in parks and lower level indigenous planting is encouraged where it can be demonstrated it is compatible with the planning and design guidelines for street tree planting and delivery of public open space.
- Strategic revegetation should link and develop habitat areas with emphasis on enhancing corridors of native vegetation along drainage lines that link to areas downstream.
- Parks and water ways should support the connection of areas capable of supporting flora and fauna through appropriate design and planting.
- Revegetation to use locally indigenous species complementary to indigenous Ecological Vegetation Classes where possible.
- Roads should generally bound the conservation reserves.
- The management of Eastern Grey Kangaroos must be addressed by appropriate staging of the development of the precinct to avoid land locking kangaroos.

Legend

- Precinct Structure Plan Area
- Urban Growth Boundary (UGB)
- Lakes/ Water Bodies
- GSM Habitat Identified (property with confirmed Golden Sun Moth habitat)
- No permits or offsets required for removal of native vegetation
- Remnant patches to be retained
- Remnant patches to be removed
- •13 Trees to be removed - subject to net gain requirements
- 2 Property Reference No.

Notes:
The entire precinct is identified as potnetial habitat for Striped Legless Lizard

Offsets to be provided in accordance with the prescription for Golden Sun Moth

HZ1 HZ2 HZ3 HZ4 HZ5 HZ6 HZ7 HZ8 HZ9 HZ10 HZ11

10 11 12 13 14 15 16 17 18 19

1 2 3 4 5 6 7 8 9 10 11 12

MOONEE PONDS CREEK
BRODIES CREEK
HILLVIEW ROAD
MICKLEHAM ROAD
SOMERTON ROAD
BONDS LANE
FRENCH ROAD
BRENDAN ROAD
FLEETWOOD
PROVIDENCE ROAD
AITKEN COLLEGE
GREENVALE RESERVOIR PARK
GREENVALE RESERVOIR
NOMINATED GREENVALE MAJOR ACTIVITY CENTRE
WOODLANDS HISTORIC PARK
GREENVALE RESERVE

Scale 1:10000 @ A3

plan 10

Threatened Species Plan

greenvale west [R3] precinct structure plan

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Legend

- Precinct Structure Plan Area
- Urban Growth Boundary (UGB)
- Connector Street
- Local Access Street
- Residential
- Community Facilities
- Government Education
- Active Open Space/Playing Fields
- Unencumbered Open Space
- Encumbered Open Space
- Green Wedge Land
- Regional Open Space
- Existing Urban Area
- Road Widening
- Ecological Vegetation Classes (EVC) to be retained
- Drainage/ Water Bodies
- Catchment Boundary
- Low Point

MOONEE PONDS CREEK

ROAD

AITKEN COLLEGE

BRODIES CREEK

GREENVALE RESERVOIR PARK

GREENVALE RESERVOIR

HILLVIEW ROAD

MICKLEHAM

NOMINATED GREENVALE MAJOR ACTIVITY CENTRE

FRENCH ROAD

BRENDAN ROAD

SOMERTON

ROAD

BONDS LANE

FLEETWOOD

PROVIDENCE

ROAD

WOODLANDS HISTORIC PARK

GREENVALE RESERVE

Scale 1:10000 @ A3

0 50 100 200 300 500m

plan 11

integrated water management

greenvale west [R3] precinct structure plan

Victoria The Place To Be

4.7 INTEGRATED WATER MANAGEMENT OBJECTIVES

The objectives of integrated water management are to:

- Ensure integrated water management measures to the satisfaction of the Responsible Authority and Melbourne Water are achieved.
- Plan for the future drainage needs of the new urban environment.
- Mitigate flooding of urban areas.
- Reduce and filter sediment levels through an integrated water sensitive urban design system.
- Enhance the biodiversity and habitat value of the precinct.
- Reduce stormwater nutrients and sediment loads.

4.7.1 IMPLEMENTATION

The objectives for integrated water management are met by implementation of all the following:

» ***Plan 5: Future Urban Structure Plan***
» ***Plan 9: Biodiversity Plan***
» ***Plan 11: Integrated Water Management Plan***

» ***Planning and design guidelines set out in 4.7.2***

4.7.2 PLANNING AND DESIGN GUIDELINES

The following planning and design guidelines should be met to the satisfaction of the Responsible Authority:

- Provision of drainage infrastructure should incorporate integrated water management components including the development of retardation basins.
- Domestic water tanks are required to be provided to each conventional density dwelling for the purposes of irrigation of garden areas.
- The drainage strategy should ensure that downstream flows are not increased beyond the capacity of the system.
- Planting of drainage areas should promote the establishment of habitat for local species.

4.7.3 WILDFIRE RISK MANAGEMENT OBJECTIVES

The objectives for wildfire risk management are to:

- Plan for the risk of wildfire to the new urban environment.
- Identify potential wildfire threats.
- Plan for the protection of local community from wildfire.

4.7.4 PLANNING AND DESIGN GUIDELINES

- New development should consider and respond to any relevant policy in relation to wildfire and fire prevention.
- New development should provide suitable fuel buffers where required to mitigate the risk of wildfire.
- Identified conservation precincts should be edged with a road to ensure access and separation in the event of a wildfire.

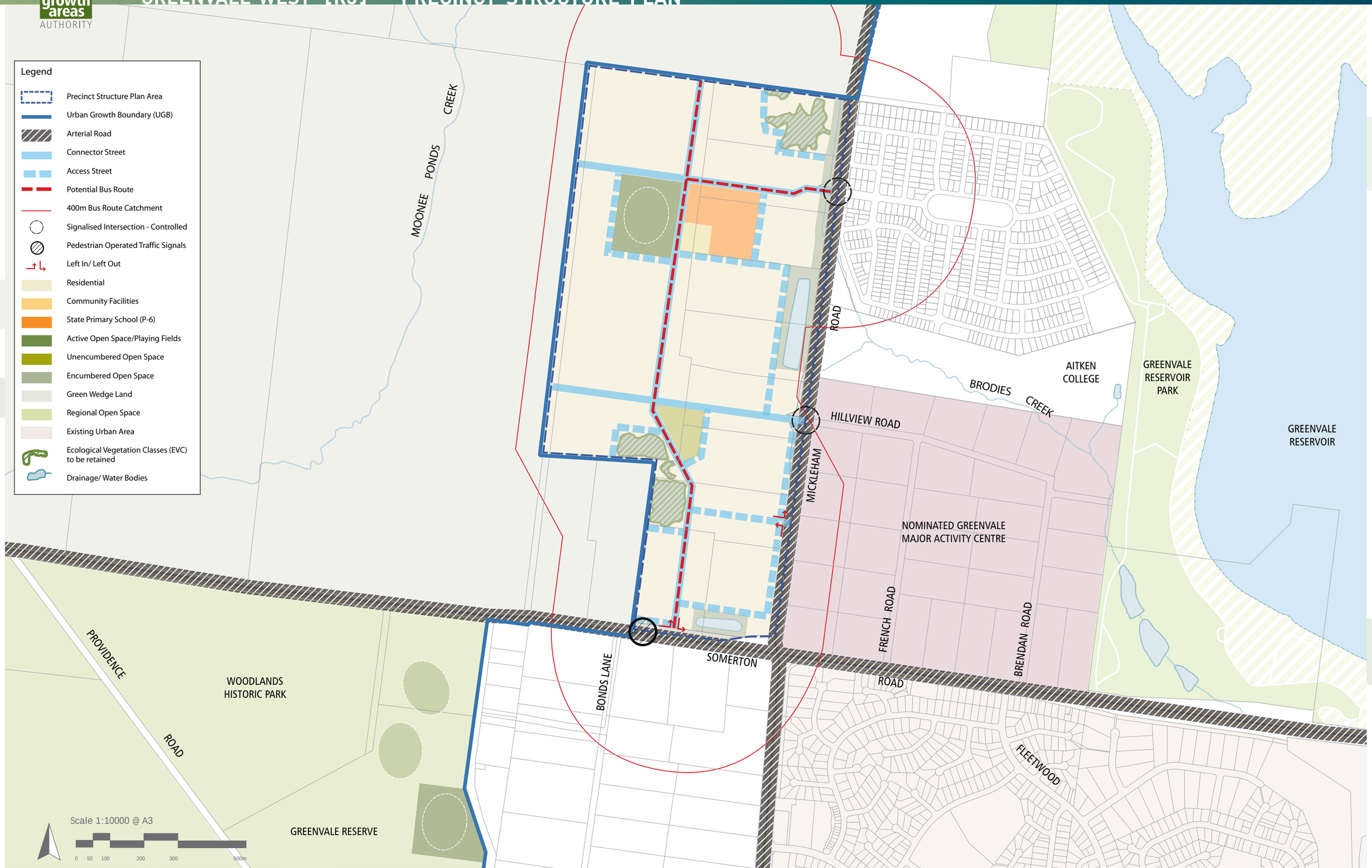
The Country Fire Association (CFA) has advised that the existing Yuroke fire station on Mickleham Road to the north of the Greenvale West PSP area will accommodate current requirements of the CFA within the PSP.

4.7.5 DRAINAGE RESERVES

The primary function of drainage reserves is to control stormwater flows. However, where there is potential to improve local amenity in and around the drainage reserves these should be explored. Planting of indigenous species, informal walking trails, playgrounds and landscaping that may provide additional habitat for local flora and fauna could be supported, subject to Melbourne Water's approval. To protect the drainage function at the retarding basin the following is noted:

- Vegetation cover on embankments should be limited to cut grass.
- Vegetation around structures such as pits, spillways and pipelines should be chosen to avoid the risk of damage by roots and ensure that access for maintenance is available.
- Landscaping features or recreational facilities with drainage reserves can often be incorporated but will be subject to approval from Melbourne Water and a maintenance agreement with Council.

growth areas AUTHORITY



plan 12

road and public transport network

greenvale west [R3] precinct structure plan

4.8 TRANSPORT AND MOVEMENT

4.8.1 TRANSPORT AND MOVEMENT OBJECTIVES

The transport and movement objectives are to:

- Establish an integrated and sustainable transport network that reduces dependency on the use of private vehicles, maximises access to public transport and encourages walking and cycling within and between neighbourhoods.
- Support the early provision of local bus services and walking and cycling links through the sequential staging of the development of the area.
- Support the early provision of safe and efficient pedestrian and bicycle paths and links which are connected to the key features of the precinct and provide links to regional networks and features, including the Greenvale Reservoir Park and Greenvale Recreation Reserve.
- Provide for the landscaping of roads, transport and movement corridors to help create safe and attractive urban environments. Road cross sections should include sufficient width to support trees with spreading crowns, as a key character element.
- Recognise the existing and proposed arterial road hierarchy as the basis for the local road network.
- Provide sufficient capacity for bus services to move efficiently through the Precinct and link to key destinations outside the PSP.

4.8.2 IMPLEMENTATION

The objectives for transport and movement are met by implementation of all the following:

» ***Plan 5: Future Urban Structure Plan***
» ***Plan 12: Road and Public Transport Network Plan***
» ***Plan 13: Walking and Cycling Network Plan***
» ***Table 11: Road Hierarchy***
» ***Planning and design guidelines set out in 4.8.3 including the road and street cross sections.***

4.8.3 PLANNING AND DESIGN GUIDELINES

Typical road section types, responding to the road network plan are included within the PSP. The arterial road cross sections reflect an agreed position between Hume City Council and VicRoads, however the internal road network and cross-sections as represented in the cross sections should:

- Provide the basis for planning future development and preparation of subdivision plans.
- Recognise that specific development proposals may generate the need for alternative road cross-sections, in addition to those identified, especially for local street network including:
  - Interface with open space or visually sensitive areas.
  - Alternative residential housing produce such as 'mews courts', rear access, medium or high density house etc.

Arterial Roads

- The following planning and design guidelines should be met:
- Provide access to buildings fronting arterial roads from service roads, local roads or lanes only.
- Intersections of connector roads and the arterial road network must be constructed to achieve a ten year design life to the satisfaction of the Responsible Authority and VicRoads.
- Staging of subdivisions is to provide for the timely connection of road links between properties and to the arterial road network to support timely transport connections (ie bus, cycle and walking) to the satisfaction of the Responsible Authority and VicRoads.
- Buildings at the arterial road intersections to have sufficient setbacks to accommodate the ultimate intersection layout, including the flaring of the road reservation in accordance with Plan 5 – Future Urban Structure Plan and the Land Budget in this PSP.

Note: Provision should be made at the relevant cross section for application of WSUD initiatives.

Note: Engineering design plans for Somerton Road are to be provided to Melbourne Water for review prior to the commencement of works.

Note: The Greenvale West R3 Native Vegetation Precinct Plan does not cover impacts of the widening of Mickleham Road. Any impacts of this road widening will require separate planning approval in the event that native vegetation is to be removed, destroyed or lopped.

Connector Streets

The following planning and design guidelines must be met:

- Connector streets (including any culverts) are to be constructed by the development proponents as part of the subdivision works (prior to the issue of a statement of compliance for the relevant stage).
- Connector Streets are to be designed to accord with the DOT Public Transport Guidelines for Land Use and Development.
- Staging of subdivisions is to provide for the timely connection of road links between properties and to the arterial road network to support timely transport connections (ie bus, cycle and walking) to the satisfaction of the Responsible Authority and VicRoads.

Bus Network

The following planning and design guidelines must be met:

- Bus stop facilities must be constructed by development proponents as part of the subdivision works (prior to the issue of a statement of compliance for the relevant stage) in accordance with the requirements of the Public Transport Guidelines for Land Use and Development to the satisfaction of the Director of Public Transport.
- The facilities must be provided with DDA compliant direct and safe pedestrian access connected to an existing pedestrian / shared path.
- The facilities must be designed as an integral part of activity centres and activity generating land uses, such as schools, sports fields and employment areas.
- A permit condition for subdivisions on a bus route must be included as follows:
  - Pavements, roads and verges on connector roads designed to accommodate buses must be to the satisfaction of the Director of Public Transport.
  - The Department of Transport to nominate the location and type of bus stops to be provided by the developer.
  - Bus stops must comply with the Commonwealth Disability Discrimination Act 1992 and the Disability Standard for Accessible Public Transport (DSAPT) 2002.
  - The design of all bus stops should be in accordance with VicRoads Bus Stop Guidelines and DOT Requirements for Bus Stop Compliance and include:

    a). Passenger hard stand areas

    b). Tactile ground surface indicators

    c). Bus stop kerbing.
  - All works specified on the approved construction plans must be constructed or carried out by the developer in accordance with those plans before the issue of a statement of compliance for the relevant stage under the Subdivision Act 1988 to the satisfaction of the responsible authority (and where relevant VicRoads and Director of Public Transport).
  - Where bus stop facilities shown on a construction plan have not been constructed, a statement of compliance may still be issued provided that:

    a). A bus service is not in operation, or will not be in operation within three months of the likely completion of works for that stage.

    b). A developer has lodged a bond with the Director of Public Transport to the value of 150% of the proposed bus stop works.

    c). A bond retained by the Director of Public Transport under this condition must be returned to the permit holder provided:
  - A statement of compliance has been issued for the last stage of the development allowed under this permit.
  - No bus service is in operation to use the bonded bus stops.
  - Be provided with direct and safe pedestrian access connected to an existing pedestrian/shared path.
  - Include DDA compliant sealed pathway access and lighting for all bus stops along the PPTN and local bus network and shelters at strategic locations.

growth areas AUTHORITY

Legend

- Precinct Structure Plan Area
- Urban Growth Boundary (UGB)
- On Road Bike Path (both sides)
- Shared Path
- Walking/ Cycling Path - Existing
- Walking/ Cycling Path - Key Connection to MTN
- Local Access Street
- Major Activity Centre
- Residential
- Community Facilities
- State Primary School (P-6)
- Active Open Space/Playing Fields
- Unencumbered Open Space
- Encumbered Open Space
- Green Wedge Land
- Regional Open Space
- Greenvale Reservoir
- Existing Urban Area
- Road Widening
- Ecological Vegetation Classes (EVC) to be retained
- Drainage/ Water Bodies
- Signalised Intersection
- Pedestrian Operated Traffic Signals

MOONEE PONDS CREEK

ROAD

AITKEN COLLEGE

BRODIES CREEK

GREENVALE RESERVOIR PARK

GREENVALE RESERVOIR

HILLVIEW ROAD

MICKLEHAM

NOMINATED GREENVALE MAJOR ACTIVITY CENTRE

FRENCH ROAD

BRENDAN ROAD

CONNECTION TO METROPOLITAN TRAIL NETWORK (MTN)

SOMERTON ROAD

BONDS LANE

PROVIDENCE ROAD

WOODLANDS HISTORIC PARK

GREENVALE RESERVE

FLEETWOOD

Scale 1:10000 @ A3

0 50 100 200 300 500m

plan 13

walking & cycling network

greenvale west [R3] precinct structure plan

Shared Pathways

The following planning and design guidelines should be met:

Walking and cycling networks are to be implemented early in the subdivision and construction process to ensure that these facilities are available when needed by new residents and visitors.

- Footpaths and cycle paths are to be provided with increased width in areas expecting high foot traffic such as near schools, community centres, activity centres and bus stops.
- Cycle parking facilities are provided in convenient and prominent locations, especially at activity generating areas.
- Pedestrian and cycle crossings are provided at all key street intersections (Mickleham and Somerton Road intersections) and along key desire lines, particularly along the interface between the residential and employment areas and in the vicinity of bus stops.
- Shared pathways should be designed and located to maximise passive surveillance and be located in wide road verges with safe crossing points at key locations.
- The local street network should be designed to provide permeable and safe routes for walking and cycling to activity centres, community facilities, parks and open space, major trail networks and public transport. They should incorporate links where road connections onto arterial roads cannot be made.
- Where safe vehicle access from the network is not available to the drainage reserve/ corridor, the shared pathway along the drainage corridor should be at least 3 metres wide and able to withstand vehicular traffic to provide access for maintenance vehicles.
- Walking and cycling networks must be located and designed to have a negligible impact on native vegetation.

Pedestrian and cycling crossings will be compliant with the Disability Discrimination Act (DDA).

Road and Street Cross Sections

The following planning and design guidelines should be met to the satisfaction of the Responsible Authority:

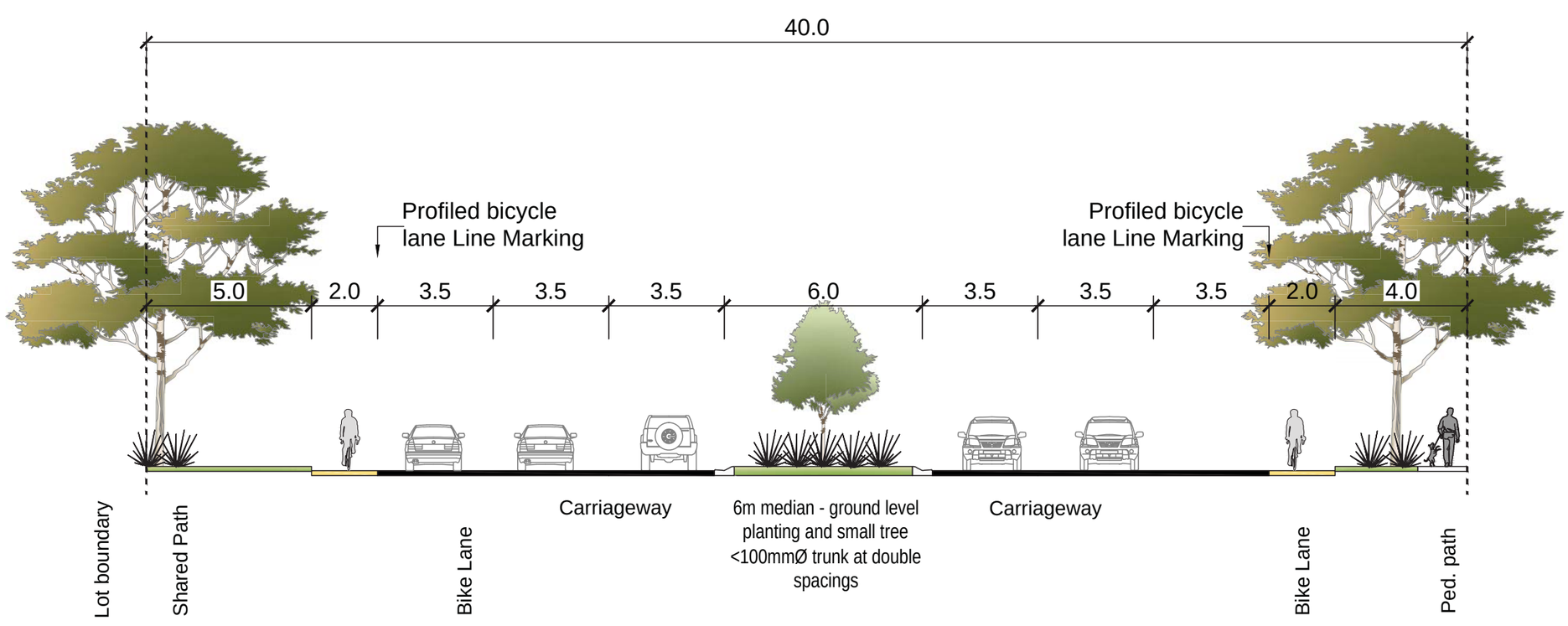
- Road and street cross sections for connector roads should be consistent with the cross sections included in this element. An alternative to cross-sections for roads other than connector roads may be considered by the responsible authority subject to the design meeting the relevant objectives in the PSP.
- Housing is to front or otherwise address the Arterial Road network. Where this requirement is not physically achievable or desirable, a plantation reservation must be provided to the satisfaction of the Responsible Authority.

Table 11: Road Hierarchy

Road/ Street	Existing Reserve	Ultimate Reserve	Access Management Policy	Indicative vehicles per day (VPD)	Traffic Lanes	Median	Speed Limit	Bus Compatible	Property Access and Parking	Tree Reserve	On Road Cycle Lane	Shared Path	Responsibility
Arterial Road [Mickleham Road/ Somerton Road]	20m	40m	Limited Access (Urban)	54,000/ 17,000	6	Yes	80km/h	Local	No	No	Yes	No	VicRoads
Residential Connector Street	-	24m	Not applicable	3,000	2	No	50km/h	Local	Yes	No	Yes	No	Council
Access Street (School & Active Open Space Edge)	-	19.6m	Not applicable	1,000	2	No	50km/h	No	Yes	No	No	No	Council
Access Street (standard)	-	14m	Not applicable	1,000	2	No	50km/h	No	Yes	No	No	No	Council
Access Street (Park Edge)	-	11m	Not applicable	1,000	2	No	50km/h	No	Yes	No	No	No	Council

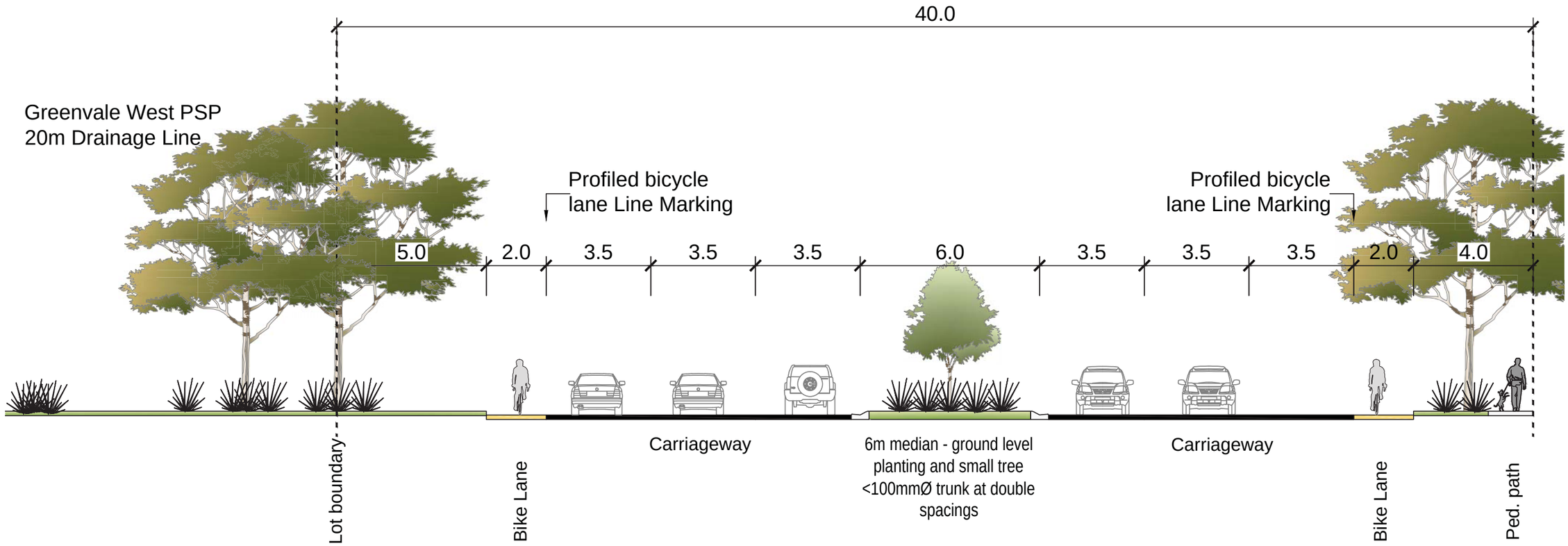
Cross-Section 1:

Arterial Road 1 - Somerton Road/ Mickleham Road



Cross-Section 2:

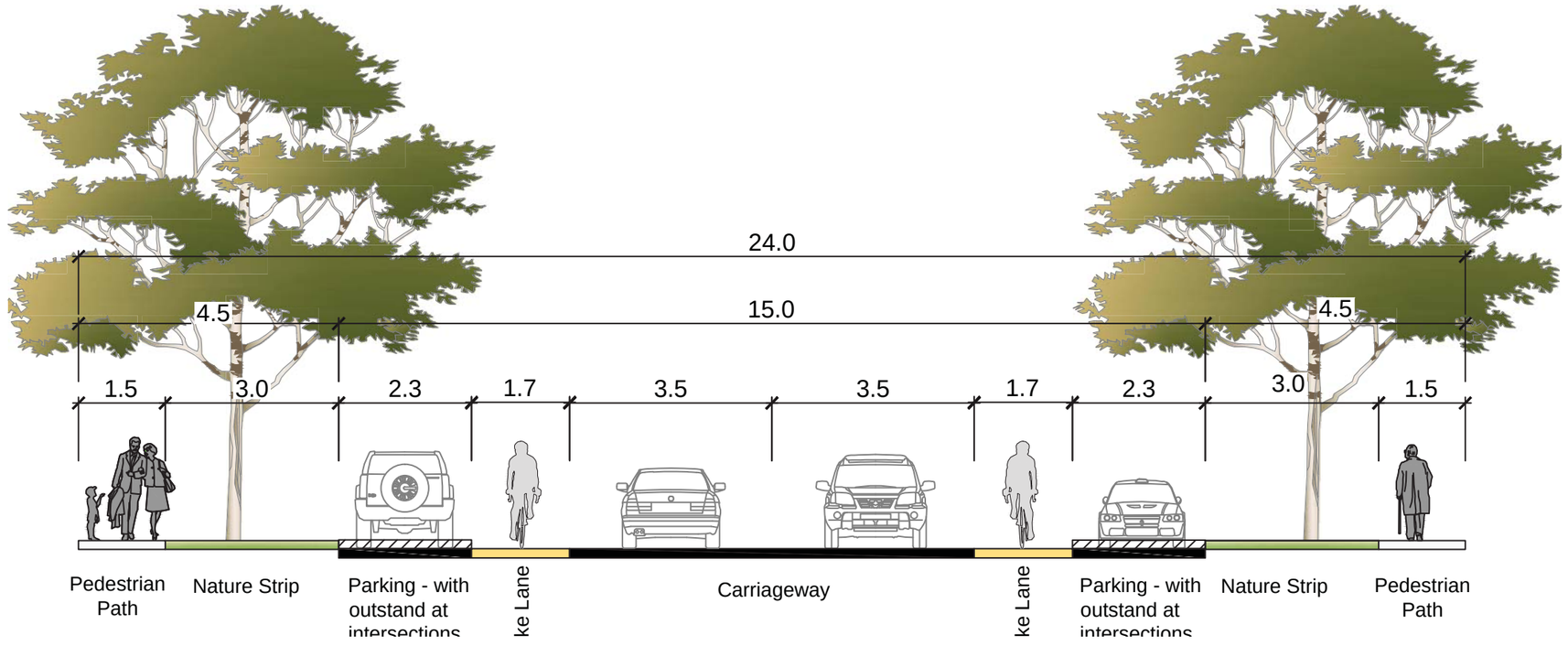
Arterial Road 2 - Mickleham Road (adjacent to drainage line)



NOTE: Parking permitted on one side of street.

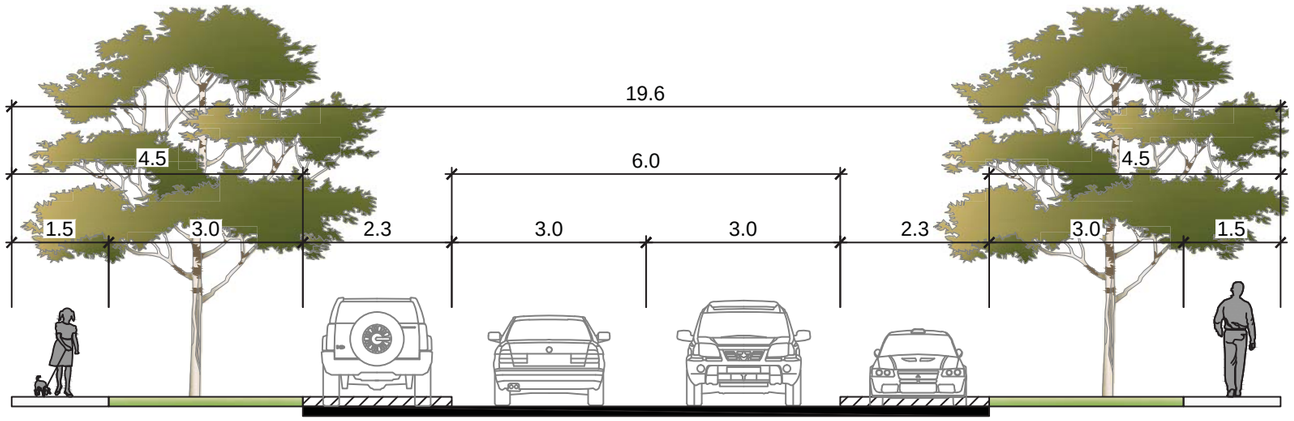
Cross-Section 3:

Residential - Connector Street



Cross-Section 4:

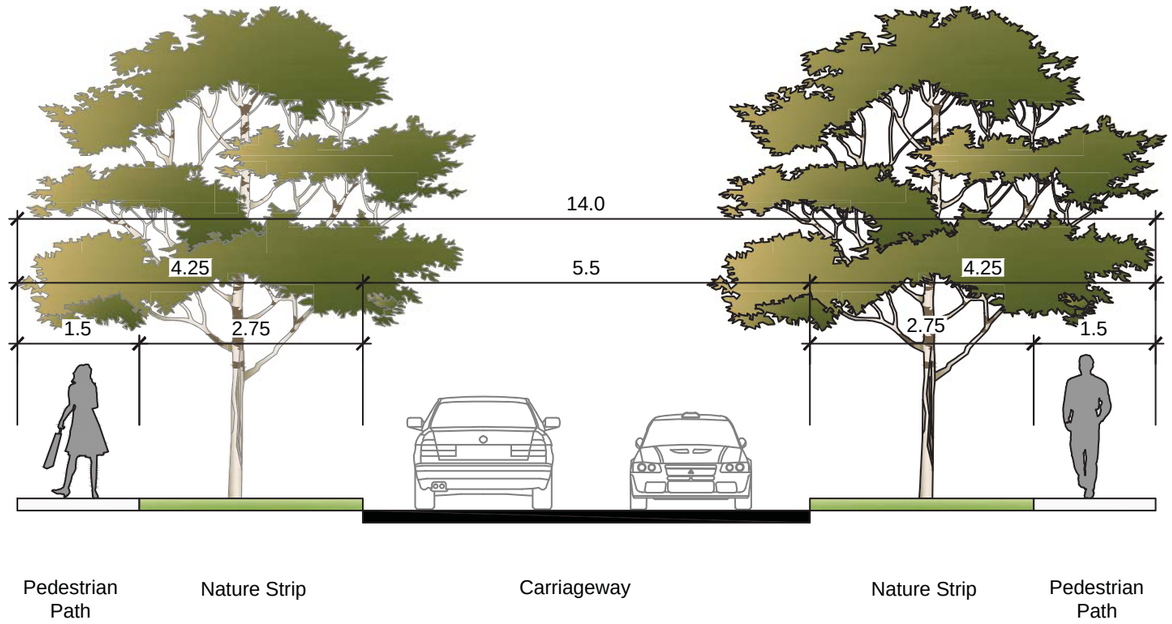
Access Street



Pedestrian Path	Nature Strip	Parking Bay Outstands at approx. 100m centres & at intersections	Carriageway	Parking Bay Outstands at approx. 100m centres & at intersections	Nature Strip	Pedestrian Path

Cross-Section 5:

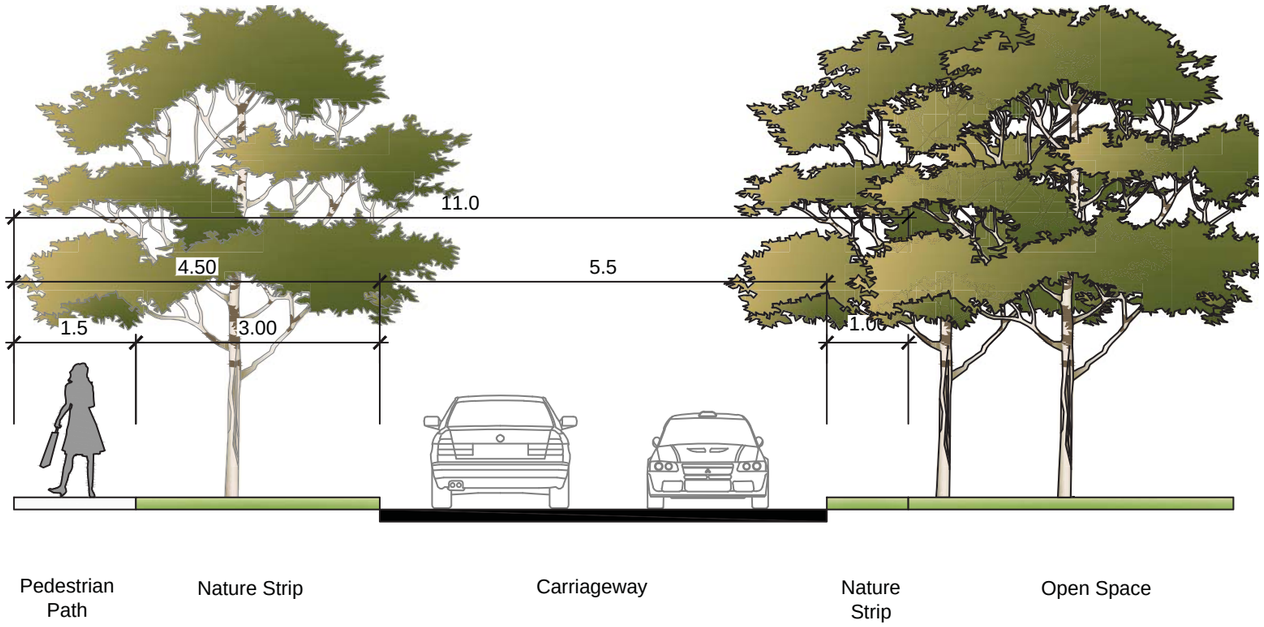
Access Street



NOTE: Parking permitted on one side of street.

Cross-Section 6:

Access Street (Park Edge)



growth areas AUTHORITY

Legend

- Precinct Structure Plan Area
- Urban Growth Boundary (UGB)
- Existing Urban Area
- Future Urban Area
- Encumbered Open Space
- Green Wedge Land
- Regional Open Space
- Greenvale Reservoir
- Road Widening
- Ecological Vegetation Classes (EVC) to be retained
- Drainage/ Water Bodies
- Staging Direction
- Proposed Water
- Proposed Sewer

MOONEE PONDS CREEK

300 ø

300 ø

ROAD

AITKEN COLLEGE

BRODIES CREEK

GREENVALE RESERVOIR PARK

GREENVALE RESERVOIR

HILLVIEW ROAD

MICKLEHAM

NOMINATED GREENVALE MAJOR ACTIVITY CENTRE

FRENCH ROAD

BRENDAN ROAD

SOMERTON ROAD

BONDS LANE

FLEETWOOD

PROVIDENCE ROAD

WOODLANDS HISTORIC PARK

GREENVALE RESERVE

Scale 1:10000 @ A3

0 50 100 200 300 500m

plan 14

staging & utilities

greenvale west [R3] precinct structure plan

4.9 UTILITIES AND DEVELOPMENT STAGING

4.9.1 UTILITY OBJECTIVES

- To provide all developed lots with:
- a potable water supply
- electricity
- a reticulated sewerage service
- drainage
- gas
- telecommunications.

4.9.2 IMPLEMENTATION

The objectives for utilities are met by implementation of all the following:

» ***Plan 14: Staging and Utilities Plan***
» ***Planning and design guidelines set out in 4.9.3***

4.9.3 PLANNING AND DESIGN GUIDELINES

Electricity

The following planning and design guidelines must be met:

- All new electricity supply infrastructure must be provided underground (excluding substations).
- New substations must be identified at the subdivision design response stage to ensure efficient integration with the surrounding neighbourhood and to minimise amenity impacts; and
- The design of subdivision electricity infrastructure must consider the practicality of removing existing above ground electricity lines by re-routing lines underground through the subdivision.

4.9.4 DEVELOPMENT STAGING

Staging will be determined largely by the development program of proponents within the Precinct and the availability of infrastructure services. Within this context the following must be achieved:

- Development staging should not create circumstances in which residents will be unreasonably isolated from community facilities or public transport.
- Development staging should, to the extent practicable, be integrated with adjoining developments, including the timely provision of connecting roads and walking/cycling paths.
- Access to each new lot is to be via a sealed road.

It is likely that development will commence in the northern neighbourhood and move generally towards the south.

5.0 PRECINCT INFRASTRUCTURE PLAN (PIP)

5.1 INTRODUCTION

The Precinct Infrastructure Plan sets out infrastructure and services required to meet the needs of the development of the precinct. The infrastructure and services are to be provided through a number of mechanisms including:

- Subdivision construction work by developers.
- Development contribution (community infrastructure levy and developer infrastructure levy).
- Utility service provider requirements.
- Capital works projects by Council, State Government agencies and non-government organisations.

5.1.1 SUBDIVISION CONSTRUCTION WORK BY DEVELOPERS

New development is required to meet the cost of delivering the following infrastructure as part of the subdivision construction works:

- Connector roads and local streets.
- Local bus stop infrastructure.
- Landscaping of all existing and future roads and locals streets.
- Intersection works and traffic management measures along collector roads and local streets.

Note: Subject to the approval of the collecting agency, part or all of the cost of works on intersections included in a Development Contributions Plan may be able to be provided as in-kind works in lieu of cash payment.

- Council approved fencing and landscaping (where required) along arterial roads.
- Local pedestrian and bicycle paths along arterial roads, collector roads and local streets and within local parks.
- Basic improvements to local parks and passive open space including levelling, grassing, tree planting, local playgrounds and shared paths and footpaths.
- Local drainage infrastructure
- Infrastructure as required by utility service provides including water, sewerage, drainage (except where the item is funded through a Drainage Scheme), electricity, gas and telecommunications.

5.1.2 DEVELOPMENT CONTRIBUTION PLAN

A development contribution plan has been prepared in conjunction with the PSP. The Development Contribution Plan (DCP) is an Incorporated Document of the Hume Planning Scheme. The DCP applies to land within the Greenvale PSP identified as residential as well as to areas outside of the Greenvale PSP (part of Greenvale North R1 PSP and the Providence Estate) which are contributing to the delivery of the infrastructure within the Precinct.

The key infrastructure and services items to be included in the Development Contributions Plan are outlined in this section. These items are either fully funded or partly funded by the Greenvale West Precinct DCP.

5.1.3 INFRASTRUCTURE AND SERVICES REQUIRED TO SUPPORT DEVELOPMENT OF THE PRECINCT

Table 12 sets out the list of infrastructure and services required within the precinct to support its development, including details of:

- Infrastructure Group and Category.
- Project Title and Description.
- Lead Agency (The Agency responsible for the coordination and approval of the project. Other agencies and/or developers have an involvement in the project).
- Timing and Indicative Capital Costs (in 2010 dollars).
- Table 14 sets out the list of infrastructure and services required outside the precinct to support its development, including details of:
  - Infrastructure Group and Category.
  - Project Title and Description.
  - Lead Agency (The Agency responsible for the coordination and approval of the project.).
  - Timing and Indicative Capital Costs (in 2010 dollars).

5.2 DELIVERY AND MONITORING

The Growth Areas Authority and Hume City Council will jointly monitor the implementation of the Precinct Infrastructure Plan.

The Growth Areas Authority has established a Hume Infrastructure Working Group to manage the monitoring, review, implementation and prioritisation of identified projects.

The preferred method of development contributions delivery by Hume City Council is to enter into an agreement with each development proponent at subdivision permit stage.

Table 12: Infrastructure and Services Table within Precinct

PROJECT CATEGORY	TITLE	PROJECT DESCRIPTION	LEAD AGENCY	TIMING S= 2011-14 M= 2014-18 L= 2019+	INDICATIVE COSTS ($2010)
TRANSPORT					
Road	Mickleham Road and northern connector - land	Land for flaring for ultimate intersection.	VicRoads	S-M	$161,000
Road	Mickleham Road and southern connector - land	Land for flaring for ultimate intersection.	VicRoads	M-L	$161,000
Road	Mickleham Road and northern connector - construction	Interim intersection - signalised. Construction.	Hume City Coucnil	S-M	$1,750,000
Road	Mickleham Road and southern connector - construction	Interim intersection - signalised. Construction.	Hume City Coucnil	M-L	$1,750,000
Road	Somerton Road pedestrian lights	Pedestrian signalised crossing point.	Hume City Council	M-L	$250,000
PUBLIC TRANSPORT					
Bus	Greenvale Bus Service	Progressive extension of local bus service to service precinct.	DOT	S-L	Yet to be determined.
Bus	Bus stops	Provision of bus stops to be delivered as part of subdivision construction approvals.	Relevant development proponent.	S-L	Determined through future specific construction plans.
COMMUNITY					
Community Centre	Multi- Purpose Community Centre	Land for multi-purpose community centre. 0.7 ha.	Hume City Council	M-L	$1,400,000
Community Centre	Multi- Purpose Community Centre	Construction of multi- purpose community centre with landscaping and car parking.	Hume City Council	M-L	$5,747,500
School	Primary School	Provision of new primary school.	DEECD	S-M	$11,500,000
OPEN SPACE					
Active Open Space	Active Playing Oval - land	Land for fuill size Active Playing Oval in PSP as an addition to neighbourhood park (3 hecatres)	Hume City Council	S-M	$2,100,000
Active Open Space	Active Playing Oval - construction	Construction of one Active Playing Oval (Senior football/cricket oval), landscaping and car parking at Greenvale Reserve.	Hume City Council	S-M	$1,957,000
Active Open Space	Active Playing Oval - construction	Construction of one Active Playing Oval (Senior football/cricket oval), landscaping and car parking.	Hume City Council	S-M	$1,957,000
Active Open Space	Public Amenities	Construction of public amenities (including umprire rooms and change rooms) to support the active playing field within the Greenvale West precicnt.	Hume City Council	S-M	$1,957,000
Active Open Space	Pavilion	Construction of one Pavilion at Greenvale Reserve.	Hume City Council	S-M	$1,957,000
Passive Parks	Passive Park - construction	Basic improvements to open space, including earthworks, grading, paths, local playgrounds etc.	Relevant development proponent.	S-L	Determined through landscape construction plans.
DRAINAGE					
Drinage/Wetlands	Drainage/Waterways	Land and construction of linear drainage corridor and retarding basin on Micklehma Road. Retarding basin to also have a passive open space function with the ability for playgrounds, pathways and picnic facilities.	Melbourne Water	S-L	Determined through landscape construction plans.

Table 13: Infrastructure and services Table outside of Precinct

PROJECT CATEGORY	TITLE	PROJECT DESCRIPTION	LEAD AGENCY	TIMING S= 2009-13 M= 2014-18 L= 2019+	INDICATIVE COSTS ($2010)
COMMUNITY					
Community Facility	Regional Library	Construction of regional library opposite Craigieburn Town Centre. Stage 2.	Hume City Council	S-M	$15,000,000
Community Facility	Indoor active recreation centre	Construction of indoor active recreation centre. Regional facility in Craigieburn Town Centre.	Hume City Council	M-L	$30,000,000
OPEN SPACE					
Active Open Space	Active Playing Oval	Construction of one Active Playing Oval (Senior football/cricket oval), landscaping and car parking. At Greenvale Reserve.	Hume City Council	M-L	$1,957,000
Active Open Space	Pavilion	Construction of one pavilion to serve Active Playing Ovals at Greenvale Reserve.	Hume City Council	M-L	$2,119,000

growth areas AUTHORITY

Legend

- Precinct Structure Plan Area
- Urban Growth Boundary (UGB)
- Existing Roads
- Drainage/ Waterways
- 1 Property Reference No.

1
2
3
4
5
6
7
8
9
10
11
12

MOONEE PONDS CREEK
MICKLEHAM ROAD
BRODIES CREEK
HILLVIEW ROAD
AITKEN COLLEGE
GREENVALE RESERVOIR PARK
GREENVALE RESERVOIR
NOMINATED GREENVALE MAJOR ACTIVITY CENTRE
FRENCH ROAD
BRENDAN ROAD
FLEETWOOD
SOMERTON ROAD
BONDS LANE
PROVIDENCE ROAD
WOODLANDS HISTORIC PARK
GREENVALE RESERVE

Scale 1:10000 @ A3
0 50 100 200 300 500m

map 1

area to which the NVPP applies

greenvale west [R3] precinct structure plan

Victoria The Place To Be

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PART TWO: GREENVALE WEST NATIVE VEGETATION PRECINCT PLAN

This is the Greenvale West Native Vegetation Precinct Plan listed under the Schedule to Clause 52.16 of the Hume Planning Scheme. The removal, destruction or lopping of native vegetation in accordance with this Native Vegetation Precinct Plan, does not require a planning permit provided that conditions and requirements specified in this Native Vegetation Precinct Plan are met.

The Greenvale West Native Vegetation Precinct Plan applies to all land shown in Map 1. It is noted that the NVPP does not encompass the Mickleham Road reserve and a separate planning application will need to be made to remove native vegetation pursuant to Clause 52.17.

Purpose

The purpose of the Greenvale West Native Vegetation Precinct Plan is to:

- Specify the native vegetation to be protected and the native vegetation that can be removed, destroyed or lopped.
- Ensure that areas set aside to protect native vegetation are managed to conserve ecological values in accordance with the Greenvale West Precinct Structure Plan.
- Ensure that the removal, destruction or lopping of native vegetation specified to be protected is consistent with conserving the ecological values of these areas and is in accordance with the three-step approach to net gain as set out in Victoria's Native Vegetation Management – a Framework for Action 2002.
- Set out the works or other necessary actions required to offset the removal, destruction or lopping of native vegetation.
- Streamline the planning approvals process through a precinct wide landscape approach to native vegetation protection and management.

Vegetation protection objective to be achieved

- To manage the native vegetation to be retained for conservation purposes and allow for passive recreation on the edge of habitat zones where there will be no damage to native vegetation. Walking and cycling trails as well as passive recreation facilities may be appropriate on the edge of conservation areas.
- To protect and manage the habitat zones and scattered trees identified to be retained, as they represent the genetic lineage of site-adapted local plant species and communities, provide existing habitat for indigenous fauna species, function to link habitat across the landscape, and provide a focus for revegetation activities.
- To improve the long-term health and habitat value of the native vegetation specified to be retained in identified offset areas.
- To provide for the protection of revegetation areas of native vegetation as required by the Responsible Authority.

The native vegetation to be protected

The native vegetation to be protected is described in NVPP Table 1 and shown in NVPP Map 2.

Applications for removal of native vegetation to be protected

- The native vegetation described and shown in Table 1 and Map 2 of this Native Vegetation Precinct Plan should be retained.
- The native vegetation described and shown in Table 1 and Map 2 has been identified as to be protected as part of a landscape wide approach to retention and removal of native vegetation.
- Decisions relating to the removal of areas of native vegetation have been made in a holistic manner taking into account habitat zones which are proposed to be protected. The ad hoc removal of native vegetation which is identified to be protected may undermine the holistic and landscape wide approach to the preparation of the NVPP.

Conditions for subdivisions, buildings and works or vegetation removal within 50 metres of native vegetation to be protected

The following conditions must be included on all planning permits for subdivisions, buildings, works or vegetation which have been identified to be protected in the Greenvale West NVPP unless otherwise agreed to in writing by the Department of Sustainability and Environment.

- A highly visible vegetation protection fence must be erected around twice the canopy distance of each scattered tree and more than 2 metres from areas of all other native vegetation which have been identified to be protected in the Native Vegetation Precinct Plan referred to in the Schedule to Clause 52.17 unless otherwise agreed to in writing by the Department of Sustainability and Environment.
- Any construction stockpiles, fill and machinery must be placed away from areas supporting native vegetation and drainage lines to the satisfaction of the responsible authority.
- All earthworks must be undertaken in a manner that will minimise soil erosion and adhere to Construction Techniques for Sediment Pollution Control (EPA 1991).

Native Vegetation which can be removed, destroyed or lopped

The native vegetation described in NVPP Tables 2 and 3 and shown in Map 2 can be removed, destroyed or lopped subject to the requirements and conditions set out below as allowed under Clause 52.16.

Conditions that must be met in accordance with Clause 52.16-3 are as follows:

- Any construction stockpiles, fill and machinery must be placed away from areas supporting native vegetation to be protected and drainage lines to the satisfaction of the responsible authority.
- All earthworks must be undertaken in a manner that will minimize soil erosion and adhere to Construction Techniques for Sediment Pollution Control EPA 1991.
- Only indigenous plants of local provenance may be used in revegetation works of conservation areas.
- Water run-off must be designed to ensure that native vegetation to be protected is not compromised.
- Prior to the commencement of any works including vegetation removal, a highly visible vegetation protection fence must be erected around twice the canopy distance of each scattered tree and more than 2 metres from areas of all other native vegetation which has been identified to be protected in the Native Vegetation Precinct Plan referred to in the Schedule to Clause 52.16 unless otherwise agreed to in writing by the Department of Sustainability and Environment and to the satisfaction of the Responsible Authority.
- Any native vegetation to be removed in accordance with the NVPP must be clearly marked on site to the satisfaction of the Responsible Authority.
- The native vegetation (habitat zones or scattered trees) which is shown as vegetation which can be removed in Table 2 and 3 and Map 2 of this Native Vegetation Precinct Plan may be removed if the removal of the native vegetation is offset in accordance with the offset targets or offsets set out lined in Tables 4 and 5 of the Native Vegetation Precinct Plan and those offsets are secured to the satisfaction of the Department of Sustainability and Environment and the responsible authority.
- The native vegetation must not be removed until the offsets required are identified and secured to the satisfaction of the Department of Sustainability and Environment and the responsible authority.
- Offsets to be provided in accordance with this NVPP must be provided within 10 years of commencement of each development.
- Prior to felling any tree which may be removed, the tree must be examined by a suitably qualified zoologist for the presence of fauna in hollows or external nests. If native fauna species are located, they must be salvaged and relocated to the closest suitable vegetation in consultation with the Department of Sustainability and Environment.

Reference Document

- ***Growth Areas Authority Native Vegetation Mapping Project: Biodiversity Assessment Report - Greenvale South PSP Area 23 (SMEC 2009). This report has been endorsed by the Department of Sustainability and Environment. Refer to maps contained within this report.***

Legend

- Precinct Structure Plan Area
- Urban Growth Boundary (UGB)
- Lakes/ Water Bodies
- No permits or offsets required for removal of native vegetation
- Remnant patches to be retained
- Remnant patches to be removed
- •13 Trees to be removed - subject to net gain requirements
- 2 Property Reference No.

MOONEE PONDS CREEK
HZ1
HZ2
HZ3
HZ4
HZ5
HZ6
HZ7
HZ8
HZ9
HZ10
HZ11
10
11
12
13
14
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ROAD
HILLVIEW ROAD
BRODIES CREEK
AITKEN COLLEGE
GREENVALE RESERVOIR PARK
GREENVALE RESERVOIR
MICKLEHAM ROAD
NOMINATED GREENVALE MAJOR ACTIVITY CENTRE
FRENCH ROAD
BRENDAN ROAD
SOMERTON ROAD
FLEETWOOD
BONDS LANE
PROVIDENCE ROAD
WOODLANDS HISTORIC PARK
GREENVALE RESERVE
Scale 1:10000 @ A3

map 2

existing vegetation

greenvale west [R3] precinct structure plan

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NVPP Table Legend

EVC ACRONYM	EVC FULL NAME
EVC	Ecological Vegetation Class
PGW	Plains Grassy Woodland

NVPP Table 1: Habitat Zones to be protected

PROPERTY DETAILS	LOT NUMBER	HABITAT ZONE	ECOLOGICAL VEGETATION CLASS (EVC) DESCRIPTION	SIZE	CONSERVATION STATUS	OVERALL CONSERVATION SIGNIFICANCE
HOUSE ADDRESS	PARCEL DESCRIPTION		NO. AND INITIALS	HECTARES (HA)	LEAST CONCERN, ENDANGERED ETC	LOW, HIGH ETC
1085 Mickleham Rd , Greenvale, 3059	1\ TP522021	HZ1	EVC 55_61 PGW	0.12	Endangered	High
1085 Mickleham Rd , Greenvale, 3059	1\ TP522021	HZ2	EVC 55_61 PGW	1.45	Endangered	High
870 Somerton Rd, Greenvale, 3059	1\TP675219	HZ3	EVC 55_61 PGW	0.85	Endangered	High
965 Mickleham Rd, Greenvale, 3059	6\LP74861	HZ4	EVC 55_61 PGW	0.11	Endangered	High
945 Mickleham Rd, Greenvale, 3059	5\LP74861	HZ5	EVC 55_61 PGW	1.17	Endangered	High

NVPP Table 2: Habitat Zones which can be removed

PROPERTY DETAILS	LOT NUMBER	HABITAT ZONE	EVC DESCRIPTION	SIZE
HOUSE ADDRESS	PARCEL DESCRIPTION		NO. AND INITIALS	HA
1075 Mickleham Rd , Greenvale, 3059	11\LP74861	HZ6	EVC 55_61 PGW	0.43
1075 Mickleham Rd , Greenvale, 3059	11\LP74861	HZ7	EVC 55_61 PGW	0.20
1005 Mickleham Rd , Greenvale, 3059	8\LP74861	HZ8	EVC 55_61 PGW	2.22
985 Mickleham Rd, Greenvale, 3059	7\LP74861	HZ9	EVC 55_61 PGW	4.43
965 Mickleham Rd, Greenvale, 3059	6\LP74861	HZ10	EVC 55_61 PGW	0.09
780 Somerton Rd, Greenvale, 3059	3\LP74861	HZ11	EVC 55_61 PGW	0.23

NVPP Table 3: Scattered trees which can be removed

PROPERTY DETAILS	LOT NUMBER	TREE ID	SPECIES	EVC DESCRIPTION	GPS CO-ORDINATES
HOUSE ADDRESS	PARCEL DESCRIPTION			NO. AND INITIALS	X - LATITUDE, Y- LONGITUDE
870 Somerton Rd, Greenvale, 3059	1\TP675219	10	Eucalyptus camaldulensis	EVC 55_61 PGW	144.8788231, -37.62044092
870 Somerton Rd , Greenvale, 3059	1\TP675219	11	Eucalyptus camaldulensis	EVC 55_61 PGW	144.8786528, -37.62095909
1075 Mickleham Rd , Greenvale, 3059	11\LP74861	12	Eucalyptus camaldulensis	EVC 55_61 PGW	144.8818270, -37.62164792
1075 Mickleham Rd, Greenvale, 3059	11\LP74861	13	Eucalyptus camaldulensis	EVC 55_61 PGW	144.8799109, -37.62203535
985 Mickleham Rd, Greenvale, 3059	7\LP74861	14	Eucalyptus camaldulensis	EVC 55_61 PGW	144.8803387, -37.62740861
780 Somerton Rd, Greenvale, 3059	3\LP74861	15	Eucalyptus camaldulensis	EVC 55_61 PGW	144.8777434, -37.63155450
780 Somerton Rd, Greenvale, 3059	3\LP74861	16	Eucalyptus camaldulensis	EVC 55_61 PGW	144.877771, -37.631563
780 Somerton Rd, Greenvale, 3059	3\LP74861	17	Eucalyptus camaldulensis	EVC 55_61 PGW	144.8776626, -37.63165909
780 Somerton Rd, Greenvale, 3059	3\LP74861	18	Eucalyptus camaldulensis	EVC 55_61 PGW	144.8770529, -37.63229756
780 Somerton Rd, Greenvale, 3059	3\LP74861	19	Eucalyptus camaldulensis	EVC 55_61 PGW	144.8770572, -37.63243675

NVPP Table 4: Offset requirements for habitat zones for native vegetation which can be removed

PROPERTY DETAILS	LOT NUMBER	HABITAT ZONE	EVC DESCRIPTION	CONSERVATION SIGNIFICANCE	LOSS (HABITAT HECTARES TO BE REMOVED)	NET GAIN MULTIPLIER	GAIN TARGET (HABITAT HECTARES) OFFSET TO BE ACHIEVED
HOUSE ADDRESS	PARCEL DESCRIPTION		NO. AND INITIALS	LOW, HIGH ETC			SCORE OF 0 = 100% RETAINED
1075 Mickleham Rd , Greenvale, 3059	11\LP74861	HZ6	EVC 55_61 PGW	High	0.08	1.5	0.12
1075 Mickleham Rd , Greenvale, 3059	11\LP74861	HZ7	EVC 55_61 PGW	High	0.05	1.5	0.075
1005 Mickleham Rd , Greenvale, 3059	8\LP74861	HZ8	EVC 55_61 PGW	Very High	0.44	2.0	0.88
985 Mickleham Rd, Greenvale, 3059	7\LP74861	HZ9	EVC 55_61 PGW	Very High	1.64	2.0	3.28
965 Mickleham Rd, Greenvale, 3059	6\LP74861	HZ10	EVC 55_61 PGW	High	0.01	1.5	0.015
780 Somerton Rd, Greenvale, 3059	3\LP74861	HZ11	EVC 55_61 PGW	High	0.06	1.5	0.09

NVPP Table 5: Offset required for scattered trees which can be removed

PROPERTY DETAILS	LOT NUMBER	EVC DESCRIPTION	CONSERVATION SIGNIFICANCE	LOSS OF VLOTS	LOSS OF LOTS	LOSS OF MOTS	LOSS OF SMALL TREES	OFFSET TO BE ACHIEVED RECRUITMENT/ REVEGETATION (NO. TREES)	OFFSETS REQUIREMENTS FOR SCATTERED OLD TREES (NO. TREES PROTECTED)
HOUSE ADDRESS	PARCEL DESCRIPTION	NO. AND INITIALS	LOW, HIGH ETC	INCL. TREE NUMBER	INCL. TREE NUMBER	INCL. TREE NUMBER	INCL. TREE NUMBER (DBH)		
870 Somerton Rd, Greenvale, 3059	1\TP675219	EVC 55_61 PGW	High			1(10)		20	2 MOT
870 Somerton Rd , Greenvale, 3059	1\TP675219	EVC 55_61 PGW	High			1(11)		20	2 MOT
1075 Mickleham Rd , Greenvale, 3059	11\LP74861	EVC 55_61 PGW	High	1 (12)				30	5 VLOT
1075 Mickleham Rd, Greenvale, 3059	11\LP74861	EVC 55_61 PGW	High		1 (13)			20	4 LOT
985 Mickleham Rd, Greenvale, 3059	7\LP74861	EVC 55_61 PGW	High			1(14)		20	2 MOT
780 Somerton Rd, Greenvale, 3059	3\LP74861	EVC 55_61 PGW	High	2 (15,16)			1(17)	60	10 VLOT
780 Somerton Rd, Greenvale, 3059	3\LP74861	EVC 55_61 PGW	High		2 (18,19)			40	8 LOT

6.0 OTHER INFORMATION

6.1 ACRONYMS

AHD	Australian Height Datum
AFL	Australian Football League ovals
CAD	Central Activities District
CHMP	Cultural Heritage Management Plan
CIL	Community Infrastructure Levy
DEECD	Department of Education and Early Childhood Development
DIL	Development Infrastructure Levy
DPCD	Department of Planning and Community Development
DoT	Department of Transport
DSE	Department of Sustainability and Environment
EVC	Ecological Vegetation Community
GAA	Growth Area Authority
GDA	Gross Developable Area
Ha	Hectare
MCH	Maternal and Child Health
MSS	Municipal Strategic Statement
LTC	Local Town Centre
NDA	Nett Developable Area
NDHa	Nett Developable Hectare
NGO	Non Government Organisation
NVPP	Native Vegetation Precinct Plan
PAC	Principle Activity Centre
PIP	Precinct Infrastructure Plan
PPTN	Principle Public Transport Network
PSP	Precinct Structure Plan
P-6	State School Prep to Year 6
Sqm	Square metres
UGB	Urban Growth Boundary
UGZ	Urban Growth Zone
VPD	Vehicles Per Day
WSUD	Water Sensitive Urban Design

6.2 GLOSSARY

Active Open Space

Land set aside for the specific purpose of formal outdoor sports by the community.

Activity Centre

Provide the focus for services, employment and social interaction. They are where people shop, work, meet, relax and live. Usually well-served by public transport, they range in size and intensity of use. In the growth areas these are referred to as Principal Activity Centres, Major Activity Centres, Neighbourhood Activity Centres and Local Centres. For further information refer to Melbourne 2030.

Affordable Housing

Well-located housing, appropriate to the needs of a given household where the cost (whether mortgage repayment or rent) is no more than 30 per cent of that household's income. Exceeding the mark places one under 'housing stress', particularly in the lower 40 per cent of the income distribution scale.

Arterial Road

A higher order road providing for moderate to high volumes at relatively high speeds typically used for inter-suburban journeys and linking to freeways, and identified under the Road Management Act 2004. All arterial roads are managed by the State Government.

Co-location

Adjoining land uses to enable complementary programs, activities and services and shared use of resources. For example, the co-location of schools and active open space.

Community Facilities

Infrastructure provided by government or non-government organisations for accommodating a range of community support services, programs and activities. This includes facilities for education and learning (e.g. government and non-government schools, universities, adult learning centres); early years (e.g. preschool, maternal and child health, childcare); health and community services (e.g. hospitals, aged care, doctors, dentists, family and youth services, specialist health services); community (e.g. civic centres, libraries, neighbourhood houses); arts and culture (e.g. galleries, museums, performance space); sport, recreation and leisure (e.g. swimming pools); justice (e.g. law courts); voluntary and faith (e.g. places of worship) and emergency services (e.g. police, fire and ambulance stations).

Connector Street

A lower order street providing for low to moderate volumes and moderate speeds linking local streets to the arterial network. Managed by the relevant local council.

Conventional Density Housing

Housing with an average density of 10 to 15 dwellings per net developable hectare.

Development Contributions Plan

Document that sets out the contributions expected from each individual landowner to fund infrastructure and services. Refer to Part 3B of the Planning and Environment Act 1987.

Encumbered Land

Land that is constrained for development purposes. Includes easements for power/transmission lines, sewers, gas, waterways/drainage; retarding basins/wetlands; landfill; conservation and heritage areas; Parks Victoria regional parks. This land may be used for a range of activities (e.g. walking trails, sports fields). Includes heavily encumbered (e.g. steep embankment); medium encumbered (e.g. transmission line) and low encumbered (e.g. land within the 1 in 10 year and 1 in 100 year flood level).

Frontage

The road alignment at the front of a lot. If a lot abuts two or more roads, the one to which the building, or proposed building faces.

Gross Developable Area

Total precinct area excluding encumbered land, arterial roads and other roads with four or more lanes.

Growth Area

Areas on the fringe of metropolitan Melbourne around major regional transport corridors that are designated for large-scale change, over many years from rural to urban use. Melbourne has five growth areas, called Casey-Cardinia; Hume; Melton-Caroline Springs; Whittlesea and Wyndham.

Growth Area Framework Plan

Government document that sets long-term strategic planning direction to guide the creation of a more sustainable community in the growth areas.

High Density Housing

Housing with an average density of more than 30 dwellings per net developable hectare.

Housing Density (Gross)

The number of houses divided by gross developable area.

Housing Density (Net)

The number of Houses divided by the net developable area.

Linear Open Space Network

Corridors of open space, mainly along waterways that link together forming a network.

Land Budget Table

A table setting out the total precinct area, gross developable area, net developable area and constituent land uses proposed within the precinct.

Local Centre

An activity centre smaller than a Local Town Centre with a catchment of about 400 square metres and may include a small supermarket or convenience store of 500 square metres to 1,500 square metres.

Local Town Centre

Refer to Neighbourhood Activity Centre definition.

Lot

A part (consisting of one or more pieces) of any land (except a road, a reserve, or common property) shown on a plan, which can be disposed of separately and includes a unit or accessory unit on a registered plan of strata subdivision and a lot or accessory lot on a registered cluster plan.

Lower Density Housing

Housing with an average density of less than 10 dwellings per hectare.

Major Activity Centre

Activity centres that have similar characteristics to Principal Activity Centres but serve smaller catchment areas. For further information refer to Melbourne 2030.

Major Employment Areas

Areas identified on the Growth Area Framework Plan for economic and employment growth.

Medium Density Housing

Housing with an average density of 16 to 30 dwellings per net developable hectare.

Native Vegetation

Plant that are indigenous to Victoria, including trees, shrubs, herbs and grasses.

Native Vegetation Precinct Plan

A plan relating to native vegetation within a defined area that forms part of the precinct structure plan. Native vegetation precinct plans are incorporated into local planning schemes and listed in the schedule to Clause 52.16.

Neighbourhood Activity Centre

Centres that are an important community focal point and have a mix of uses to meet local needs. Accessible to a viable user population by walking, cycling and by local bus services and a public transport link to one or more principal or major activity centre (known as Local Town Centres in growth areas).

Net Developable Area

Total amount of land within the precinct that is made available for development of housing and employment buildings, including lots, local and connector streets. Gross developable area minus community facilities, schools, educational facilities and open space. Small local parks defined at subdivision stage are included in net developable area.

Passive Open Space

Open spaces that is set aside for parks, gardens, linear corridors, conservation bushlands, nature reserves, public squares and community gardens that are made available for passive recreation, play and unstructured physical activity including walking, cycling, hiking, revitalisation, contemplation and enjoying nature.

Precinct Infrastructure Plan

Section within the precinct structure plan that defines the priority regional and local infrastructure requirements for future planning and investment by council and government agencies.

Precinct Structure Plan

A statutory document that describes how a precinct or a series of sites within a growth area will be developed over time. A precinct structure plan sets out the broad environmental, social and economic parameters for the use and development of land within the precinct.

Principal Activity Centre

Activity centres that accommodate a mix of activities that generate higher number of trips, including business, retail, services and entertainment. Generally well served by multiple public transport routes and on the Principal Public Transport Network or capable of being linked to that network. Has a very large catchment covering several suburbs and attract activities that meet metropolitan needs. For further information refer to Melbourne 2030.

Principal Public Transport Network

A high-quality public transport network that connects principal and Major Activity Centres and comprise the existing radial fixed-rail network, extensions to this radial network and new cross-town by routes.

Public Open Space

Land that is set aside in the precinct structure plan for public recreation or public resort, or as parklands; or for similar purposes. Incorporates active and passive open space.

Public Transport Interchange

Places where people can access or change between multiple public transport routes. For example, between train and bus or a multi-route bus station at a major activity centre.

Shared or Joint Use

When councils, schools and community service organisations come together to plan, build and in some cases jointly manage a single facility to be used by multiple service providers. E.g. Using a school as a facility for wider community utilisation.

Social Housing

Non-profit housing owned and managed for the primary purpose of meeting social objectives such as affordable rents, responsible management, security of tenure and good location in relation to employment services. The term encompasses public housing and includes housing owned or managed by the community.

Social Infrastructure

Community facilities plus public open space.

Urban Growth Boundary

A statutory planning management tool used to set clear limits to metropolitan Melbourne's urban development.

Urban Growth Zone

Statutory zone that applies to land that has been identified for further urban development. The UGZ has four purposes (1) to manage transition of non-urban land into urban land; (2) to encourage development of well-planned and well-serviced new urban communities in accordance with an overall plan; (3) to reduce the number of development approvals needed in areas where an agreed number of development plan is in place; and (4) to safeguard non-urban land from use and development that could prejudice its future urban development.

Water Sensitive Urban Design

A sustainable water management approach that aims to provide water-quality treatment as well as flood management to reduce the pollution carried to our waterways. Key principles that include minimising water resistant areas; recharging natural groundwater aquifers (where appropriate) by increasing the amount of rain absorbed into the ground; encouraging onsite reuse of rain; encouraging onsite treatment to improve water quality and remove pollution, and using temporary rainfall storage (retarding basins/wetlands) to reduce the load on drains.

6.3 SUPPORTING INFORMATION

Greenvale PSP Transport Assessment Report, September 2009, Traffix Group Pty Ltd.

Hume Corridor Growth Area, Economic Development and Employment Analysis, Final draft Report 18 August 2009, Essential Economics Pty Ltd

Precinct Structure Plan, Precinct Greenvale West, Service and Utility Infrastructure Engineering Report, 4 August 2009, WBCM Pty Ltd

Phase 1 Environmental Site Assessment, Precinct Structure Plans, Somerton and Mickleham Roads, Greenvale West, Victoria, June 2009, Lane Piper Pty Ltd

Greenvale West, Assessment of Community Infrastructure Requirements and Opportunities, Version 16/9/09, GAA