

Quarry Hills

Precinct Structure Plan



**City of
Whittlesea**



METROPOLITAN
PLANNING
AUTHORITY

June 2016

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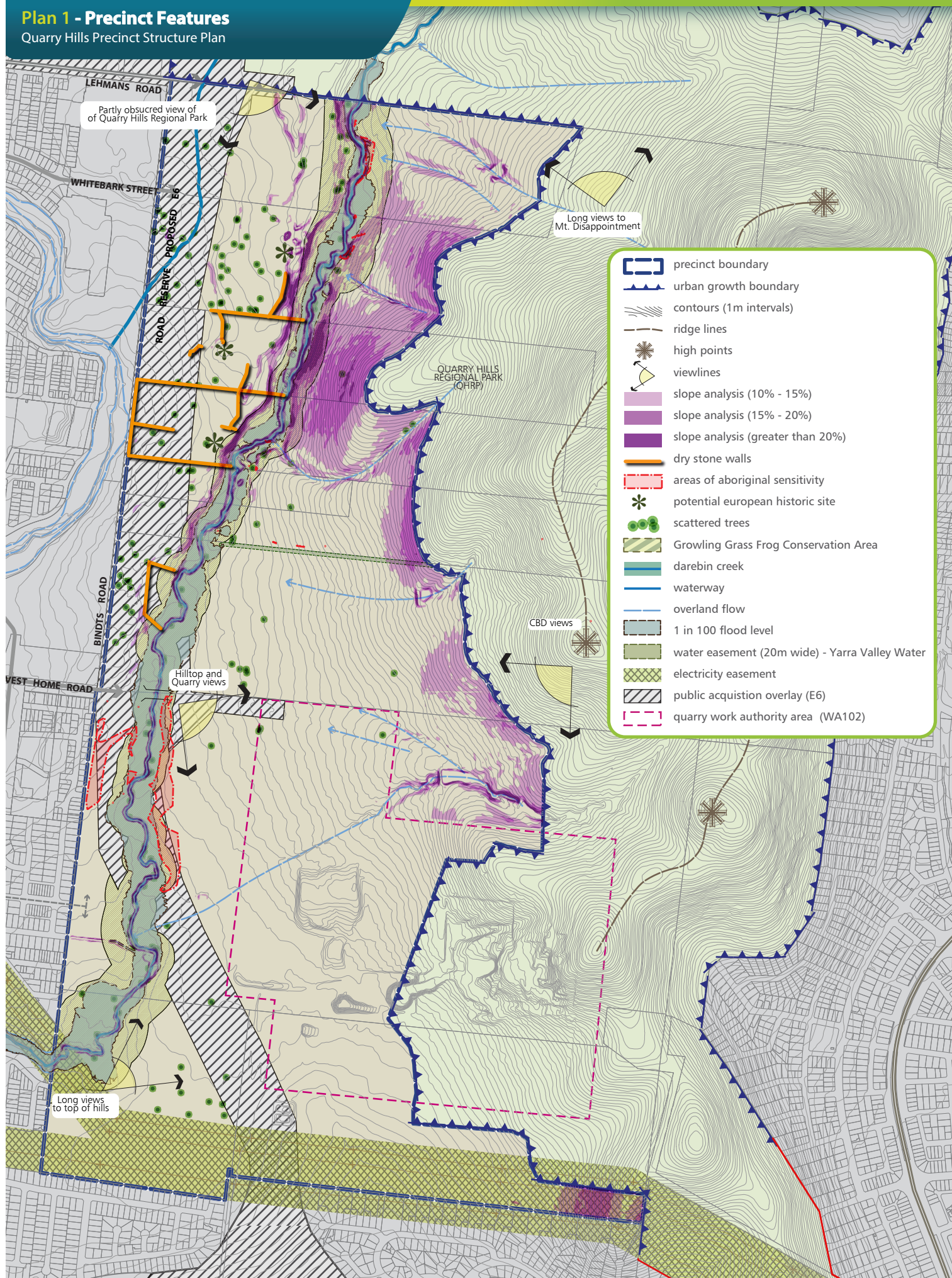
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Note: Any reference to the Metropolitan Planning Authority (MPA) in this document is a reference to the Growth Areas Authority (GAA) as defined under the *Planning and Environment Act 1987*.



Plan 1 - Precinct Features

Quarry Hills Precinct Structure Plan



1.0 INTRODUCTION

The Quarry Hills Precinct Structure Plan (the PSP) has been prepared by the City of Whittlesea in collaboration with the Metropolitan Planning Authority (MPA) with the assistance of Government agencies, service authorities and major stakeholders.

The Quarry Hills Development Contributions Plan (DCP) has been prepared concurrently with this document. It sets out requirements for development proponents to make a contribution toward the infrastructure required to support the development of the precinct.

A PSP is a long-term plan for urban development. It describes how the land is expected to be developed, and how and where services are planned to support development.

The PSP guides proposed development within the Precinct.

Generally, the PSP:

- Sets out plans to guide the delivery of quality urban environments in accordance with relevant Victorian Government guidelines, including the MPA Precinct Structure Planning Guidelines, The Victorian *Planning and Environment Act 1987* and the State Planning Policy Framework.
- Enables the transition of non-urban to urban land.
- Sets the vision for how land should be developed and the outcomes achieved.
- Outlines the projects required to ensure that future residents, visitors and workers within the area can be provided with timely access to services and transport necessary to support a quality, affordable lifestyle.
- Sets out objectives, guidelines and requirements for land use and development.
- Provides Government agencies, the Council, developers, investors and local communities with certainty about future development.
- Addresses the requirements of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act 1999) in accordance with an endorsed program under Part 10.
- Acknowledges that development must also comply with other Acts and approvals where relevant e.g. in the case of Aboriginal cultural heritage, compliance with the *Aboriginal Heritage Act 2006* is required.

The PSP is informed by:

- The State and Local Planning Policy Framework set out in the Whittlesea Planning Scheme.
- The Growth Corridor Plan, June 2012.
- The Biodiversity Conservation Strategy and Sub Regional Species Strategies for Melbourne's Growth Areas (Department of Environment and Primary Industries, June 2013)*
- Quarry Hills Development Contributions Plan June 2016 (the DCP) which sets out the requirements for development proponents to make contributions toward infrastructure required to support the development of the precinct; and
- Quarry Hills Precinct Structure Plan Background Report June 2016.

* On 5 September 2013 an approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) was issued by the Commonwealth Minister for Environment, Heritage and Water. The approval applies to all actions associated with urban development in growth corridors in the expanded Melbourne 2010 Urban Growth Boundary as described in page 4 in the Biodiversity Conservation Strategy for Melbourne's Growth Corridors (Department of Environment and Primary Industries, 2013). The Commonwealth approval has effect until 31 December 2060. The approval is subject to conditions specified at Annexure 1 of the approval.

Provided the conditions of the EPBC Act approval are satisfied individual assessment and approval under the EPBC Act is not required.

1.1 HOW TO READ THIS DOCUMENT

This Precinct Structure Plan guides land use and development where a planning permit is required under the Urban Growth Zone or another zone where that zone references this Precinct Structure Plan.

A planning application and planning permit must implement the **OUTCOMES** of the Precinct Structure Plan. The outcomes are expressed as the vision and objectives.

Each element of the Precinct Structure Plan contains **REQUIREMENTS** and **GUIDELINES**.

REQUIREMENTS must be adhered to in developing the land. Where they are not demonstrated in a permit application, requirements will usually be included as a condition on a planning permit whether or not they take the same wording as in this structure plan. A requirement may include or reference a plan, table or figure in the Precinct Structure Plan.

GUIDELINES express how discretion will be exercised by the responsible authority in certain matters that require a planning permit. If the responsible authority is satisfied that an application for an alternative to a guideline implements the outcomes the responsible authority may consider the alternative. A guideline may include or reference a plan, table or figure in the Precinct Structure Plan.

Meeting these **REQUIREMENTS** and **GUIDELINES** will implement the outcomes of the Precinct Structure Plan.

Development must also comply with other Acts and approvals where relevant e.g. the *Environmental Protection and Biodiversity Act 1999* in the case of biodiversity or the *Aboriginal Heritage Act 2006* in the case of cultural heritage amongst others.

Not every aspect of the land's use and development is addressed in this structure plan and a responsible authority may manage development and issue permits as relevant under its general discretion.

1.2 LAND TO WHICH THE PRECINCT STRUCTURE PLAN APPLIES

The Quarry Hills PSP (1094) covers an area of 285 hectares, and is bound by the proposed E6 road reservation, the rear of properties on Ilani Street, Lauren Court and Dransfield Way, the proposed Quarry Hills Regional Park and an easterly extension of Lehmanns Road (both of which form the Urban Growth Boundary). The precinct lies immediately east of the Harvest Home and Epping North East local structure plan areas.

1.3 QUARRY HILLS DEVELOPMENT CONTRIBUTIONS PLAN (DCP)

The Quarry Hills DCP sets out the requirements for infrastructure funding across the precinct. The DCP is a separate document incorporated into the Whittlesea Planning Scheme and implemented through a Development Contributions Plan Overlay (DCPO).

1.4 BACKGROUND INFORMATION

Background information on the precinct including its local and metropolitan context, history, landform and topography, biodiversity, drainage, open space and community facilities is provided in the separate Precinct Background Report. This report also references the various background technical studies that have also informed preparation of the Precinct Structure Plan.

2.0 OUTCOMES

2.1 VISION

Quarry Hills will be a unique community where landform, landscape character and connection to the Quarry Hills Regional Parkland and the Darebin Creek are key planning and design drivers. The precinct is one which will be defined by its physical and visual connection to green links, unique topographical features, and a centralised town centre all of which will ensure a sustainable, self sufficient community.

Quarry Hills will seek to be:

- An innovative, well designed residential development which respects and works with its environmentally sensitive surrounds.
- A site responsive development that compliments the topographical features and instills a strong sense of place.
- A sustainable and self sufficient community with access to local retail, education and associated community facilities.
- Connected to the natural environment through physical and visual links to the Quarry Hills Regional Parkland the Darebin Creek corridor, and other natural features such as the River Red Gums located across the site.
- A place of housing diversity and housing choice, that caters for a diverse future community.
- A connected community with access to public transport, open space networks and community facilities.

2.2 KEY OBJECTIVES

The development of the Quarry Hills Precinct Structure Plan area is guided by a set of key development objectives.

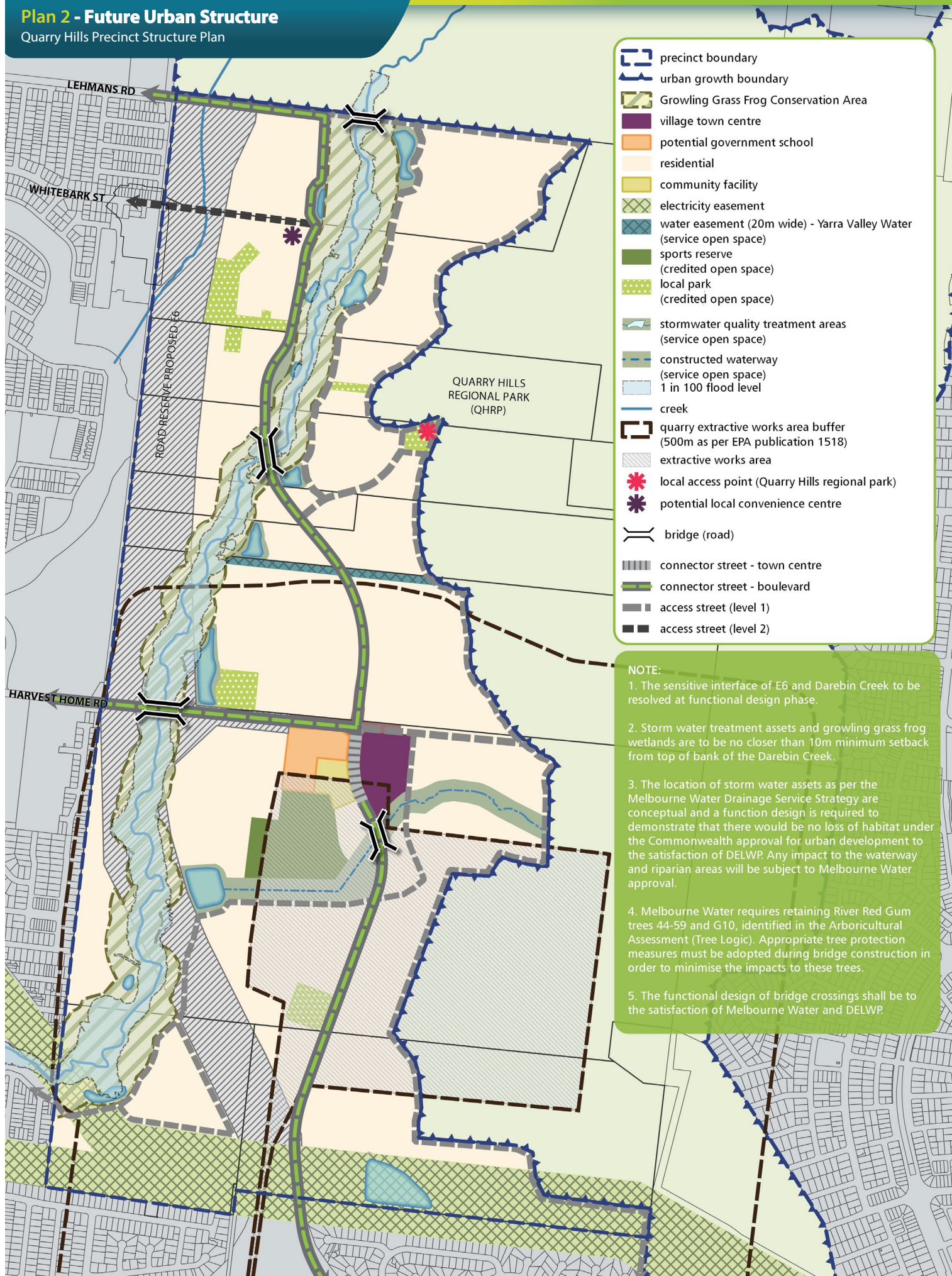
Development within the Quarry Hills will seek to:

OBJECTIVES	
IMAGE, CHARACTER AND HOUSING	
01	Create a high amenity urban environment including well designed housing, attractive streets and open space.
02	Promote a diverse range of universally accessible, well-designed housing in order to respond to the environmental and topographical features of the precinct and meet the needs of the future community.
03	Create logical, permeable and connected subdivision layouts which respond to, and maximise the natural character features of the precinct.
04	Create a neighbourhood which has convenient and efficient access to local open space, the community centre, the school and the Village Town Centre.
05	Create a high amenity, indigenous planted landscape within the streets, open space networks and the Darebin Creek corridor.
06	Ensure development protects and enhances the historical, landscape and environmental characteristics of the site including the hills and ridgelines associated with the Quarry Hills and the Darebin Creek environs.
07	Ensure development appropriately responds to the natural landform of the precinct, particularly where there is an interface with the Quarry Hills Regional Parkland.
EMPLOYMENT, TOWN CENTRES AND COMMUNITY FACILITIES	
08	Create a high amenity, centrally located Village Town Centre to provide for the day to day needs of the future community and provide for local employment opportunities.
09	Create a 'main street' focused Village Town Centre with a high quality pedestrian environment that provides safety and comfort for pedestrians and encourages community interaction.
010	Create a Village Town Centre with a sense of place, unique identity and local character.
011	Provide a Village Town Centre that is pedestrian friendly and accessible by all modes including public transport, while enabling private vehicle access.



Plan 2 - Future Urban Structure

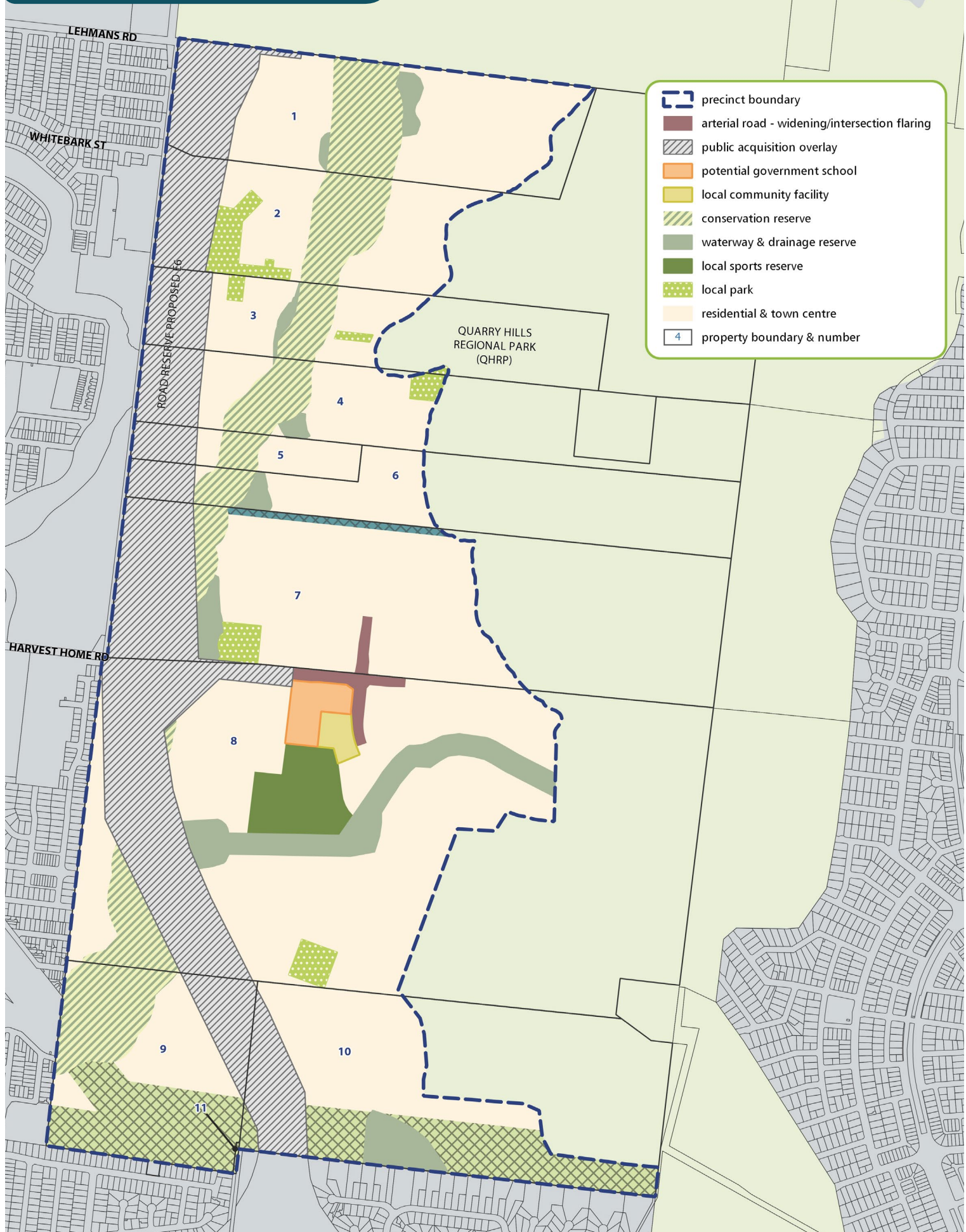
Quarry Hills Precinct Structure Plan



O12	Provide a fully integrated, diverse use community facility which provides a range of services to meet the needs of local residents and maximises shared use potential with the adjoining government primary school.
OPEN SPACE AND NATURAL SYSTEMS	
O13	Create a precinct which is linked to its natural surrounds through an integrated open space network, incorporating the Quarry Hills Regional Parkland, Darebin Creek, local passive parks, sports reserve and community facilities.
O14	Create accessible local neighbourhood parks to cater to all ages and abilities in the community.
O15	Protect and enhance interfaces with the Darebin Creek and the Quarry Hills Regional Parkland.
BIODIVERSITY, THREATENED SPECIES AND BUSHFIRE MANAGEMENT	
O16	Protect and create high quality habitat for the Growling Grass Frog within the Darebin Creek corridor.
O17	Plan for the long term conservation and enhancement of areas of biodiversity.
O18	Ensure that bushfire protection measures are considered in the layout and design of the local street network.
O19	Identify bushfire hazards and specify bushfire protection measures for affected subdivisions and buildings and works.
TRANSPORT AND MOVEMENT	
O20	Establish an integrated and permeable transport network to encourage walking, cycling, reduce car dependency and maximise connectivity.
O21	Establish a road network with links to key external road networks and key destinations located within and outside of the precinct.
INTEGRATED WATER MANAGEMENT AND UTILITIES	
O22	Deliver an integrated water management system that reduces reliance on reticulated potable water, increases the re-use of alternative water, minimises flood risk, ensures the environmental health of waterways and bays, protects public health, delivers affordable essential water services and contributes towards a sustainable and green urban environment.
O23	Plan for the development of gas and electricity infrastructure capable of supporting the future community of the precinct.
PRECINCT INFRASTRUCTURE PLAN AND STAGING	
O24	Require all lots to be provided with potable water, electricity, reticulated sewerage, drainage, gas and telecommunications.
O25	Design street cross sections to ensure that the installation of essential services does not impede the ability to plant large canopy trees in streets and along easements.
O26	Ensure pre-development property structure does not impede the realisation of cohesive and integrated neighbourhoods.
O27	Ensure that development staging is co-ordinated with the delivery of key local and state infrastructure.

**Plan 3 - Land Use Budget**

Quarry Hills Precinct Structure Plan



2.3 SUMMARY LAND BUDGET

The Quarry Hills PSP land budget below provides a summary of the land required for transport, community facilities, government education facilities and open space and identifies the total amount of land available for development.

The total amount of land available for development within the Quarry Hills PSP is 150.84 hectares.

All figures are based on Net Developable Area (NDA).

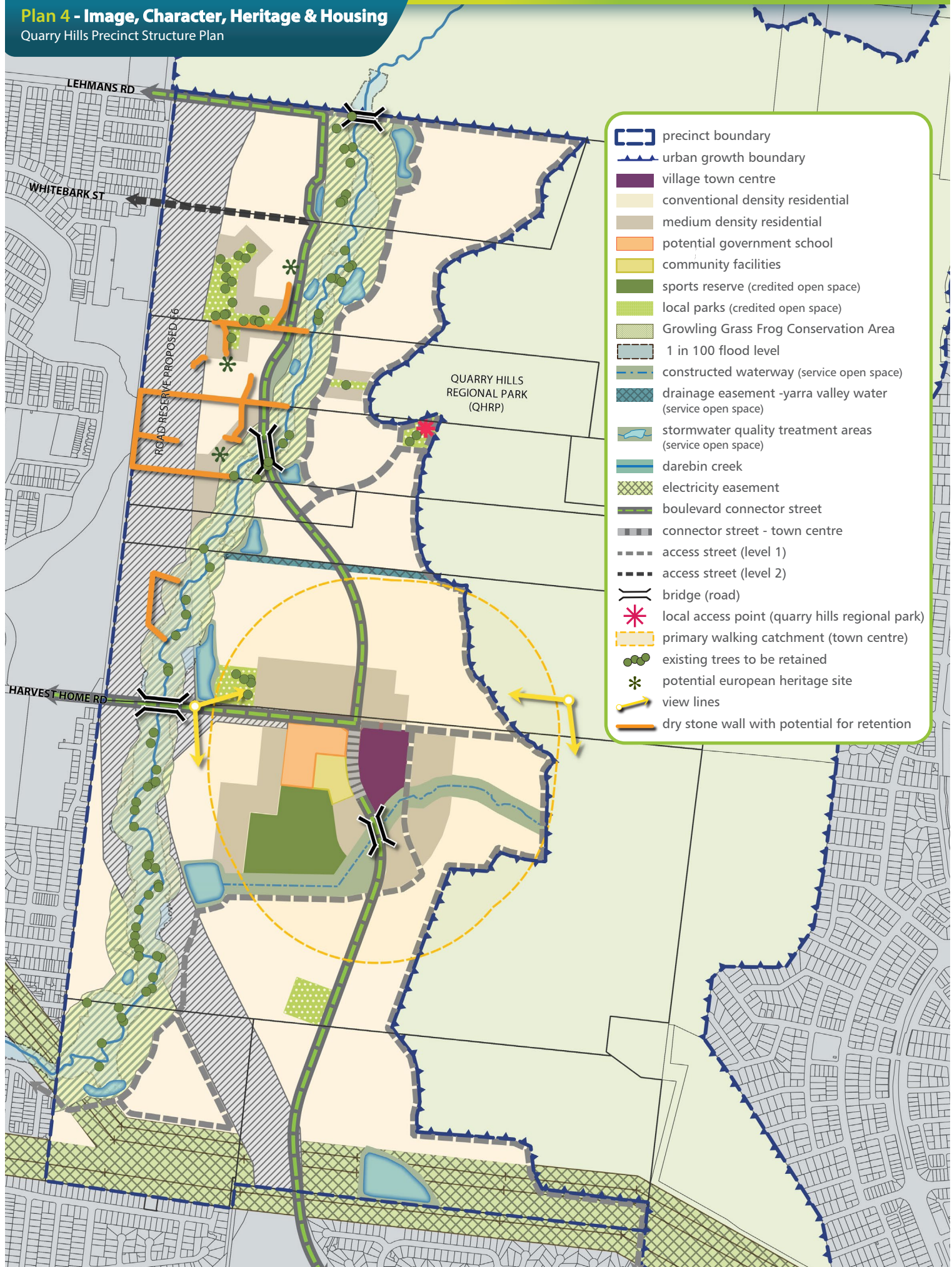
Table 1 Summary Land Use Budget

DESCRIPTION	HECTARES	% OF PRECINCT	% OF NDA
TOTAL PRECINCT AREA (ha)	278.69	100.00%	
TRANSPORT			
E6 Corridor	56.28	20.19%	38.18%
SUB-TOTAL	56.28	20.19%	38.18%
EDUCATION & COMMUNITY			
Community Centres	1	0.36%	0.68%
Potential Government School	2	0.72%	1.36%
SUB-TOTAL	3	1.08%	2.04%
OPEN SPACE			
ENCUMBERED LAND AVAILABLE FOR RECREATION			
Power easements	20.42	7.33%	13.85%
Waterway / Drainage / Stormwater quality treatment areas	12.77	4.58%	8.66%
SUB-TOTAL - EASEMENTS, DRAINAGE	33.18	11.91%	22.51%
GGF Corridor - BCS CA 34	28.67	10.29%	19.45%
SUB-TOTAL - BCS	28.67	10.29%	19.45%
SUB-TOTAL - ENCUMBERED OPEN SPACE	61.86	22.20%	41.96%
UNENCUMBERED LAND AVAILABLE FOR RECREATION			
Sports Reserve- Unencumbered	5.00	1.79%	3.39%
Local Parks - Unencumbered	5.15	1.85%	3.50%
SUB-TOTAL - UNENCUMBERED OPEN SPACE	10.12	3.63%	6.71%
SUB-TOTAL - OPEN SPACE	71.98	25.83%	48.83%
NET DEVELOPABLE AREA (NDA) Ha	147.41	52.89%	
NET DEVELOPABLE AREA - RESIDENTIAL(NDA-R) Ha (Includes Residential and Town Centres)	147.41		
DESCRIPTION	HECTARES	% OF PRECINCT	% OF NDA
RETAIL / EMP & OTHER USES			
Town Centres (included in Residential NDA)	2.26	0.8%	1.5%
SUB-TOTAL	2.26	0.8%	1.5%
Net Residential Area (NRA) less Town Centres	145.15	52.08%	98.47%



Plan 4 - Image, Character, Heritage & Housing

Quarry Hills Precinct Structure Plan



3.0 IMPLEMENTATION

3.1 IMAGE AND CHARACTER

LANDSCAPE CHARACTER REQUIREMENTS

R1	Viewlines to the CBD, Quarry Hills Regional Parkland and Mount Disappointment shown on Plan 4 must be protected through the development of an attractive and diverse road network.
R2	Streets and pedestrian and cyclist networks must connect to Central Park and local parks, the Quarry Hills Parkland and the Darebin Creek through the provision of perimeter roads, access ways and path networks.
R3	Streetscapes must be of a high quality, incorporating public art and plantings with seating infrastructure into the broader subdivision layout.
R4	Streetscape planting, along with parks and other public spaces must include native and indigenous plantings which are suitable for inclusion into the local environs to the satisfaction of the responsible authority.
R5	Street trees must be provided on both sides of all roads and streets (excluding laneways) at regular intervals appropriate to tree size at maturity and not exceeding: 8 – 10 metre intervals for trees with a canopy of less than 10 metres 10 – 12 metre intervals for trees with a canopy of between 10-15 metres 12 – 15 metre intervals for trees with a canopy great than 15 metres
R6	Key landscape features including natural topography, the Darebin Creek and the Quarry Hills Regional Parkland must be protected through a sensitive subdivision design layout.

LANDSCAPE CHARACTER GUIDELINES

G1	Subdivision design should integrate with the precinct landform and physical character through: <ul style="list-style-type: none"> Site responsive location and alignment of roads, trails and paths. Site responsive location and design of public spaces
G2	Drainage and stormwater should be designed and incorporated into the overall street network as a visual feature and build on the existing landscape features of the precinct to the satisfaction of the responsible authority and Melbourne Water.
G3	Streets which abut conservation areas, parks, the Darebin Creek and the Quarry Hills Regional Parkland should be landscaped with the same plant and tree species palette as within the adjacent open space to further extend the open space character into the street network.
G4	Feature street trees should be selected to provide local landmarks and definition to key nodes, the Village Town Centre, park frontages, key intersections and entrances.
G5	Trees not requiring protection within the Biodiversity Conservation Strategy (BCS) or as nominated for retention on Plan 8, should be retained within streetscapes and public spaces where possible.
G6	Where trees are retained, applications for subdivision should apply Tree Protection Zones as identified within Appendix 4.3 of the Quarry Hills Precinct Structure Plan.
G7	A consistent suite of lighting and furniture should be used across individual subdivisions and the wider precinct, appropriate to the type and role of street or public space, to the satisfaction of the responsible authority.

NON RESIDENTIAL INTERFACES REQUIREMENTS

R7	Development must provide for active frontages to the Darebin Creek Conservation Area, the Quarry Hills Regional Parkland or any other area set aside for open space or a waterway corridor. See Figure 1 for open space interface guidance. Side fences and back fences may not abut the Darebin Creek Conservation Area.
R8	Development must provide an active frontage to the E6 reservation and the transmission line easement.

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NON RESIDENTIAL INTERFACES GUIDELINES

G8	Subdivisions should be designed to provide for a road or paper road separating development from the Quarry Hills Regional Parkland, the Darebin Creek conservation area, waterways, the E6 Reservation, and the transmission easement. Where this is not possible due to slope constraints, design and layout options should demonstrate: <ul style="list-style-type: none"> • The use of rear lane access with active frontages to key interfaces • Avoidance of side or rear fence treatments • Opportunities for informal passive surveillance.
G9	Subdivisions should be designed to allow for a continuous pedestrian and cyclist network at the interface of the Quarry Hills Regional Parkland.
G10	Development abutting open space should be well articulated and facilitate passive surveillance from windows, balconies, and pedestrian access points.
G11	Where fencing is required it should be low in scale and permeable to facilitate public safety and surveillance.
G12	Linear corridors adjoining or within road or tree reservations should incorporate park seating adjacent to paths at least every 400 metres.
G13	Landscaping of development and streets should integrate with the adjoining open space design.
G14	Applicants within the buffer of the Extractive Industry Works Area as identified on Plan 2 should liaise with the responsible authority and the Earth Resource Regulation Section of the Department of Economic Development, Jobs, Transport and Resources (DEDJTR), prior to lodging any permit application for residential or commercial development.

EARTHWORKS, EMBANKMENTS AND RETAINING STRUCTURES REQUIREMENTS

R9	Subdivision, engineering, landscape design and buildings and works must provide a sensitive response to current landforms and minimise the need for excavation and cut and fill earthworks.
R10	Earthworks, retaining structures and embankments must be carefully and sensitively designed to transition gradually into natural contours.
R11	Where lawns are utilised for embankments in public areas, the gradient must be in accordance with Council standards.

EARTHWORKS, EMBANKMENTS AND RETAINING STRUCTURES GUIDELINES

G15	Retaining walls over 1 metre should be avoided along the street edge.
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HERITAGE REQUIREMENTS

R12	Any subdivision and/or development of land surrounding a heritage site identified in a Heritage Overlay in the <i>Whittlesea Planning Scheme</i> must have regard to the heritage significance of the site and provide a sensitive interface.
R13	Development of land close to heritage sites identified in a Heritage Overlay in the <i>Whittlesea Planning Scheme</i> must ensure that heritage becomes a prominent component of the urban structure which is conveniently accessible to the wider community.
R14	Subdivision of land in proximity to heritage elements identified on Plan 4 as 'Potential European Historic Sites' must ensure that heritage becomes a prominent component of the urban structure and is conveniently accessible to the wider community.

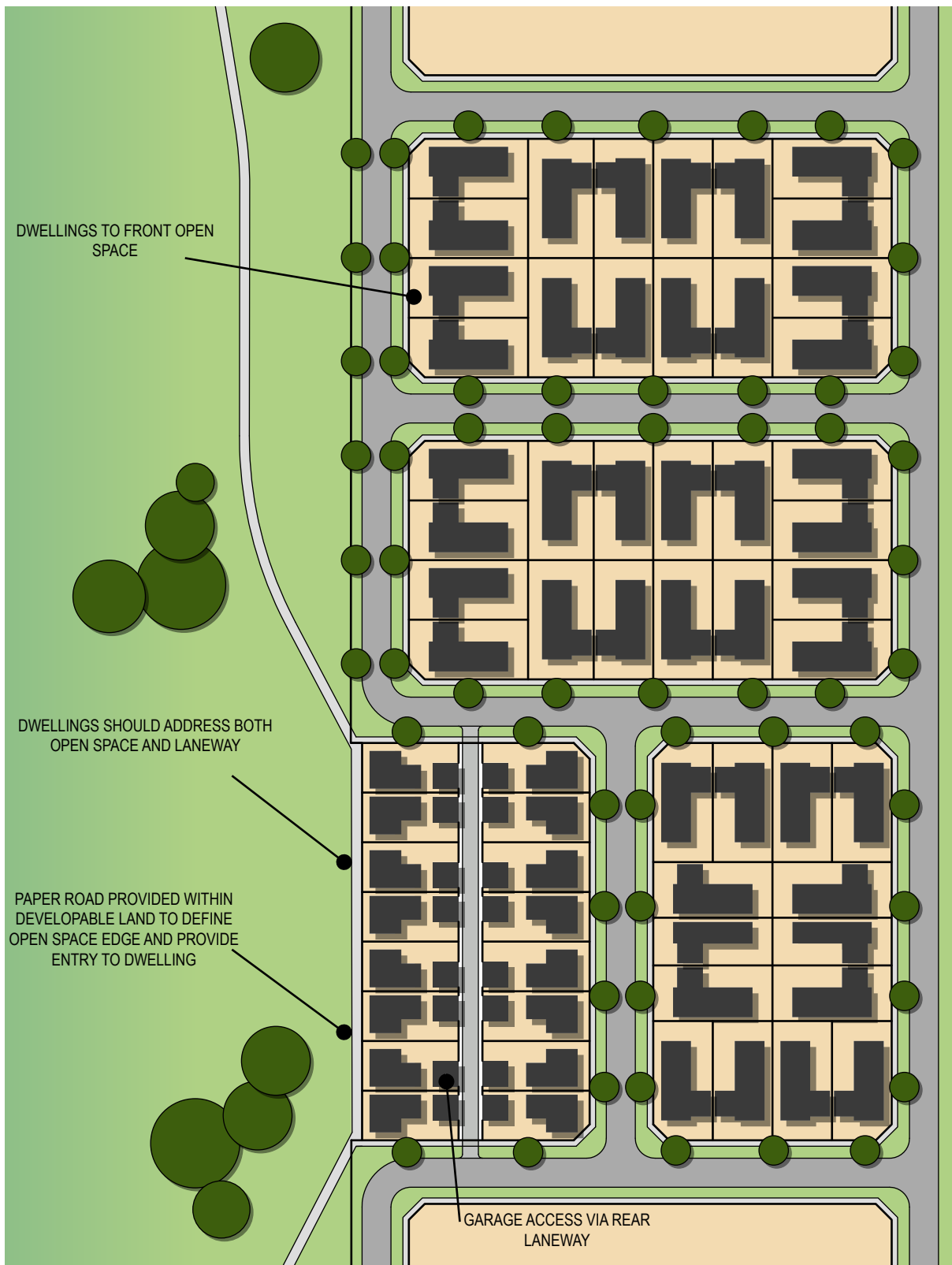


Figure 1: Quarry Hills Interface Treatment

R15	<p>Dry stone walls which are identified on Plan 1 and Plan 4 must:</p> <ul style="list-style-type: none"> • Be situated within public open space or road reserve to the satisfaction of the responsible authority. • Have a suitable landscape interface to minimise maintenance requirements (for example mulch, garden bed or gravel) and must not encourage public access immediately adjacent to the retained walls. • Be checked by a professional craftsman for any loose stones. Any loose stones are to be reinstated in the wall in secure positions. • Retain post and wire or post and rail fences situated within the walls, with any wire protruding beyond the vertical face of the wall reinstated to its original position or removed. • Be incorporated into subdivision design to minimise disturbance to the walls (e.g. utilisation of existing openings for vehicle and pedestrian access).
R16	<p>Installation of services across the alignment of retained dry stone walls is to be undertaken by boring rather than open trenching. If open trenching or disturbance to the wall is unavoidable, a minimum section of wall may be temporarily removed and then reinstated to original condition.</p>
R17	<p>Any reinstatement or repair of walls must be undertaken by a professional craftsman and is to be consistent with the construction style of the original wall.</p>
R18	<p>Reinstatement is to use stone from (in order of priority):</p> <ul style="list-style-type: none"> • The original wall in that location (including fallen stone adjacent to the wall). • A nearby section of the wall approved to be removed. • Any adjacent paddock containing wall parts which can be recovered. • Walls approved to be removed in the nearby area (including any stone which has been stockpiled by Council). <p>A list of professional craftspeople can be obtained by Council and the Dry Stone Walls Association of Australia.</p>
R19	<p>Aboriginal cultural heritage must be protected and conserved through the incorporation of identified areas of importance into the overall design of the precinct in agreement with the Registered Aboriginal Party.</p>

HERITAGE GUIDELINES

G16	<p>Where retention of dry stone walls in their current state is not feasible, walls (or parts of walls) in high profile and/or strategic locations should be re-built by a master craftsman to integrate with the development to the satisfaction of the responsible authority.</p>
G17	<p>Any development of land within a Heritage Overlay in the <i>Whittlesea Planning Scheme</i> should be in accordance with the relevant incorporated document relating to the heritage site as contained in the Schedule to the Heritage Overlay in the <i>Whittlesea Planning Scheme</i>.</p>
G18	<p>Where existing dry stone walls are to be removed, land owners should consult with Council to determine whether the material may be used internally within the precinct or transferred for landscaping purposes.</p>
G19	<p>Heritage items located adjacent to conservation areas, or local parks, should be considered for public or commercial uses.</p>
G20	<p>Streets should be the primary interface between development and waterways. Public open space and lots with a direct frontage may be provided as a minor component of the waterway interface. Where lots with direct frontage are provided, they should be sufficiently set back from the waterway corridor to allow for the provision of pedestrian and service vehicle access to the front of those lots, to the satisfaction of Melbourne Water and the responsible authority.</p>

3.2 HOUSING

3.2.1 Housing density

The overall housing density target for the precinct is based on Net Developable Area (NDA) which is based on the total amount of land within the precinct that is available for the development of housing and town centres, including lots, local streets and connector streets. It excludes land set aside for community facilities, government educational facilities, unencumbered and encumbered open space such as waterways, ecological and heritage conservation areas.

The standard residential density of a minimum 16 dwellings per hectare average applies to the precinct area. It is noted that while this is the standard applied, subdivision applications must be tailored to the context of each individual site. Subdivision plans must take into consideration localised slope, environmental features, interfaces, distance from services and amenities and seek to innovatively respond to these features through a diversity in lot sizes and dwelling types.

Table 2 Estimated Housing Yield and Distribution

RESIDENTIAL	NRA (HA)	APPROXIMATE DWELL / NDHA	APPROXIMATE DWELLINGS	% OF LOTS
STANDARD DENSITY	126.56	15	1898.4	80
MEDIUM DENSITY	18.59	25	464.75	19
VILLAGE TOWN CENTRE	2.26	10	22.6	1
TOTAL YIELD AGAINST NDA	147.41	16.2	2386	100
ANTICIPATED POPULATION			6,681	

HOUSING REQUIREMENTS

R20	Subdivision layout and lot diversity must respond to the natural features of the area, including topographical features, the Quarry Hills Regional Parkland and the Darebin Creek.
R21	The built form of dwellings located at the interface with the Quarry Hills Regional Parkland must be designed to avoid dominating views to and from the parkland through design features such as reduced overall building heights and split level design.
R22	An application for subdivision which includes land located on slopes greater than 10% must be accompanied by Subdivision and Housing Design Guidelines, as required by Clause 3.1 of Clause 37.07-3 of the Whittlesea Planning Scheme. The guidelines must demonstrate how the development will minimise landscape scarring, including minimising large amounts of cut and fill.
R23	Planning permit applications must demonstrate how a development proposal will deliver a diversity of housing.
R24	Where medium density residential development is proposed, it must be located in close proximity to the Village Town Centre and/or open space, including the Growling Grass Frog Conservation Area.
R25	Subdivision applications must include indicative layouts for any lots identified for the future development of medium density, high density, or integrated housing that suitably demonstrate: <ul style="list-style-type: none"> Potential dwelling yield. Active interfaces with adjacent street, open space and waterways. Safe and effective internal vehicle and pedestrian circulation. The delivery of dwelling diversity and lot sizes. Servicing arrangements.
R26	Lots must front (in order of priority where a lot fronts multiple elements): <ul style="list-style-type: none"> Local access streets Waterways and public open space Connector roads Transmission line easements The E6 road reservation
R27	Specialised housing forms such as lifestyle communities, retirement living or aged care facilities must be designed to ensure that clear and logical pedestrian and cyclist permeability is not impeded, and should have convenient access to the town centre, community facilities and public transport networks.

HOUSING GUIDELINES

G21	Subdivision of land should create an overall average density greater than 16 dwellings/NDH. Where a subdivision proposal represents a single stage or limited number of stages, proponents should demonstrate how the subdivision will contribute to the eventual satisfaction of this guideline.
G22	Subdivisions should, for each stage, cater for the provision of three or more dwelling types, as listed in Table 3, as appropriate, or demonstrate an alternative lot range that achieves the housing diversity objectives.
G23	Subdivision of land within 400 metres walkable catchment of the Village Town Centre or designated public transport route should create a range of lot sizes suitable for medium or high density housing types listed in Table 4.
G24	Residential lots which maintain an interface with the Quarry Hills Regional Parkland should provide larger lots to transition from residential development to the Quarry Hills Regional Parkland.
G25	Neighbourhood character should be influenced or created through the implementation of diverse allotment sizes and residential dwelling typologies.
G26	Opportunities for lots to accommodate for natural demographic change should be provided. This may include utilising building envelope plans and avoiding the use of single dwelling covenants on title in order to not prevent the construction of two dwellings on a single lot through the life of the precinct.
G27	Subdivisions should be designed to allow for maximum sustainability outcomes to be achieved.
G28	Front fences should be avoided. If unavoidable, front fences should be no less than 50% transparent and no higher than 1.2 metres.
G29	Subdivision layouts should guide pedestrians to key entry points into the Quarry Hills Regional Parkland, as nominated on Plan 11.
G30	Street activation within residential areas should be encouraged through the inclusion of street furniture and incidental meeting spaces.

Table 3 Housing Type by Lot Size

The following table is intended to provide guidance on the achievement of housing diversity objectives by providing an example of how variation in lot sizes supports the delivery of a broad range of housing types.

INDICATIVE HOUSING TYPE	TYPICAL LOT SIZE (M ²)		
	0-300	301 - 600	601 +
SMALL LOT HOUSING INCLUDING TOWNHOUSES AND ATTACHED, SEMI-DETACHED AND DETACHED HOUSES			
DUAL OCCUPANCIES, DUPLEXES			
DETACHED HOUSES			
MULTI-UNIT HOUSING SITES INCLUDING TERRACES, ROW HOUSES AND VILLAS			
WALK UP FLATS AND APARTMENTS			

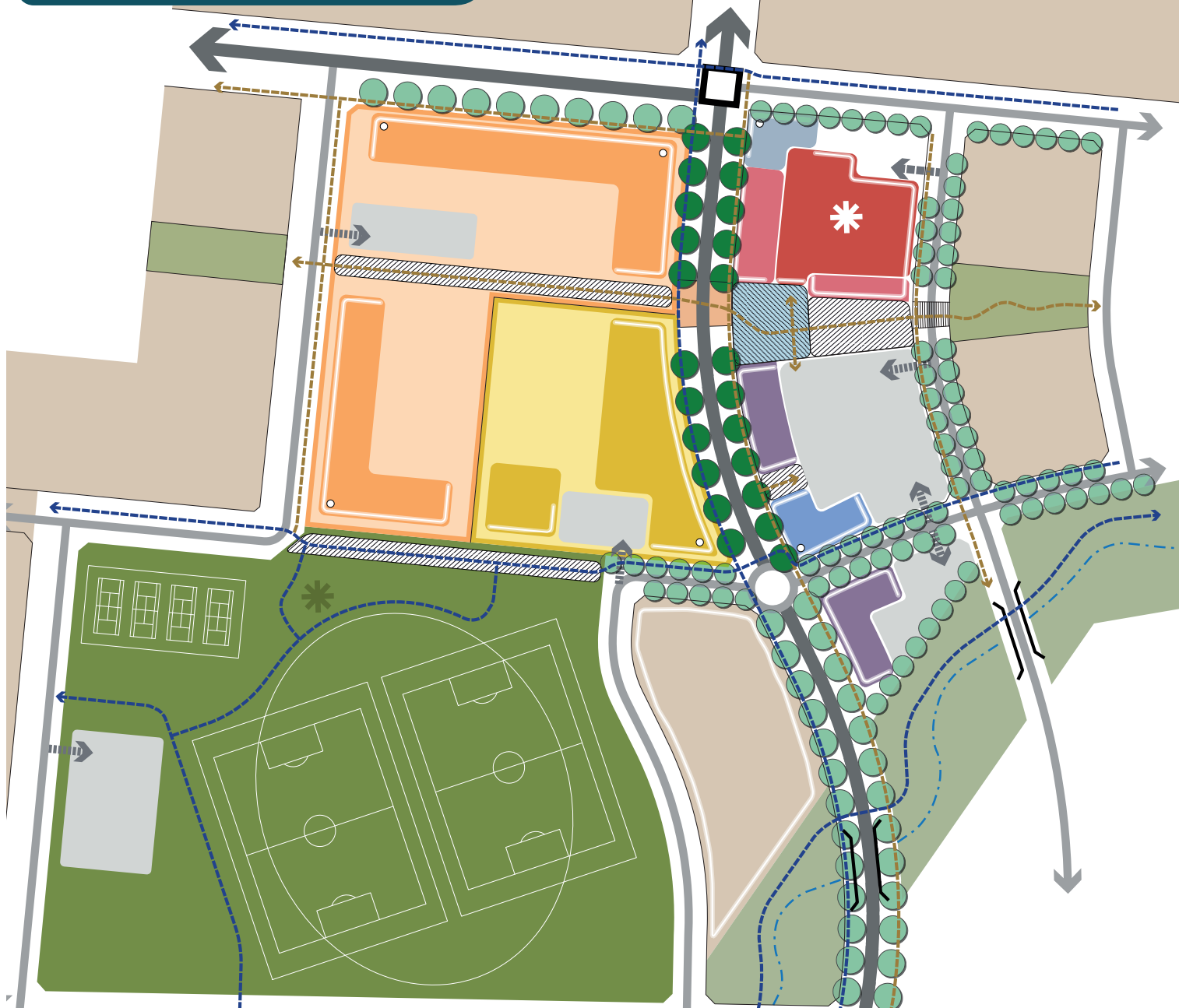
Table 4 Housing Delivery Guide – Walkable Catchment Areas

The following table is intended to provide statutory planners with guidance on the required lot yields across the precinct to underpin the viability of town centres and support the broader town centre objectives.

SUB-PRECINCT	AREA (HA) WITHIN 400M CATCHMENT	HOUSING TARGET (85% OF TOTAL OPPORTUNITY)	HOUSING TYPES
Village Town Centre – Primary Walking Catchment	74.0	1,250	The most significant opportunity for the delivery of high and medium density housing options in the area. Residential development within the town centre should consist of apartments, terraces, and other high density options with a mixture of medium density and small-lot detached housing in the surrounding area

**Plan 5 - Village Town Centre Concept**

Quarry Hills Precinct Structure Plan

**NOTES:**

• KEY STRUCTURING ELEMENTS OF THE VILLAGE TOWN CENTRE CONCEPT PLAN

- North-south main street lined with continuous built form and active frontages.
- Strong east-west axis linking the supermarket to the east and school/community facility to the west.
- Strong corner built form definition at each end of the centre
- A central 'town square' at the intersection of the main street and the primary east-west axis.
- Strong open space edge to the south of the centre.
- All car parking recessed behind main street

- high street
- local access
- supermarket loading
- at grade carpark
- vehicle access to car parking
- key pedestrian circulation
- shared path network
- anchor retail/supermarket
- specialty retail
- commercial
- soho / commercial

- mixed use
- medium density residential
- potential government school
- community facilities
- town square
- key pedestrian links
- sports reserve (credited open space)
- local park (credited open space)
- drainage corridor (service open space)

- main street feature planting
- waterways
- active frontage
- BBQ picnic area
- features of interest to be incorporated into built form

3.3 EMPLOYMENT AND TOWN CENTRES

The Quarry Hills PSP provides for a Local Town Centre (Village Town Centre) and one Local Convenience Centre. The Village Town Centre is located at the junction of Harvest Home Road and the major north-south connector road. A local convenience centre is located in the north of the PSP, at the junction of Whitebark Street and the north-south connector road. The local convenience centre will provide for basic daily needs for residents, particularly in the north and is a suitable location for an interim community facility.

Table 5 Anticipated Employment Creation in Precinct

LAND USE BASED EMPLOYMENT	MEASURE	JOBS	QUANTITY IN PSP	ESTIMATED JOBS
RETAIL	JOBS/20M ²	1	5500M ²	275
OFFICE/NON RETAIL COMMERCIAL	JOBS/30M ²	1	1250M ²	41
POTENTIAL GOVERNMENT SCHOOL	JOBS/SCHOOL	40	1	40
COMMUNITY CENTRE(L2)	JOBS/CENTRE	10	1	10
HOME BASED BUSINESS	JOBS/DWELLING	0.05	2,725	136
TOTAL ESTIMATED				502

3.3.1 Village centre function and business mix

- The Village Town Centre will provide for an indicative retail floor space of approximately 5000m², comprising a small full line supermarket (3000m²) and a variety of specialty retail stores (2000m²).
- The Village Town Centre should be designed to encourage the provision of office/non-retail space (1250m²).
- The Village Town Centre should create a strong, economically viable and integrated centre. This should be facilitated through providing opportunities for medium density residential development with Small Office-Home Office (SOHO) components within and at the periphery of the centre.

EMPLOYMENT REQUIREMENTS

R28	Use and development of the Village Town Centre must be generally in accordance with the layout of land uses and road structure shown in the concepts in Plan 5 - Village Town Centre Concept Plan.
R29	The Village Town Centre must provide for a town square of 650sqm, located generally in accordance with the concept shown in Plan 5.
R30	The masterplanning of the Village Town Centre must ensure that the opportunity for the provision of major public art is considered.
R31	Road and path networks within the Village Town Centre must promote pedestrian and bicycle trips through a clear, direct layout and design.
R32	The Village Town Centre must provide for a range of employment opportunities through the development of a centre which supports a mix of retail, commercial, leisure and community services.
R33	Public and private spaces including streets, town squares and Central Park, must be designed and developed to create a strong sense of social interaction and vibrancy.

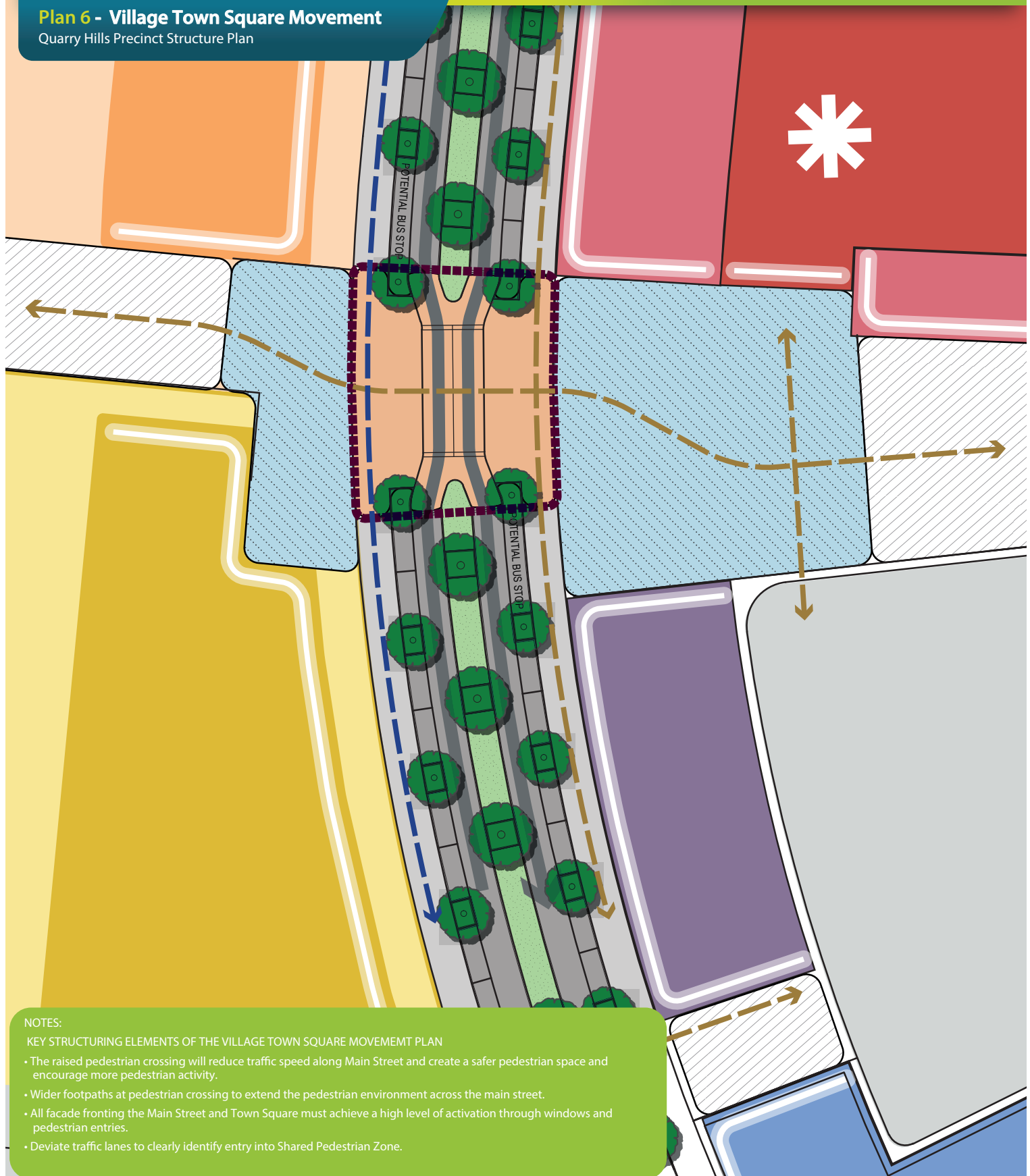
BUILT FORM REQUIREMENTS

R34	Buildings on corner sites within the Village Town Centre must be built to the street edge and use height or other form definition to highlight the entry to the main street.
R35	Buildings with a frontage to the 'main street' must use clear glazing to allow for visibility from the street to internal rooms and avoid the use of white washed windows and window advertising.
R36	All facades fronting the 'main street' must achieve a high level of activation through windows and pedestrian entries.
R37	Developments must locate building entries and the most active functional uses towards the main street edge so that they are visible from the street.



Plan 6 - Village Town Square Movement

Quarry Hills Precinct Structure Plan



NOTES:

KEY STRUCTURING ELEMENTS OF THE VILLAGE TOWN SQUARE MOVEMENT PLAN

- The raised pedestrian crossing will reduce traffic speed along Main Street and create a safer pedestrian space and encourage more pedestrian activity.
- Wider footpaths at pedestrian crossing to extend the pedestrian environment across the main street.
- All facade fronting the Main Street and Town Square must achieve a high level of activation through windows and pedestrian entries.
- Deviate traffic lanes to clearly identify entry into Shared Pedestrian Zone.

- | | |
|----------------------------|------------------------------|
| high street | mixed use |
| key pedestrian circulation | potential government school |
| shared path network | community facilities |
| raised pedestrian crossing | town square |
| shared pedestrian zone | key pedestrian links |
| at grade carpark | main street feature planting |
| anchor retail/supermarket | active frontage |
| specialty retail | |
| commercial | |
| soho / commercial | |

R38	Buildings fronting the 'main street' must provide a continuous built form edge with fine grain development and outward facing built form.
R39	Supermarkets/ big box retail must be sleeved by single fronted small retail at the main street edge.
R40	The supermarkets must be located in a key position and have convenient access to car parking, while maximising activity within the 'main street' and public spaces/thoroughfares.
R41	Community facilities and the Potential Government School must front the main street with active facades and minimal setbacks provided to the street.
R42	Buildings must front public streets and spaces to create a safe and vibrant public realm and reinforce the public movement network.

BUILT FORM GUIDELINES

G31	All retail should have a main entrance which addresses the main street and avoid the use of internal malls and double fronted retail.
G32	Continuous lengths of blank walls should be avoided, and visual interest provided through: <ul style="list-style-type: none"> • Breaking up the length with windows and doors • Strong vertical and horizontal elements • Façade articulation • Varied facade materials
G33	Increased height in built form must be encouraged in order to take advantage of key viewlines to the CBD, the Quarry Hills Regional Parkland and the Darebin Creek.
G34	Corner sites form key entries to the centre and should be celebrated with features of interest to provide visual prominence. Corner sites: <ul style="list-style-type: none"> • Should be designed to provide built form anchors where the "main street" intersects the Harvest Home road. This could be achieved, for example, through the use of a substantial multi – storey building at the corners; • Should not be developed for standard single storey fast food outlets; and • Should be developed to have a ground floor retail floor space component to the "main street" frontage.
G35	Mechanical plant and services structures on roofs should be included within roof lines or otherwise hidden from view.
G36	Service areas should be internalised wherever possible. Where internalised service areas cannot be provided, they should be secured and sensitively screened at the rear of buildings. Where service areas are accessible from car parks, they should present a well-designed and secure façade to public areas.
G37	Adequate allowance should be made for trolley return areas but they must not be placed within public squares, forecourts or open spaces.
G38	The built form should create a high visual standard and quality of development along street frontages.
G39	Key pedestrian entries should be signified through materials or design.

MOVEMENT NETWORK REQUIREMENTS

R43	Widened footpaths must be incorporated into the main street cross section to improve and prioritise pedestrian movements and to allow for the inclusion of outdoor dining zones.
R44	The 'main street' design and layout must prioritise pedestrian movement.

MOVEMENT NETWORK GUIDELINES

G40	Village Town Centre connector streets, including the north south and east west connector streets should link into key shared paths to the Darebin Creek, Central Park and the Quarry Hills Regional Parkland.
G41	The design of building frontages on the main street should incorporate the use of pedestrian canopies to provide for weather protection particularly at pedestrian entries. Lighting should be designed to avoid unnecessary spill to sides or above.



G42	Quality footpath and shopfront lighting should be provided in the centre for night-time visibility and pedestrian safety.
G43	Street furniture should be located in areas that are highly visible, where pedestrian movements are not compromised and close to or adjoining pedestrian desire lines/gathering spaces.
G44	Level changes between building entries from public streets should be minimised.
G45	The 'main street' precinct should be designed to encourage traffic to conform with a speed environment of 40km/h or less.
G46	Bicycle parking should be provided within the street network in highly visible locations and close to pedestrian desire lines and gathering spaces.

VEHICULAR ACCESS/PARKING REQUIREMENTS

R45	Off-street car parking must be located to the rear of buildings sleeved behind buildings fronting the main street.
R46	Heavy vehicle movements (i.e. loading and deliveries) must not front the main street and must be located to the rear of the retail premises.

VEHICULAR ACCESS/PARKING GUIDELINES

G47	Parallel on-street parking should be provided to encourage short stay parking.
G48	Car parking ingress and egress crossovers should be grouped and limited.
G49	Vehicle ingress and egress and car parking areas accommodating heavy vehicle movements should be designed to limit the potential for pedestrian/vehicle conflict and maximise the visibility of pedestrians by drivers.
G50	Car parking areas should provide for appropriate landscaping including planting of canopy trees.

DIVERSITY AND ADAPTABILITY REQUIREMENTS

R47	Fine grain retail opportunities must be provided fronting the main street.
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DIVERSITY AND ADAPTABILITY GUIDELINES

G51	Shopfronts should have varying widths and floor space areas to promote a diversity of use and trading opportunities throughout the Village Town Centre.
G52	Flexibility (including floor to ceiling heights) should be incorporated into building design to enable a range of uses and future adaptability including promoting localised non-retail commercial uses in the town centre.
G53	Facilities such as childcare and medical centres, gyms, dance schools, places of assembly etc. are encouraged within or adjacent to the Village Town Centre.
G54	Centre design should seek to minimise amenity and noise impacts resulting from the mix of uses.
G55	Mixed use development with retail, restaurant and café activities at street level and commercial/residential opportunities above are encouraged.
G56	Appropriately designed and sited medium density residential should be located surrounding the town centre. This housing should be designed to front streets and public spaces and utilise rear lanes or other alternative access measures to minimise garage frontage to streets.

COMMUNITY PARTICIPATION AND INTEGRATION REQUIREMENTS

R48	Community facilities and the Potential Government School must front the main street with active facades and minimal setbacks provided to the street.
R49	<p>The design and provision of a centrally located 'Town Square' along the main street must be provided that:</p> <ul style="list-style-type: none"> • Is a minimum of 650m². • Is central to the Village Town Centre and provide a focus for the local community. • Is located at a high intensity node where core uses are concentrated. • Includes a combination of soft and hard landscaping, furniture and fixtures to reinforce a sense of place and identity. • Includes cafes, restaurants and active retail at its edges so that outdoor dining and other activity can 'spill out' into the public space. • Is appropriately scaled to accommodate a range of activities including outdoor dining and pedestrian movements. • Is oriented to ensure good solar access and also provides protection from prevailing winds and adverse weather conditions. • Achieves a high degree of visual enclosure through surrounding built form.

LOCAL IDENTITY AND LEGIBILITY GUIDELINES

G57	Development should complement and enhance the character of the surrounding area by responding appropriately to key visual cues associated with the topography, natural features of the site and its surrounds.
G58	Key view lines/sight lines into, and out of, the Village Town Centre should be incorporated in the overall design to promote way finding and accessibility.
G59	Streets and paths should be located in response to landform and natural features.
G60	Orientate medium density residential development to engage with the main street and public open spaces.
G61	The main street should use feature canopy street trees to define the street.

LOCAL CONVENIENCE CENTRE GUIDELINES

G62	The Local Convenience Centre should be located as illustrated on Plan 2.
G63	The design of the Local Convenience Centre should consider inclusion of two storey built form and ensure that all buildings are well articulated and of a high quality urban design that reflects its location as a key community hub within the precinct.
G64	The Local Convenience Centre should feature a high degree of permeability and clear circulation to ensure that key destinations within the centre are easily accessible by walking and cycling.
G65	The Local Convenience Centre should be designed in accordance with Appendix 4.4 Local Convenience Centre Guidelines.

3.4 COMMUNITY FACILITIES

3.4.1 Community hub concept planning

An agreed integrated approach to the planning, design and development of the community facility, the Central Park and the future school guided the design of the community hub.

The Community Hub, as identified within the Village Town Centre Concept Plan (Plan 5) illustrates the integrated nature of the community centre and primary school. The community centre will contain kindergarten rooms and associated outdoor spaces, meeting rooms, a kitchen, a hall, and a range of consulting suites for maternal child health and other non-government organisations.

Opportunities for the shared use of the community centre facilities and the sports reserve have been investigated through the broad concept planning for the Community Hub and should be accommodated through flexible facility design and integration through the hub master planning.

It is expected that models for service delivery may change over time as new approaches are adopted and the PSP has been designed to be flexible to accommodate potential changes.

The governance arrangement and engagement of stakeholders is an important part of progressing the vision of an integrated and flexible community hub. It is expected that Council and Department of Education and Training will work together to formalise delivery and management of the facilities outside of the PSP. This may include, identifying and resolving issues around facility design, ownership, leasing, capital works funding, service delivery, management and maintenance and upgrades over time.

The opportunities for integrated facility delivery apply equally to sporting facilities as they do to items such as community centres and schools.

Early provision of community facilities and service spaces are integral to facilitating social interaction opportunities and cementing new and future resident relationships. Given the catchment size of the Quarry Hills PSP, and the extensive period of time which may pass between the first residents arriving into the precinct, and the development of the community hub, innovative early or interim provision opportunities should be explored between Council and other relevant parties. An interim community facility could be accommodated within the local convenience centre in the north of the precinct.

3.4.2 Community health and wellbeing

Community health and wellbeing should be considered at all levels of the planning process. Identifying the many measures available within the built environment, which can be utilised for fostering social interaction and increasing levels of human activity, is critical in providing a framework for a socially connected, equitable and healthy community.

COMMUNITY FACILITY REQUIREMENTS

R50	The Community Facility must be co-located with the Village Town Centre, Central Park and Potential Government School and be reflective of the Quarry Hills Precinct Structure Plan Village Town Centre Concept Plan (Plan 5).
R51	Community Facilities must reflect a high quality architectural outcome, and be in keeping with the design and built form outcomes of the Village Town Centre with respect to height, orientation and activation.
R52	The floor plan of the Community Facility must be designed to maximise flexibility in the range of uses which can occur at the site.
R53	The Community Facility must be designed to front, and be directly accessed from the main street, with secondary access to be provided from the Potential Government School and Central Park.
R54	Change room and toilet facilities associated with the Community Facility, must be oriented to ensure ease of access for users of Central Park.

R55	Any educational, community or civic infrastructure not shown on the Quarry Hills Village Town Centre Concept Plan must be located within or proximate to the town centre.
COMMUNITY FACILITY GUIDELINES	
G66	Community Facilities, including Central Park and Potential Government School should be planned and designed concurrently to ensure integrated delivery and shared use of services and facilities.
G67	Any private childcare, medical or similar facility is encouraged to locate proximate to the Village Town Centre.
G68	The design and layout of Community Facilities and Central Park should be integrated and allow for easy pedestrian access between the two.
G69	Detailed masterplanning of the Community Hub should include opportunities for the development of Community Gardens and associated infrastructure including garden beds, garden sheds, seating and water tanks.
G70	The location of key entries to the Community Facilities and school should allow for safe and convenient pedestrian and cyclist access for all ages and abilities.
G71	<p>The built form of the Community Facility and school should be architecturally designed to be responsive to the site and surrounds by:</p> <ul style="list-style-type: none"> • Providing strong built form definition of streets. • Providing increased height at key corners of the Village Town Centre. • Incorporating design elements to minimise energy and resource use. • Incorporating principles for universal access (all ages and all abilities) into the design of the Community Facility and broader hub area. • Minimising the use and height of perimeter site fencing in favour of the use of appropriate landscape treatments. • Fencing in excess of 1.8 metres should be avoided. If fences are unavoidable, they should be semi transparent and less than 1.2 metres <p>Buildings and works associated with the development of the primary school and Quarry Hills Community Facility must be generally in accordance with the Quarry Hills Precinct Structure Plan Village Town Centre Concept Plan (Plan 5).</p>



Plan 7 - Open Space

Quarry Hills Precinct Structure Plan

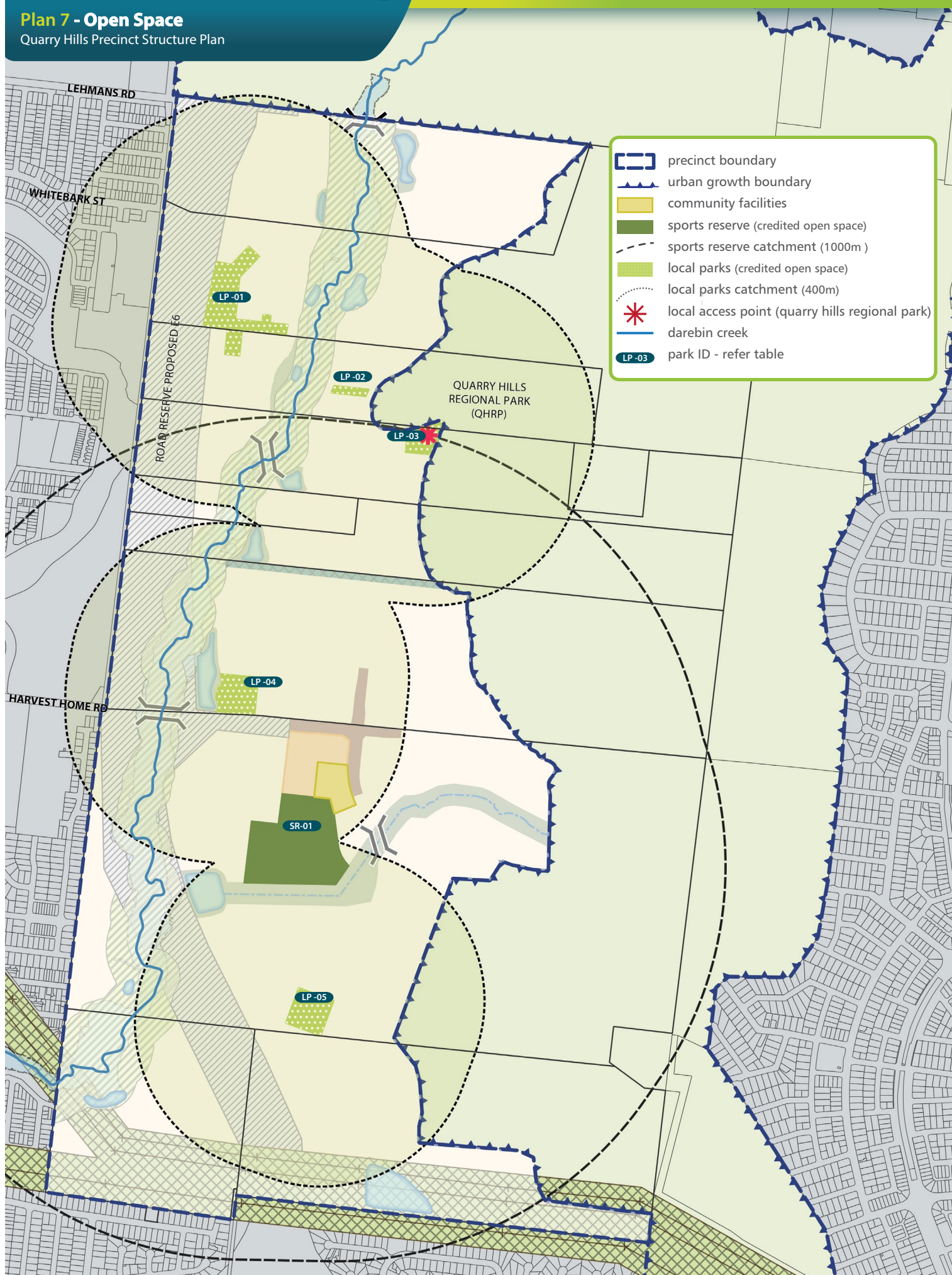


Table 6 Open Space Delivery Guide

PARK ID	PARK FUNCTION	LOCATION AND OTHER ATTRIBUTES	SIZE	RESPONSIBILITY
SR-01	SPORTS RESERVE	LOCATED AS PER PLAN 7, INDICATIVE SPORTS PROVISION - 1 X MULTI-PURPOSE SPORTING FIELD - 4 X TENNIS COURTS - CAR PARKING AS PER COUNCIL REQUIREMENTS - FENCING WHERE REQUIRED - SHARED PATHS - SHADE/COVERED AREAS - BBQ AND SEATING FACILITIES	5.0HA	COW
LP-01	NEIGHBOURHOOD LOCAL PARK	LOCATED AS PER PLAN 7 - SEATING - FENCING AS REQUIRED - SHARED PATHS - LOCAL PLAYGROUND"	2.3HA	COW
LP-02	NEIGHBOURHOOD LOCAL PARK	LOCATED AS PER PLAN 7 - SHARED PATHS"	0.21HA	COW
LP-03	NEIGHBOURHOOD LOCAL PARK	LOCATED AS PER PLAN 7 - SHARED PATHS - SEATING - DIRECTIONAL SIGNAGE	0.64HA	COW
LP-04	NEIGHBOURHOOD LOCAL PARK	LOCATED AS PER PLAN 7 - SEATING - FENCING AS REQUIRED - SHARED PATHS - LOCAL PLAYGROUND	1.0HA	COW
LP-05	NEIGHBOURHOOD LOCAL PARK	LOCATED AS PER PLAN 7 - SEATING - FENCING AS REQUIRED - SHARED PATHS - LOCAL PLAYGROUND	1.0HA	COW

3.5 OPEN SPACE AND NATURAL SYSTEMS

The Quarry Hills Precinct Structure Plan is located at the foot of the Quarry Hills Regional Parkland. The Quarry Hills Precinct Structure Plan will anchor off this special area of Regional Open Space, providing future residents with convenient access to a range of passive and informal recreation uses. The parkland will sit in addition to the local open space and Central Park within the Quarry Hills Precinct Structure Plan area, but will be highly linked through a series of integrated pedestrian and cyclist paths.

OPEN SPACE AND NATURAL SYSTEMS REQUIREMENTS	
R56	Open space must be provided in accordance with Table 6 of this document.
R57	A diverse range of local parks must be provided to the meet the needs of the community and be constructed to be fit for purpose
R58	Where playspaces are to be provided by the developer, the design and development of the space must be in accordance with the City of Whittlesea Playspace Planning Framework and Policy.
R59	The local open space network must be integrated into the broader open space network including the Quarry Hills Regional Parkland and the Darebin Creek corridor through the development of key pedestrian and cyclist links.
R60	The open space network must link into surrounding existing and proposed open space through the use of pedestrian and cyclist links.
R61	Highly permeable pedestrian and cyclist links must be provided to the Quarry Hills Regional Parkland and Darebin Creek and connect to existing networks external to the precinct.



R62	Any fencing of open space, whether encumbered or unencumbered, must be low scale and visually permeable to facilitate public safety and surveillance. Fences other than vehicle exclusion bollards or pedestrian exclusion fencing to prevent access to conservation areas are to be avoided.
R63	Vehicle exclusion bollards must be placed at any formal entry into the Quarry Hills Regional Parkland. During development phases, interim post and wire fencing must be provided along the boundary of the Quarry Hills Regional Parkland.
R64	The design of waterway corridors, conservation areas, wetlands and retarding basins and any other encumbered open space must seek to enhance the amenity value of that open space and provide for a range of flexible recreational opportunities. This is to be prioritised when such land abuts unencumbered passive or active parkland where this does not conflict with the primary function of the encumbered area.
R65	Planting at the periphery of the Quarry Hills Regional Parkland, Darebin Creek Environs and conservation areas must be indigenous and assist with enhancing the overall habitat and amenity values of the precinct.
R66	Planting within the private realm at the interface of the Quarry Hills Regional Parkland should be low in scale and must not impede passive surveillance of the parkland.
R67	Physical infrastructure associated with open space areas including seating and play infrastructure must be designed and developed to the satisfaction of the responsible authority.
R68	The layout (including design and width) of open space and natural systems must be to the satisfaction of the responsible authority. The layout of drainage infrastructure, including waterway corridors, open channels, wetlands and retarding basins must be to the satisfaction of the responsible authority and Melbourne Water.

OPEN SPACE AND NATURAL SYSTEMS GUIDELINES

G72	Planting of open spaces should complement existing vegetation found throughout the precinct.
G73	Open space areas should be located and designed to contribute to the protection and enhancement of existing environmental, habitat and historical values of the precinct.
G74	Passive parks should cater for a broad range of users by providing a mix of spaces and planting to support both structured and unstructured recreational activities and play opportunities for all ages and abilities.
G75	Any pedestrian link through a drainage reserve or adjoining the road network should include provision of park seating at appropriate intervals to the satisfaction of the responsible authority.
G76	Existing vegetation should be protected and enhanced through open space networks which facilitate habitat and movement corridors for species found within the region and the precinct.
G77	Open spaces should have a road frontage to all edges except where a direct pedestrian connection is being provided to the Community Hub or where housing fronts open space with a paper road.
G78	Linear open space corridors adjoining or within road tree reserves should incorporate park seating adjacent to paths at least every 400m.
G79	The design of waterways, wetlands (other than Growling Grass Frog wetlands), retarding basins and other encumbered land should maximise the potential for the integration of local parks and / or sports reserve where this does not conflict with the primary function of the land.
G80	Where fencing of local parks, active sporting field and conservation areas within parks is required it should be low scale (max. 1.2m) and be designed to guide appropriate movement and access rather than as an impenetrable barrier. Design and materials should complement the park and conservation setting. Preferred fence types include: <ul style="list-style-type: none"> • Timber post with timber beams, pipe, wire or chain. • Timber post and chain wire may be required for critical areas.
G81	Local parks which are incorporated into conservation or tree retention areas should be designed to ensure that activities and play opportunities are low in impact.
G82	In order to provide safe and pleasant open spaces, design principles known as "Crime Prevention Through Environmental Design" (CPTED) should guide the design of open spaces and associated infrastructure.
G83	Park infrastructure such as playgrounds, shelters, BBQs, picnic tables and toilets should be located with reference to the Village Town Centre Concept Plan (Plan 5).

G84	Path networks associated with open space located inside and outside of the precinct should include way finding signage which clearly identifies key destinations.
G85	Public areas should be lit to Australian standards and to the satisfaction of the responsible authority.
G86	Water Sensitive Urban Design principles should be used so that excess run-off water from within, or where appropriate, external to the park, is directed to support park planting and / or rain gardens rather than being diverted to drains, to the satisfaction of the responsible authority.

QUARRY HILLS SPORTS RESERVE REQUIREMENTS

R69	The sports reserve must be designed to ensure that a range of recreational uses can occur at the site and be generally in accordance with the Quarry Hills Precinct Structure Plan Village Town Centre Concept Plan (Plan 5).
R70	The sports reserve must provide a strong physical and visual connection with the Community Facility, Potential Government School and Village Town Centre.
R71	The sports reserve area must be incorporated into the broader open space network through a series of pedestrian and cyclist links.
R72	Links between the northern end of the sports reserve into the Community Facility must be clearly signed and designed to maximise multiuse potential and the sharing of facilities (such as change rooms and toilets).

QUARRY HILLS SPORTS RESERVE GUIDELINES

G87	Pedestrian and cyclist networks should ensure that the sports reserve are a key destination point and easily accessible from all parts of the precinct.
G88	The sports reserve should be planned generally in accordance with the Village Town Centre Concept Plan (Plan 5), to the satisfaction of the responsible authority.
G89	Structures located within the open space area should be low in scale and reflective of the character of the precinct.
G90	Planting within the Central Park area should not obstruct physical and visual links to the Community Facility and Potential Government School to the satisfaction of the responsible authority.

3.5.1 How to make a public open space contribution in this precinct

Further to the public open space contribution required by Clause 52.01 of the *Whittlesea Planning Scheme*, this provision sets out the amount of land to be contributed by each property in the precinct and consequently where cash contribution is required in lieu of land.

All owners must provide a public open space contribution equal to 3.5% of the Net Developable Area (NDA) upon subdivision of land in accordance with the following:

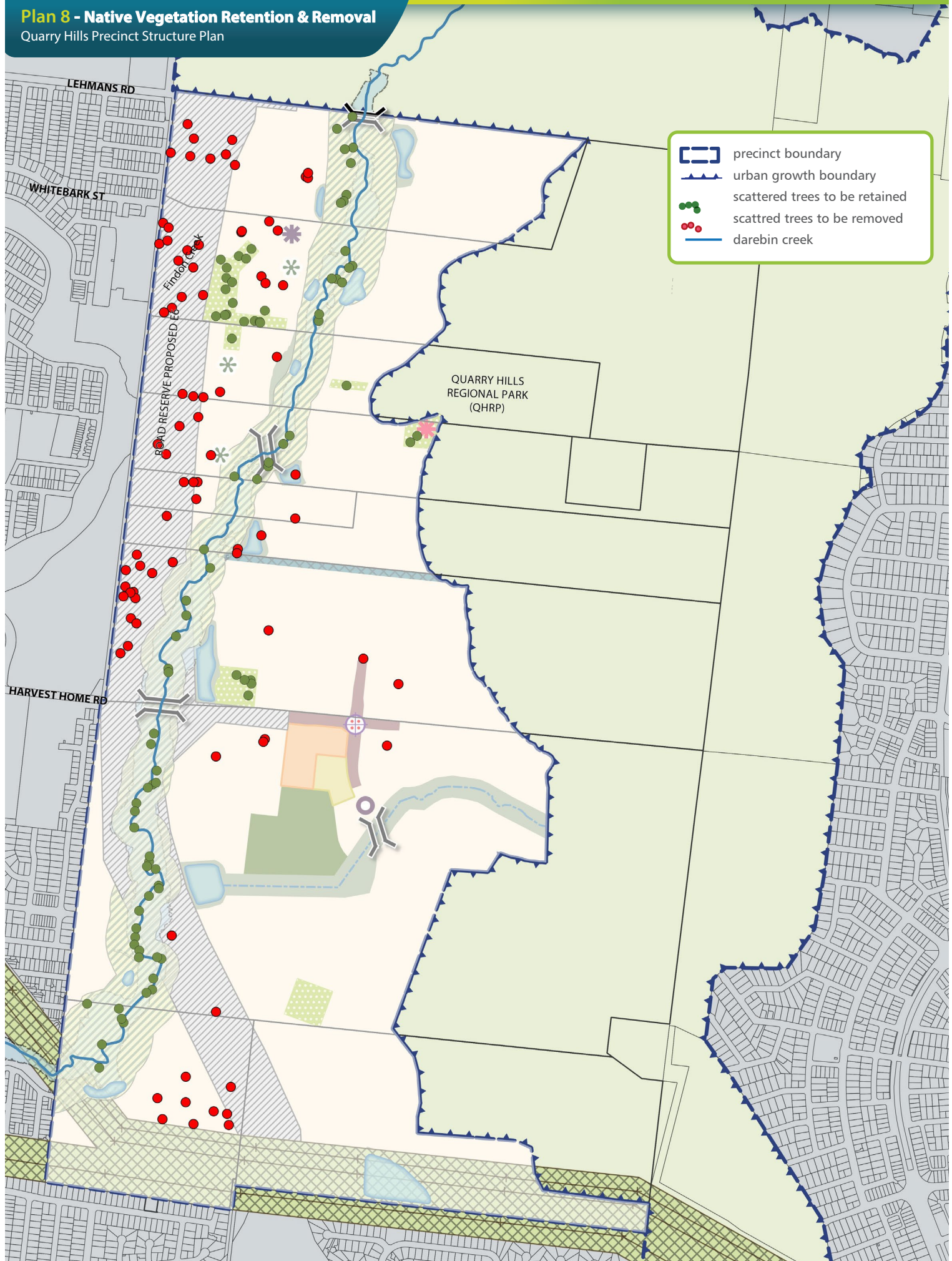
- Where land is required for unencumbered open space purposes as shown on Plan 7 and Specified in Appendix 4.1 and is equal to 3.5% of NDA that land is to be transferred to Council at no cost.
- Where no land or less than 3.5% of NDA is shown on Plan 7 and specified in Appendix 4.1, as required for unencumbered open space purposes, a cash contribution is to be made to Council to bring the total open space contribution to a value equal 3.5% of NDA of that site.
- Where land required for unencumbered open space purposes as shown on Plan 7 and specified in Appendix 4.1 is more than 3.5% of NDA, Council will pay an amount equivalent to the value of the additional land being provided by that proposed development.

The value of land for equalisation purposes is to be assessed as an equivalent proportion of the value of the whole land, in accordance with Section 18 of the *Subdivision Act., 1986*.



Plan 8 - Native Vegetation Retention & Removal

Quarry Hills Precinct Structure Plan



3.6 BIODIVERSITY AND THREATENED SPECIES

The following requirements and guidelines are in addition to biodiversity requirements and conditions identified in Schedule 3 to Clause 37.07 of the Whittlesea Planning Scheme.

BIODIVERSITY AND THREATENED SPECIES REQUIREMENTS

R73	Development abutting any conservation area must be in accordance with Figure 2, or in exceptional circumstances, Figure 3, to the satisfaction of the Secretary to the Department of Environment, Land, Water and Planning. Side fences and back fences must not be the property interface to the conservation area.
R74	Any public paths or infrastructure located within a conservation area must be designed to avoid/minimise disturbance to vegetation or Growling Grass Frog (GGF) habitat. Public paths are to be generally located in accordance with the GGF Conservation Area Concept Plan (Plan 9) to the satisfaction of the Department of Environment, Land, Water and Planning, Melbourne Water and the responsible authority.
R75	Public lighting must be designed and baffled to prevent light spill and glare within and adjacent to any Growling Grass Frog conservation area, except where agreed by the Secretary to the Department of Environment, Land, Water and Planning.
R76	Any passive open space areas integrated within the Growling Grass Frog Conservation Area, must not detract from the conservation reserve, to the satisfaction of the Secretary to the Department of Environment, Land, Water and Planning.

BIODIVERSITY AND THREATENED SPECIES GUIDELINES

G91	Public recreation and open space areas should be co-located with significant conservation areas and waterways to create and/or enhance any conservation area.
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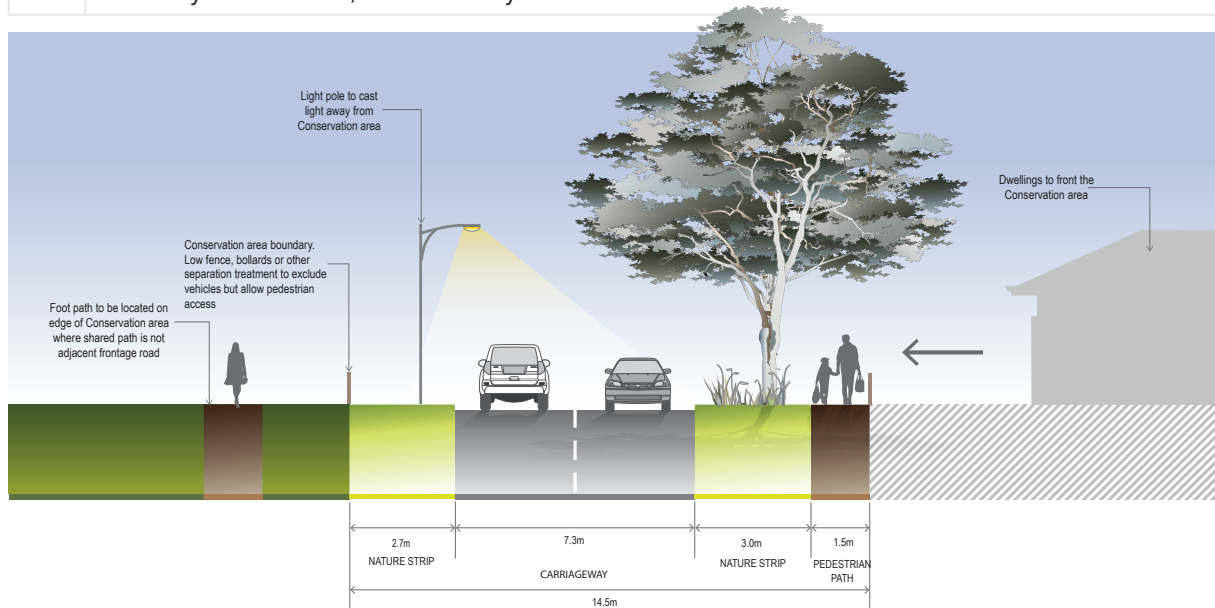


Figure 2: Growling Grass Frog Interface - Frontage Road

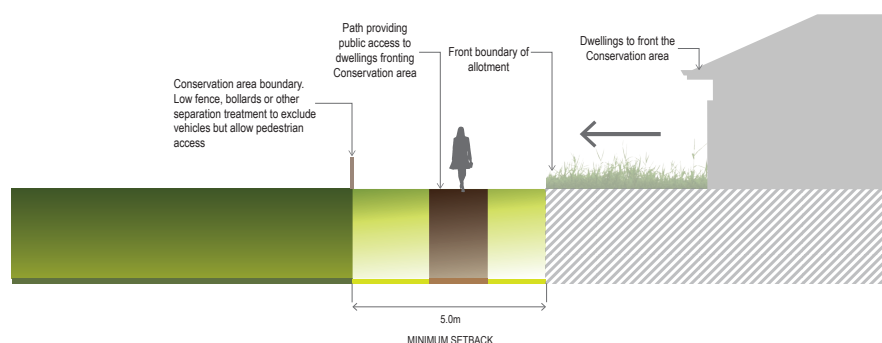
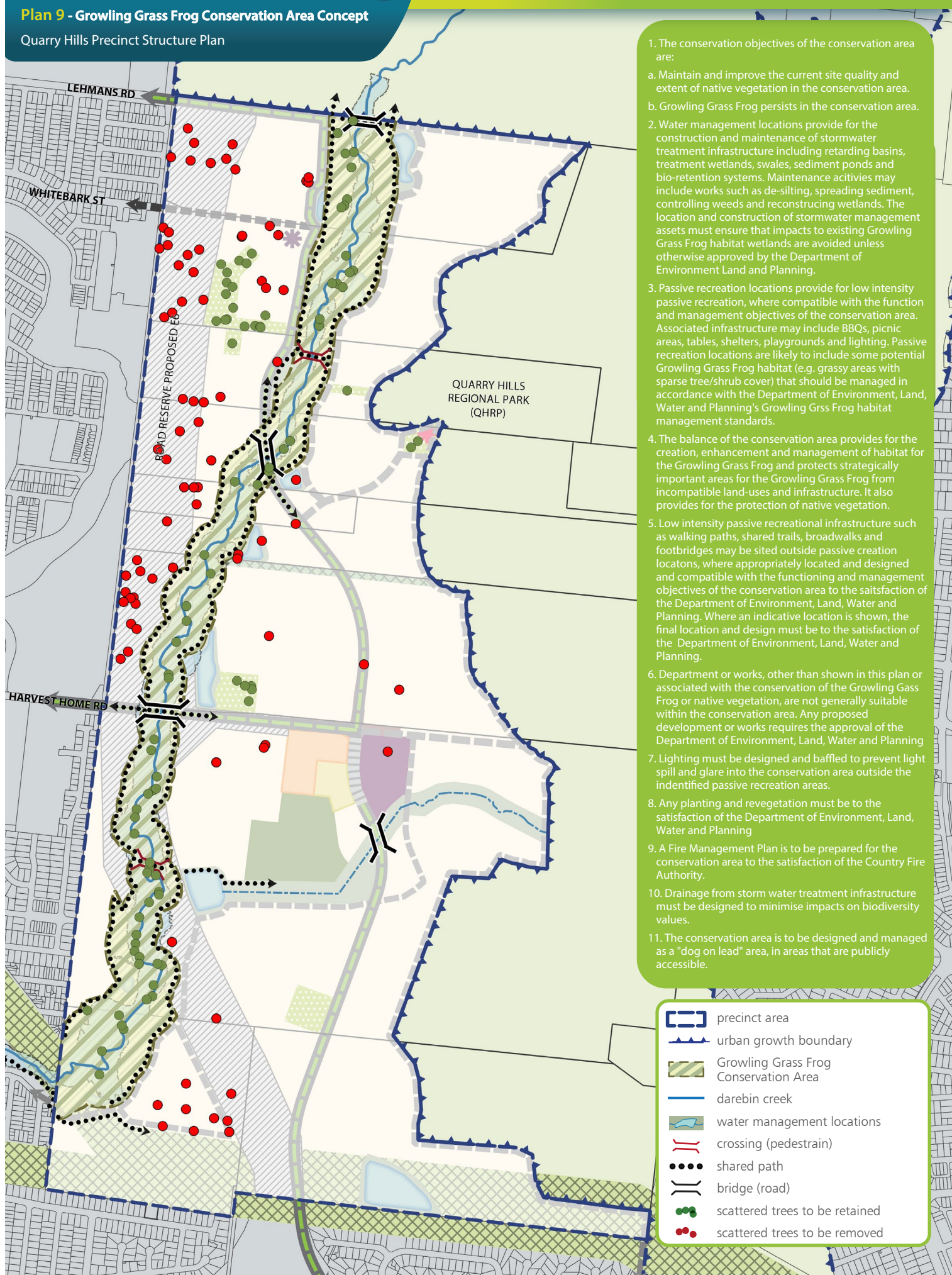


Figure 3: Growling Grass Frog Interface - Paper road frontage



Plan 9 - Growing Grass Frog Conservation Area Concept

Quarry Hills Precinct Structure Plan



1. The conservation objectives of the conservation area are:

- Maintain and improve the current site quality and extent of native vegetation in the conservation area.
- Growing Grass Frog persists in the conservation area.

2. Water management locations provide for the construction and maintenance of stormwater treatment infrastructure including retarding basins, treatment wetlands, swales, sediment ponds and bio-retention systems. Maintenance activities may include works such as de-silting, spreading sediment, controlling weeds and reconstructing wetlands. The location and construction of stormwater management assets must ensure that impacts to existing Growing Grass Frog habitat wetlands are avoided unless otherwise approved by the Department of Environment Land and Planning.

3. Passive recreation locations provide for low intensity passive recreation, where compatible with the function and management objectives of the conservation area. Associated infrastructure may include BBQs, picnic areas, tables, shelters, playgrounds and lighting. Passive recreation locations are likely to include some potential Growing Grass Frog habitat (e.g. grassy areas with sparse tree/shrub cover) that should be managed in accordance with the Department of Environment, Land, Water and Planning's Growing Grass Frog habitat management standards.

4. The balance of the conservation area provides for the creation, enhancement and management of habitat for the Growing Grass Frog and protects strategically important areas for the Growing Grass Frog from incompatible land-uses and infrastructure. It also provides for the protection of native vegetation.

5. Low intensity passive recreational infrastructure such as walking paths, shared trails, broadwalks and footbridges may be sited outside passive recreation locations, where appropriately located and designed and compatible with the functioning and management objectives of the conservation area to the satisfaction of the Department of Environment, Land, Water and Planning. Where an indicative location is shown, the final location and design must be to the satisfaction of the Department of Environment, Land, Water and Planning.

6. Department or works, other than shown in this plan or associated with the conservation of the Growing Grass Frog or native vegetation, are not generally suitable within the conservation area. Any proposed development or works requires the approval of the Department of Environment, Land, Water and Planning.

7. Lighting must be designed and baffled to prevent light spill and glare into the conservation area outside the identified passive recreation areas.

8. Any planting and revegetation must be to the satisfaction of the Department of Environment, Land, Water and Planning.

9. A Fire Management Plan is to be prepared for the conservation area to the satisfaction of the Country Fire Authority.

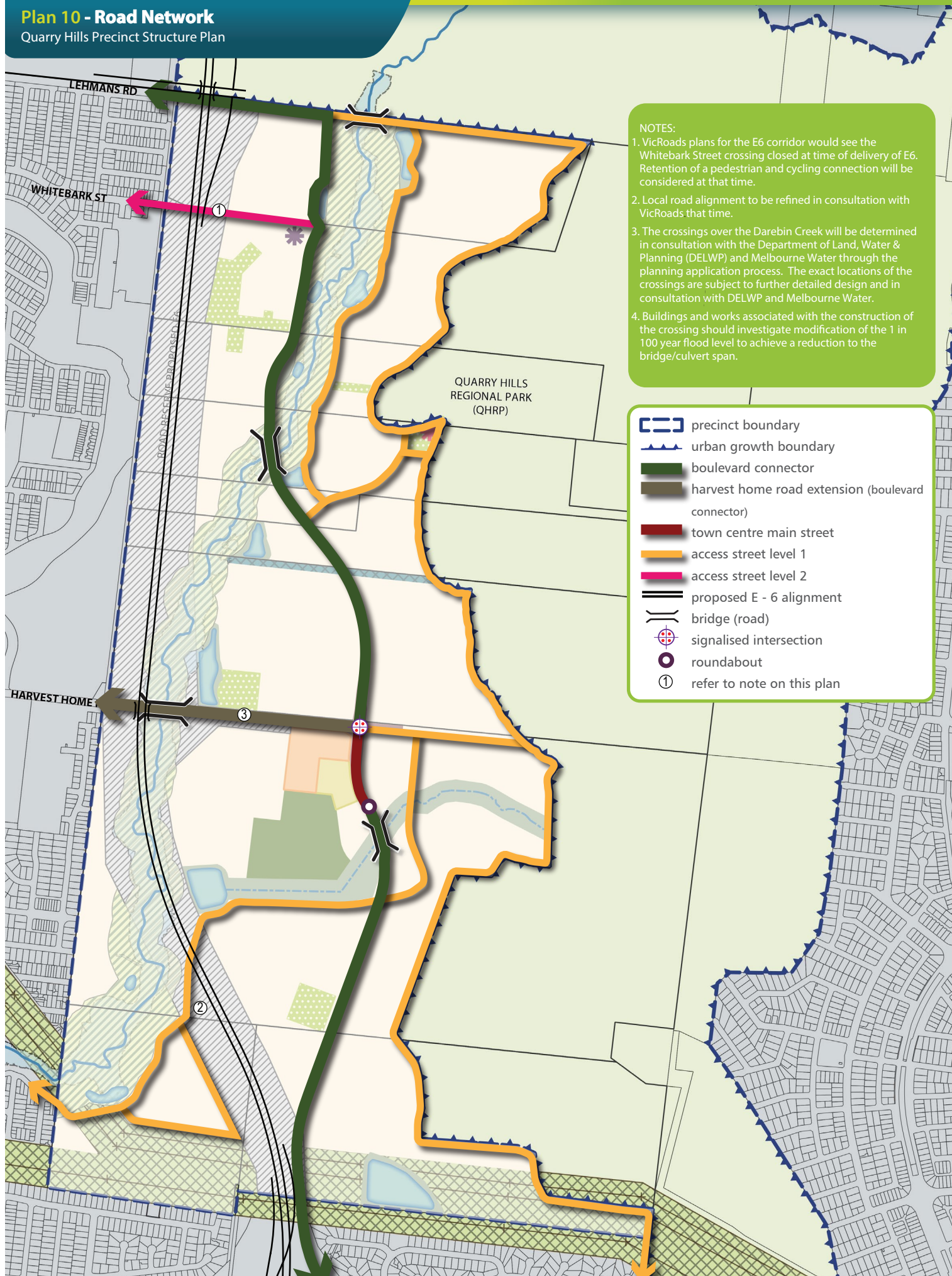
10. Drainage from storm water treatment infrastructure must be designed to minimise impacts on biodiversity values.

11. The conservation area is to be designed and managed as a "dog on lead" area, in areas that are publicly accessible.

G92	The layout and design of the waterways, wetlands and retarding basins (including the design of paths, bridges and boardwalks and the stormwater drainage system) should integrate with biodiversity and natural systems to the satisfaction of the responsible authority.
G93	Planting in streetscapes and parks abutting waterways should make use of indigenous species to the satisfaction of Melbourne Water and the responsible authority.
G94	Street trees and public open space landscaping should provide habitat for indigenous fauna species, in particular arboreal animals and birds, where practical.
G95	Where a lot interfaces with the Growling Grass Frog Conservation Area, the dwelling should front the conservation area and be designed generally in accordance with Figure 3.
G96	Local roads that interface with the Growling Grass Frog Conservation Area should be designed generally in accordance with Figure 2.

**Plan 10 - Road Network**

Quarry Hills Precinct Structure Plan



3.7 TRANSPORT AND MOVEMENT

INFRASTRUCTURE WITHIN THE GROWLING GRASS FROG CONSERVATION AREA REQUIREMENTS

R77	Applications to construct infrastructure within the Growling Grass Frog conservation area must be generally in accordance with the specifications and locations shown in this PSP and DCP and be approved to the satisfaction of Secretary to the Department of Environment, Land, Water and Planning.
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PUBLIC TRANSPORT REQUIREMENTS

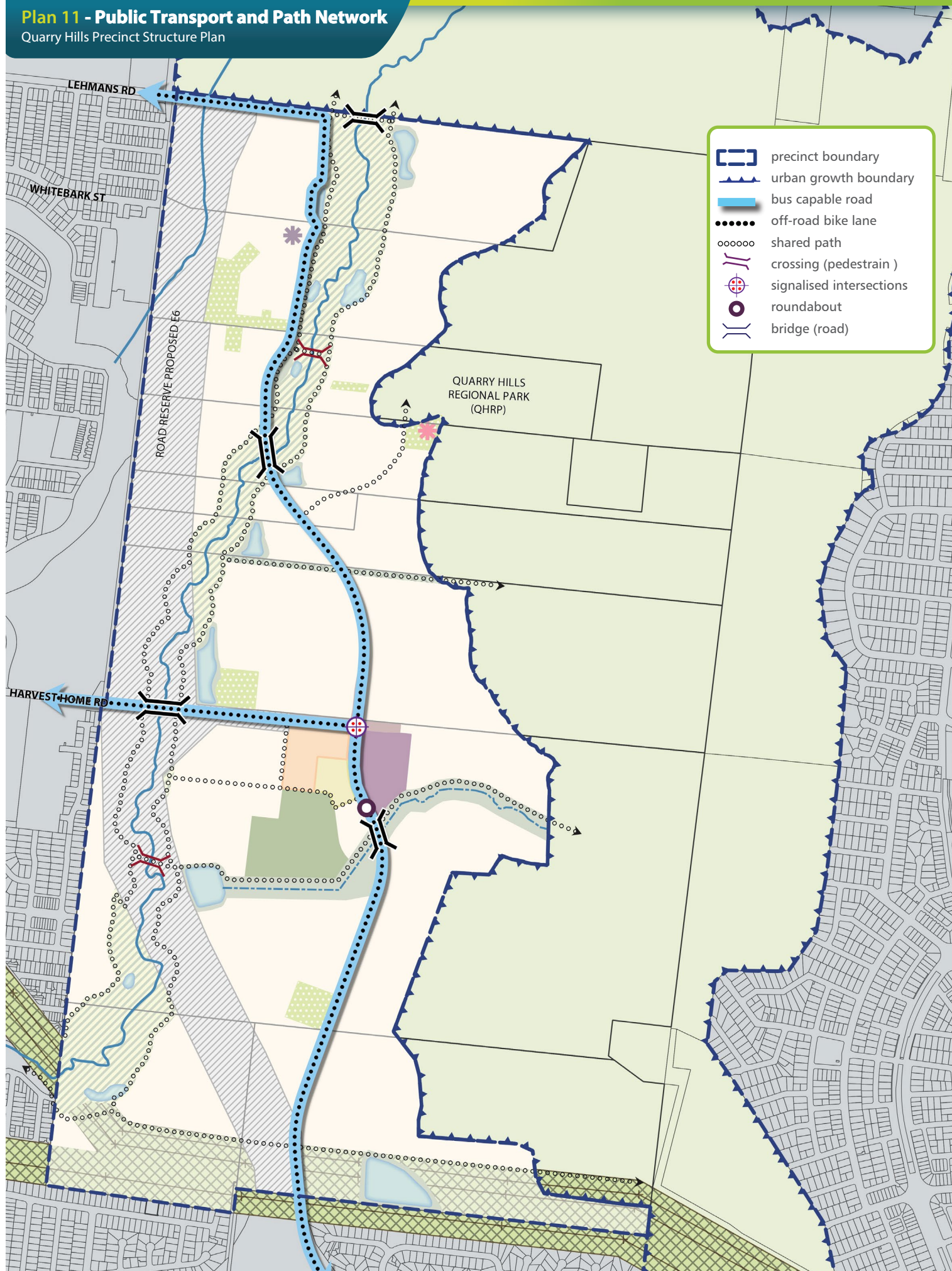
R78	Bus stop provision must be designed as an integral part of the Village Town Centre and activity generating land uses such as the school and sports reserve.
R79	The road network must be designed to ensure 95 % of all households are located within 400 metres of public transport services.
R80	Any roundabouts on roads shown as 'bus capable' on Plan 11 must be constructed to accommodate ultra-low-floor buses in accordance with the 'Public Transport Guidelines for Land Use and Development'.

WALKING AND CYCLING REQUIREMENTS

R81	Walking and cycling path networks must be permeable, and linked to key destinations in and around the precinct area including the Village Town Centre, the Quarry Hills Regional Parkland and the Darebin Creek as per Plan 11.
R82	The location of walkways or pedestrian and cycle paths in addition to those described through the standard cross sections must be designed and located to ensure maximum passive surveillance.
R83	Road and path networks must be designed to encourage daily walking and cycling trips and reduce car dependency.
R84	<p>The design of all streets must give key priority to needs of pedestrians and cyclists by providing:</p> <ul style="list-style-type: none"> • Footpaths of at least 1.5 metres of both sides of all streets and roads unless otherwise specified by the Quarry Hills PSP. • A network of shared paths where shown on Plan 11 or as shown on cross sections illustrated at Appendix 4.2, which allow for quick and convenient access to key destinations including the community facility, Potential Government School, Local Parks, Central Park and other pathway networks. • Safe and convenient crossing points of connector roads and local streets at all intersections and at key desire lines, including those associated with bus stops. • Pedestrian and cyclist priority crossings at roundabouts. • Safe and convenient transition between on and off road bicycle networks. <p>All to the satisfaction of the responsible authority.</p>
R85	<p>Shared and pedestrian paths along waterways must:</p> <ul style="list-style-type: none"> • Be delivered by development proponents generally in accordance with the network shown on Plan 11. • Be above 1:10 year flood levels with a crossing of the waterway designed to maintain a hydraulic function of the waterway. • Where a shared path is to be delivered on one side of a minor waterway as outlined in Plan 11, a path is also to be delivered on the other side of the waterway but may be constructed to a lesser standard, such as crushed rock or similar granular material. <p>All to the satisfaction of Melbourne Water.</p>
R86	The alignment of the off-road bicycle path must be designed for cyclists travelling up to 30 km/h
R87	Bicycle priority at intersections of minor streets must be achieved through strong and consistent visual and physical clues and supportive directional and associated road signs.

**Plan 11 - Public Transport and Path Network**

Quarry Hills Precinct Structure Plan



R88	On a construction or engineering plan approved by a subdivision permit, specification of any bike path on a connector road must be to the satisfaction of Public Transport Victoria and the relevant Road Authority.
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WALKING AND CYCLING GUIDELINES

G97	Lighting should be installed along shared, pedestrian and cycle paths linking to key destinations, unless otherwise agreed to by the responsible authority.
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ROAD NETWORK REQUIREMENTS

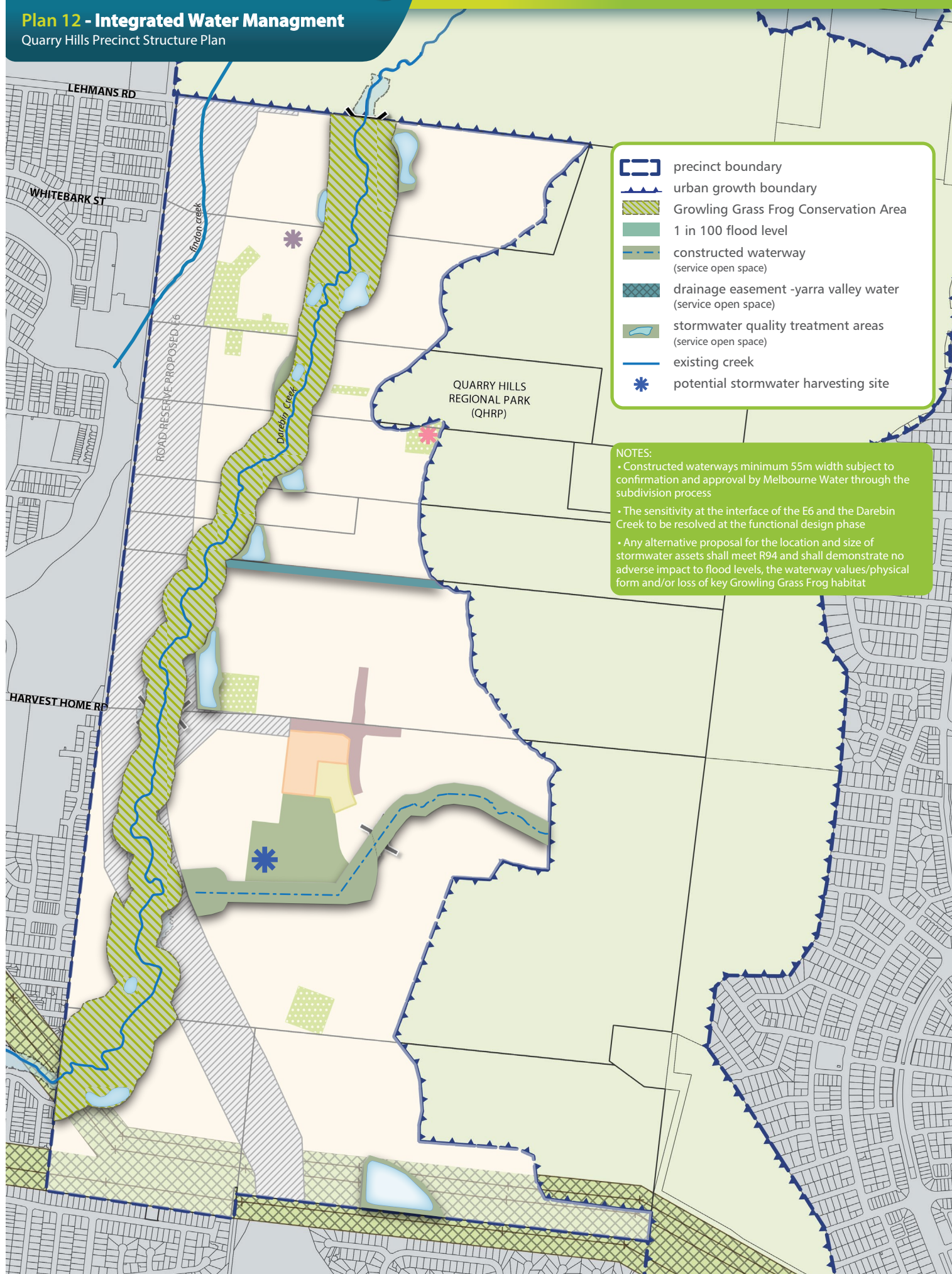
R89	Street layouts within the precinct must be permeable, efficient, direct and focused on providing convenient access to key destinations for pedestrians, cyclists and vehicles.
R90	Road networks must provide efficient connections to employment opportunities and higher order public transport outside of the precinct area.
R91	Road networks and street types must be designed and developed in accordance with the cross sections located at Appendix 4.2, unless otherwise agreed to by the responsible authority.
R92	Water Sensitive Urban Design Initiatives, including rain gardens and swales, must be in accordance with current best practice and nominated Council standards, to the satisfaction of the responsible authority.

ROAD NETWORK GUIDELINES

G98	Street layouts should provide multiple convenient routes to major destinations such as the Village Town Centre and the arterial road network.
G99	Street block lengths should not exceed 240 metres to ensure a permeable and low speed environment for pedestrians, cyclists and vehicles.
G100	Cul-de-sacs should be avoided throughout subdivisions. Where unavoidable, they should not detract from convenient pedestrian and vehicular connections.
G101	Slip lanes should be avoided in areas of high pedestrian activity and only be provided at any other intersection between connector roads and arterial roads where they are necessitated by high traffic volumes/turning movements, to the satisfaction of the coordinating road authority.
G102	<p>The frequency of vehicular crossovers on widened verges (a verge in excess of six metres) should be minimised through the use of a combination of:</p> <ul style="list-style-type: none"> • Rear loaded lots with laneway access. • Vehicular access from the side of a lot. • Combined or grouped crossovers. • Increased lot widths.

**Plan 12 - Integrated Water Management**

Quarry Hills Precinct Structure Plan

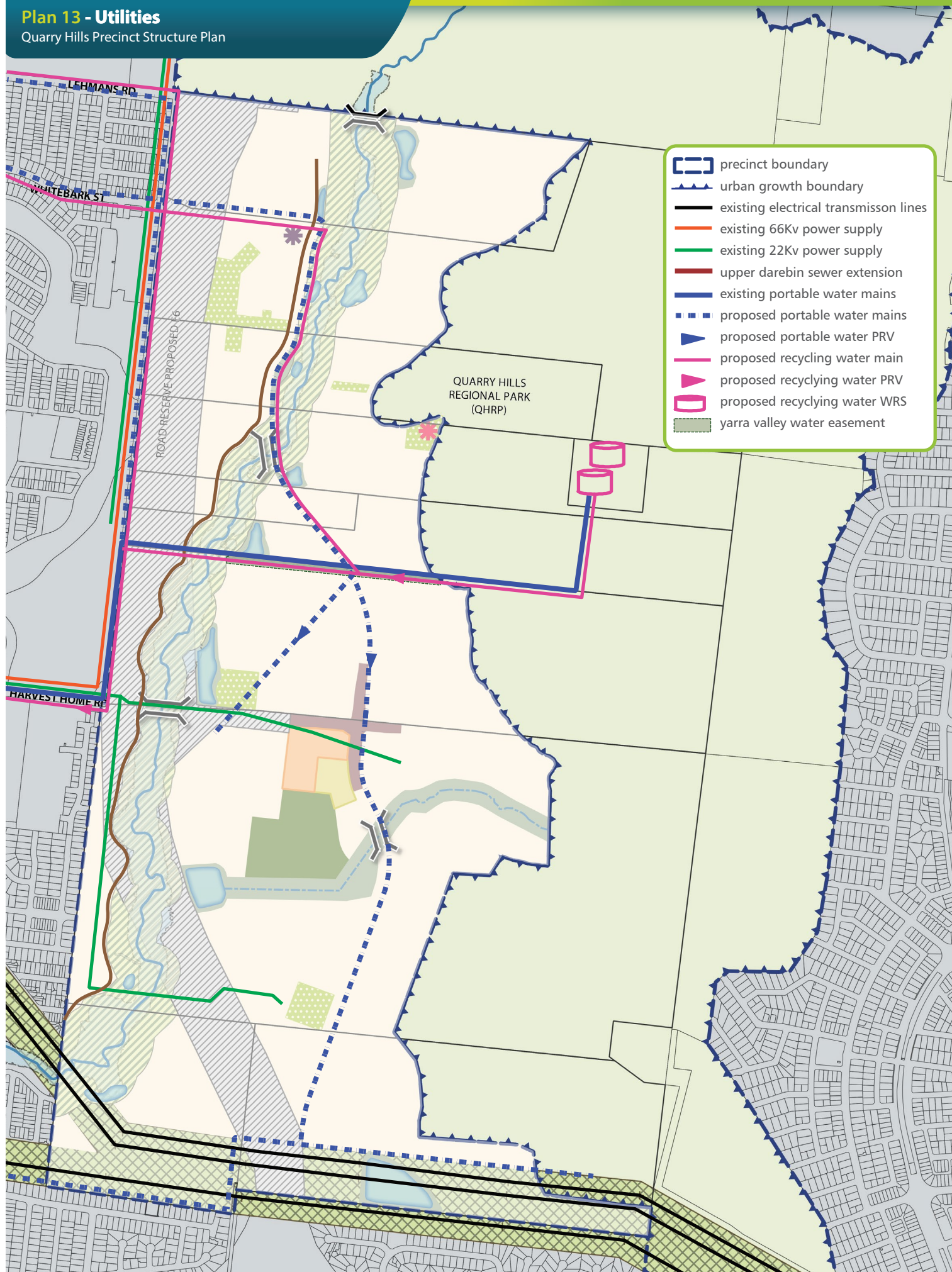


3.8 INTEGRATED WATER MANAGEMENT AND UTILITIES

INTEGRATED WATER MANAGEMENT REQUIREMENTS	
R93	Development must have regard to relevant policies and strategies being implemented by the responsible authority, Melbourne Water and Yarra Valley Water, including any approved Integrated Water Management Strategy and Development Services Strategy.
R94	Stormwater conveyance and treatment must be designed in accordance with the relevant Development Services Strategy, prepared by the responsible authority and to the satisfaction of Melbourne Water.
R95	Consistent with Clauses 56.01-2 and 56.07 of the <i>Whittlesea Planning Scheme</i> , Victorian Planning Provision (VPP) Practice Note 39 and any requirements and guidelines in this PSP, a subdivision application of 60 or more lots must include an Integrated Water Management Plan.
R96	Stormwater runoff from the development must meet or exceed the performance objectives of the Best Practice Environmental Management Guidelines for urban stormwater management (as amended or superseded) prior to discharge to receiving waterways and as outlined on Plan 12, unless otherwise approved by Melbourne Water and the responsible authority.
R97	Where a waterway is shown as 'natural' on Plan 12, development works must: <ul style="list-style-type: none"> • Not encroach past the Growling Grass Frog Conservation Area defined in this PSP, unless otherwise agreed by responsible authority and Melbourne Water. • Minimise earthworks and impact on the existing landform of the waterway. • Retain existing vegetation as part of waterway landscaping. All to the satisfaction of Melbourne Water and the responsible authority.
R98	Final design and boundary of constructed waterways, waterway corridors, retarding basins, stormwater quality treatment infrastructure, associated paths, boardwalks, bridges and planting must be to the satisfaction of Melbourne Water and the responsible authority.
R99	Development staging must provide for the delivery of ultimate waterway and drainage infrastructure, including stormwater quality treatment. Where this is not possible, development proposals must demonstrate how any interim solution adequately manages and treats stormwater generated from the development and how this will enable delivery of an ultimate drainage solution, all to the satisfaction of Melbourne Water and the responsible authority.
R100	Avoid placement of any stormwater quality treatment assets or Growling Grass Frog Wetlands within 10 metres of the top of bank of the waterway (to allow for a riparian corridor, any future waterway maintenance requirements and to avoid adverse impacts to Growling Grass Frog habitat). These assets must be appropriately offset from the Darebin Creek to the satisfaction of Melbourne Water, Department of Environment, Land, Water and Planning and the responsible authority.
R101	The Access Street Level 1 along the boundary of the Quarry Hills Regional Park must be designed having regard for overland flows coming down from the steeper land in the regional park to the east.
INTEGRATED WATER MANAGEMENT GUIDELINES	
G103	The design and layout of roads, road reserves and public open space should optimise water use efficiency and long- term viability of vegetation and public uses through the use of overland flow paths, Water Sensitive Urban Design (WSUD) initiatives such as rain gardens and / or locally treated stormwater for irrigation to contribute to a sustainable and green urban environment.
G104	Integrated water management systems should be designed to: <ul style="list-style-type: none"> • Maximise habitat values for local flora and fauna species. • Enable future harvesting and/or treatment and re-use of stormwater, including those options or opportunities outlined in Plan 12.
G105	Where practical, and where primary waterway, conservation or recreation functions are not adversely affected, land required for integrated water management initiatives (such as stormwater harvesting, aquifer storage and recharge or sewer mining) should be incorporated within the precinct open space system as depicted on Plan 7 subject to the approval of the responsible authority.
G106	Development should reduce reliance on potable water by increasing the utilisation of fit-for- purpose alternative water sources such as stormwater, rain water and recycled water.

**Plan 13 - Utilities**

Quarry Hills Precinct Structure Plan



UTILITIES REQUIREMENTS

R102	Delivery of underground services must be coordinated, located and bundled (utilising common trenching) to facilitate the planting of trees and other vegetation within road verges to the satisfaction of the responsible authority.
R103	All new electricity supply infrastructure (excluding substations and cables of a voltage greater than 66kV) must be provided underground.
R104	Where existing above ground electricity cables of 66kV voltage are retained along road ways, underground conduits are to be provided as part of the upgrade of these roads to allow for future undergrounding of the electricity supply.
R105	<p>Before development commences on a property, functional layout plans are to be submitted of the road network showing the location of all:</p> <ul style="list-style-type: none"> • Underground services. • Driveways/crossovers. • Street lights. • Street trees. <p>A typical cross section of each street is also to be submitted showing above and below ground placement of services, street lights and trees.</p> <p>The plans and cross sections must demonstrate how services, driveways and street lights will be placed so as to achieve the road reserve width (consistent with the road cross sections outlined in Appendix 4.2 in this PSP) and accommodate the minimum level of street tree planting (as outlined in this PSP). The plans and cross sections are to be approved by the responsible authority and all relevant service authorities before development commences.</p>
R106	Above ground utilities must be identified at the subdivision design stage to ensure effective integration with the surrounding neighbourhood and to minimise amenity impacts and be designed to the satisfaction of the relevant authority. Where that infrastructure is intended to be located in public open space, the land required to accommodate that infrastructure will not be counted as contribution to public open space requirements classified under Clause 52.01 or the Quarry Hills Development Contributions Plan.
R107	Utility infrastructure must be placed outside any designated conservation areas as shown on Plan 9. Utilities must be placed outside of natural waterway corridors or on the outer edges of these corridors to avoid disturbance to existing waterway values, native vegetation, significant landform features and heritage sites, to the satisfaction of the Melbourne Water and the responsible authority.
R108	Irrespective of whether Yarra Valley Water has entered into an agreement as contemplated, any plan of subdivision must contain a restriction which provides that no dwelling or commercial building may be constructed on any lot unless the building incorporates dual plumbing for the use of recycled water in toilet flushing and garden watering should it become available.
R109	The electricity transmission line easement must be embellished with appropriate landscaping to increase its visual amenity, to the satisfaction of the responsible authority.

UTILITIES GUIDELINES

G107	Above ground utility infrastructure should be located outside of key view lines and screened with vegetation or architectural features, as appropriate, to the satisfaction of the responsible authority.
G108	Existing above ground 66kV electricity cables should be removed and placed underground as part of the upgrade of existing roads.
G109	Design and placement of underground services in new or upgraded streets should utilise the service placement guidelines outlined in Appendix 4.2.
G110	Utility easements to the rear of lots should only be provided where there is no practical alternative, to the satisfaction of the responsible authority.
G111	Landscape screening must be established or maintained where existing adjacent to Work Authority 102 (WA102) as identified on Plan 1.
G112	Significant vegetation should be retained in the vicinity of the transmission line pylons to assist with visual screening and lessening the visual definition of the easement's edge.

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G113	Shared paths should deviate within the transmission line easement to create varied viewlines and direct views out of the easement.
G114	Back fences should not adjoin the transmission line easement. Side fences, where deemed to be appropriate, must be at least 25% visually permeable.
G115	Trunk services should be placed along the general alignments shown on Plan 13, subject to any refinements as advised by the relevant servicing authorities.

3.9 PRECINCT INFRASTRUCTURE PLAN AND STAGING

3.9.1 Precinct Infrastructure Plan

The Precinct Infrastructure Plan (PIP) at Table 7 sets out the infrastructure and services required to meet the needs of proposed development within the precinct. The infrastructure items and services are to be provided through a number of mechanisms including:

- Subdivision construction works by developers.
- Agreement under Section 173 of the Act.
- Utility service provider requirements.
- The Quarry Hills DCP including separate charge areas for local items.
- Relevant development contributions from adjoining areas.
- Capital works projects by Council, State government agencies and non-government organisations.
- Works In Kind (WIK) projects undertaken by developers on behalf of Council or State government agencies.

Alternative stormwater quality treatment arrangements may be provided subject to agreement with Melbourne Water and Council.



Table 7 Precinct Infrastructure Plan

ITEM NUMBER	PROJECT GROUP	PROJECT CATEGORY	TITLE	PROJECT DESCRIPTION	LEAD AGENCY	TIMING	INCLUDED IN QUARRY HILLS DCP
ROAD AND INTERSECTION INFRASTRUCTURE							
1	TRANSPORT	ROAD	LEHMANN'S ROAD - BINDTS ROAD TO WEST EDGE OF DAREBIN CREEK	EXTENSION OF ROAD EAST OF EXISTING RESERVATION BETWEEN BINDTS ROAD AND THE DAREBIN CREEK INCLUDING A PORTION OF LAND LOCATED WITHIN THE E6 PAO FOR THE DEVELOPMENT OF A 2 LANE ACCESS ROAD AND ITS CONSTRUCTION.	COUNCIL.	AT TIME OF SUBDIVISION/ ACCESS DEMAND	YES
2	TRANSPORT	ROAD	LEHMANN'S ROAD - ROAD AND BRIDGE OVER DAREBIN CREEK	EXTENSION OF ROAD (INCLUDING BRIDGE) OVER DAREBIN CREEK RESERVE.	COUNCIL.	AT TIME OF SUBDIVISION/ ACCESS DEMAND	YES
3	TRANSPORT	ROAD	LEHMANN'S ROAD - EXTENSION OF ROAD EAST OF DAREBIN CREEK	EXTENSION OF ROAD (INCLUDING LAND) EAST OF THE DAREBIN CREEK RESERVE.	DEVELOPMENT PROPONENT.	AT TIME OF SUBDIVISION/ ACCESS DEMAND	NO
4	TRANSPORT	ROAD	HARVEST HOME ROAD - SALT LAKE BOULEVARD TO NORTH- SOUTH CONNECTOR STREET.	EXTENSION OF HARVEST HOME ROAD (INCLUDING LAND AND BRIDGE OVER DAREBIN CREEK) FROM SALT LAKE BOULEVARD TO INTERSECTION WITH NORTH-SOUTH BOULEVARD CONNECTOR STREET.	COUNCIL.	AT TIME OF SUBDIVISION/ ACCESS DEMAND	YES
5	TRANSPORT	ROAD	HARVEST HOME ROAD - EAST OF SOUTH SOUTH CONNECTOR STREET	EXTENSION OF HARVEST HOME ROAD (INCLUDING LAND) EAST OF NORTH-SOUTH CONNECTOR STREET.	FIRST ADJOINING DEVELOPMENT PROPONENT.	AT TIME OF SUBDIVISION/ ACCESS DEMAND	NO
6	TRANSPORT	ROAD	NORTH-SOUTH CONNECTOR ACROSS DAREBIN CREEK RESERVE LOCATED ON 90 BINDTS ROAD (INCLUDING BRIDGE).	CONSTRUCTION OF ROAD ACROSS DAREBIN CREEK RESERVE (INCLUDING BRIDGE)	COUNCIL.	AT TIME OF SUBDIVISION/ ACCESS DEMAND	YES
7	TRANSPORT	ROAD	WHITEBARK STREET FROM BINDTS ROAD TO THE EASTERN EDGE OF THE E6 PAO ON THE BOUNDARY OF 150-152 AND 130 BINDTS ROAD	CONSTRUCTION OF CONNECTOR STREET ACROSS E6 RESERVE.	COUNCIL.	AT TIME OF SUBDIVISION/ ACCESS DEMAND	YES
8	TRANSPORT	ROAD	LOCAL ACCESS STREET PORTION WITHIN E6 PAO FROM NORTH BOUNDARY OF 26 ILANI STREET INTO 10C BINDTS ROAD	CONSTRUCTION OF LOCAL ACCESS STREET ACROSS E6 RESERVE.	COUNCIL.	AT TIME OF SUBDIVISION/ ACCESS DEMAND	YES

9	TRANSPORT	ROAD	LOCAL ACCESS STREET WITHIN HIGH VOLTAGE ELECTRICITY EASEMENT. EASEMENT CONNECTING INTO LADISLAW DRIVE.	CONSTRUCTION OF LOCAL ACCESS STREET ACROSS HIGH VOLTAGE ELECTRICITY EASEMENT.	DEVELOPMENT PROPONENT.	AT TIME OF SUBDIVISION/ ACCESS DEMAND	NO
10	TRANSPORT	ROAD	SOUTHERN SECTION OF NORTH-SOUTH CONNECTOR WITHIN HIGH VOLTAGE ELECTRICITY EASEMENT TO FINDON ROAD	CONSTRUCTION OF NORTH-SOUTH CONNECTOR STREET ACROSS HIGH VOLTAGE ELECTRICITY EASEMENT AND WITHIN E6 PAO AREA TO CONNECT INTO FINDON ROAD (INCLUDING INTERSECTION).	COUNCIL.	AT TIME OF SUBDIVISION/ ACCESS DEMAND	YES
10	TRANSPORT	PEDESTRIAN BRIDGE	DAREBIN CREEK PEDESTRIAN AND CYCLIST BRIDGE LOCATED ON 100 BINDTS ROAD	CONSTRUCTION OF A PEDESTRIAN CROSSING OVER WATERWAY	COUNCIL.	AT TIME OF SUBDIVISION/ ACCESS DEMAND	YES
11	TRANSPORT	PEDESTRIAN BRIDGE	DAREBIN CREEK PEDESTRIAN AND CYCLIST BRIDGE LOCATED ON 10C BINDTS ROAD	CONSTRUCTION OF A PEDESTRIAN CROSSING OVER WATERWAY	COUNCIL.	AT TIME OF SUBDIVISION/ ACCESS DEMAND	YES
PUBLIC TRANSPORT INFRASTRUCTURE							
14	TRANSPORT	BUS	BUS SERVICES	PROGRESSIVE EXTENSION OF LOCAL BUS SERVICES TO SERVICE THE PRECINCT	PTV	AS REQUIRED.	NO
15	TRANSPORT	BUS	BUS STOPS	PROVISION OF BUS STOPS TO BE DELIVERED WITH LOCAL STREET SYSTEM AS PART OF SUBDIVISION CONSTRUCTION APPROVALS.	DEVELOPMENT PROPONENT.	AS REQUIRED.	NO
EDUCATION INFRASTRUCTURE							
16	EDUCATION	SCHOOL	POTENTIAL GOVERNMENT SCHOOL	PROVISION OF POTENTIAL GOVERNMENT SCHOOL	DEED	AS REQUIRED.	NO
OPEN SPACE INFRASTRUCTURE							
17	OPEN SPACE	SPORTS RESERVE	SPORTS RESERVE OPEN SPACE LAND ACQUISITION AND CONSTRUCTION.	CONSTRUCTION OF MULTI PURPOSE SPORTS GROUND, TENNIS COURTS, LANDSCAPING, PARKING, IRRIGATION AND CIVIL WORKS FOR THE SPORTS RESERVE	COUNCIL	AS REQUIRED.	YES
18	OPEN SPACE	DRAINAGE	LINEAR WATERWAYS AND ASSOCIATED WETLANDS	EARTHWORKS, DRAINAGE WORKS, LANDSCAPE CONSTRUCTION, WSD TREATMENTS, TRAIL DEVELOPMENT AND PASSIVE PARKS DEVELOPMENT WORKS.	DEVELOPMENT PROPONENT/ MELBOURNE WATER/ COUNCIL	AS REQUIRED.	NO
19	OPEN SPACE	LOCAL	CONSTRUCTION OF LOCAL PARKS	EARTHWORKS, DRAINAGE WORKS, LANDSCAPE CONSTRUCTION, TRAIL DEVELOPMENT AND PASSIVE PARKS DEVELOPMENT WORKS.	DEVELOPMENT PROPONENT	AS REQUIRED.	NO
COMMUNITY INFRASTRUCTURE							
20	COMMUNITY SERVICES	COMMUNITY CENTRE	QUARRY HILLS COMMUNITY CENTRE	ACQUISITION OF LAND AND CONSTRUCTION OF FUTURE COMMUNITY CENTRE	COUNCIL	AS REQUIRED.	YES

3.10 DEVELOPMENT STAGING

DEVELOPMENT STAGING REQUIREMENTS

R110	<p>Development staging must provide for the timely provision and delivery of:</p> <ul style="list-style-type: none"> • Connector streets and connector street bridges. • Street links between properties, constructed to the property boundary. • Connection of the on- and off-road pedestrian and bicycle network.
R111	<p>Subdivision of land within the precinct must provide and meet the total cost of delivering the following infrastructure:</p> <ul style="list-style-type: none"> • Connector roads and local streets. • Local bus stop infrastructure (where locations have been agreed in writing by Public Transport Victoria). • Landscaping of all existing and future roads and local streets. • Intersection works and traffic management measures along arterial roads, connector streets and local streets (except those included in the Quarry Hills Precinct Development Contributions Plan (DCP). • Council approved fencing and landscaping (where required) along key roads. • Local shared, pedestrian and bicycle paths along local roads, connector roads, utilities easements, local streets, waterways and within local parks including bridges, intersections and barrier crossing points (except those included in the DCP). • Bicycle parking as required in this document. • Appropriately scaled lighting along all roads, major shared and pedestrian paths, and traversing public open space. • Basic improvements to local parks and open space (refer to the open space delivery below). • Local drainage system. • Local street or pedestrian path crossings of waterways unless included in the DCP or outlined as the responsibility of another agency in the Precinct Infrastructure Plan. • Infrastructure as required by utility service providers including water, sewerage, drainage , electricity, gas, and telecommunications. • Remediation and / or reconstruction of dry stone walls where required.
R112	<p>OPEN SPACE DELIVERY</p> <p>All public open space (where not otherwise provided via the DCP) must be finished to a standard that satisfies the requirements of the responsible authority prior to the transfer of the public open space, including:</p> <ul style="list-style-type: none"> • Removal of all existing and disused structures, foundations, pipelines and stockpiles. • Clearing of rubbish and weeds, levelled, topsoiled and grassed with warm climate grass (unless conservation reserve requirements dictate otherwise). • Provision of water tapping, potable and recycled water connection points. Sewer and gas connection points must also be provided to land identified as an active reserve. • Planting of trees and shrubs. • Provision of vehicular exclusion devices (fence, bollards, or other suitable method) and maintenance access points. • Installation of park furniture including BBQ's, shelters, furniture, rubbish bins, local scale playground equipment, local scale play areas, and appropriate paving to support these facilities, consistent with the type of public open space listed in the open space delivery guide (Table 4).
R113	<p>Development of land within Work Authority 102 (WA102) must undertake remediation works associated with soil stabilisation to the satisfaction of the responsible authority prior to development.</p>

R114	Applications must be accompanied by an assessment prepared by a suitably experienced and qualified person, which demonstrates that a variation to the <i>Recommended separation distances for industrial residual air emissions</i> (EPA publication number 1518 March 2013) is justified and provides sufficient confidence that a sensitive use can be safely developed within 500 metres of any quarrying activity at WA102.
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DEVELOPMENT STAGING GUIDELINES

G116	Staging will be determined largely by the development proposals on land within the precinct, having regard to existing constraints (including the ongoing operation of the quarry) and the availability of infrastructure services. Development staging should, to the extent practicable, be integrated with adjoining developments. Access to each new lot must be via a sealed road.
G117	The early delivery of community facilities, local parks and playgrounds is encouraged within each neighbourhood and may be delivered in stages, to the satisfaction of the responsible authority.



4.0 APPENDICES

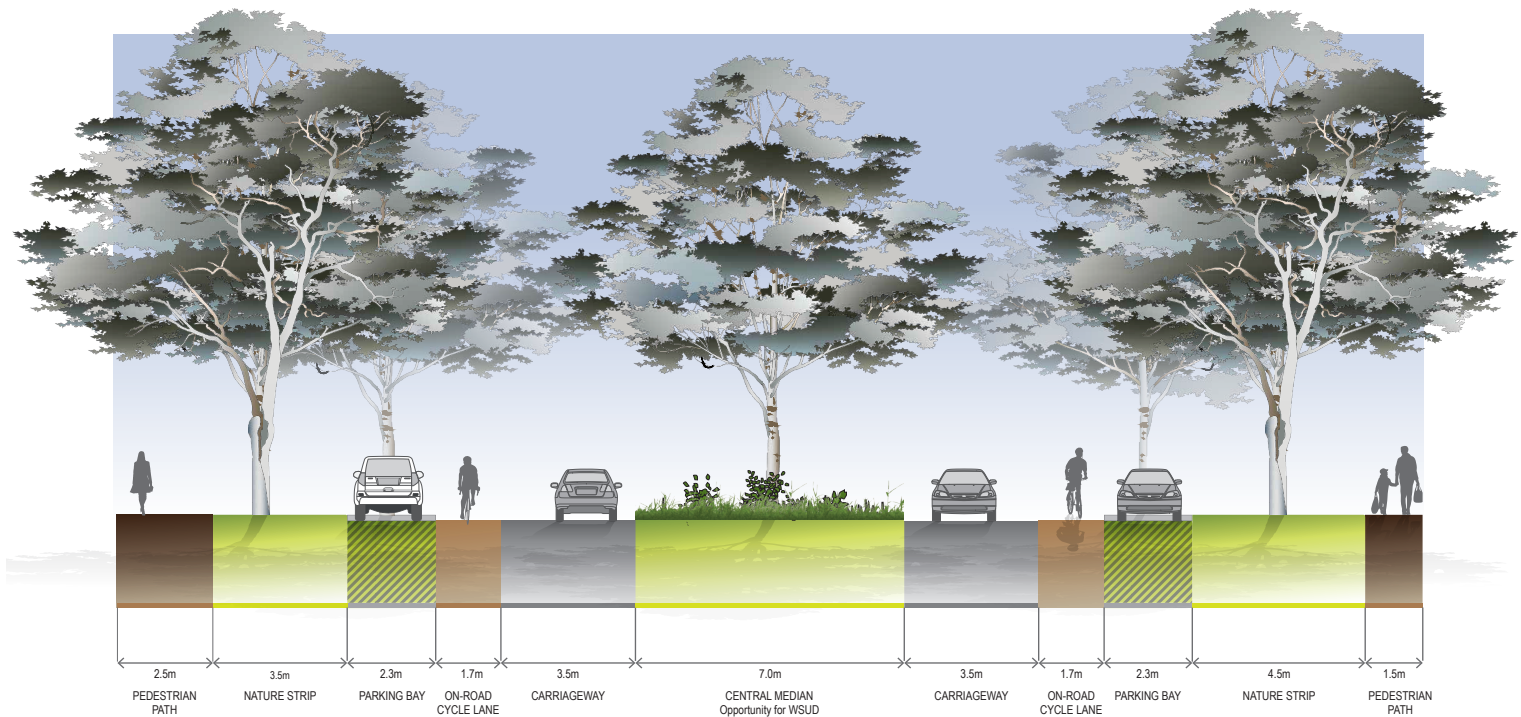
4.1 Property Specific Land Use Budget

PROPERTY NUMBER	TOTAL AREA (HECTARES)	TRANSPORT		COMMUNITY & EDUCATION		SERVICE OPEN SPACE			CREDITED OPEN SPACE		TOTAL NET DEVELOPABLE AREA (HECTARES)
		E6 CORRIDOR	CONNECTOR ROAD - WIDENING AND INTERSECTION FLARING	POTENTIAL GOVERNMENT SCHOOL	COMMUNITY FACILITIES	BIODIVERSITY CONSERVATION STRATEGY (BCS) CA34 - GGF CORRIDOR	WATERWAY AND DRAINAGE RESERVE	UTILITIES EASEMENTS	LOCAL SPORTS RESERVE	LOCAL NETWORK PARK	
PROPERTY											
1	30.39	5.79	-	-	-	5.44	0.97	-	-	-	18.19
2	23.19	4.63	-	-	-	4.67	-	-	-	2.02	11.87
3	13.39	3.28	-	-	-	2.14	0.37	-	-	0.54	7.07
4	15.81	3.32	-	-	-	3.00	0.36	-	-	0.56	8.56
5	5.90	1.67	-	-	-	1.05	0.01	-	-	-	3.17
6	9.69	1.78	-	-	-	1.28	0.57	-	-	-	6.07
7	39.39	8.83	0.52	-	-	1.55	1.13	1.17	-	1.03	25.15
8	86.47	17.28	1.47	2.00	1.00	3.55	7.17	-	5.00	1.00	48.00
9	25.17	3.24	-	-	-	6.00	-	9.83	-	-	6.10
10	29.23	4.47	-	-	-	-	2.18	9.35	-	-	13.22
11	0.07	-	-	-	-	-	-	0.07	-	-	-
SUB-TOTAL	278.69	54.29	1.99	2.00	1.00	28.67	12.77	20.42	5.00	5.15	147.41

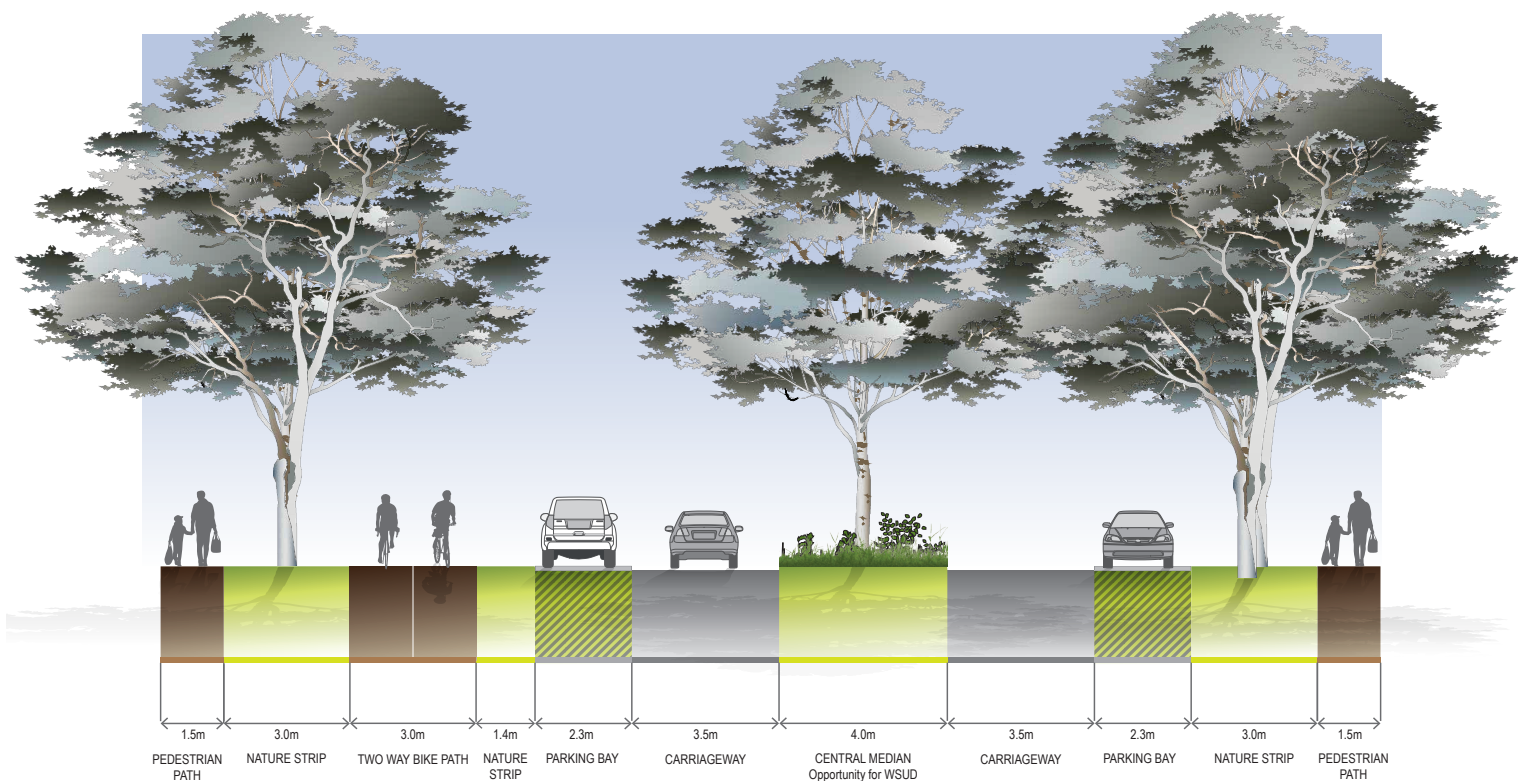
Note: The land required for drainage assets may be subject to minor refinement through the subdivision process.

4.2 Street Cross Sections

4.2.1 Harvest Home Road Extension (34.0m)



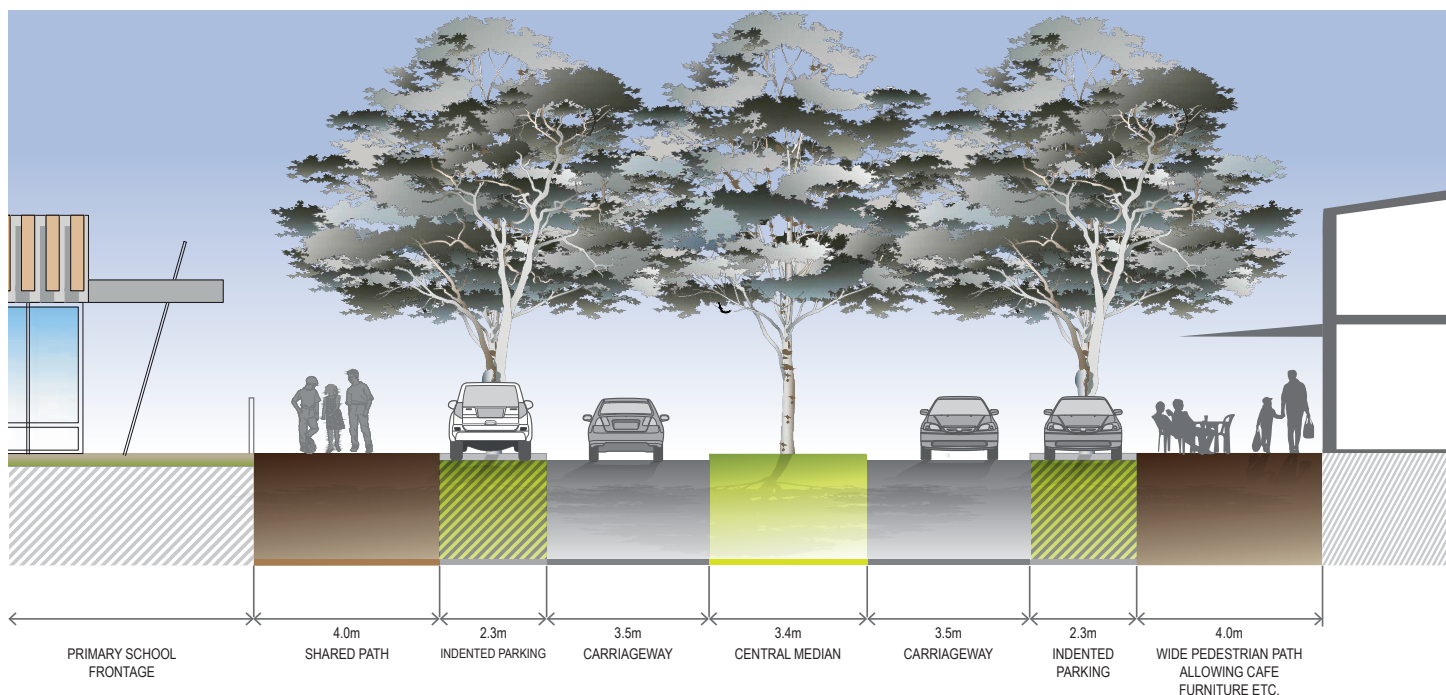
4.2.2 Boulevard Connector (29.0m)



Notes to 4.2.2

- Include a central median with large canopy trees to create a boulevard effect. Trees are to be centrally planted in median.
- Topsoil used in central medians is to be sandy loam, with a minimum depth of 200mm. The surface of medians is to be free-draining with a minimum cross fall of 2%, and is to be planted with warm season grasses.
- In areas where high pedestrian volumes are expected (e.g.: around schools and town centres), central medians should be paved with harder wearing surfaces such as granitic sand or other pavements.
- Any garden beds in central medians are to be offset 1.5m from back of kerb.
- Kerb to central median is to be SM2 Semi-mountable kerb.
- Depending on the location of breaks in the median, provide intermediate pedestrian crossing points to accommodate mid-block crossings.
- An alternative boulevard treatment can be achieved through a wider verge on one side capable of accommodating a double row of canopy trees.
- Verge widths may be reduced where roads abut open space with the consent of the responsible authority.

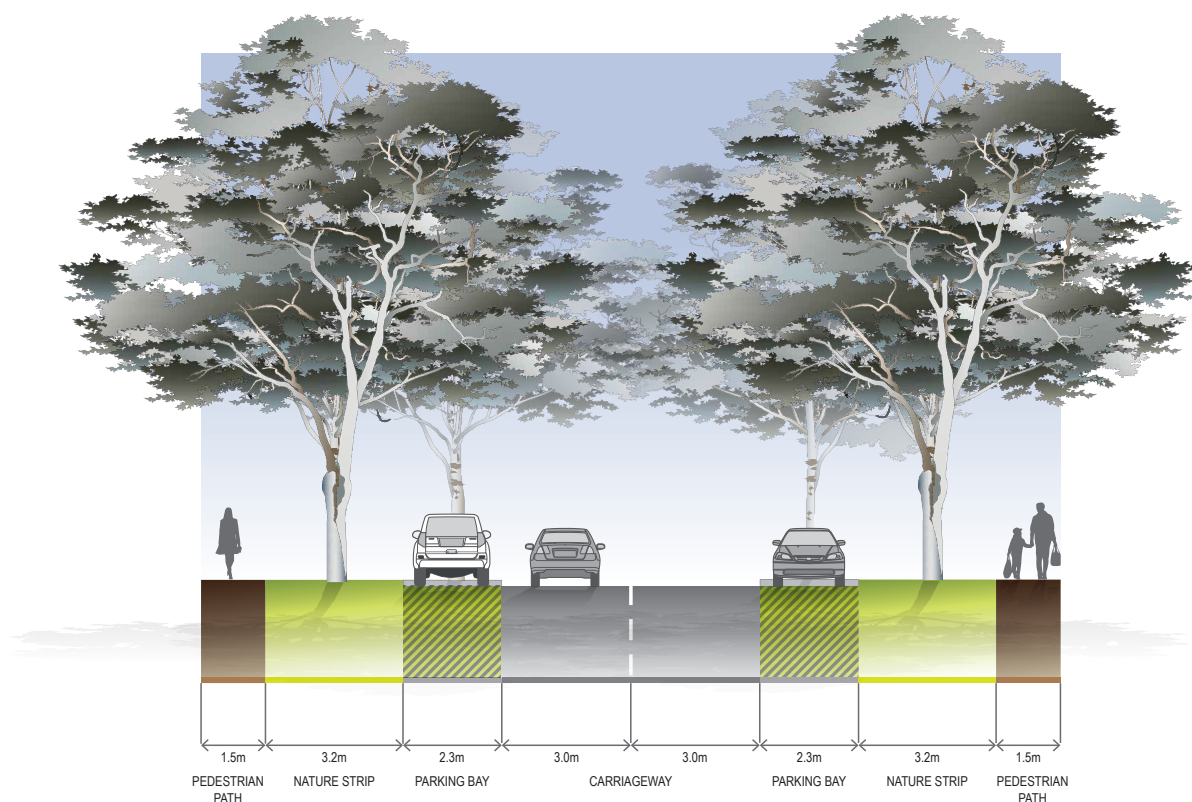
4.2.3 Town Centre Main Street (23.0m)



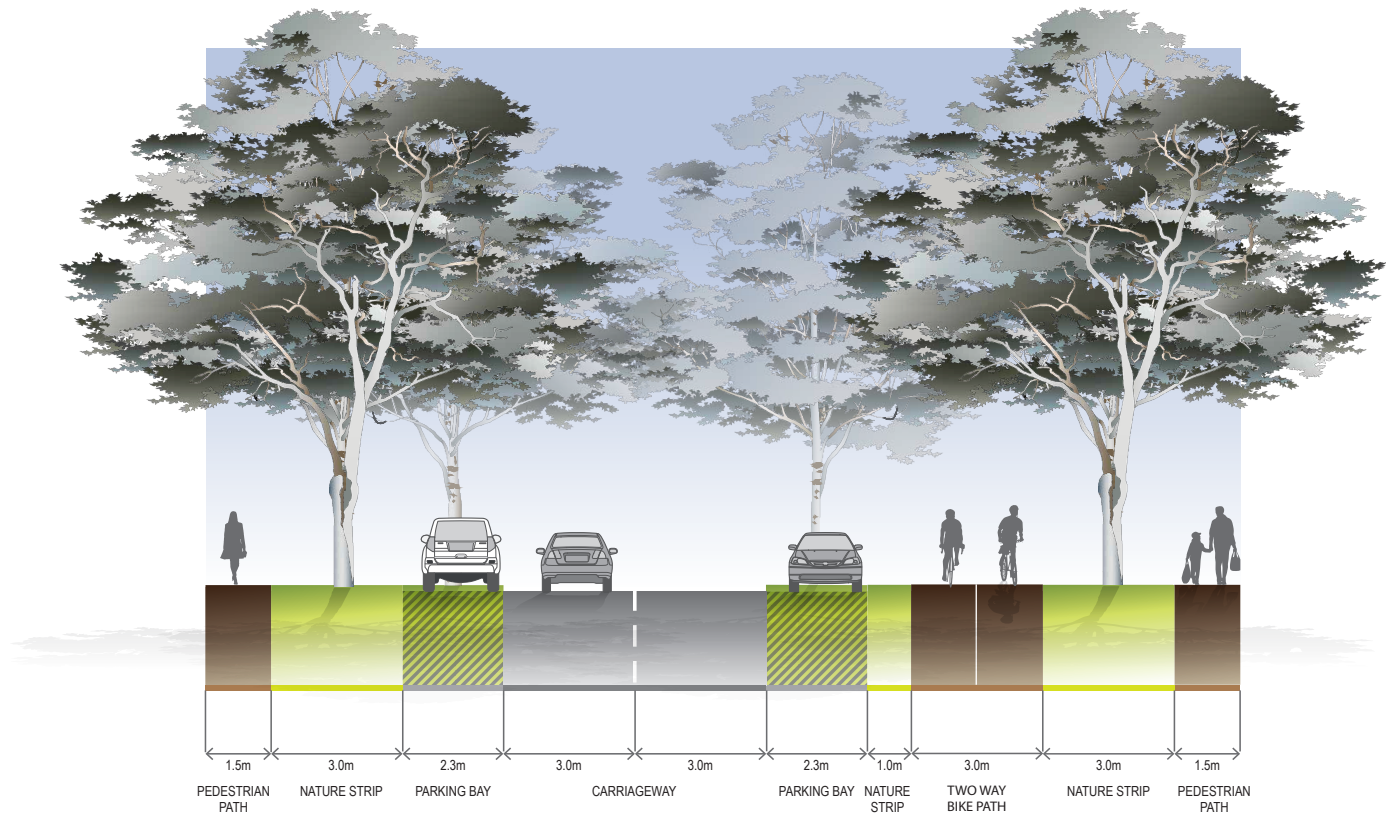
Notes to 4.2.3

- Include a central median with large canopy trees to create a boulevard effect. Trees are to be centrally planted in median.
- Topsoil used in central medians is to be sandy loam with a minimum depth of 200mm. The surface of medians is to be free-draining with a minimum cross fall of 2% and is to be planted with warm season grasses.
- In areas where high pedestrian volumes are expected (e.g.: around the school and town centre), central medians should be paved with harder wearing surfaces such as granitic sand or other pavements.
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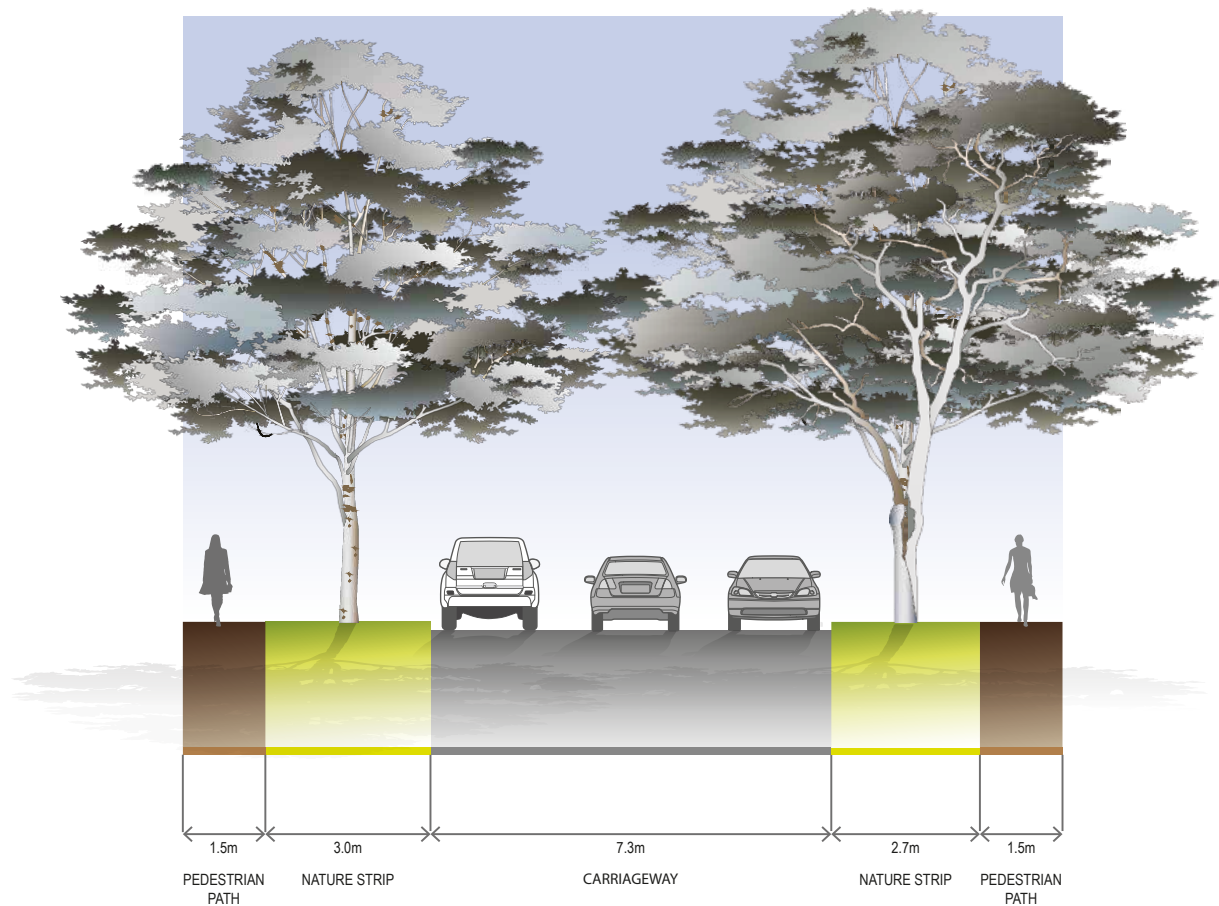
4.2.4 Access Street Level 2 (20.0m)



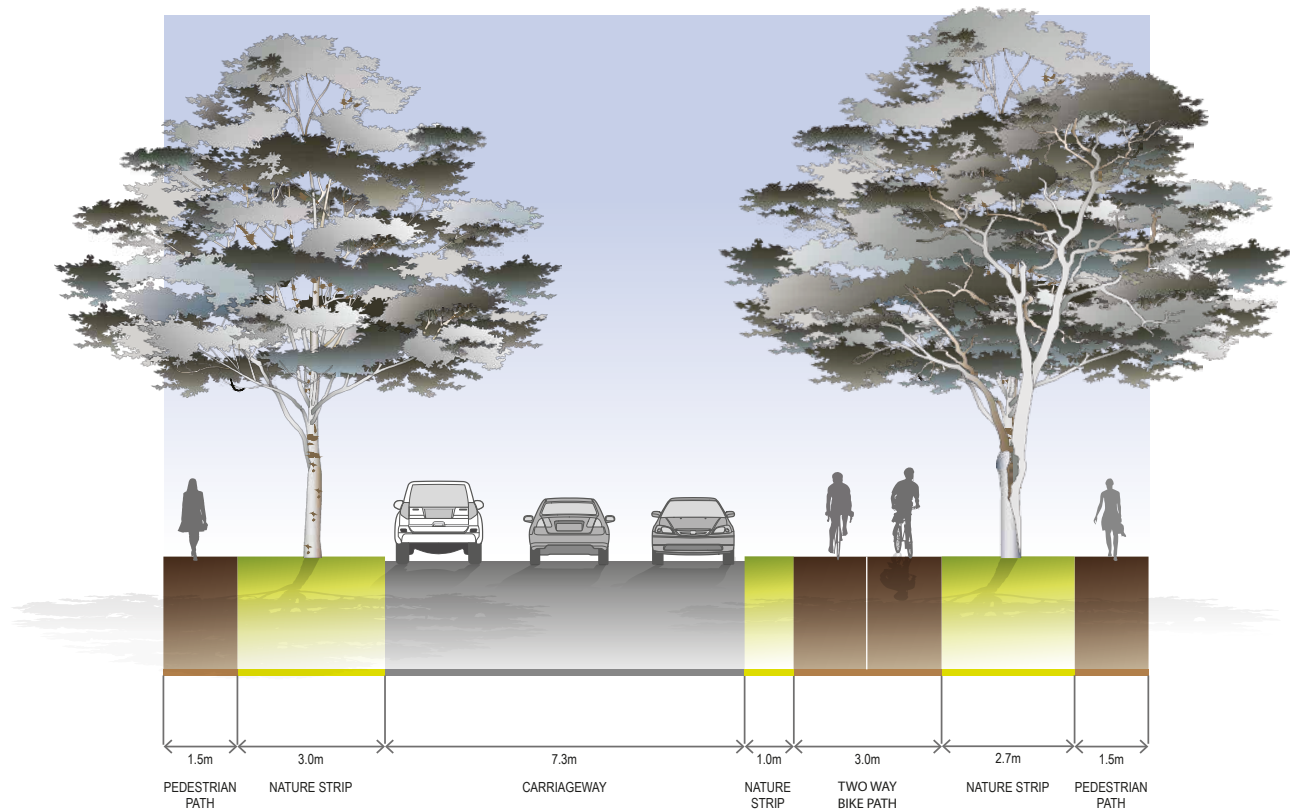
4.2.5 Access Street Level 2 with Two Way Bike Path (23.6m)



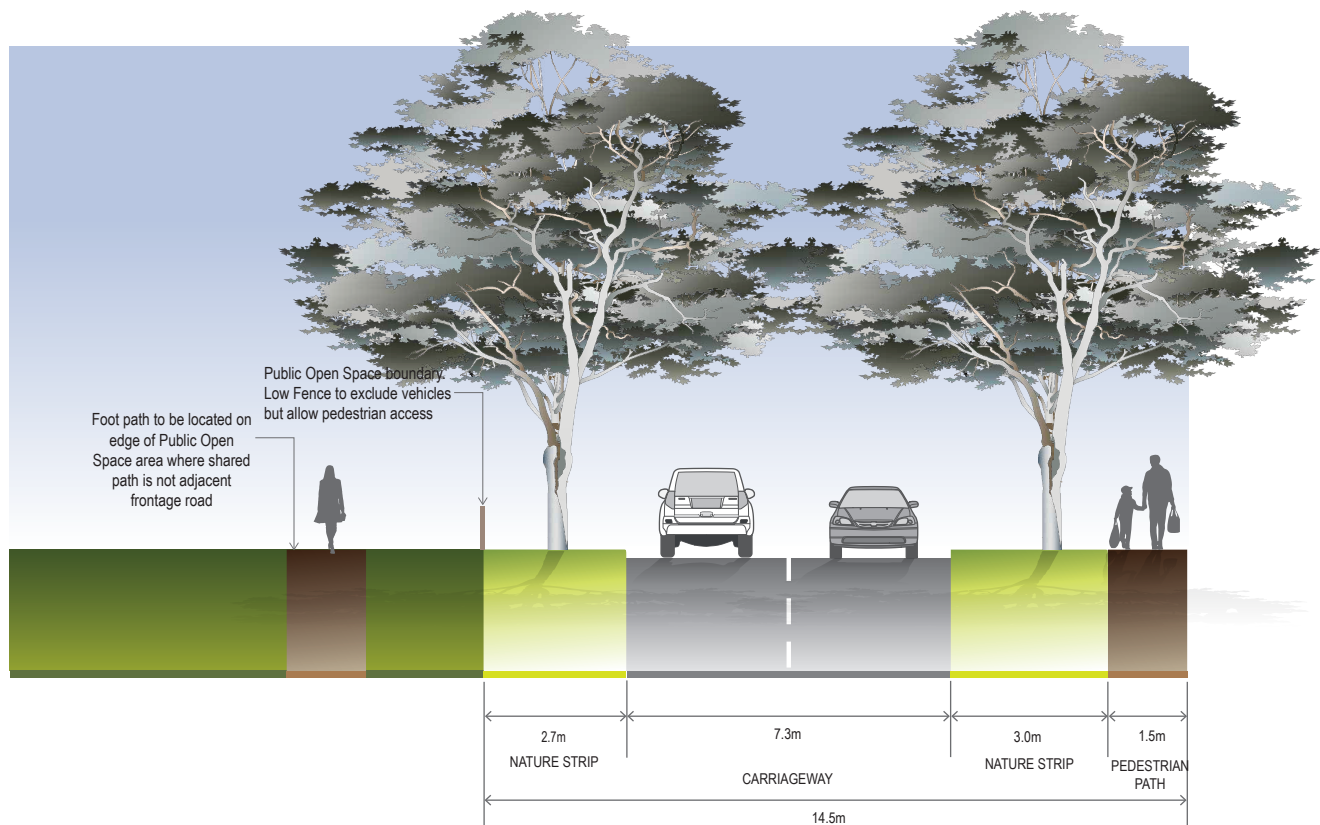
4.2.6 Access Street Level 1(16.0m)



4.2.7 Access Street Level 1 with Two Way Bike Path (20.0m)



4.2.8 Public Open Space Interface Road (14.5m)



4.3 Scattered Tree Retention in the City of Whittlesea

The following guidelines apply, where appropriate, to the retention of scattered trees and may, where appropriate, be applied as conditions of planning permits.

Tree protection zones (TPZs) are exclusion zones designed to protect all trees and stags identified for retention in a development.

CALCULATING TREE PROTECTION ZONES

A Tree Protection Zone is defined by a circle or polygon, the centroid point of which is the centre point of the tree at ground level and whose radius is equal to half the height of the tree or half the crown width (whichever is the greatest) plus the tree canopy plus one metre (refer to Figure 4).

The Tree Protection Zone is to be determined by a consulting arborist, to the satisfaction of the Responsible Authority.

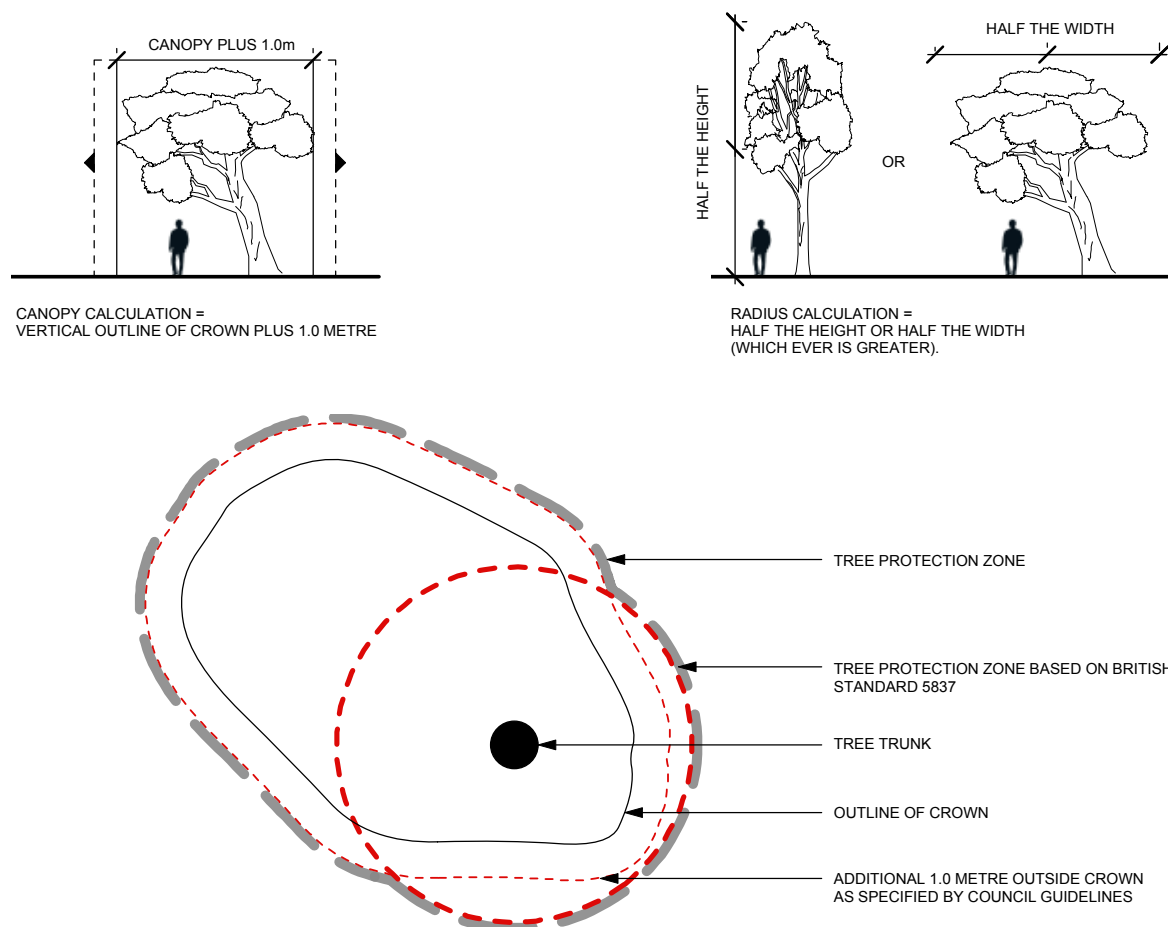


Figure 4: Calculating Tree Protection Zones

AS4970 – 2009 TREE PROTECTION ZONES ON DEVELOPMENT SITES

The Tree Protection Zone as set out in this Appendix should be applied in preference to AS4970 – 2009 and/or any other tree protection zone standard/calculation.

The Tree Protection Zone as set out in this Appendix considers both the ongoing health of the tree but has also been developed to protect people, infrastructure and property (i.e. the shape considers the impact of falling limbs and delineates a pedestrian deterrent zone) whereas AS4970 – 2009 only considers the impact of works on the ongoing health of the tree.

CONDITION - TREE PROTECTION ZONES

No works are to be undertaken within a Tree Protection Zone unless:

- Council determines that the works proposed within the Tree Protection Zone will not adversely impact on the tree or damage any part of the tree including its canopy, branches, trunk and roots; or
- Council determines that the variation is required to minimise risk to the public and/or property; or
- Council otherwise consents.

All works located in or in close proximity to a Tree Protection Zone must be supervised by a suitably qualified and experienced consulting arborist.

CONDITION - WORKS WITHIN A TREE PROTECTION ZONE

With Council consent, works may encroach into a Tree Protection Zone, including (where appropriate):

- “no dig” footpaths, mulching and limited soft landscaping provided all footpaths are first pegged on site and confirmed by the responsible authority prior to construction and all works are undertaken by hand to minimise disturbance to surface roots.
- boring for services where all other alternative alignments have been investigated and determined unfeasible to the satisfaction of Council.

CONDITION – DOCUMENTATION OF WORKS WITHIN A TREE PROTECTION ZONE

All works proposed to occur within a Tree Protection Zone must be documented in the civil infrastructure drawings and landscape plans, or otherwise approved in writing, to the satisfaction of the Responsible Authority.

CONDITION – TREE PROTECTION ZONE FENCING

The Tree Protection Zone as calculated by the consulting arborist must be clearly identified on site by an appropriately qualified person.

Temporary Tree Protection Zone fencing (refer to Figure 5) must be erected around the perimeter of all Tree Protection Zones and must be inspected and approved by Council prior to the commencement of any buildings, works or demolition.

Tree Protection Zone fencing must be to the satisfaction of the Responsible Authority and should comprise:

- Treated pine posts with a minimum height of 1.8 metres (total post length) at every corner or at a maximum interval of 9.0 metres. These posts must be sunk 450mm into the ground. Concrete may affect the soil pH level and must not be used to secure posts.
- Treated pine stays must be fixed to all corner posts.
- Steel star pickets with a minimum height of 1.8 metres (total picket length) must be installed between the treated pine posts at a maximum interval of 3.0 metres. These pickets must be sunk 450mm into the ground and must include high visibility safety caps.
- Ring lock wire mesh fencing with a minimum height of 1.2 metres must be securely fixed at each post with wire ties. The fence must completely enclose the tree protection zone.
- High visibility hazard marker tape must be securely fixed to the top of the ring lock mesh fencing with wire ties.
- Signage must be attached to the fence at regular intervals. Signage must read “TREE PROTECTION ZONE. NO ENTRY EXCEPT TO AUTHORISED PERSONNEL. FINES SHALL BE IMPOSED FOR REMOVAL OR DAMAGE OF FENCING AND/OR TREES” (refer to Figure 5).

Tree Protection Zone fencing must be regularly maintained and may only be removed after the landscape pre-commencement meeting has occurred or until such date as is approved by the responsible authority in writing.

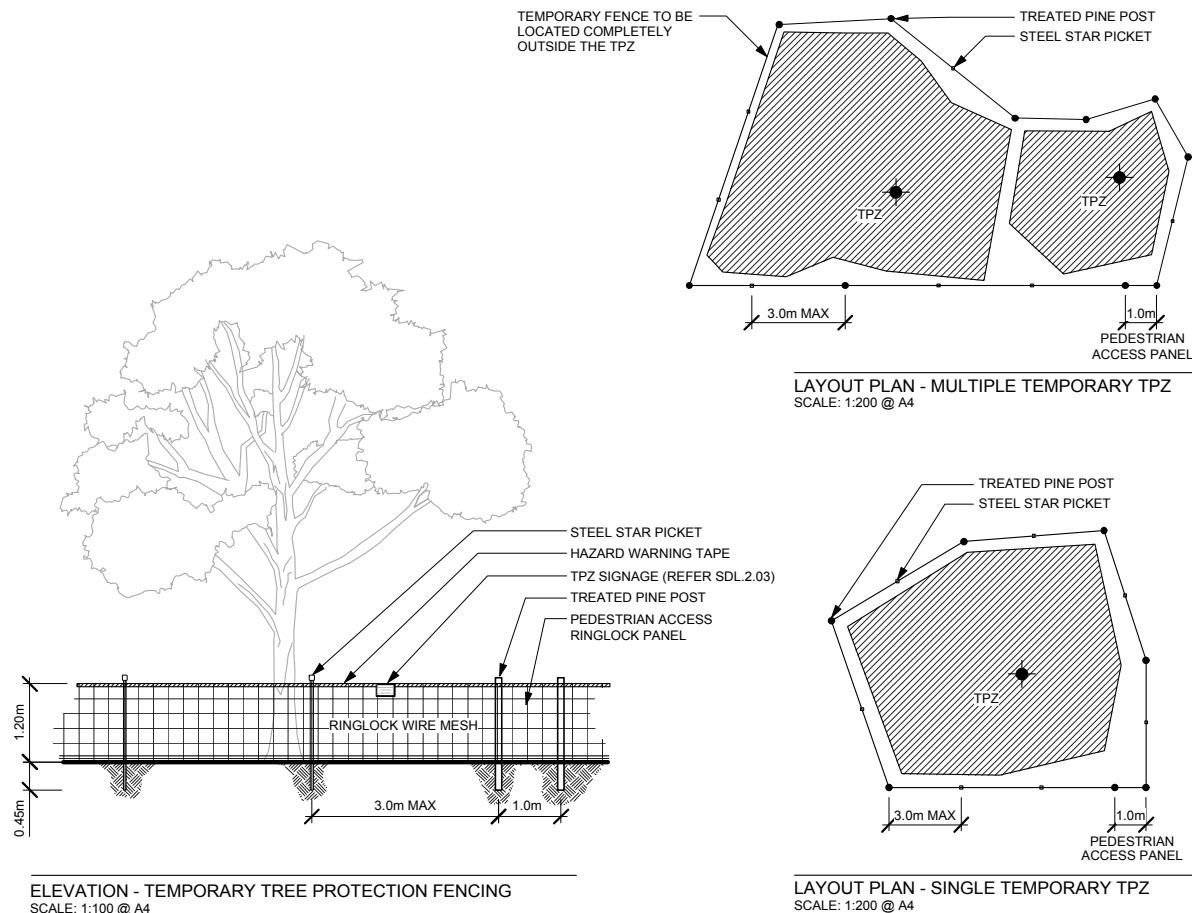


Figure 5: Tree Protection Zone Fencing

CONDITION – ENHANCED GROWING ENVIRONMENT WITHIN TREE PROTECTION ZONES

The area within the Tree Protection Zone must be modified to enhance the growing conditions of the tree to help reduce stress or damage to the tree as a direct result of adjacent construction works to the satisfaction of the Responsible Authority.

Specific improvements may include one or a combination of the following:

- Ground surfaces within tree protection zones must be left intact and a Glyphosate based herbicide mixed in accordance with the manufacturer's recommendations used to remove any weeds or unwanted vegetation.
- The area within the exclusion zone must be mulched with wood chips to a depth of 150mm.
- If required or as directed by the responsible authority, trees are to receive supplementary water. The amount of water is to be determined by the consulting arborist and will be determined by the amount of disturbance the tree has sustained and/or climatic conditions.
- Where severing of roots (greater than 50mm in diameter) is required directly adjacent to tree protection zones, the roots must be cleanly cut. Where possible this is to be completed at the beginning of the development of the site. Roots are not to be left exposed, they are to be back filled or covered with damp hessian.

The health of retained trees must be recorded prior to the commencement of works and periodically monitored by the consulting arborist during those works to the satisfaction of the responsible authority.

CONDITION – TREE PROTECTION ZONE INDUCTION

Prior to any works commencing in proximity to a Tree Protection Zone, a consulting arborist must induct all personnel involved in construction in close proximity to and/or involved in works that may impact Tree Protection Zone.

Construction personnel must be advised:

- Unless authorised by the consulting arborist or as directed by the responsible authority, no party must enter into a tree protection zone or modify the tree protection zone fencing in any way.
- No buildings or works (including loading and unloading, storage of materials, dumping of waste, vehicle access and parking or other construction activity) are to occur in the tree protection zone without the written consent of and to the satisfaction of the responsible authority.
- The storing or disposal of chemicals or toxic material must not be undertaken within 10 metres of any exclusion zone. Where the slope of the land suggests that these materials may drain towards an exclusion zone, the storing or disposal of these materials is strictly forbidden.
- Any trees that are to be removed next to exclusion zones are to be done so manually under the direct supervision of the consulting arborist (ie cut not pushed). Stumps are to be ground and not excavated to prevent damage to trees in close proximity.

CONDITION – TREE PROTECTION BOND

In appropriate circumstances, a Tree Protection Bond may be required as a condition of a permit for subdivision or development where existing trees are required to be retained. Such a condition may, as appropriate, include the following:

- Prior to commencement of the subdivision, a bank guarantee or other security to the satisfaction of the Responsible Authority for the total amount of \$100,000.00 (or otherwise as determined by the responsible authority) must be submitted to the Responsible Authority as security for the satisfactory observance of the conditions in relation to the Tree Protection Zones within that subdivision.
- Upon completion of any building or subdivision works to the satisfaction of the Responsible Authority, the bank guarantee or other security will be returned to the person providing the bank guarantee or security.
- Where the Responsible Authority determines that a tree covered by a Tree Protection Zone has been damaged as a result of buildings and works by the developer or its contractors to an extent that it affects detrimentally the life, health and appearance of the tree or its contribution to the landscape, an amount from the security is to be paid by the developer for the purchase of trees for planting on the land or the pruning or other arboricultural works to rehabilitate and improve existing trees, all to the satisfaction of the responsible authority.
- The extent of amount of security to be forfeited is to be determined by the appointment of an independent suitably qualified person at the developer's expense. Council's tree protection zone guideline shall supersede AS4970 – 2009 and/or any other tree protection zone standard/calculation. In this regard, Council's guideline considers both the on-going health of the tree and has been developed to protect people, infrastructure and property (ie the shape considers the impact of falling limbs and delineates a pedestrian exclusion zone) whereas AS4970 – 2009 only considers the impact of works on the on-going health of the tree.

CONDITION – HAZARD REDUCTION PRUNING

Prior to the issue of Practical Completion of the landscaping works, all trees that are to be retained must have hazard reduction pruning undertaken by a suitably qualified and experienced arborist to ensure the tree does not present an unreasonable risk. If necessary, pruning works shall include:

- Removal of all dead and diseased branches. Specifically, dead branches greater than 40mm in diameter (measured at the base of the branch) shall be removed from the canopy unless they contain hollows that are clearly being used for habitat. Due care shall be given to ensure the integrity of the tree as habitat for native fauna is not compromised (larger material shall be left on site for its habitat value).
- Weight reduction and canopy thinning (especially for branches overhanging trafficable areas and fixed infrastructure). No live branches greater than 200 mm in diameter shall be removed from the tree without authorisation from the responsible authority. Remove no more than 20 per cent of live foliage from any tree.

Removal of epiphytic plant material, wire and any attached debris/rubbish.

Prior to any pruning works being undertaken, the arborist engaged to undertake the works must arrange a site meeting with a representative from Council's Parks and Open Space Department.

All pruning works must be to approved arboricultural practices and have regard to AS4373 – 2007.

CONDITION – TREE REMOVAL

Where a tree is permitted to be removed:

- Each tree nominated for removal must be suitably marked prior to its removal and an inspection arranged with an appropriate Council Officer to verify that the tree marked accords with the permit and/or endorsed plans;
- Prior to removal, the tree to be removed shall be inspected by an appropriately qualified and experienced zoologist to determine the presence of any native animals living or nesting in the tree. Should any native animals be detected they must be caught and relocated to a site deemed appropriate by the zoologist;
- Tree removal is to be undertaken in a safe manner;
- All services either above or below ground are to be located prior to the commencement of any works;
- Stumps and any surface roots are to be ground down below ground level. Ground and chipped material to a depth of 50mm is to be removed from site at the direction of the project manager. The project manager must supply and place suitable topsoil and seed the area making certain that the reinstated ground surface is level, even and safe;
- Stumps must be removed within 14 days of the removal of a tree. All stumps not removed immediately after removal of the tree are to be paint marked with a suitable bright yellow reflective marking paint;
- Where ever possible and appropriate, native trees to be removed should be retained for use in core conservation areas for habitat purposes or reused in open space as urban art, park furniture and/or other use determined appropriate by the responsible authority;
- After a tree has been fallen, the tree must be protected from firewood harvesting via temporary fencing and signage to the satisfaction of Council until such time as the tree has been relocated for habitat or mulched;
- All timber greater than 300mm in diameter that cannot be reused as habitat, furniture or another use determined appropriate by the responsible authority shall be hammer milled and shredded for reuse as mulch within the site;
- All timber less than 300mm in diameter and branch/leaf material must be shredded for reuse as mulch within the site.



4.4 Local Convenience Centre Guidelines

PRINCIPLES	GUIDELINES
<p>Principle 1</p> <p>Provide smaller neighbourhoods with a viable Local Convenience Centre which offers accessible services to the surrounding community.</p>	<ul style="list-style-type: none"> Local Convenience Centres should be planned in conjunction with Local Town Centres in order to deliver a fine grain distribution of town centres within the region. Local Convenience Centres should be planned for neighbourhoods that contain less than 8,000 people and are located more than 1km away from a Local Town Centre or higher order town centre. Locate Local Convenience Centres in locations which are central to the residential community they serve and that provide exposure to passing traffic. Where appropriate, locate Local Convenience Centres in attractive settings and incorporate natural or cultural landscape features such as creeks and waterways, linear open space, pedestrian and cycle links and areas of high aesthetic value.
<p>Principle 2</p> <p>Provide a range of local services and facilities which are appropriate to the Local Convenience Centre location and the catchment that it serves.</p>	<ul style="list-style-type: none"> The design of the Local Convenience Centre should facilitate development with a high degree of community interaction and provide an appropriate mix of retail, commercial and community facilities to suit the catchment that the Local Convenience Centre serves. The design of the Local Convenience Centre should also encourage a pattern of smaller scale individual tenancies and land ownership patterns within the Local Town Centre to attract investment and encourage greater diversity and opportunities for local business investment. Active building frontages should address the primary street frontage to maximise exposure to passing trade and promote pedestrian interaction.
<p>Principle 3</p> <p>Design the Local Convenience Centre to be pedestrian friendly and accessible by all modes including public transport, while enabling private vehicle access. The Local Convenience Centre should be easily, directly and safely accessible for pedestrians, cyclists, public transport modes, private vehicles, service and delivery vehicles with priority given to pedestrian movement, amenity, convenience and safety.</p>	<ul style="list-style-type: none"> Public transport infrastructure/facilities should be planned for commuter friendly/convenient locations adjacent to the Local Convenience Centre. Bus stops should be provided in accordance with the Public Transport Victoria Public Transport Guidelines for Land Use and Development, to the satisfaction of the Public Transport Victoria. Bicycle parking should be provided within the street network and public spaces in highly visible locations and close to pedestrian desire lines and key destinations. The design of buildings within the Local Convenience Centre should have a relationship with and should interface to the public street network. Car parking areas should be located centrally to the site and to the rear and or side of street based retail frontages. Car parking areas should be designated to ensure passive surveillance and public safety through adequate positioning and lighting. Car parking areas should be designed to provide dedicated pedestrian routes and areas of landscaping. On-street car parking should be provided either as parallel or angle parking to encourage short stay parking. Car parking ingress and egress crossovers should be grouped and limited. Car parking ingress or egress and car parking areas accommodating heavy vehicle movements should be designed to limit the pedestrian/vehicle conflict. Streets, public spaces and car parks should be well lit to Australian standards and with pedestrian friendly (generally white) light. Lighting should be designed to avoid unnecessary spill to the side or above.
<p>Principle 4</p> <p>Create a sense of place with high quality engaging urban design.</p>	<ul style="list-style-type: none"> Development should complement and enhance the character of the surrounding area by responding appropriately to key visual cues associated with the topography of the Local Convenience Centre location and its surrounds. The Local Convenience Centre design should seek to minimise amenity and noise impacts resulting from the mix of uses by maintaining separation and transitional areas between retail and housing activities, such as open space, road networks and community facilities. The design of each building should contribute to a cohesive and legible character for the Local Convenience Centre as a whole. Sites in prominent locations (such as at key intersections, surrounding public spaces and terminating key view lines and vistas) should be identified for significant buildings or landmark structures. The design of building frontages should incorporate the use of a consistent covered walkway or verandah to provide for weather protection. The built form should define the primary street frontage and be aligned with the property boundary.

	<ul style="list-style-type: none"> • Street facades and all visible side or rear facades should be visually rich, interesting and well articulated and be finished in suitable materials and colours that contribute to the character of the Local Convenience Centre. • Materials and design elements should be compatible with the environment and landscape character of the broader precinct. • If a supermarket is proposed, the supermarket should have a frontage that directly address the primary street frontage so that the use integrates with and promotes activity within the public realm. • Supermarkets with a frontage to the primary street frontage should use clear glazing to allow view lines into the store from the street. (Planning permits for buildings and works should condition against the use of white washed windows, excessive window advertising and obtrusive internal shelving or 'false walls' offset from the glazing). • Secondary access to a supermarket from car parking areas should be considered where it facilitates convenient trolley access and does not diminish the role of the primary access from the primary street frontage. • The design and siting of supermarkets should provide an appropriate response to the entire public domain. This includes but is not limited to car parking areas, predominantly routes and streets. • Retail uses along street frontages should generally include access points at regular intervals to encourage activity along the length of the street. • Retail and commercial buildings within the Local Convenience Centre should generally be built to the property line. • Public spaces should be oriented to capture north sun and protect from prevailing winds and weather. • Landscaping of all interface areas should be of a high standard as an important element to complement the built form design. • Urban art should be incorporated into the design of the public realm. • Street furniture should be located in areas that are highly visible and close to or adjoining pedestrian desire lines/gathering spaces and designed to add visual interest to the Local Convenience Centre. • Wrapping of car parking edges with built form, to improve street interface, should be maximised. • Car parking areas should provide for appropriate landscaping with planting of canopy trees and dedicated pedestrian thoroughfares. • Screening of centralised waste collection points should minimise amenity impacts with adjoining areas and users of the centre. • Where service areas are accessible from car parks, they should present a well designed and secure facade to public areas. • Mechanical plant and service structure roofs should be included within roof lines or otherwise hidden from view.
<p>Principle 5</p> <p>Promote localisation, sustainability and adaptability.</p>	<ul style="list-style-type: none"> • The Local Convenience Centre should promote the localisation of services which will contribute to a reduction of travel distance to access local services and less dependence on the car. • The Local Convenience Centre should be designed to be sympathetic to its natural surrounds by: <ul style="list-style-type: none"> • Investigating the use of energy efficient design and construction methods for all buildings; • Including Water Sensitive Urban Design principles such as integrated stormwater retention and reuse (e.g. toilet flushing and landscape irrigation); • Promoting safe and direct accessibility and mobility within and to and from the Local Convenience Centre; • Including options for shade and shelter through a combination of landscape and built form treatments; • Ensuring buildings are naturally ventilated to reduce the reliance on plant equipment for heating and cooling; • Promoting passive solar orientation in the configuration and distribution of built form and public spaces; • Grouping waste collection points to maximise opportunities for recycling and reuse; • Promoting solar energy for water and space heating, electricity generation and internal and external lighting; and • Investigating other opportunities for the built form to reduce greenhouse gas emissions associated with the occupation and the ongoing use of buildings. • Encourage building design which can be adapted to accommodate a variety of uses over time.

