Breese Pitt Dixon

80 McArthurs Lane & 25 Hunters Road, South Morang

The Development Plan was approved by the City of Whittlesea on 6 October 2020in accordance with Clause 43-04 Schedule 5 & 27 of the Whittlesea Planning Scheme.

13/10/2020

George Surnaev

Signature of the Responsible Authority

80 McArthurs Lane & 25 Hunters Road, South Morang

Development Plan

DPO5 & DPO27

August 2020

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1.0 Introduction

This development plan is prepared for land located at 80 McArthurs Road and 25 Hunters Road South Morang. The land is subject to the Development Plan Overlay schedules 5 and 27 requiring the preparation of a development plan prior to the issue of a planning permit allowing the comprehensive development of the land.

The development plan has been prepared in accordance with the requirements of the Development Plan Overlays Schedules 5 and 27 and will provide an appropriate land use transition to the Quarry Hills Regional Parklands to the west, established residential land within the locality and to that land which remains undeveloped.

The Development Plan has been prepared with the key physical elements of the site and the surrounding context in mind. As a result, the Development Plan will:

- Advance the strategic planning objectives of the Mernda Strategy;
- Deliver orderly planning advancement for the site and the locality through the introduction of an appropriate land use and development strategy that successfully integrates with its context.
- Draw from the natural and landscape values of the site and integrate these into the Development Plan to deliver a unique and high level of amenity into the urban design response;
- Reinforce and enhance the local character of the broader surrounding area;
- Allow existing native vegetation, locally significant views to the Quarry Hills Regional Parklands and the natural topography to play a key role in defining the sense of place and neighbourhood character through site responsive design;
- Provide a clear framework detailing the future planning outcomes and objectives for the land to inform any future application for planning permit.

2.0 Background

The Mernda Strategy was originally approved by Whittlesea City Council in October 2004 with the latest iteration being approved and incorporated into the planning scheme in July 2017 via planning scheme amendment C123. The Strategy provides strategic direction and land use outcomes for the future development of the Mernda growth area.

The majority of the subject land has supported a residential zoning for many years. Planning scheme amendment VC68, amongst other changes, amended the location of the Urban Growth Boundary in August 2010 as it applied to the land whereby the boundary was shifted to the west providing for increased development opportunity. That part of the land which was included within the expanded UGB was rezoned from the Rural Conservation Zone to Residential 1 Zone via planning scheme amendment C166 part 1 in November 2012. This amendment also applied the Development Plan Overlay Schedule 27 to the aforementioned portion of the site with the Development Plan Overlay Schedule 5 already applying to the land previously included within the UGB.

3.0 Site & Context

3.1 Regional Context

The site is located approximately 25km from the Melbourne CBD. Figure 1 shows the site's context within the metropolitan Melbourne Growth Corridor Plan including its position within the South Morang/Mernda growth area, proximity to the Quarry Hills Regional Parkland, the Outer Metropolitan Ring Road, Hume Freeway and the surrounding arterial road, activity centre and train system network.

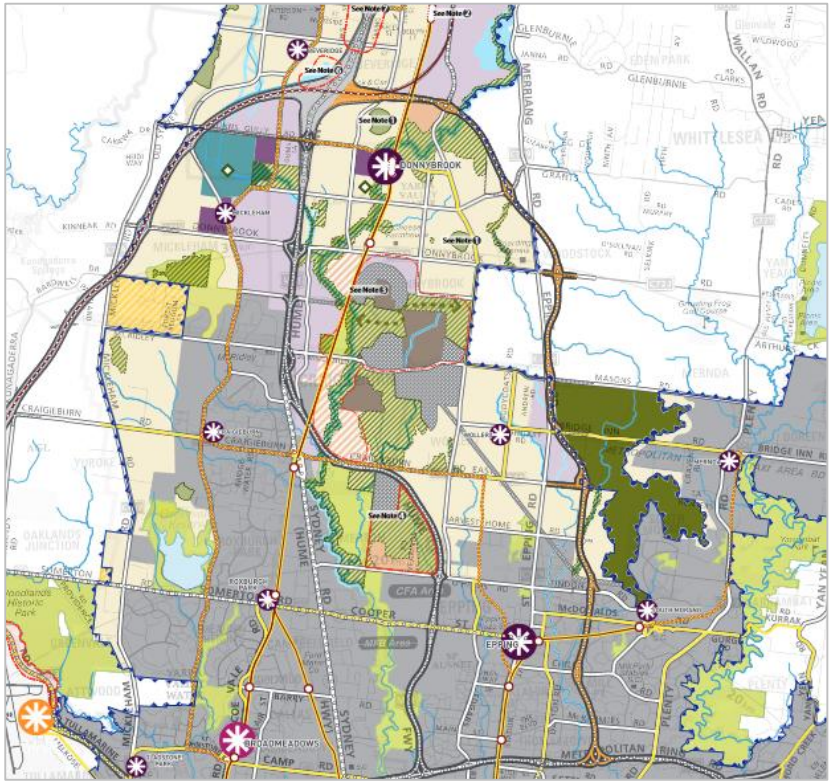


Fig 1. North Growth Corridor Plan

Fig 2. Municipality map

Figure 2 shows the site's location within the municipality boundary and council ward boundaries.

The 2016 ABS Census should showed the City of Whittlesea as supporting a population of 197,491, consisting of 53,550 families with an average of 1.9 children per family. In regard to dwelling structure the Census found that 83% of dwellings consisted of detached dwellings with 12% being semi-detached, row or terrae or townhouse dwellings. 87% of dwellings were recorded as supporting more than 3 bedrooms compared to 73% for Victoria. Household composition consisted of 81% representing family households with 16% being single or lone person households.

City of Whittlesea Population and household forecasts 2011 to 2036 (.id consulting, 2014) forecasts population growth to 241,000 in 2021 and 333,000 to 2036 representing a 38% increase between this period. A significant proportion of future population growth will be supported by the continued development of greenfield growth areas through the implementation of strategic plans such as PSP's, local structure plans or development

plans. Areas forecast to support the greatest level of population change and transition to urban environments includes the growth regions of Donnybrook, Epping North and Wollert which are subject to precinct structure planning.

South Morang is forecast to support strong population growth over the coming years as shown in population forecasts of figure 3 with id Consulting forecast population growth in South Morang for the period between 2016 to 2026 to be approximately 4,800 people. Upon development of the subject land and its surrounds a significant portion of population growth in South Morang will be accommodated by the development plan area as it represents one of the remaining major greenfield development opportunities in South Morang

City of Whittlesea	Forecast year						Change between 2016 and 2041	
Area	2016	2021	2026	2031	2036	2041	Total change	Avg. annual % change
City of Whittlesea	**207,881**	**246,904**	**285,275**	**320,622**	**352,873**	**382,896**	**+175,015**	**+2.47**
Bundoora	14,458	15,465	16,042	16,549	17,071	17,612	+3,154	+0.79
Donnybrook	131	2,325	13,004	28,061	43,934	58,652	+58,522	+27.67
Doreen	21,921	28,643	31,236	30,935	30,227	29,740	+7,820	+1.23
Epping	15,736	15,969	17,015	18,351	19,877	21,360	+5,624	+1.23
Epping North	27,418	40,191	50,723	55,263	56,537	57,281	+29,864	+2.99
Lalor	24,045	25,437	26,606	27,413	28,142	28,869	+4,823	+0.73
Mernda	20,217	28,662	32,277	33,271	32,739	32,080	+11,863	+1.86
Mill Park	30,952	30,642	30,593	30,763	31,095	31,466	+514	+0.07
Rural Balance	3,162	3,277	3,365	3,479	3,591	3,681	+519	+0.61
South Morang	22,828	25,970	27,658	28,868	29,836	30,624	+7,796	+1.18
Thomastown	21,612	22,444	23,703	25,008	26,125	27,180	+5,568	+0.92
Whittlesea Township and Surrounds	5,247	5,893	6,152	6,411	6,709	7,006	+1,759	+1.16
Wollert	155	1,985	6,900	16,251	26,992	37,344	+37,189	+24.54

Population and household forecasts, 2016 to 2041, prepared by id, the population experts, November 2017.

Fig 3. Future population forecast. id consulting

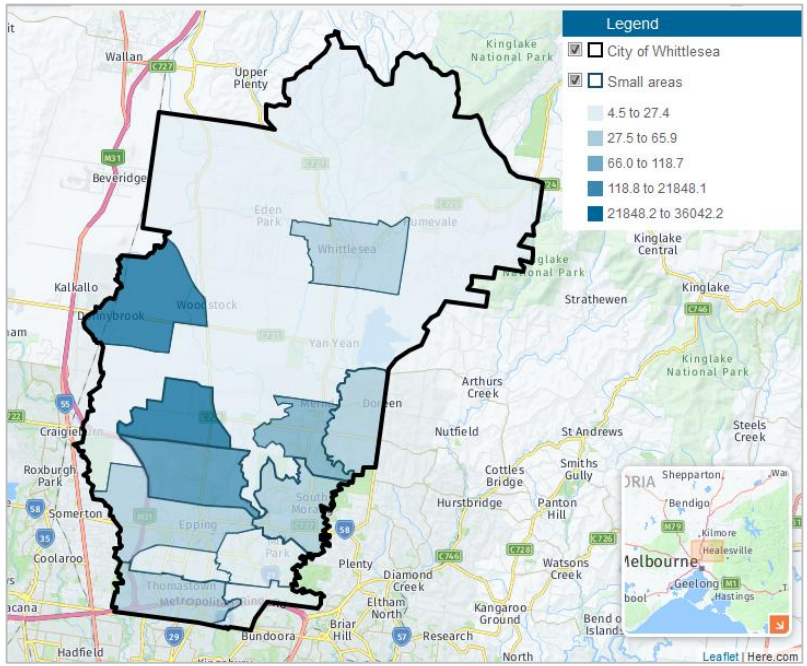


Fig 4. Future dwelling forecast map. id consulting

3.2 Local Context

Surrounding context

The Woodland Waters residential estate is located to the north of Hunters Road and supports primarily conventional density residential development of single dwellings on lots of circa 420 square metres with examples of medium density housing provided primarily closer to public open space and in the form of rear laneway vehicle access and attached terrace double storey dwellings. The estate supports the provision of active open space and also the Woodlands Conservation Reserve. A stormwater management network is located in the south-east corner of the estate with this network draining south through the subject site via Simons Creek.

There are two residential lots located midway along the north side of Hunters Road which gain access from this road. These properties are to remain upon the transition of Hunters Road to a Council greenway and mobility link to the future Quarry Hills Parkland. The Mernda Strategy has recently been subject to planning scheme amendment C123 which has amended the Strategy for the express purpose of showing these two properties as supporting ongoing residential use and development from their previous conservation purpose. The northern land use context is shown below.

Fig 5. Aerial context to north

Residential development exists along and to the south of McArthurs Road in the form of typical single dwelling development on residential lots of circa 600 to 700 square metres in size with reduced examples of housing diversity and medium density residential development. As can be seen below, the subdivision pattern generally consists of residential lots of regular shape, orientated either north-south or east-west with an internal local street treatment applied along Plenty Road. The subdivision response achieves a level of retention of indigenous remnant River Red Gums. Access to Plenty Road for the northern residential catchment is provided via McArthurs Road. Residential development south of McArthurs Road has the ability for minor expansion to the west upon the more recent expansion to the UGB

Fig 6. Aerial context to south

A retail butcher business is located along the east side of Plenty Road at 1235 Plenty Road contained within a parcel of approximately 6,000 square metres. The premises currently gains access to Plenty Road via a temporary access extending from the intersection of Plenty Road and Riverdale Boulevard with the accessway extending through the subject land. Provision of the current temporary access is a requirement of Section 173 Agreement AJ730990L registered to the subject land.

The land supports a single storey commercial building constructed towards Plenty Road being setback approximately 9 metres from its front boundary with customer car parking provided to the rear. The land supports a number of mature trees within the site and close to its property boundary including a number of River Red Gums which were identified and assessed within the arborist report.

1215 Plenty Road is located to the south-east of the site consisting of an extended frontage to Plenty Road. The land supports residential use and previously supported a broiler farm which has ceased operations. As is shown below, the land consists of a dwelling situated towards Plenty Road with three main shed buildings positioned to the rear which supported the former use. There are a number of plantings and remnant trees located on this land including along the shared boundary with the subject land. 1175 Plenty Road is a smaller parcel of approximately 0.4ha located towards the intersection of Plenty Road and McArthurs Road supporting residential use with one dwelling on the land.

1235, 1215 and 1175 Plenty Road do not form part of the development plan area and will be considered as part of a separate planning approval process.

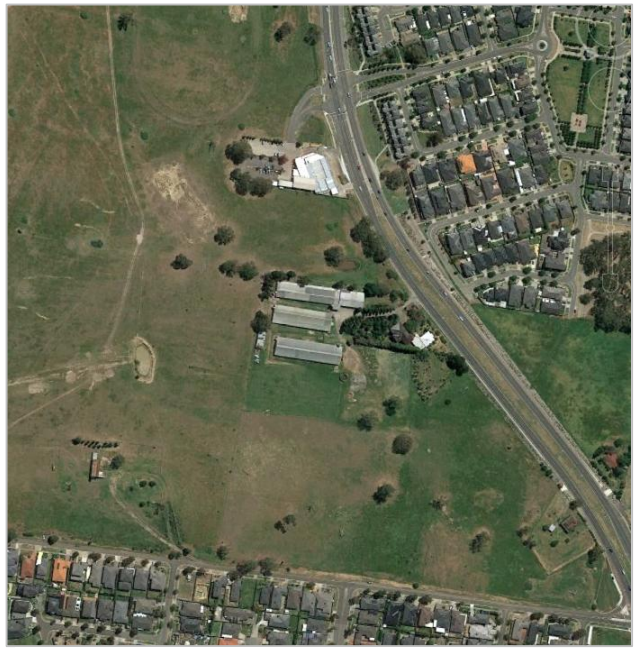


Fig 7. Aerial view to 1215 & 1235 Plenty Road

As shown below, residential use and development is found east of Plenty Road including the Hawkstowe estate. Residential development supports conventional residential development in the form of single dwellings on lots generally in the range of 400-500 square metres, examples of medium density residential development in proximity to public open space, the retention of River Red Gums within open space areas and a curving local street network. The recently completed Hawkstowe train station is located to the east of Plenty Road and its intersection with Hawkstowe Parade.

Fig 8. Aerial context to east

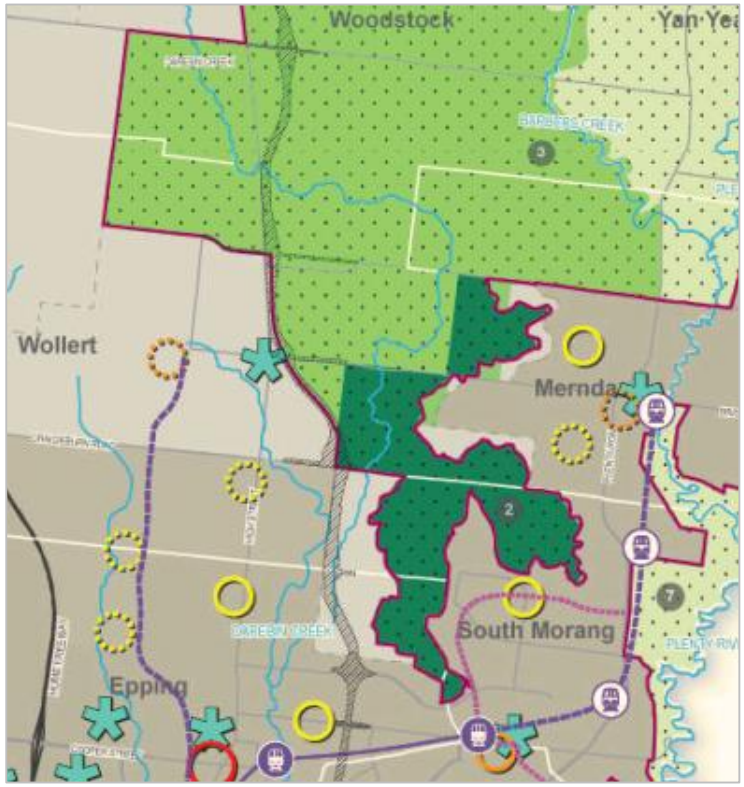


Fig 9. Municipal Framework Plan extract

The Quarry Hills Regional Parkland is located to the west of the subject land with the current park area being approximately 115 hectares supporting public open space positioned over the hilltops and ridges of the northern area of South Morang offering superb elevated 360 degree views. The parklands support a network of trails, passive open space use, flora and fauna biodiversity, cultural heritage values and is a locally and regionally significant landscape. The Quarry Hills Parkland is to be expanded through future acquisitions of land located externally to the UGB as detailed below. The western portion of the subject land is identified to be acquired by Council for inclusion within the Quarry Hills Parkland.

The State government have recently completed development of the Mernda rail extension, as shown in figure 11. The rail line has been extended from the South Morang station to the Mernda station located in the site of the future Mernda activity centre. The rail extension included the development of three new stations. The Hawkstowe train station is located in convenient walkable proximity to the subject site at the intersection of Plenty Road and McArthur Road/Hawkestowe Parade. The Hawkstowe station supports access to the principal public transport network for future residents of the subject land upon its conversion to residential development. The Hawkstowe station consists of raised station platforms, 350 parking spaces, a landscaped forecourt and integrated share path network as illustrated below.

Fig 10. Hawkestowe train station

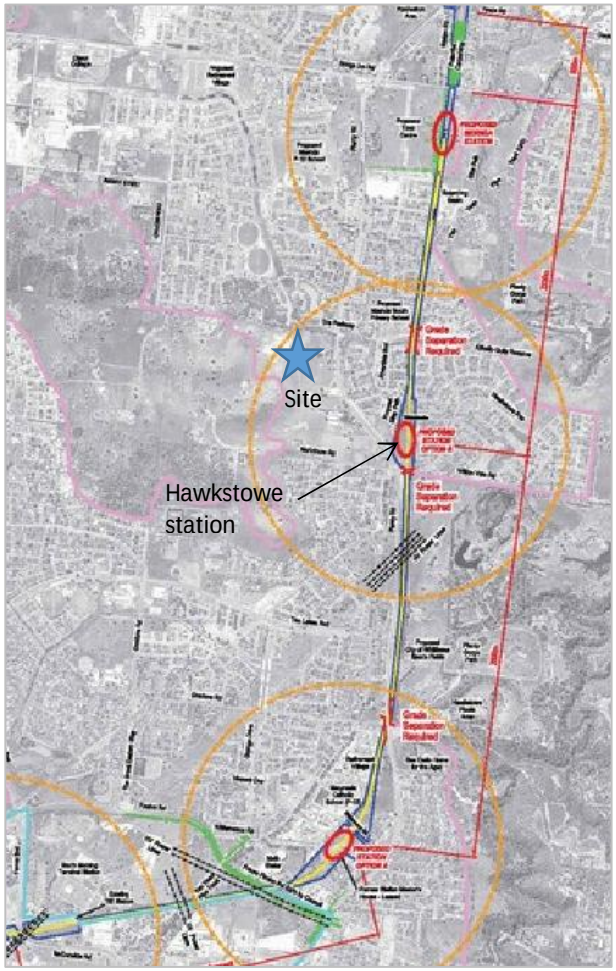


Fig 11. Mernda rail extension plan

3.3 Development Plan Area

The land consist of three separate titles as is detailed below.

Address	Lot	Plan of Subdivision
25 Hunters Road, South Morang	1	TP172693
25 Hunters Road, South Morang	A	PS637199
80 McArthurs Road, South Morang	1	TP160050

The site supports a total area of 79.81 hectares and is retained in single ownership.

Fig 12. Cadastral plan

Fig 13. Site and context aerial view, Google

Fig 14. Locality aerial

The site is located on the west side of Plenty Road and positioned centrally within the City's Mernda / South Morang growth corridor. The site is positioned 3.5km north of the South Morang retail centre core and 24km north-east of the Melbourne CBD. The Urban Growth Boundary transects the site through its north and south property boundaries forming part of the western edge of the Mernda growth corridor.

The site is accessed via a signalised four-way intersection on Plenty Road to its eastern boundary with Plenty Road being a 4 lane declared arterial road zoned Road Zone Category 1.

McArthurs Road, being a local residential street extends along the southern boundary contained within a 19 metre wide road reserve and intersects with Plenty Road via a signalised intersection.

Hunters Road extends along the northern boundary in the form of an unsealed rural local road. Hunters Road does not support connection to Plenty Road. Whittlesea City Council has plans to close Hunters Road where abutting the subject land into the future and establish it as a pedestrian and cycle link to the future Quarry Hills Regional Parkland.

The site supports two single dwellings with one each located on 25 Hunters Road and 80 McArthurs Road supporting rural residential use.

Fig 15. Existing signalised intersection and future site access

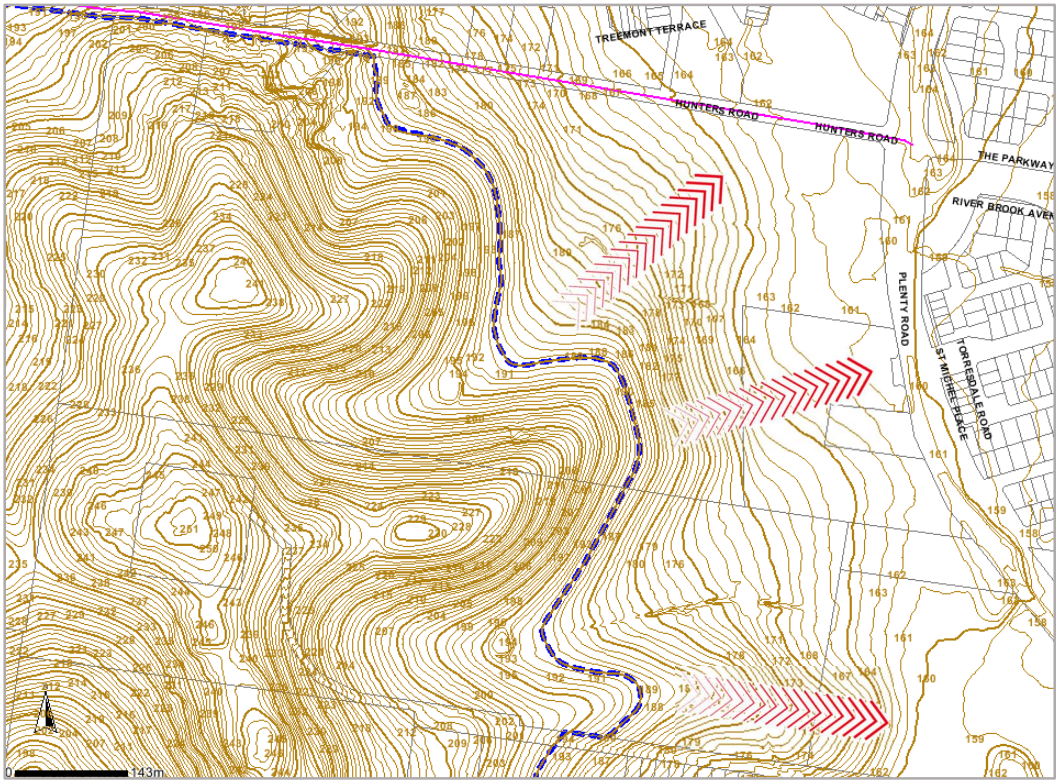


Fig 16. Contour map

The site is subject to significant slope as it approaches the Urban Growth Boundary to the west with flatter topography found to the east of the site. The steeper land to the west and external of the UGB is identified to form part of the future expanded Quarry Hills Regional Parkland. The elevated parts of the land maintain excellent and locally significant views.

The sloping topography of the site is consistent with much of the surrounding South Morang and Mernda growth area.

The Simons Creeks transects the north-east corner of the site before it flows are directed under Plenty Road and continue east towards the Plenty River.

Photo. View north across site

Photo. View to north-east across site

Photo. View north across site

Whilst the land has been subject to historical farming use and consequential removal of much of the indigenous remnant vegetation that would have once been present there are a number of mature River Red Gums (*Eucalyptus camaldulensis*) found throughout the site. The land is subject to the following planning zone and overlays.

- General Residential Zone 1
- Development Plan Overlay 5 & 27
- Incorporated Plan Overlay 1
- Vegetation Protection Overlay 1
- Development Contributions Plan Overlay 8
- Significant Landscape Overlay 2

4.0 The Development Plan

4.1 Vision

To establish a new residential neighbourhood which draws its sense of place and defining neighbourhood character from its natural landscape features. The residential neighbourhood is to integrate natural elements and respond to the site's characteristics and setting to achieve a unique residential urban environment for its future community. The neighbourhood will maximise the amenity value provided by existing River Red Gums and other remnant native vegetation found on and external to the site along with capturing views to the future Quarry Hills Regional Parkland and the surrounding natural landscape. The site will support a residential community in which the natural and built environment are complementary and provides contemporary housing options which cater for the local community.

A new residential community will be created in which residents will be encouraged to adopt active movement to local destinations through the delivery of an efficient high quality pedestrian and cycle network which provides ease of travel and connection to the surrounding network, local parklands and the public transport network including the future Hawkstowe train station.

4.2 Design & Development Principles

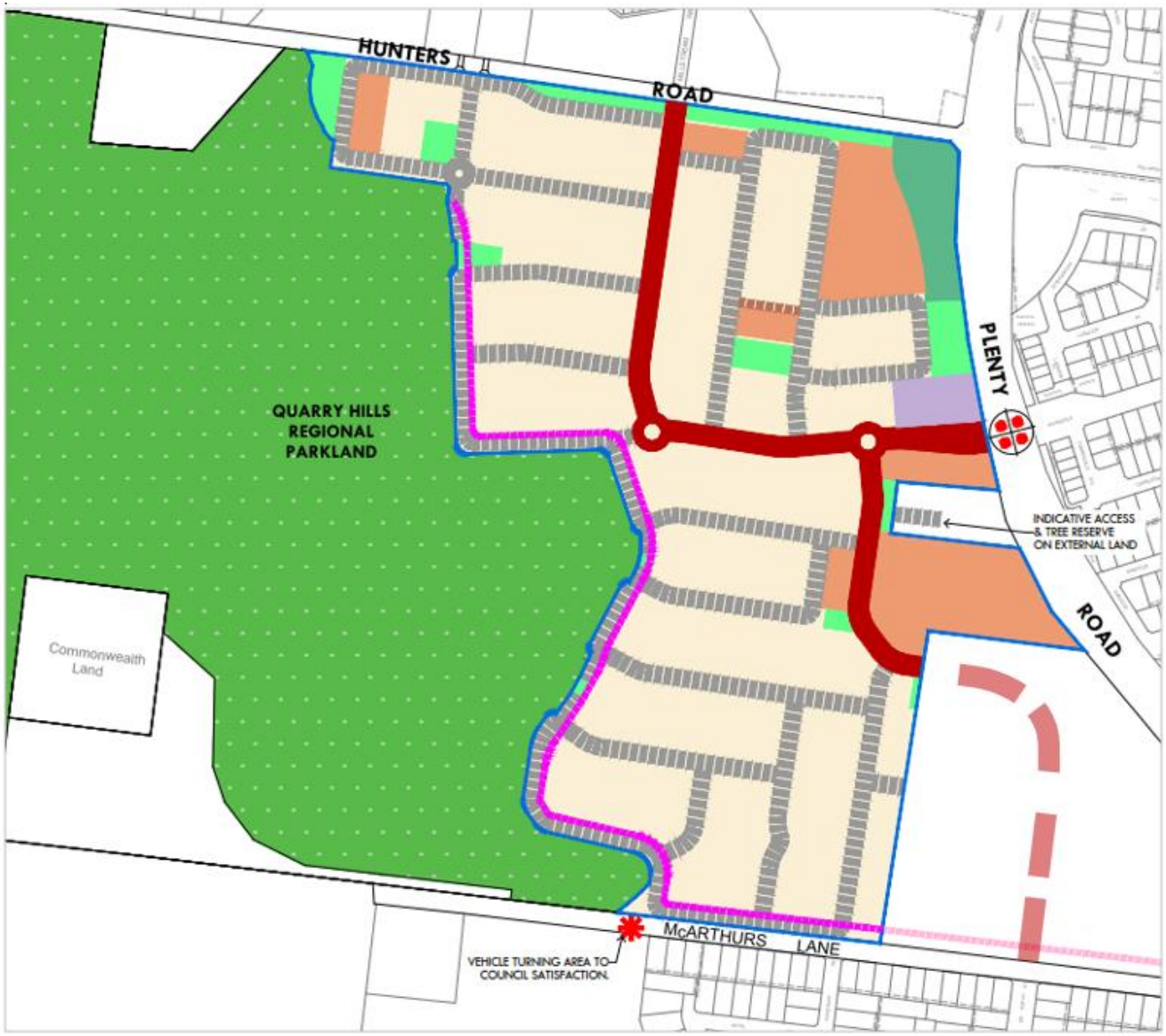
Neighbourhood character
Create a unique character for the site whilst also adopting aspects which contribute to City of Whittlesea's broader attractive character.
Create a residential environment in which residents feel safe.
Maximise landscape values of the Quarry Hills Regional Park and the urban break to reinforce the site-specific character.
Incorporate remnant River Red Gums and the natural landscape into the urban environment providing a balance to the built environment.
Provide intimate and high quality local streetscapes.
Provide a consistent high quality residential setting throughout.

Housing
Achieve an efficient utilisation of residential zoned land.
Provide an appropriate mix of dwelling diversity to suit varied accommodation needs including conventional and medium density dwellings.
Housing design to adopt contemporary architectural outcomes.
The designation of different housing outcomes responding to the site's development opportunities and constraints.
Housing complements the surrounding natural environment and makes a positive contribution to the local character.

Conservation & Open Space
Achieve the retention of River Red Gums throughout the urban environment.
Ensure River Red Gum retention enhances their landscape and amenity value through ensuring trees are affectively retained in the subdivision design response.
Whilst no public open space is identified for the site in the Mernda Strategy incorporate the provision of opportunistic public open spaces.

Mobility
Deliver a street environment which emphasises an intimate local network rather than characterised by higher order streets.
Require a low speed street network which encourages opportunities to utilise local streets for community interaction and passive use.
Provide a legible and permeable mobility network.
Encourage the use of non-vehicular modes of travel.
Achieve a street networks which complements and enhances the natural values of the site.

Infrastructure & Utilities
Deliver required services and utilities to support the development of residential land in a logical sequencing of infrastructure.
Provide infrastructure in accordance with any adopted servicing strategy.
Provide infrastructure and services in a cost-effective manner.
Provides satisfactory integration to the existing and future mobility network.



LEGEND

- Site Boundary
- Quarry Hills Regional Parkland
- Waterway/Drainage Reserve
- Conservation Reserve
- Tree Reserves & Pocket Parks
- Future Development Site
- Conventional Residential
- Medium Density Residential
- Connector Road
- Local Access Level 1
- Rear Laneway
- Footpath Link
- Signalised Intersection
- Vehicle Turning Area
- Existing Bus Stop Location

4.3 Development Plan Components

The development plan has been prepared to address the requirements of the Development Plan Overlay Schedules 5 (Mernda Development Plan) and 27 (Mernda West & South Morang Quarry Hills Precincts) as detailed below.

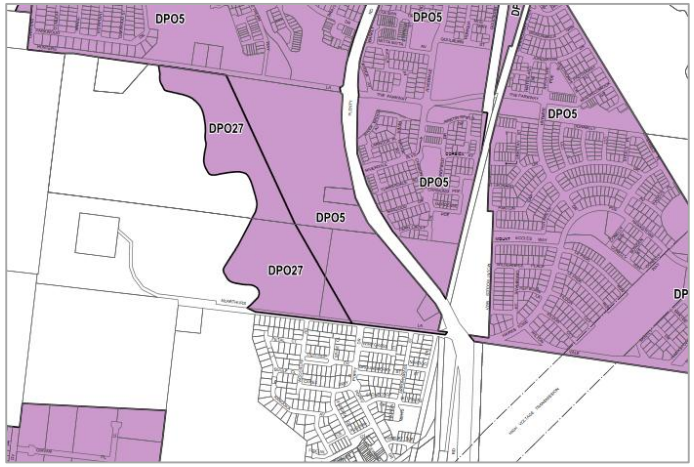


Fig 17. Development Plan Overlay map

These overlays set out the content required to be provided within a development plan to clearly detail the future use and development of the precinct to which they apply. The development plan responds to the requirements of the overlays applying to the land through addressing the following planning items.

Mernda Strategy
Supports planning outcomes which are generally in accordance with the expectations of the Mernda Strategy Plan through supporting residential use of the land, the creation of public open space for conservation purposes, contribution of land towards the Quarry Hills Parklands, retention of mature native vegetation and delivers a high level of residential amenity and variety of dwelling types to accommodate community requirements.

Biodiversity Preservation
Affords protection and enhancement of identified conservation areas including mature River Red Gums, drainage corridors, the Hunters Road vegetation and greenway and the Quarry Hills Parklands.
The development plan succeeds in retaining and integrating individual and stands of mature trees, particularly River Red Gums into the urban design.
Recognition of important landscape views and vistas.
The local street networks is designed to reinforce the contribution that the Quarry Hills Regional Parklands makes to the locality through maximising view lines to the parklands.
Views to existing vegetation within the site will be enhanced through placing such vegetation within local reserves with surrounding residential land to support active frontages to these areas.
Residential land positioned to the north of the site will be sufficiently setback and fronted towards the future greenway and existing mature vegetation located along the northern property boundary and within Hunters Road.
Lot Diversity
The proposal supports the creation of a suitable variety of lot and housing types which will include larger lots of greater than 500 square metres positioned on areas of increased slope, conventionally sized lots of 350 - 450 square metres and areas to support medium density housing.
The development plan supports a suitable diversity of housing types to address the anticipated varied accommodation requirements of the community.
Site Context Response
Housing types are distributed to respond to the development opportunities and constraints of the site particularly with regard to the degree of land slope.
Preferred design outcomes are adopted which respond to the Quarry Hills Parklands, existing vegetation, drainage corridors and the arterial and local street network.
Integration with Quarry Hills Parklands
An active edge to the future Quarry Hills Parklands is provided through a local street treatment to the parklands. The interface will support residential development fronting onto the Parklands with the edge street design to provide a landscaped response affectively blending the built and natural environment.
Numerous opportunities for pedestrian access to the Parklands are to be provided supporting passive open space uses to the community.

Integration with Adjoining Land
The development plan responds accordingly with regard to land use distribution, local traffic and non-vehicular movement with satisfactory access and cross-parcel movement provided.
Transport & Movement
Supports a low speed street network encouraging shared use.
Efficient access is provided to all residential land.
Appropriate connections to the existing and surrounding mobility networks are provided.
Design of the street network will be to Council's satisfaction.
Landscape Strategy
The landscaping strategy will adopt native and indigenous species, canopy tree planting to extend a mature canopy throughout, enhancement planting to existing mature River Red Gums and a response which delivers a high-quality transition from urban land to the Quarry Hills Parkland.
Will provide a balancing of the built environment and make a discernible positive contribution to local neighbourhood character.

4.4 Land Use & Density

Housing outcomes
Should achieve an overall housing density of a minimum 15 dwellings per net developable hectare.
Provide a suitable level of housing diversity.
Housing is to consist primarily of single dwelling development on residential lots with medium density housing provided in suitable locations generally in accordance with the development plan.
Housing to consist of modern and contemporary dwelling design.
Housing design to respond to the natural landscape of the site and it surrounding context including the Quarry Hills Regional Parklands and the established native vegetation along Hunters Road.
Housing to complement and enhance the presentation and function of open space areas.
Housing to make an immediate and positive contribution along the main entry street from Plenty Road.
Establish a unique residential character albeit achieves successful integration into the broader residential areas of the municipality.
Ensure development appropriately responds to the natural landform of the precinct, particularly where there is an interface with the Quarry Hills Regional Parkland.
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.
Achieve an increase in housing density at those areas which are less constrained in terms of topography and exhibit higher levels of amenity.
Deliver a residential environment that supports a high level of amenity.
Deliver a residential community which enjoys a defined sense of place.
Deliver residential development which is interactive and generates a strong sense of community and inclusion.

Lot Type Table (estimate only)

Lot Size (m^2)	Number of Lots	Percentage %
0-299	55	11
300-499	122	24
500 +	224	45
Multi-Dwelling Development	100	20

Land Budget Table (excluding QHP. estimate only)

Land Use	Area (ha)	Percentage of Total Site Area %
Residential	32.9	93.4
Public Open Space	0.72	2.1
Drainage	0.78	2.2
Tree Reserve	0.8	2.3

Plenty Road entrance site
The site located to the north of the connector street entry from Plenty Road has the potential to support housing at a higher density or non-residential use.
Where not exempt under the Planning Scheme any non-residential use will need to demonstrate how it may be integrated into the residential context without resulting in detriment to surrounding and adjoining land. Potential non-residential uses the site may support consist of those which are commonly located in residential areas such as medical centre, child care or veterinary clinic.
Access to any non-residential will be provided from the connector and entry street to the satisfaction of the responsible authority. No access to a non-residential use at this location will be allowed via a local residential street.

Housing requirements
Conventional residential subdivision is to ensure that a suitable diversity of lot types are provided to support variation in dwelling types, frontage treatments and a more interesting building environment.
A permit application supporting residential development is to demonstrate how the proposal will deliver housing diversity.
Housing is to front onto areas of public open space to enhance the presentation and function of these areas. Rear lot boundaries presenting to public open space will not be supported. Side boundary presentation to public open space should be limited where design constraints support this outcome albeit with the primary presentation being lot frontages.
Housing should adopt the use of materials and finishes which are complementary to the natural landscape within and surrounding the site.
Dwellings to support a consistent front setback character which enables the provision of landscaping within the property frontage to complement street planting and the open space network.
For those lots which are located on steeper topography, dwellings should adopt adaptive design solutions to respond to natural ground level.
Earthworks that are undertaken in response to steeper topography such as retaining walls and site cutting are not to overwhelm or dominate the presentation of residential lots from the street.
Earthworks and retaining walls undertaken along rear lot boundaries are to be undertaken in a manner which ensures that the works will maintain satisfactory levels of sunlight to private open space.

Residential lots located along the Quarry Hills Parkland interface are to consist of larger lots to improve the integration of the urban environment to the Parklands and the Urban Growth Boundary.
Housing is to complement and enhance the presentation and function of open space areas.
Housing is to make an immediate and positive contribution along the main entry street from Plenty Road with opportunities for stronger built form outcomes encouraged.
Applications proposing medium density housing in locations adjacent to public open space areas to ensure that dwellings provide passive surveillance to open space for ground and upper floors, pedestrian connection and deliver an integrated landscape response which complements that of the reserve.
Where medium density housing directly adjoins an open space reserve a 4 metre wide ‘paper road’ reserve is to be provided along the residential frontage not encroaching into the open space reserve.
Deliver housing that is responsive to the natural topography.
Fencing along or within 3 metres of the lot front boundary is not to be provided.

4.5 Mobility

Vehicle Access

LEGEND

- Site Boundary
- Quarry Hills Regional Parkland
- Waterway/Drainage Reserve
- Conservation Reserve
- Tree Reserves & Pocket Parks
- Future Development Site
- Conventional Residential
- Medium Density Residential
- Connector Road
- Local Access Level 1
- Rear Laneway
- Footpath Link
- Signalised Intersection
- Vehicle Turning Area
- Existing Bus Stop Location

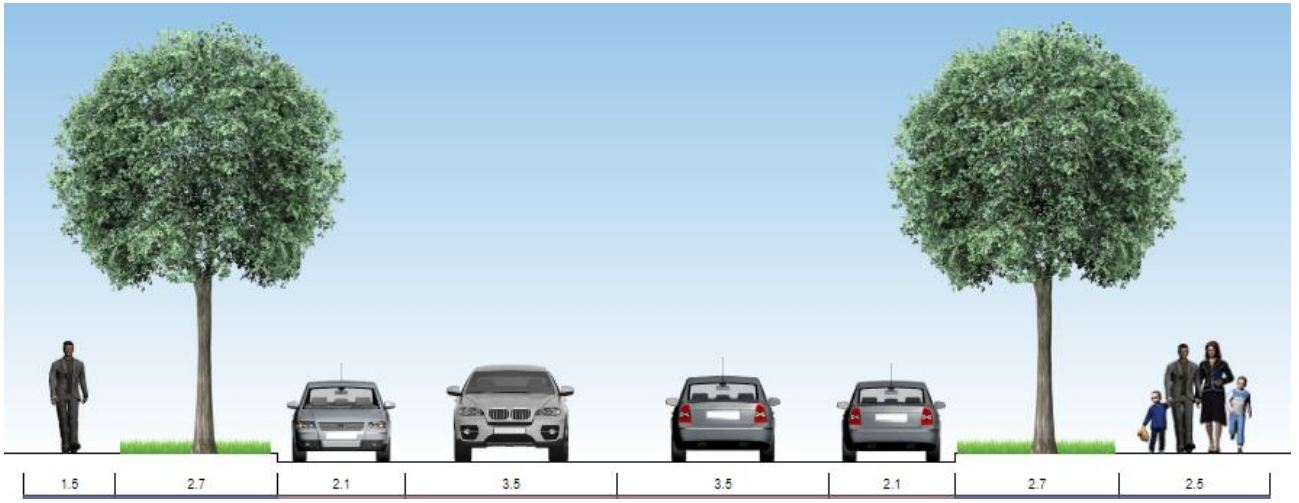
Pedestrian & Cycle Access

LEGEND

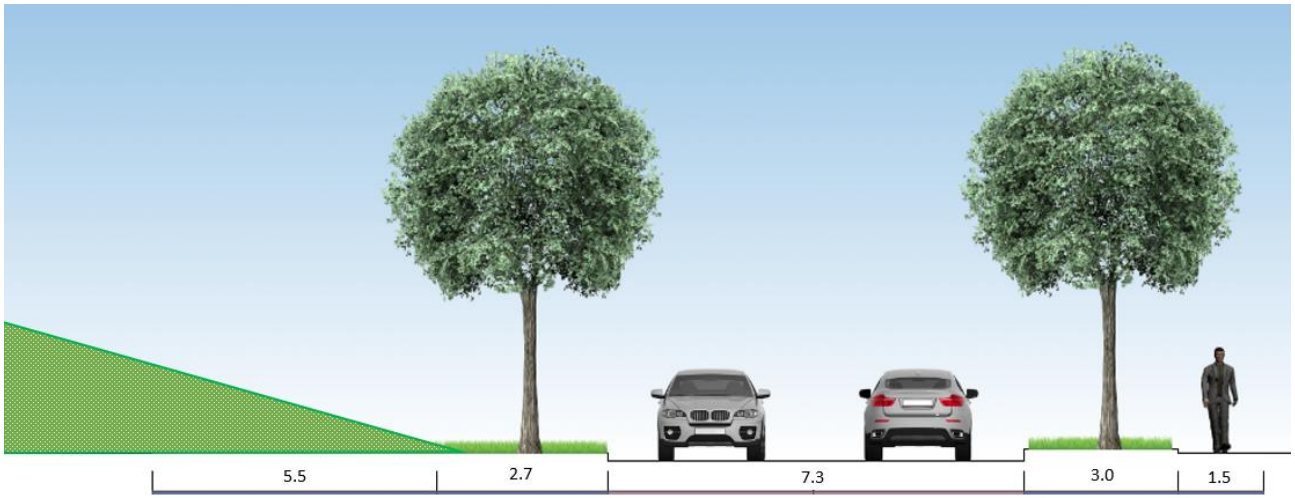
- Site Boundary
- Quarry Hills Regional Parkland
- Waterway/Drainage Reserve
- Conservation Reserve
- Tree Reserves & Pocket Parks
- Future Development Site
- Conventional Residential
- Medium Density Residential
- Shared Path (off-road)
- Shared Path (on-road)
- QHRP Cycle & Pedestrian Link
- Footpath
- Existing Bus Stop Location

Mobility requirements
Access to Plenty Road is to be provided in accordance with the development plan subject to the agreement of Transport for Victoria.
The interface to the Quarry Hills Regional Parkland is to consist of an internal street abuttal allowing for residential lots to front the parkland. Where breaks in this street are provided they should support driveway access to lots and maintain pedestrian access.
The local street network is to support efficient access to the open space network.
Residential development located along Plenty Road is to be provided with access via an internal street or via rear lot access with direct lot access from Plenty Road prohibited.
The design of local streets to be consistent with the cross section details included in the development plan unless otherwise approved by the responsible authority.
Maximise local streets around the periphery of open space reserves to provide opportunities for passive surveillance and access. Rear accessed dwellings may abut an open space reserve provided the dwellings support direct frontage to the reserve.
An internal street is to be provided parallel to Hunters Road and located to allow the retention of native vegetation along this street and boundary.
The alignment of the street network is to respond to site topography and reduce the use of earthworks such as retaining walls and similar structures.
The main entry street into the estate from Plenty Road should be designed to afford direct view lines towards the Quarry Hills Regional Parklands.
Inter-parcel \ street connections to adjoining land are to be provided to deliver an integrated and permeable mobility network.
Street block lengths should not exceed 200 metres to ensure a permeable and low speed environment for pedestrians, cyclists and vehicles is achieved.
Access to residential lots located opposite the Quarry Hills Regional Parklands is to be provided along the local street abutting the parklands.
The street network is to support a low speed environment and encourage shared use with speed control devices to be applied to the satisfaction of the responsible authority.
A pedestrian and cycle network is to be provided throughout the site and provide connection with the surrounding network.
The future mobility network will support access to the Hawkestowe train station through creation of a footpath along the northern side of McArthurs Road to Plenty Road. The Major Road Authority are to undertake upgrade works to Plenty Road with works anticipated to commence in 2019. Upgrade works support the extension of the 2.5 metre wide shared path on the west side of Plenty Road along the site's frontage allowing for connection to the existing and future shared path on the east side of Plenty Road via the Riverdale Boulevard signalised intersection. Plenty Road upgrade works are to extend the shared path to the Hawestowe train station. It is anticipated that the shared path along the west side of Plenty Road will be extended as part of the future planning works for those parcels adjoining this road.
Access to the surrounding street network and adjoining land is to be provided generally in accordance with that shown on the development plan
The design of all streets is to give priority to pedestrians and cyclists through: • Providing footpaths of at least 1.5 metres wide. • A connected path network through the development plan area. • Safe and convenient crossing points to all intersections. • Pedestrian and cycle priority at roundabouts.
All streets are to support the planting of canopy trees to Council's satisfaction and consist of a native or indigenous species theme.
Where trees are shown to be retained in, or in close proximity to a road, detailed design works as part of the planning permit application will be required to ensure the health of vegetation is maintained which may result in modifications to street alignment.
Local streets adjoining the future Quarry Hills Regional Parkland are to support an integrated and landscaped design treatment to the parkland to provide a high level of public amenity along this interface. Due to level of slope along the interface to the parkland the design response is to adopt and respond to the natural topography and minimise the creation of large retaining wall structures or steep cutting into the site.
Pedestrian connection locations to future Quarry Hills Parklands are to be provided along the interface to the Parkland to the satisfaction of Council.
Works supporting the upgrading of McArthurs Road as detailed in the relevant street cross section are limited to the extent to which the land subject to this development plan adjoins McArthurs Road. The balance of upgrading works to McArthurs Road will be undertaken by others.
A turning area must be provided in the location generally consistent to that shown in the development plan to the satisfaction of Council. These works form part of the those supporting this Development Plan.
The local street adjoining the north boundary and Hunters Road will support new vehicle crossings to support new access for 50 and 60 Hunters Road at the relevant time. The final location of the vehicle crossings will be undertaken to the satisfaction of the developer, the owners of 50 and 60 Hunters Road and Council.

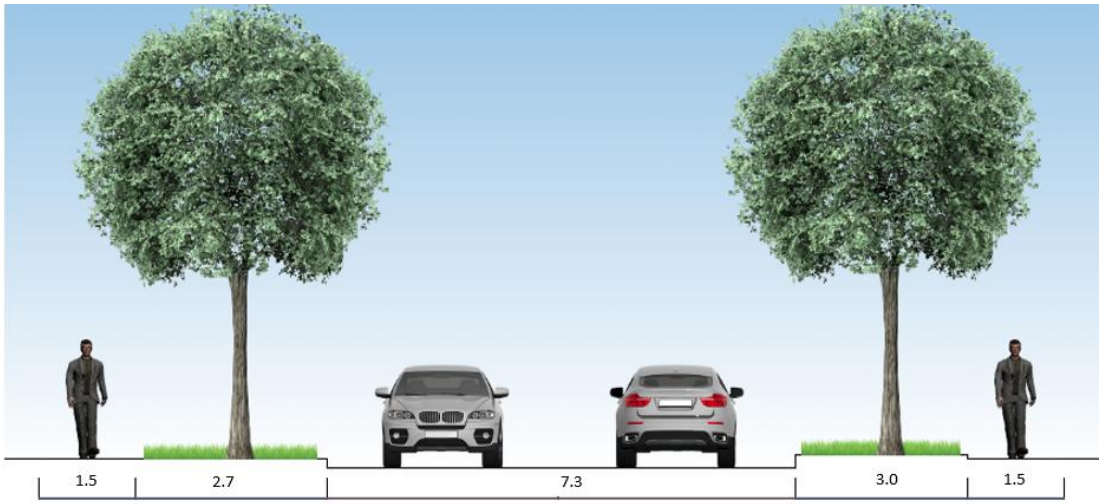
Local street cross sections



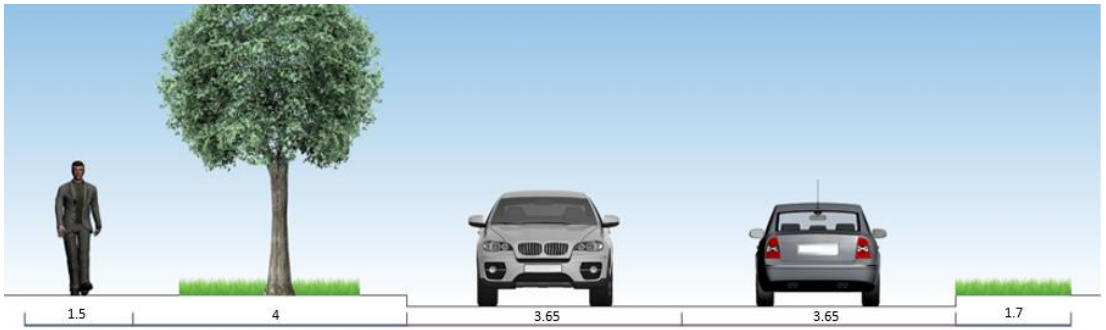
20.6 metre wide connector street



20 metre wide local street adjoining Quarry Hills Regional Parkland

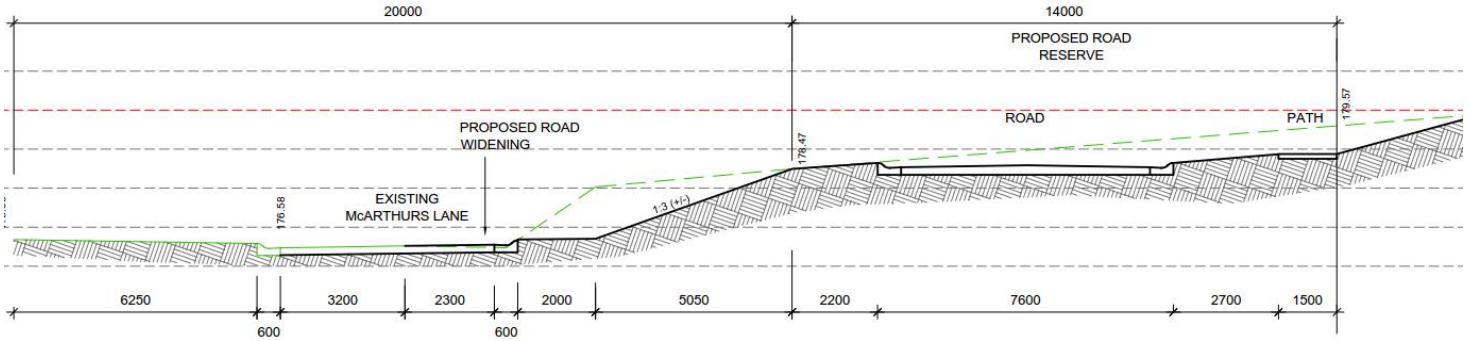


16 metre wide local street



14.5 metre wide local street along open space and drainage reserve

The below shows the typical cross section design for the upgrading of McArthurs Road along its northern side along with pedestrian access from within the site to McArthurs Road. The ultimate design will be subject to further refinement and engineering details. Notwithstanding, the pavement width of McArthurs Road east of the Woodruff Road must transition to 7.3 metres. The extent of responsibility for undertaking works supporting the upgrade of McArthurs Road is limited to the extent the subject land adjoins this road. Where McArthurs Road adjoins external land upgrade works will be the responsibility of others.



LEGEND

- PROPOSED LOTS WITHIN SUBJECT SITE
- BOUNDARY
- ULTIMATE FOOTPATH CONNECTIONS
- LOCATION OF INDICATIVE VIEW POINT

The below provides further plans showing design examples of local streets adjoining the Quarry Hills Parklands to achieve a satisfactory response to the edge of development. Final design will be subject to detailed plans and Council approval.

Local examples for the design of the local street interface to the Quarry Hills Regional Parkland are provided below. The proposed street interface will generally reflect the below examples with the degree of slope to determine design requirements.

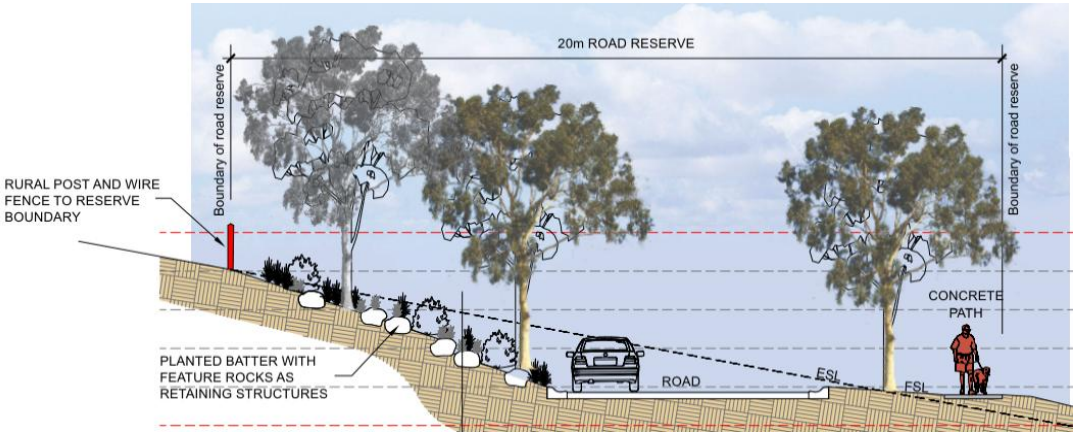


Photo. Quarry Hills interface example

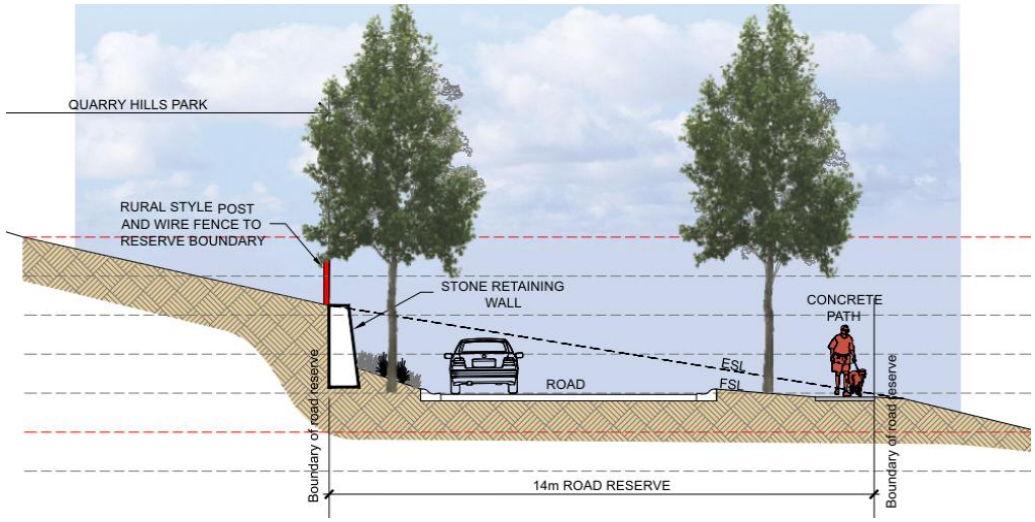


Photo. Quarry Hills interface example

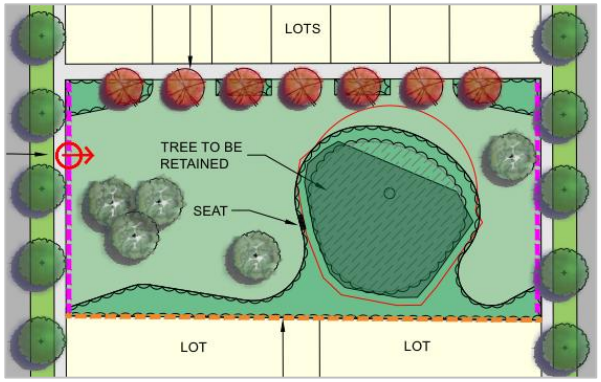
4.6 Open Space

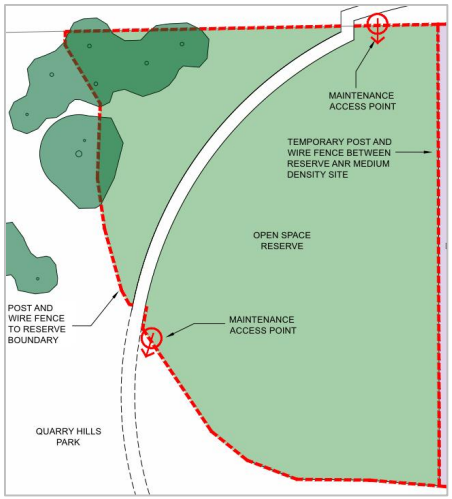
LEGEND

- Site Boundary
- Quarry Hills Regional Parkland
- Waterway/Drainage Reserve
- Conservation Reserve
- Tree Reserves & Pocket Parks
- Future Development Site
- Conventional Residential
- Medium Density Residential
- Shared Path (off-road)
- 200m Catchment Buffer
- Trees to be retained

Open space requirements
The open space network is to consist of a combination of reserves in which some are to support passive recreation use whilst others are to be created to primarily retain existing River Red Gums.
Open space reserves which are to serve a passive recreation function are to be suitably shaped and sized to support their intended use.
The level of embellishment to open space reserves, such as play equipment, structures and other facilities will be determined at the permit application stage.
Open space reserves are to be created so as to ensure that where they are to contain River Red Gums the reserve is designed to provide satisfactory protection for the vegetation from works external and internal to the reserve including roadworks.
Open space reserves supporting passive recreation use are to be provided with interface treatments consisting of either a local street edge or rear accessed medium density dwellings with complementary landscaping along adjoining streets.
The north-west open space reserve adjoining the future Quarry Hills Parklands to achieve a landscaping response which integrates with the parkland ensuring views into the parkland are retained, formal and informal access is provided, landscape bordering between the parklands and open space reserve is subtle where provided.
The level of landscaping provided within reserves is to be such that it positively contributes to landscape character of the estate although does not undermine the ability of the reserve to support passive recreation use.
Open space reserves are to support the planting of canopy trees to complement those which are retained over the development plan area, provide shading, landscape interest and ultimately a sense of enclosure within the reserve.
Landscaping of the open space network is to consist of indigenous and native plant species.
Where small pocket parks are provided they are to make a positive contribution to the streetscape through appropriate levels of visual exposure.
Pedestrian access to and throughout the open space network is to be provided to the satisfaction of the responsible authority and be commensurate with the purpose of the reserve.
Seating provided within the open space network should be provided in logical locations associated with active areas of the reserve rather than providing seating in areas unlikely to support activity.
Vehicle exclusion bollards must be placed along the boundary of 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.
Public open space contributions pursuant to clause 52.01 of the planning scheme may be satisfied on a stage by stage basis in accordance with the subdivision staging approved under a permit.

Landscape master plan design for public open space areas are provided below. Design of public open space reserves will be subject to further design advancement through the permit application process.





4.7 Native Vegetation & Biodiversity

Native vegetation & biodiversity requirements
Development of the land is to support the retention of native vegetation shown to be retained in the development plan.
Where vegetation is to be retained within a public open space reserve the reserve is to be sized and shaped to adequately accommodate the vegetation as a prominent feature of the reserve.
Where vegetation is to be retained within a new road reserve information is to be provided to Council demonstrating how the tree is to be integrated within the road design to ensure its health is preserved. Retention may require local widening of the road reserve, setting back of lot access and varied location of infrastructure assets to limit works around a tree.
Where works within the tree protection zone of a tree to be retained are proposed, information prepared by a suitably qualified arboricultural expert is to be provided to satisfactorily demonstrate the extent of works will not have a detrimental impact on the health of the tree.
Vegetation to be retained within areas identified to support medium density housing is to be integrated into the design of proposed development through the creation of tree reserves. Design of medium density housing sites is to enhance the landscape amenity contribution provided by retained vegetation through suitably responsive design.
A permit application proposing development of the east residential medium density sites is to include an arboricultural assessment of the proposal addressing whether the works are likely to result in a detrimental impact to the health of the vegetation along with any recommendations to support the health and preservation of the vegetation.
The design of waterway drainage reserves is to ensure the preservation of native vegetation and seek to enhance the amenity value of the vegetation.
Landscaping within public open space and drainage reserves should consist of either indigenous or native species to complement existing River Red Gum and deliver the desired landscape character.
Unless with the consent of the responsible authority, all trees shown on the tree retention plan(s) are to be retained.
Where biodiversity offsetting is required, these are to be satisfied in accordance with the *Melbourne Strategic Assessment (MSA) Program* and the *Guidelines for the removal, destruction or lopping of native vegetation*.

LEGEND

Site Boundary	
Quarry Hills Regional Parkland	
Waterway/Drainage Reserve	
Conservation Reserve	
Tree Reserves & Pocket Parks	
Future Development Site	
Conventional Residential	
Medium Density Residential	
Trees to be retained	

The below shows tree retention detail and identification numbers from the arboricultural assessment accompanying the development plan submission.

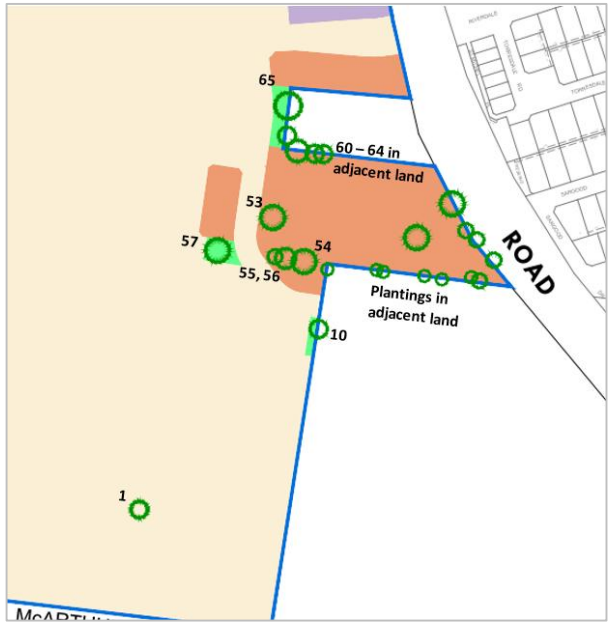


Photo. Existing River Red Gums to be retained within future medium density development site, drainage reserves and along Hunters Road.

Photo. Existing River Red Gums to be retained along the north boundary of the site and within the Hunters Road reserve.

Galbraith & Associates undertook an aboricultural assessment of existing trees located within and in proximity to that part of the land proposed to be subject to future urban development. The report provided information on tree species, size, condition, their worthiness of retention within a developed environment and tree protection zone detail.

The assessment found there to be approximately 90 trees present on the land with approximately 70 consisting of self-sown indigenous tree species of which the vast majority are River Red Gum (*Eucalyptus camaldulensis*). The report found that the River Red Gums are generally in good condition with older specimens requiring branch reduction to minimise branch failure.

Of the twenty exotic trees onsite these were assessed as being of low quality and retention value due their poor condition, small size and weed classification.

The below photos provide examples of mature River Red Gums present over the land. The arboricultural assessment provides individual assessment and location details of trees over the site.

Photo. Existing River Red Gum

Photo. Existing River Red Gum

Photo. Existing River Red Gum

4.8 Infrastructure / Utilities

Stormwater

The site is located within the Melbourne Water Wiltonvale Creek and Mernda South Drainage Services Scheme (DSS) areas. An extract of each DSS as it applies to the land is provided below showing the land draining towards Plenty Road with flows conveyed through a network of Melbourne Water main drains and an open drainage channel at the north-east of the site. Stormwater flows will be conveyed under Plenty Road via either existing or future culverts and integrate into the developed drainage network found east of Plenty Road. The development plan accommodates the open channel as shown in the DSS through adoption of a drainage reserve at this location.

Any development of the land will need to provide the stormwater management assets consistent with the Wiltonvale Creek and Mernda South Drainage Services Schemes to the satisfaction of Melbourne Water. The DSS stormwater pipe network is to be located within local streets along with Council stormwater assets or in designated reserves. Stormwater drainage will be designed and constructed to the satisfaction of Melbourne Water and Council and will be addressed in greater detail as part of the permit application process.

Overland flow paths (gap flow), supported with sufficient preliminary data to indicate how access runoff will be safely conveyed to its destination to the satisfaction of Council. The final layout may need to be altered to accommodate the final drainage strategy. The minor stormwater drainage system and infrastructure will be accommodated within a reticulated network designed to the satisfaction of Council directing flows to the nominated point of discharge locations in accordance with the DSS's.

There may be a need for development of the land to provide temporary onsite stormwater retention until such time as downstream management assets become established. Any onsite temporary drainage works are to be designed to the satisfaction of Melbourne Water and Council.

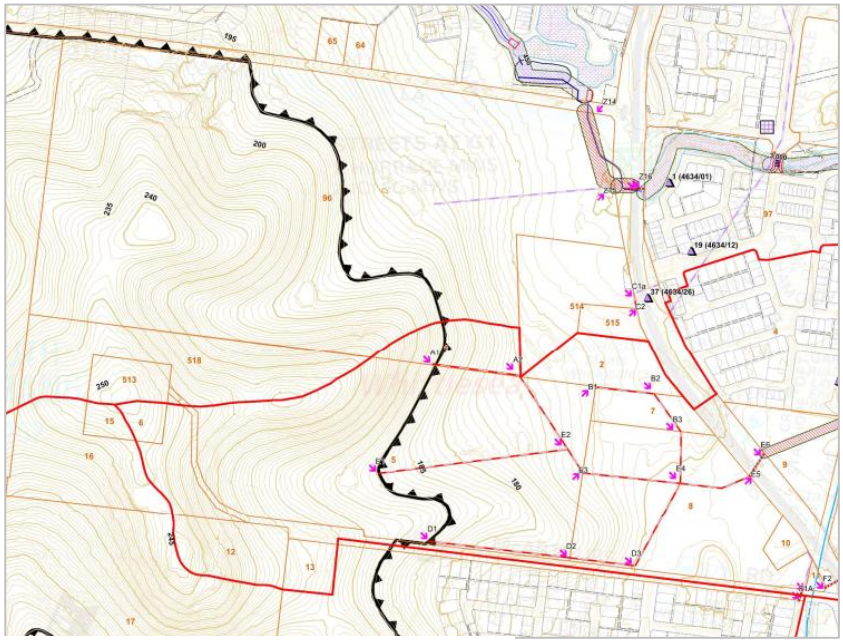


Fig 18. Wiltonvale Creek DSS and Mernda South DSS

Sewer

The land is located within the Yarra Valley Water service area. The development of the land will connect to the existing sewer network located centrally along Plenty Road and within Hunters Road at the north-east of the land as indicated on the YVW service maps. The preparation of detailed engineering plans will be required to be submitted and approved by Yarra Valley Water and Council prior to development of the land as part of any planning permit approval

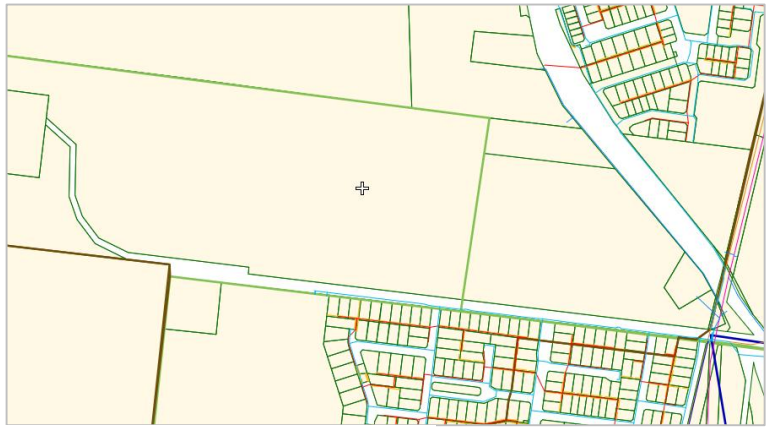


Fig 19. Existing local sewer network to south

Fig 20. Existing local sewer network to north

Other services
Any application seeking a planning permit to subdivide the land will require referral to the various service and referral authorities pursuant to clause 66 of the Whittlesea planning scheme. Unless otherwise agreed, all overhead services abutting the proposed development site must be undergrounded by the abutting land developer. Any permit issued allowing subdivision and development of the land will include conditions by referral authorities ensuring that the delivery of infrastructure is provided in accordance with the requirements of the authorities and Council.

4.9 Cultural Heritage

The site is identified as being a place of cultural heritage sensitivity. The land has been subject to previous cultural heritage assessment by Tardis Enterprises Pty Ltd. This assessment predates the introduction of the Aboriginal Heritage Act 2006. Professional advice concludes that a CHMP is not required in this instance.

The previous assessment found the presence of one Aboriginal scar tree (VAHR 7922-0909). The location of this scar tree is well beyond that part of the site which is to support future development being located west of the UGB. That part of the site which is situated within the UGB was found to not support any areas of cultural heritage significance and is therefore unaffected in respect to its future development potential in this regard.

4.10 Environmental Assessment

Cardno Lane Piper undertook detailed site investigation, remediation works and reporting over part of the land located within the UGB identified to support future urban development as detailed within their report Environmental Site Assessment and Remediation (October 2015).

The site investigation works consisted of thorough assessment for soil and groundwater contamination. This was undertaken through a coordinated and comprehensive sampling methodology across the site inclusive of targeting specific areas exhibiting a higher likelihood of potential contamination. Areas of targeted investigation included the site of a former underground storage tank, wastewater treatment ponds, buried inert waste and existing and former building sites. These locations are shown in the following report extract.

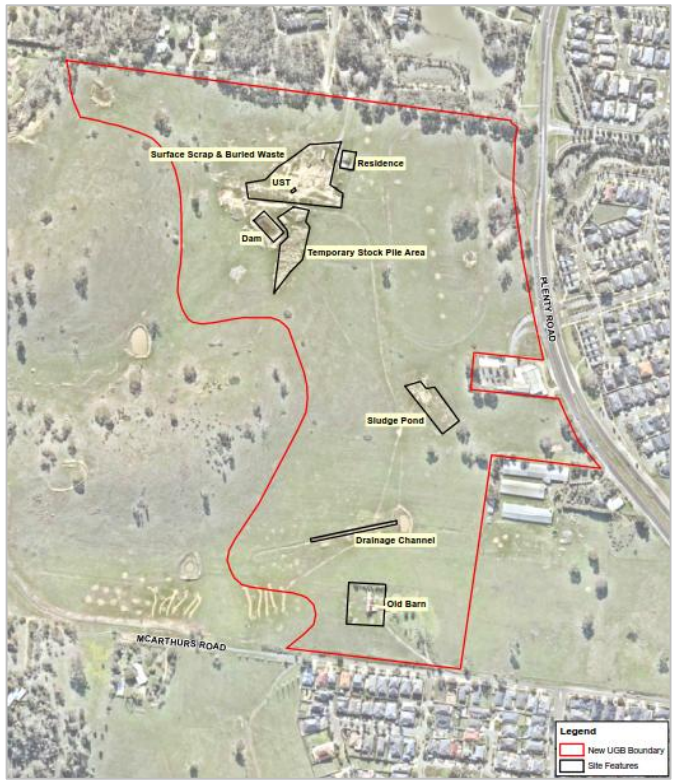


Fig 21. Environmental report extract

The soil sampling and testing program found elevated levels of arsenic and zinc located in proximity to the old barn shed situated to the south of the site. The impacted soils were excavated and removed offsite in accordance with EPA requirements. Validation testing of this site confirmed removal of contamination and a return to conditions reflecting the background conditions of the land.

In relation to groundwater investigations, higher levels of hydrocarbons were found in proximity to the former underground storage tank. Extraction works were undertaken in this area to reduce the persistence of contamination. Whilst levels were reduced in select

boreholes the contaminants did return. The investigation states that the area located around the underground storage tank is to be excluded from the ability to extract groundwater for human use such as the filling of swimming pools.

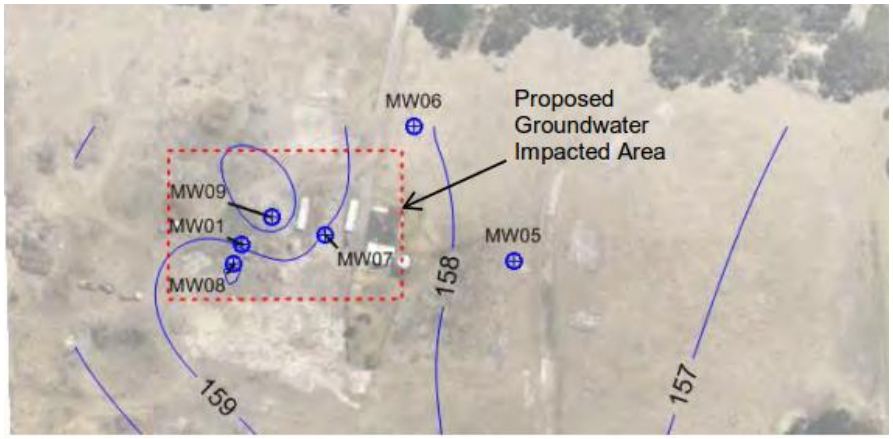


Fig 22. Environmental report extract

The assessment concludes as follows.

From the results obtained for the assessment, and as summarised it is concluded that the majority of the site is suitable for the proposed low to medium density residential development but there remains an isolated area in the vicinity of the former UST in which the groundwater has been and continues to be impacted to preclude some of the protected extractive beneficial uses of the groundwater.

Where required by Council and the EPA, an environmental audit is to be undertaken in respect to the former underground fuel storage tank and surrounding area of approximately 5,200 square metres as identified in previous environmental assessment.

Unless otherwise agreed to by the City of Whittlesea, a Section 53X Environmental Audit must be completed either:

- before the construction of a sensitive use, or a sensitive use commences on the 5,200m2 site as shown on Figure 11-1 of the Environmental Site Assessment; or
- before the certification of a plan of subdivision associated with any approved residential subdivision in respect to the 5,200m2 site, whichever is earlier.

Appropriate conditions to the above effect are be contained on any permit allowing residential subdivision of the land where an environmental audit is to be undertaken. Prior to certification of a plan of subdivision compliance of any requirements of an environmental audit must be provided by a suitably qualified environmental professional or other suitable person acceptable to the responsible authority confirming that the land is suitable for the intended use. In addition, sign off must be in accordance with any requirements in the Statement conditions regarding verification of works.

4.11 Future Planning & Implementation

Future use and development of the land is to be advanced through planning permit approval by Council. Any permit issued is required to be generally in accordance with this development plan. The development plan may be amended from time to time subject to the approval of Council.