



THE ACREAGE DEVELOPMENT PLAN

Tyers-Walhalla Road, Tyers

Latrobe City Council

October 2015

Prepared by the NBA Group
on behalf of Yorksville Pty Ltd

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- Appendix 4 – Biodiversity Assessment Report**
- Appendix 5 – Infrastructure Servicing Report***
- Appendix 6 – Timeline of Development Plan Progression**
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- Appendix 13 – Movement Network Plan 15533DP8_V3**
- Appendix 14 – Design Response Plan 15533DP9_V2**
- Appendix 15 – Land Capability Assessment**
- Appendix 16 – Preliminary Stormwater Management Strategy**

* Background Report only which has been used to inform the preparation of the Development Plan but they are not to be used to provide guidance on future decision making.

1 Introduction

This Development Plan applies to approximately 66 hectares of land situated to the north east of the Tyers Township as shown in Figure 1 below.

The catalyst for the preparation of this Development Plan is the recent adoption of planning scheme Amendment C82 which rezoned the land to Low Density Residential Zone (LDRZ) and Rural Living Zone - Schedule 2 (RLZ2) and applied the Development Plan Overlay - Schedule 8 (DPO8) to the subject land.

The Development Plan Overlay is a planning tool used to guide the future development of land. It is commonly used in areas where land is controlled by multiple land owners and an integrated development outcome is required.

The Department of Transport, Planning and Local Infrastructure (the 'DTPLI') outlines the purpose of the DPO as follows:

The DPO prevents the granting of permits under the zone before the Development Plan has been approved. The purpose of this provision is to restrain use and development of the land until a plan has been prepared and ensure that future use and development of the land is carried out in accordance with that plan. The Development Plan details the form and conditions that must be met by future use and Development of the land.

The Acreage Development Plan (the 'ADP') has been prepared in accordance with Schedule 8 of the DPO. It provides guidance for Low Density and Rural Living development across two separate land holdings ensuring a cohesive and integrated development that is appropriate for the area.

The Development Plan identifies where roads, reserves, and physical infrastructure should be located. It is based on best practice urban design and is responsive to site conditions including topography, bush fire considerations, drainage, waste disposal, vegetation, abuttal to neighbouring uses and site opportunities and constraints.

There are two major components that comprise 'The Acreage Development Plan':

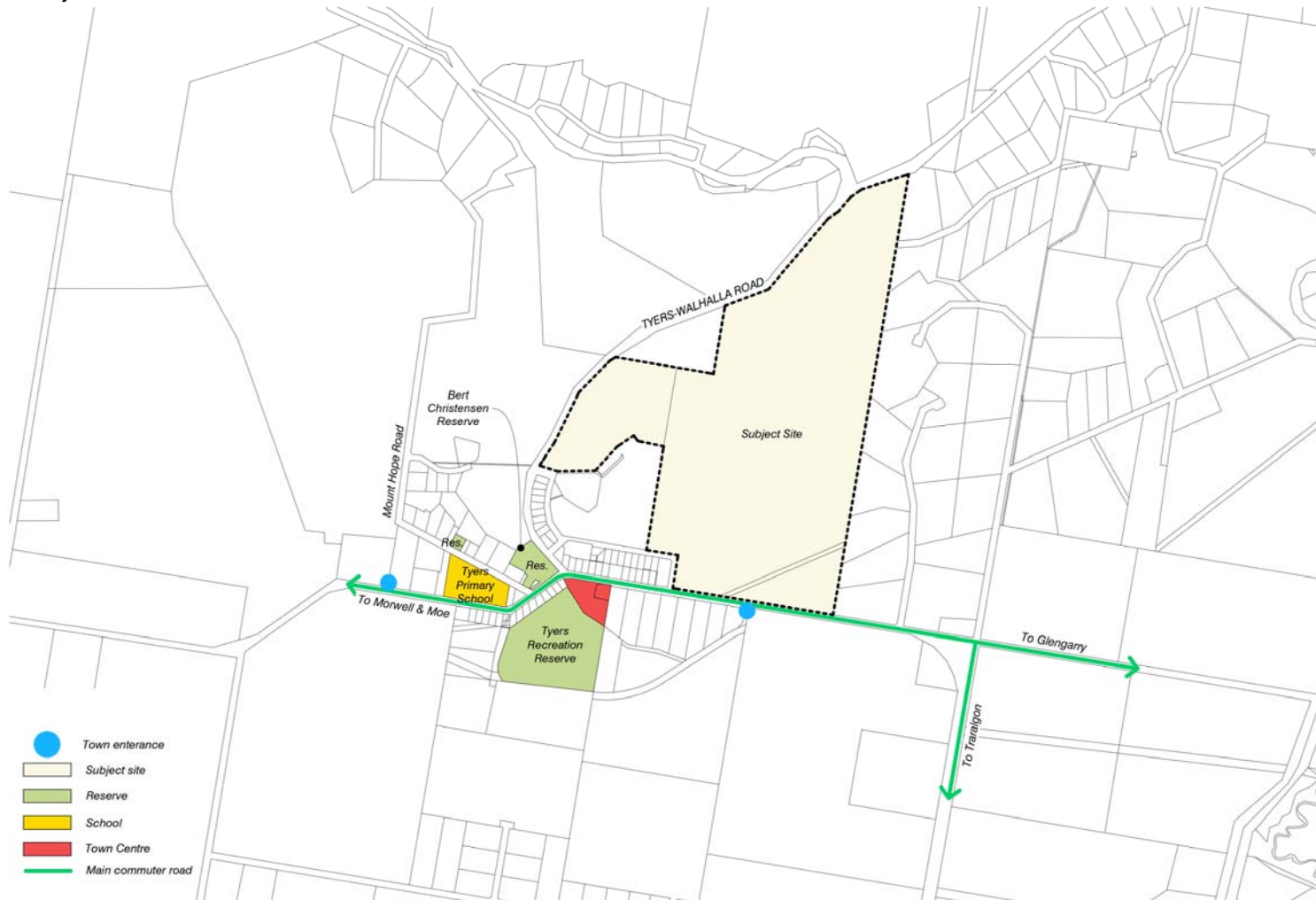
- **The Development Plan** (DP) – depicting a broad urban layout including road network and location of reserves (Appendix 7).
- **The Report** – providing context for the preparation of the Development Plan, summarising existing site conditions, analysing key opportunities and constraints and describing the plan and its implementation.

These two documents should be considered in conjunction with each other.

The Development Plan has been prepared following extensive consultation with Council and authorities throughout the rezoning process. A timeline of events can be found at Appendix 6 and details the formation of the final Development Plan. A number of consultant reports have also been prepared for the site and used to guide the layout of the Development Plan. These reports can be found in the attached appendices and include:

- Traffic Engineering Assessments (Appendix 3);
- Biodiversity Assessment Report (Appendix 4);
- Infrastructure Servicing Report (Appendix 5);
- Land Capability Assessment (Appendix 15);
- Preliminary Stormwater Management Strategy (Appendix 16).

Figure 1 - Locality Plan



2 Development Plan Area

The Acreage Development Plan relates to two parcels of land that together comprise an area of approximately 66 hectares and are located to the north east of the Tyers Township (see Figure 1). The land is irregular in shape and is bound by Moe-Glengarry Road (Main Road) to the south and Tyers-Walhalla Road to the north and east.

Historically the land has accommodated a Blue Gum plantation however the site has since been cleared of plantation vegetation and comprises mostly of cleared areas, weeds and pasture grass. A few forestry access tracks are present through the precinct. There are no buildings or structures present.

The topography of the land is undulating with a prominent ridge line dissecting the precinct. Land to the south of the ridge line falls towards the south eastern corner of the precinct with the slope lessening as it moves away from the ridgeline. Land on the north western side of the ridgeline falls to the north-west, with the degree of slope increasing as the height of the ridgeline increases.

An existing electricity easement traverses the south eastern corner of the Development Plan area (as labelled E2 on title plan PS449977U at Appendix 1).

Attractive views over the Latrobe Valley are available from the Development Plan area. A number of industrial uses are visible in the far distance from the upper slopes. The industrial uses are well located away from the Development Plan area and no significant noise sources affect the area. Odour created by the Australian Paper Mill is intermittently evident throughout the area, as it is to much of the Latrobe Valley.

The Tyers Township is on the immediate periphery of the site and is accessible via both Glengarry Moe Road and Tyers-Walhalla Road.

Tyers is situated approximately 10kms north-west of Traralgon and 150kms east of Melbourne. It is a rural township within the City of Latrobe.

As shown on the Site Analysis Plan at Appendix 2, the Development Plan area interfaces with several land uses which include residential, rural living, agricultural and a former quarry.

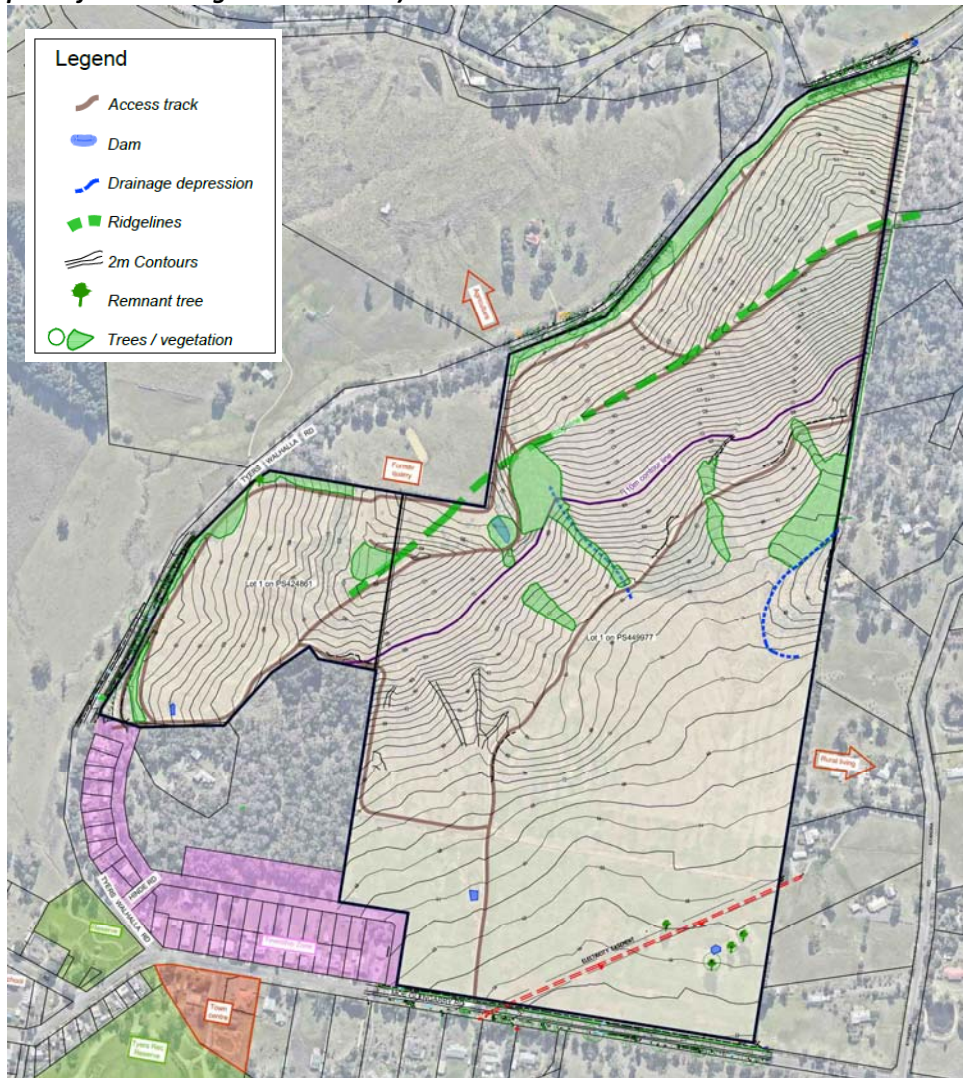
Land to the east of the precinct is generally contained within the Rural Living Zone - Schedule 4 and comprises of developed allotments that vary between 1 and 2 ha.

Land immediately to the south and west of the precinct is contained within the Township Zone and comprises of allotments of approximately 800sqm developed with single dwellings. Further south are Low Density Residential allotments that range between 2000sqm and 9000sqm. Further west of the town is agricultural land that is generally utilised for grazing purposes.

North of the precinct is agricultural land with pockets of rural living available throughout.

A former quarry abuts the north east boundary of the precinct, however is unused.

Figure 2 – Excerpt from the Site Analysis Plan (refer to Appendix 2 for a detailed plan of the existing site conditions).



Photograph 1 - South west across the precinct from the ridgeline



3 Site Assessments

3.1 Traffic Engineering

A Transport and Traffic Impact Assessment Report was prepared for the precinct by SMEC Urban in October 2010 and this report was reviewed and updated by GTA Consultants in September 2011 to reflect design changes. Copies of both reports are attached at Appendix 3.

The GTA Report describes the existing road network as follows:

- Moe-Glengarry Road functions as a primary arterial road and is located within a Road Zone Category 1 in the Latrobe Planning Scheme. It is a two-way road aligned in an east-west direction and configured with a two-lane, 6.4 metre wide sealed carriageway with a 3m wide sealed shoulder on the south side, set within a 20 to 25 metre wide road reserve. Moe-Glengarry Road has a speed limit of 80km/h past the site. Traffic counts undertaken by SMEC Urban found a two way traffic volume of 2,400 vehicles per day on Moe-Glengarry Road near the site, of which approximately 10% is in each peak hour.
- Tyers-Walhalla Road functions as a primary arterial road and is located within a Road Zone Category 1 in the Latrobe Planning Scheme. It is a two-way road aligned in a northeast-southwest direction and configured with a two lane, 6.4m wide sealed carriageway set within a variable width road reserve. Tyers-Walhalla Road has a speed limit of 80km/h past the site. Traffic counts undertaken by SMEC Urban found a two-way traffic volume of 1,400 vehicles per day near the site, of which approximately 10% is in each peak hour.

The subject site also abuts unconstructed Hinde Road to the south and a section of Fitzgibbons Road in the north east corner

Photographs 2 & 3 – Tyers-Walhalla Road along frontage of site



All intersections to Moe-Glengarry Road and Tyers-Walhalla Road are required to be designed and constructed to the satisfaction of Vic Roads. They have advised that BAR/BAL treatments will only be appropriate where it can be demonstrated that roads have appropriate sight distances. Where visibility is unsuitable the use of a BAR treatment will not be accepted. This scenario may require an upgraded treatment which will be developed at the subdivision stage. It is also noted that VicRoads does not support the creation of cross-roads.

Photograph 4 – Moe-Glengarry Road (Main Road) along frontage of site (towards west)



3.2 Existing Vegetation

As detailed above, historically the land has accommodated a Blue Gum plantation however the site has since been cleared of plantation vegetation and comprises mostly of cleared areas, weeds and pasture grass (refer to Figure 4). Four remnant scattered trees are situated towards the southern boundary (photographs 5 & 6), whilst some small areas of regrowth vegetation (less than 10 years old) are scattered throughout the site.

In terms of the surrounding land, a large 'bushblock' is situated adjacent to the western boundary (refer to figure 4), whilst some remnant vegetation is situated within the Tyers-Walhalla Road reserve (to the north of the subject site). A large expanse of predominantly native vegetation is also situated to the north-east of the site.

Ecological Vegetation Class (EVC) mapping suggests that vegetation situated within the site resides within EVC 151 (Plains Grassy Forest), although a small section of the south-eastern corner is identified as EVC 55 (Plains Grassy Woodland) (refer to Figure 3). It is noted that the subject site resides within the *Highlands – Southern Fall Bioregion* and the subject site is situated within the *West Gippsland Catchment*. Table 1 outlines ecological characteristics typical of the EVC.

Figure 3 – EVC Mapping.

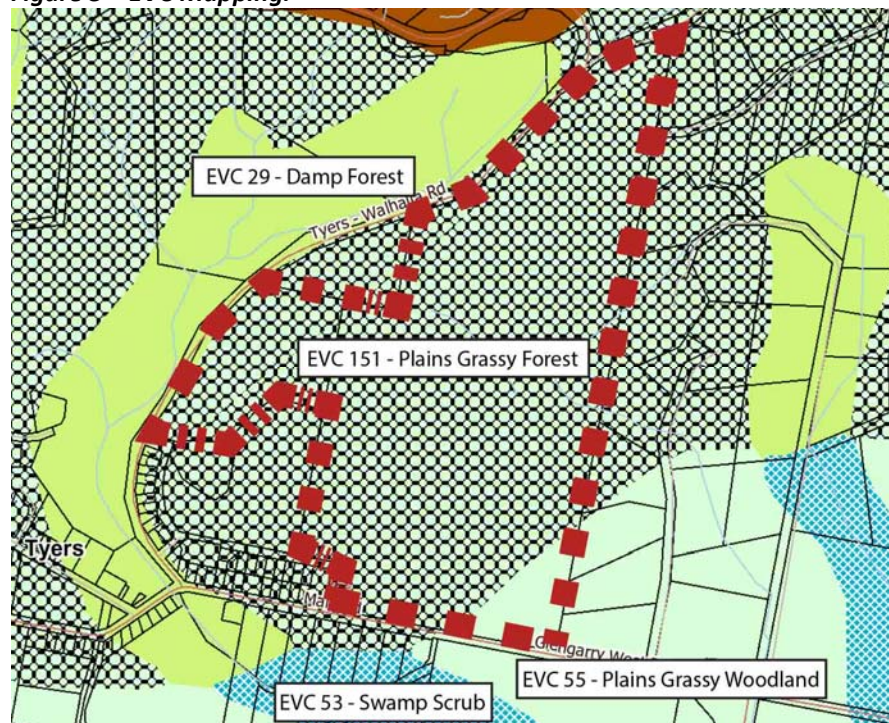


Table 1 – Benchmark description of EVCs identified on or in close proximity to the subject site.

Ecological Vegetation Class	EVC No.	Benchmark Description
Plains Grassy Forest	151	Open forest to 20m tall often above a heathy shrub layer and a diverse grassy, sedge and herbaceous ground layer. Occurs on lowland plains and old river terraces made up of gravelly sandy clays.
Plains Grassy Woodland	55	An open, eucalypt woodland to 15m tall occurring on a number of geologies and soil types. Occupies poorly drained, fertile soils on flat or gently undulating plains at low elevations. The understorey consists of a few sparse shrubs over a species-rich grassy and herbaceous ground layer
Damp Forest	29	Grows on a wide range of geologies on well-developed generally colluvial soils on a variety of aspects, from sea level to montane elevations. Dominated by a tall eucalypt tree layer to 30m tall over a medium to tall dense shrub layer of broadleaved species typical of wet forest mixed with elements from dry forest types. The ground layer includes herbs and grasses as well as a variety of moisture-dependent ferns including occasional tree ferns.
Swamp Scrub	53	Closed scrub to 8m tall at low elevations on alluvial deposits along streams or on poorly drained sites with higher nutrient availability. The vegetation characteristically lacks a eucalypt overstorey and is dominated by Swamp Paperbark (<i>Melaleuca ericifolia</i>) (or sometimes Woolly Tea-tree <i>Leptospermum lanigerum</i>) which often forms a dense thicket, out-competing other species. Where light penetrates to ground level, a moss/lichen/liverwort or herbaceous ground cover is often present. Dry variants have a grassy/herbaceous ground layer.

Photographs 5 & 6 – Existing Scattered Trees.



Figure 4 – Existing Vegetation Plan.



3.3 Infrastructure Servicing Report

An Infrastructure Servicing Report was prepared by Millar Merrigan (February 2013) Appendix 5. The report provides an assessment of the infrastructure available within the area and its ability to service the Development Plan area. The report provides the following summary of existing conditions:

Reticulated Water

Existing infrastructure exists servicing the site. Preliminary information from Gippsland Water suggests that the site can be provided with reticulated water for all areas of elevation up to and including 110m AHD. The 110m contour is the limit for existing infrastructure.

There are no reticulated recycled water sources within this area but opportunity exists for rainwater capture and re-use as part of future development processes.

Electricity

The relevant electricity supplier for the site is AusNet Services. There are no anticipated issues with regard to network capacity. Substations will be required within the development as an SP-AusNet maintained asset.

There are existing 66kV/22kV overhead powerlines crossing through the south west corner of the site. AusNet Services East Region Design Manager, John Barnett has advised that the 22kV lines bounding the site can support future development based on 4kVA per lot. The existing supply to Lot 1 PS603049 can remain.

Photograph 7 – Existing overhead power lines.



Gas

Feasibility enquiries have determined that there is currently no natural gas distribution infrastructure within the area. APA Group's Mains Extension Coordinator, Julieanne Free, has confirmed that there are currently no plans to extend the network into the area.

Telecommunications

Telecommunication infrastructure is available within the area and is currently transitioning from copper wire to broadband technology. Pit and pipe infrastructure will be required to be provided by the developer within the subdivision in accordance with the usual requirements of Telstra and NBN Co. If deemed viable by Telstra/NBN Co, Fibre to the Premises (FTTP) may be required, instead of copper service, as part of the National Broadband Network. NBN Co. requirements will be based on whether the proposed development is within their current broadband footprint as the development meets the size trigger point currently in use.

The technology and services required would be determined closer to the time of development commencement, depending on Telstra/NBN Co. deployment of FTTP policy and any negotiations based on a commercial agreement.

Sewerage

The relevant service authority for sewer in the area is Gippsland Water. There is currently no reticulated sewerage available to Tyers and advice from Gippsland Water indicates no plans by the authority to provide reticulated sewerage to the area.

A *Municipal Domestic Wastewater Management Plan (DWMP)* was prepared for Council in December 2006 and includes the town of Tyers for specific closer management. The report recognises the current wastewater management problems experienced in Tyers with monitoring confirming that approximately 78% of sites dispose of their waste offsite into kerb and channel, producing poor local visual amenity and contributing to the significant risk of disease to humans from contact with contaminated water. The report contains the following Key Finding (page 28):

Tyers has been assessed as a high risk locality and there is a need to urgently continue consideration, in conjunction with other stakeholders, sustainable options including conventional reticulated sewer and other low cost alternative options for the management of domestic wastewater.

The Management Strategies of the DWMP are (page 32):

1. *Policy review;*
2. *Information Management;*
3. *Community education, information, and communication;*
4. *Monitoring of septic tank systems and environmental impacts;*
5. *Compliance auditing of identified high risk localities.*

Management Action Plans have been developed to implement each of the above strategies and the following is the plan set out specifically for Tyers:

Strategies		Objectives
1a)	<i>Investigate innovative waste disposal strategies</i>	<ul style="list-style-type: none"> ▪ <i>To develop a long term solution to domestic wastewater management in Tyers.</i> ▪ <i>To minimise impacts on receiving environment around Tyers.</i>
1b)	<i>Development of a community information and education strategy on septic tank management.</i>	<ul style="list-style-type: none"> ▪ <i>To reduce loading on/discharge from systems.</i> ▪ <i>To maximise the designed criteria of the system.</i>

	<p><i>Development of a community information and education strategy on water minimization/conservation.</i></p>	<ul style="list-style-type: none"> ▪ <i>To increase owners' awareness of the importance of managing septic tanks systems.</i> ▪ <i>To improve compliance with permit conditions.</i> ▪ <i>To prevent alterations exceeding the design capacity of existing approved systems.</i> ▪ <i>To minimise impacts on receiving environments.</i>
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It is evident that existing smaller lots within the Tyers Township are not containing their effluent outflow. It appears that existing systems are inefficient and/or need maintenance, and the Council's intention to instigate proper record keeping and monitoring is obviously soundly based.

A detailed LCA has been completed by Simon Anderson Consultants. A detailed site investigation was carried out to allow sizing of different LAA areas based on lot layout and topography. Subsoil investigations were completed at forty six locations to determine an accurate soil profile.

Urban Run Off

Current mapping provided by the West Gippsland Catchment Management Association (WGCMA) indicates two waterways within the subject site, see Figure 5. Through discussions with WGCMA's Land Planning Manager, Adam Dunn, it has been determined that the first of these waterways is a mapping anomaly and the second is a waterway of low hydrological and ecological value. WGCMA has advised that no requirements or conditions will be placed on the land during future development proposals for the site. A Drainage Strategy has been prepared for the Development Plan area by Simon Anderson Consultants (Appendix 15). The report outlines stormwater management obligations for the development to ensure best practice guidelines can be met.

Figure 5 – WGCMA Waterway Mapping.



4 Consultation

The Acreage Development Plan has been informed by consultation with relevant stakeholders and various authorities over the past 7 years. A timeline of events is included at Appendix 6 and details how the Development Plan has been informed.

In preparing the Infrastructure Servicing Report, Millar Merrigan engaged in discussions with various servicing agencies including:

- West Gippsland Catchment Management Authority;
- Latrobe City Council Engineers, Planners and Health Department;
- Gippsland Water;
- SP Ausnet;
- APA Group/Envestra;
- Telstra/NBN;
- Vicroads.

The Development Plan has been informed by the requirements and comments of these various authorities.

Figure 6 - Original draft Development Concept prepared by SMEC Urban 2007



Figure 7– Tyers Structure Plan 2010

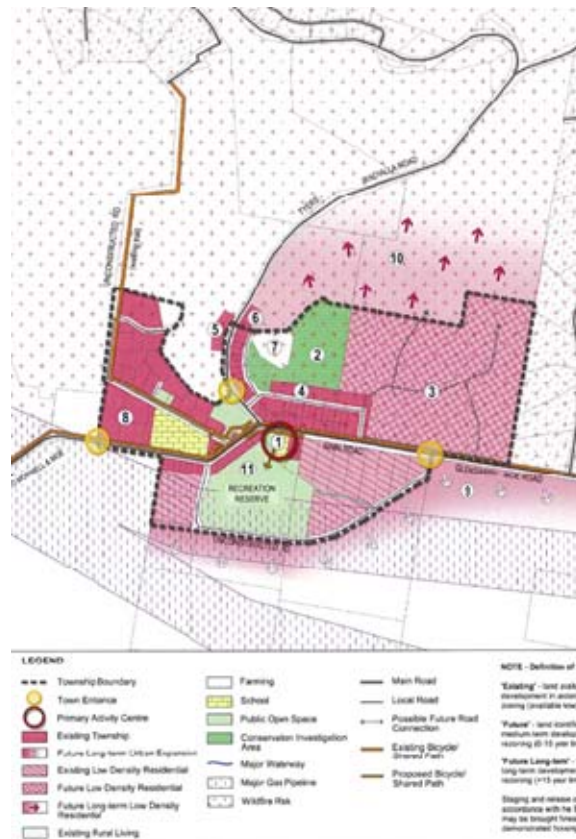


Figure 8 - Development Concept prepared by NBA Group / Millar Merrigan February 2011



Figure 9 – Amended Development Concept 2013



The change from the layouts shown in Figures 9 & 10 was a result of Council feedback that the design should align roads with topographic features, particularly minor gullies, to assist with site drainage. The layout was also refined to accord with the findings of the Drainage Strategy. The layout in Figure 11 was amended to provide a single access to Moe-Glengarry Road following discussions with VicRoads.

Figure 10 - Amended Development Concept February 2014

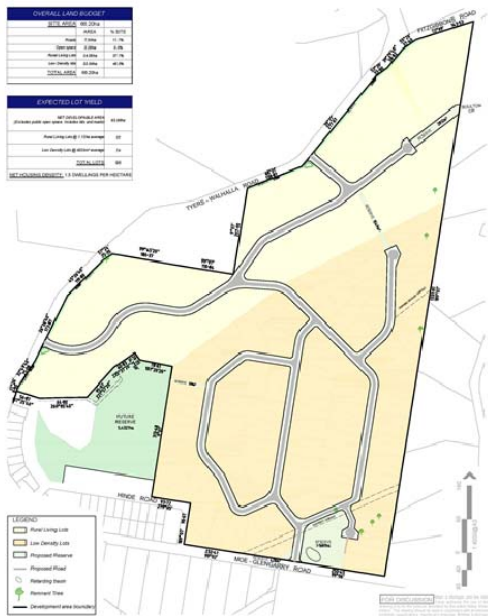
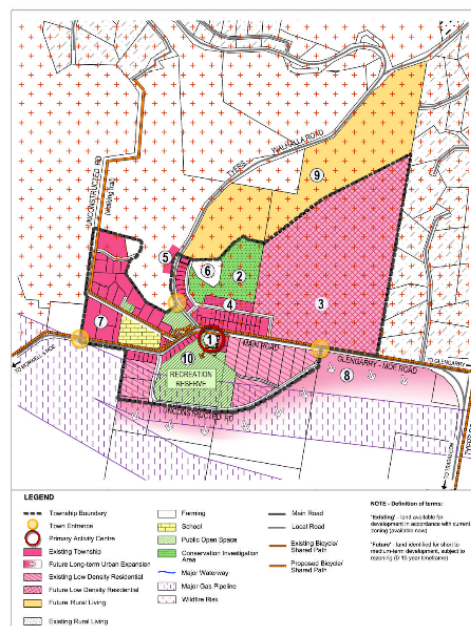


Figure 11 – Revised Tyers Structure Plan following adoption of Amendment C82



5 The Development Plan

The Acreage Development Plan is illustrated in Figure 12 and Appendix 7.

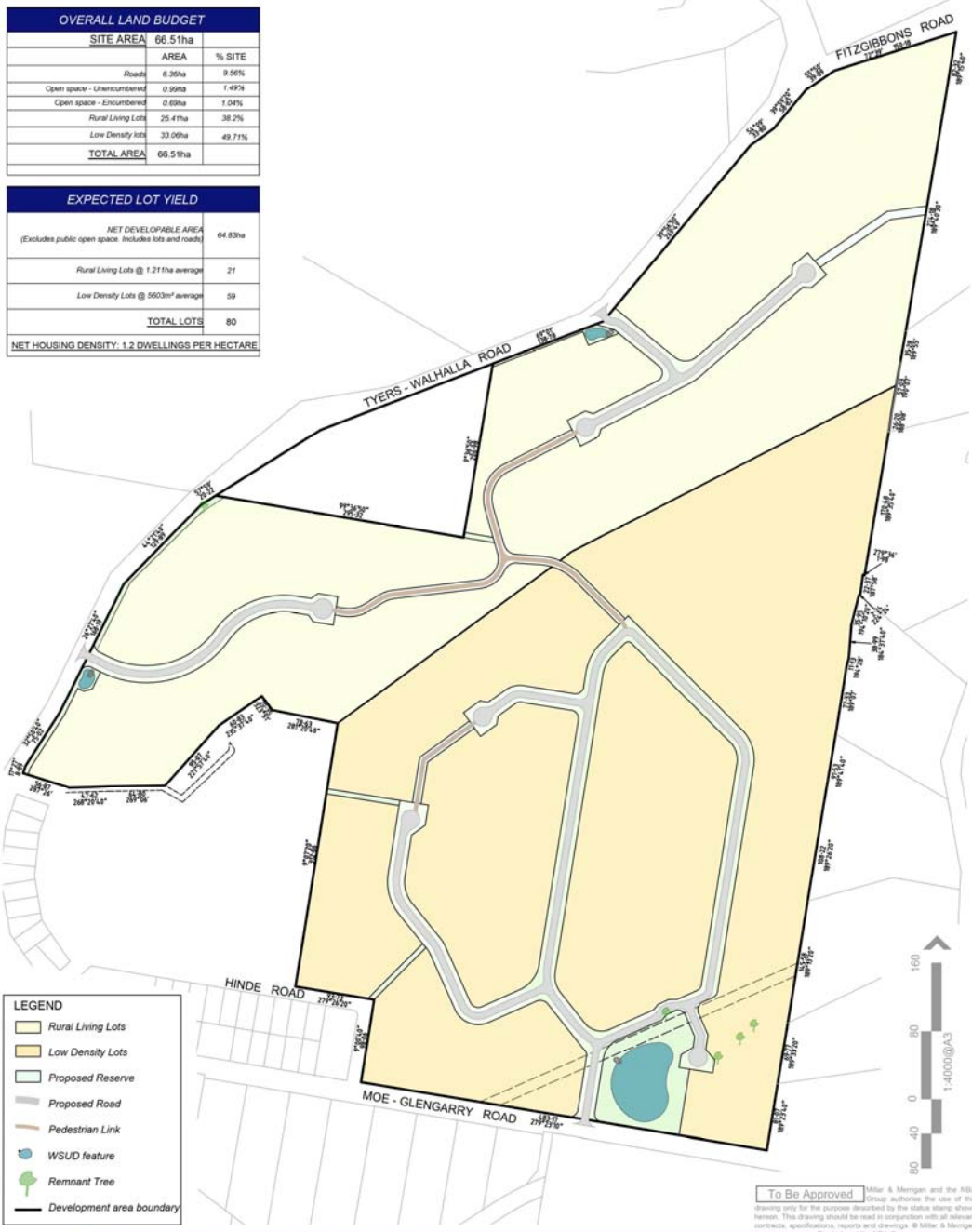
The intention of the ADP is to provide for an attractive, well planned community expanding on the existing rural living areas at the edge of town. It delivers an integrated and sustainable neighbourhood where future residents can choose from a range of housing types in high amenity settings. The ADP provides for a mix of rural living and low density housing opportunities. It allows for a logical infill between the township area and the established rural living area to the north east.

The overall neighbourhood design has been influenced by the natural features of the site and the availability of reticulated services. The design ensures that streets are well connected and easy movement through the neighbourhood and connections to surrounding areas is provided.

Drainage, wetland design and Water Sensitive Urban Design (WSUD) techniques will add to sustainability in terms of capture, use and treatment of stormwater and it is intended that a wetland area be provided within a public open space reserve. Landscaping around the wetlands will improve ecological integrity and provide habitat potential for native flora and fauna.

The key elements of the Plan are detailed in the following sections of this report.

Figure 12 – The Acreage Development Plan (refer to Appendix 7).



DEVELOPMENT PLAN

The Acreage, Tyers
 Tyers - Walhalla Road, Tyers
 Latrobe City Council

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 October 2015

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6 The Acreage Development Plan Opportunities and Constraints

The ADP has been prepared in accordance with a series of strategic objectives based around best practice approaches to growth area planning. A review of the site analysis and existing conditions has deemed the following opportunities and constraints, all of which have been considered and have informed the preparation of the Development Plan.

Site opportunities:

- To provide increased rural residential development within close proximity to the township of Tyers;
- To provide low density residential living in a rural environment;
- Further population growth will contribute to the vitality of the Tyers community;
- To contribute to the rural village character of the town;
- To provide lower density housing within close proximity to Traralgon without detracting from the recognised need to maximise available land within Traralgon;
- To develop land generally in accordance with the Tyers Structure Plan;
- To create an attractive entrance into the township from both Moe-Glengarry Road and Tyers-Walhalla Road;
- To provide appropriate effluent disposal and implement monitoring and review in accordance with DWMP;
- To meet market gaps in medium to premium housing contributing to diversity of choice;
- Opportunities for passive surveillance given the opportunity for rural fencing.

Site Constraints

- The relatively steep slope on the northern portion of the site.
- The lack of reticulated sewerage and requirement to treat waste water within allotment boundaries;
- The heavily vegetated rural residential precincts to the east and west of the site;
- The location of the existing electricity easement and overhead service;
- The inability to provide lots above the 110m contour with reticulated water;
- Visual and potential odour amenity impacts created by distant industrial uses;
- The relevant bushfire considerations;
- Minimising access to the RDZ1;
- Likelihood of further subdivision is restricted by infrastructure available;
- No need for commercial or community uses within the precinct given existing town community assets and infrastructure;
- Remnant vegetation situated onsite and within the road reserve.

7 Land Budget

This Land Use Budget should be read in conjunction with the ADP.

The GAA Precinct Structure Planning Guidelines provide the following definitions used in the land budget:

- **Encumbered Land** is constrained for development purposes. Includes easements; retarding basins/wetlands; landfill; conservation and heritage areas. This land may be used for a range of activities (e.g. walking trails, sports fields). It is not provided as a credit against public open space requirements, however regard is taken to the availability of encumbered land when determining the open space requirement.
- **Gross Developable Area** is the total precinct area excluding encumbered land, arterial roads and other roads with four or more lanes.
- **Net Developable Area** is land within the precinct available for development. This excludes encumbered land, arterial roads, railway corridor, government schools and community facilities and public open space. It includes lots, local roads and connector streets.
- **Net Housing Density** is the number of houses divided by the net developable area.

	Ha	%
TOTAL AREA OF SITE	66.51	100
ENCUMBERED LAND	0.58	0.9
GROSS DEVELOPABLE AREA	65.93	99.1
OPEN SPACE (UNENCUMBERED)	0.99	1.49
OPEN SPACE (ENCUMBERED)	0.69	1.04
NET DEVELOPABLE AREA	64.83	97.47
Proposed Road Reserves	6.36	9.56
Rural Living Lots	25.41	38.2
Low Density Lots	33.06	49.71
ALLOTMENT AREA	58.47	

8 Land Use Framework

8.1 Housing Density

The ADP aims to achieve a neighbourhood that provides for a density in accordance with the applicable zoning requirements while responding to the particular site features and the character of the Tyers Township.

In accordance with the requirements of DPO8 and the Latrobe Planning Scheme, the ADP provides opportunity for a range of lot sizes to provide for housing diversity and choice.

Lots	Average Site	No. of Lots
Low Density Allotments	5603m ²	59
Rural Living Allotments	1.211ha	21

Assuming the average lot size, the ADP will yield approximately 80 allotments, representing an overall density of 1.2 dwellings per hectare.

8.2 Housing Diversity

The ADP provides a diversity of choice for future residents and will meet an identified market gap being premium housing and lifestyle living. Two types of housing are provided within the ADP.

Low Density Allotments – are provided on the lower slopes of the Development Plan area below the 110m contour. This land is able to be serviced with reticulated water and is topographically less constrained than the northern extents of the site. Low Density allotments average 5595m² providing opportunities for future dwellings, vegetation and generous recreation areas. Assuming the average lot size, the ADP provides for potentially 59 Low Density Allotments.

Rural Living Allotments - are provided on the upper slopes of the Development Plan area where the topography is steeper and the land is unserviceable with reticulated water. Rural Living Allotments average 1.216ha providing opportunities for future dwellings, effluent disposal, vegetation, hobby farming, recreation areas, water capture and effluent disposal. Assuming the average lot size, the ADP provides for potentially 21 Rural Living Allotments.

8.3 Community, Commercial and Retail Facilities

In accordance with the Tyers Structure Plan contained in Clause 21.06 of the Latrobe Planning Scheme, the entire area of land is dedicated to residential purposes with no new neighbourhood centre or community facilities proposed or required.

The ADP provides for infill development between the existing township and rural living area to the north east and takes advantage of proximity to the Tyers Township. Existing township facilities are as shown in the Site Analysis Plan at Appendix 2.

9 Open Space

A well planned network of open space is available to the ADP area and will provide recreational opportunities for the community as well as catering for stormwater treatment and retardation.

Council’s adopted Public Open Space Strategy (May 2013) defines open space as:

Publically accessible land that is set aside for recreation, leisure, sport, conservation and/or associated environmental and urban design functions.

The strategy aims to employ the following policy:

In residential areas, new subdivision be levied at 10% of the net developable area as total open public space, of which a minimum of 5% must be unencumbered and where required, suitable for active open space development.

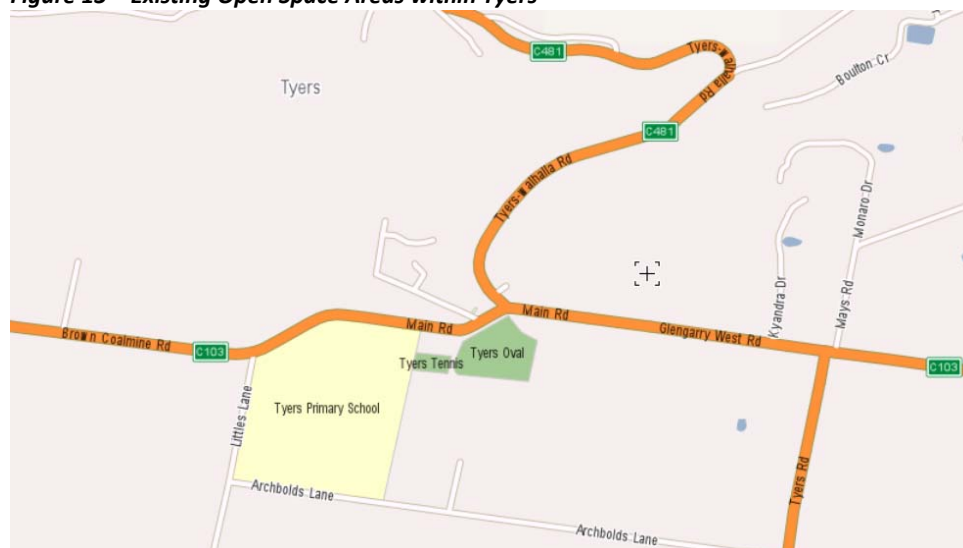
Latrobe City Council’s Public Open Space Strategy (2013) discusses open space roles, functions and hierarchies.

The hierarchy and desired distribution for residential areas is defined in the strategy as follows:

- **Local** - The majority of houses in residential areas should have access to a minimum of 0.5 hectares of public open space within a 500 metre radius.
- **District** - The majority of houses in residential areas should have access to district level public open space within a 3 km radius.
- **Regional** - Each town with a population of over 10,000* people should have access to regional standard public open space venue/s.

The Public Open Space Strategy identifies the Tyers Recreation Reserve as a District Sport Reserve, the Bert Christensen Reserve and a District Parkland Reserve, and the Jean Galbraith Flora Reserve as a District Conservation and Environment Reserve. Reserves within close proximity to the Development Plan area are demonstrated in Figure 13 below.

Figure 13 – Existing Open Space Areas within Tyers



In addition to the existing public open space areas readily available, the Development Plan includes the creation of 1.68ha of public open space, comprising the following:

- A large reserve (approximately 1.19ha) is proposed adjacent to the proposed access from the Moe-Glengarry Road, the intention is that the reserve would be of sufficient size to act as useable open space for future residents and the township and also provide for a stormwater detention pond, this would be incorporated into the overall design of the park and landscaped to act as an attractive entrance feature.
- A series of lineal reserves proposed along existing roads and within the development allow for pedestrian links throughout the site and to neighbouring developments. Lineal reserves will not be smaller than 10m in width (consistent with Council's Public Open Space Strategy).

As shown in the Open Space Plan at Appendix 9, approximately 1.68ha of land is set aside for open space which equates to 2.5% of the total area. Of this 0.99ha is unencumbered and 0.69ha is encumbered with the existing electricity easement and the proposed WSUD features.

The open space provision is less than that outlined within Latrobe City Council's Public Open Space Strategy (2013) which in residential areas seeks 10% of public open space, 5% of which is to be unencumbered, the policy does not detail requirements for low density subdivisions in small townships. It is noted that the Tyers Township is well serviced by the provision of existing active open space reserves and the Tyers Structure Plan does not envisage the creation of further active open space areas within the subject site. Given the generous lot sizes and the provision of a passive open space reserve, future residents will have more than adequate areas for the passive enjoyment of the outdoors. A cash contribution will be provided to make up any shortfall in the provision of open space at the subdivision stage and this can be utilised for the embellishment of open space areas in accordance with Council policies to suit the needs of the community.

The Landscape Master Plan (Appendix 11) indicates the intended overall landscape treatments for public areas to guide future development. The detailed design of these facilities should be considered at the subdivision stage. To address surveillance issues, the interface between residential lots and open space reserves are to be controlled via urban design guidelines, to be prepared as a condition of subdivision, to the satisfaction of Latrobe City Council.

10 Landscape

Given the land use history of the area, landscape values are currently limited.

The ADP presents the opportunity to enhance the values of the site by establishing a landscape theme that provides a sense of place and community. A Landscape Masterplan for the precinct has been prepared and is attached at Appendix 11.

The ADP proposes avenues of green streets designed to create visual interest and a leafy character for the development. The Landscape Masterplan suggests use of varying trees throughout streets to provide identity and create differentiation between areas of the development. Large informally scattered native canopy trees are suggested within the rural living areas to give them a rustic country appeal, whilst a more structured planting arrangement and use of varying species is suggested with the low density residential areas.

The lineal reserves will enable retention of vegetation along Tyers-Walhalla Road and the dedicated pedestrian links will provide space for new canopy trees and meandering footpaths.

The small retarding basins (adjacent to the road ways that extend from Tyers-Walhalla Road) will only contain water during storm events and will be enhanced with a quality landscape solution to ensure that they are aesthetically pleasing whilst ensuring ease of on-going maintenance.

The proposed large local reserve is to incorporate both Water Sensitive Urban Design elements and space for passive recreation. A retarding basin for stormwater treatment is provided and it too will be enhanced with a quality landscape solution to ensure that it is aesthetically pleasing and easy to maintain.

There is ample opportunity for native plantings that will be visually pleasing, provide for habitat of local fauna and fulfil the required stormwater retardation and filtration process to meet best practice design principles. A meandering pathway will also be included in the reserve for use by residents and consideration is to be given to the provision of open space embellishments including seating and swings. Details are to be determined at subdivision stage.

Photograph 8 – Example of developed lot & associated landscaping



Photograph 9 – Example street tree



Photograph 10 – Example landscaped retarding basin



11 Ecological Considerations

The subdivision layout has been designed to retain remnant vegetation wherever practical. Remnant vegetation protected as part of the development plan includes several scattered trees that are situated towards the southern boundary and are to be retained within allotments and areas of open space.

In terms of remnant vegetation which is proposed for retention within allotments, the indicative lot layout shown in the Design Response Plan (refer to Appendix 14) details that three scattered trees are to be retained within lots 39 and 40. Both allotments are of ample size to enable a future dwelling and associated infrastructure to be appropriately sited.

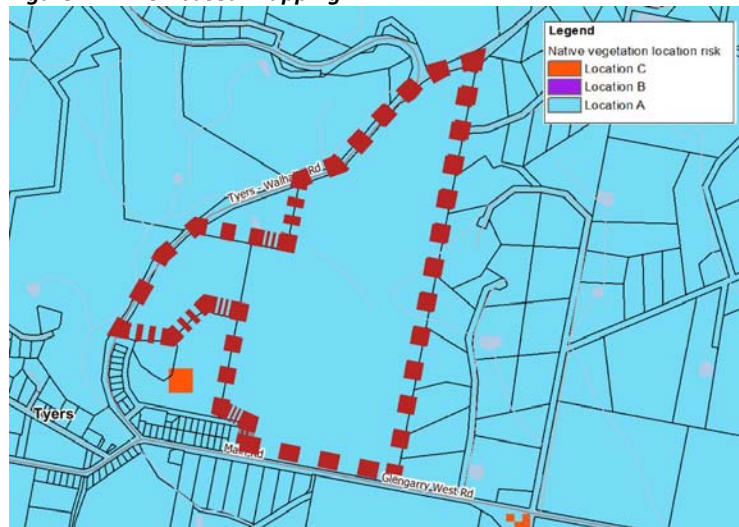
In terms of remnant vegetation to be retained within areas of open space, the proposed road reserve to the north of the drainage reserve has been designed to avoid a small clump of scattered trees. The proposed design has allowed ample space for the pavement and services to be installed in a manner that will not compromise the structural integrity of the trees. To ensure that remnant trees are adequately maintained and protected as part of any future subdivision works, it is recommended that an arboricultural report be undertaken and suitable protection zones be identified at the planning permit stage.

In addition to remnant vegetation, there is also a variety of non-remnant/regrowth vegetation that is situated on steep sections of the site. Canopy vegetation in these areas is to also be retained, where appropriate, to help maintain the characteristics of the soil profile, although it is noted that sections of the understorey may need to be managed to some degree to help mitigate against the risk posed by wildfire. As with the protection zones for the remnant trees to the south of the development layout, it is recommended that suitable management initiatives are devised at the planning permit stage to ensure that appropriate environmental outcomes are achieved.

Whilst the development has sought to avoid and minimise the need for vegetation removal, it is likely that some remnant vegetation will require removal from within the Tyers-Walhalla Road reserve to allow for the construction of two appropriately designed access roads to the north. It is also likely that one scattered tree will require removal from the southern portion of the site to accommodate the proposed road. Pursuant to Clause 52.17 of the Latrobe Planning Scheme, any application to remove remnant vegetation from within the site and/or the road reserve will need to be accompanied by the necessary documentation. Such documentation would include a Biodiversity Assessment Report which would detail the characteristics of any native vegetation proposed for removal and would stipulate any offset requirement (an example report has been included as Appendix 4).

Acknowledging that the extent of impact on native vegetation will only be known at such time as a detailed design of the intersection treatments has been prepared, a review of Native Vegetation Location Risk Mapping suggests that any vegetation removal associated with the future development of the site would fall within 'Location A' (low risk-based application pathway). This indicates that an application for vegetation removal is unlikely to impact on native vegetation deemed to make a significant contribution to Victoria's biodiversity.

Figure 14 – Risk-based Mapping



Photograph 11 – Roadside vegetation along Tyers-Walhalla Road



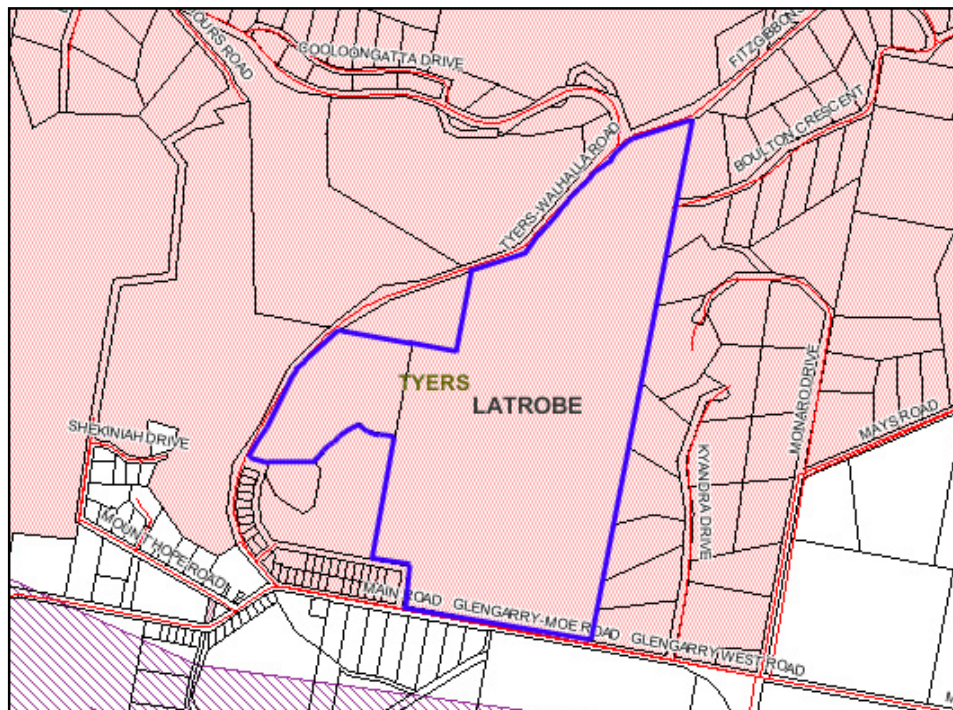
12 Bushfire

The site and surrounds are included within the Bushfire Management Overlay (BMO), see Figure 15.

The BMO is used to guide the development of land in areas of high bushfire hazard where there is potential for extreme bushfire behaviour such as crown fire, extreme ember attack and radiant heat. A proposal must consider the location, design and construction of development as well as the implementation of bushfire protection measures to ensure that the risk to life from bushfire is reduced to an acceptable level.

The ADP proposes a layout with large allotments that are capable of accommodating required defendable space areas and static water supplies as well as a road network that enables appropriate access, see the Bushfire Considerations Plan at Appendix 12.

Figure 15 - Bushfire Management Overlay (land.vic.gov.au)



The subject site is mostly cleared, offering unmanaged grassland, however a patch of forest vegetation is located between the site and the Tyers Township and the rural living lots to the east of the Development Plan area offer dwellings nestled amongst a mix of woodland and forest vegetation. It is noted that the large patch of forest vegetation between the site and the Tyers Township has existing maintenance obligations relating to bushfire risk, which are implemented by a 173 Agreement.

The vegetated areas, together with the steep topography, offer the greatest bushfire hazard to the subject site. There is however additional threat from forest vegetation lining Tyers-Walhalla Road and Fitzgibbons Road, as well as threat from grassfire within the site and from farming land in the surrounding area. In relation to vegetation on site,

an assumption has been made that the low density lots (around 1 acre) will be well managed (mown on a regular basis) however the rural living lots (1 hectare) are likely to be grassland and as such have been considered as a threat to future buildings and residents.

Based on a desktop assessment of the vegetation and effective slope, the majority of proposed lots should be capable of achieving a BAL 12.5. Defendable space areas are indicated on the Bushfire Considerations Plan, however the lot layout and defendable space areas are subject to detailed design at subdivision stage.

In respect to the adjacent vegetated land to the south-west of the site, no native vegetation will need to be removed to create defendable space for the development plan area, other than that already envisaged under the applicable s173 agreement. It is intended that some pine trees will be removed adjacent to rural living lots to the north of this vegetated parcel (Refer to the Bushfire Considerations Plan at Appendix 12).

Consideration must be given to siting during a future subdivision application whereby building envelopes should be clumped and the length of access ways minimised. A Bushfire Management Statement will be required as per the requirements of the Bushfire Management Overlay (BMO) and Clause 52.47 of the Latrobe Planning Scheme.

Proposed lots will be large enough (minimum 4000sqm) to accommodate appropriate defendable space areas for grassland along stage boundaries and each can accommodate a static water supply in accordance with CFA requirements.

We note that the layout of the development plan area is heavily constrained by the topography and it is not possible to provide perimeter roads between the external hazards and proposed lots, as grades reach up to 1 in 4 in these areas. Instead, the road network is designed to offer good circulation and multiple access points to the external road network. As a result of detailed engineering assessments, a series of cul-de sacs are utilised across the development plan area to avoid the steep portions of the site. 10m wide links between some of the court bowls will provide pedestrian links as well as emergency access links. Detailed road design at subdivision stage must be in accordance with CFA access requirements.

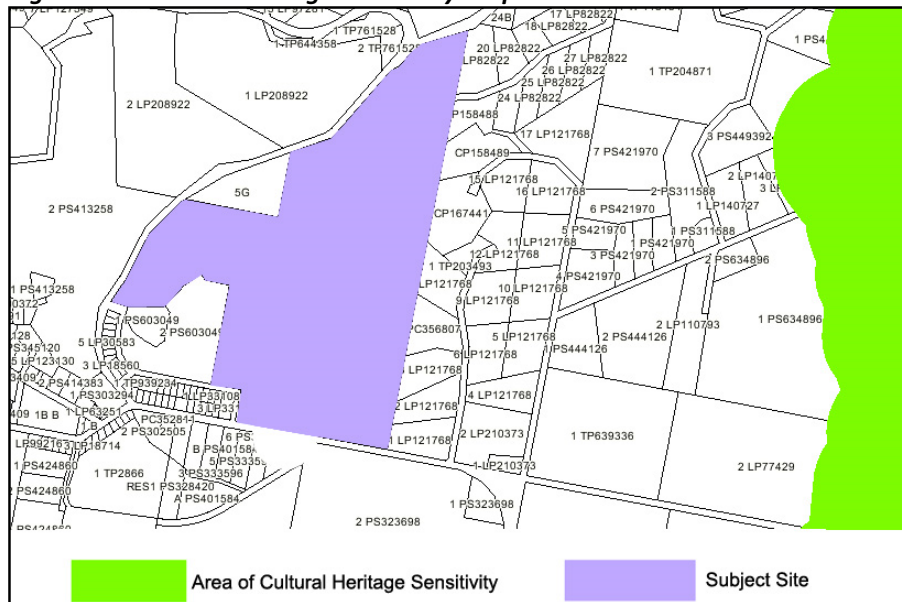
Future landscaping within road reserves and public open space areas must also consider bushfire risk. At detailed design, landscaping should offer separation between vegetation and utilise low risk and non-combustible features where possible. These include but are not limited to managed lawn, footpaths, rocks and water bodies.

The layout of the Development Plan has considered bushfire hazard and the CFA have reviewed the layout, advising that they are supportive of the submission. Pursuant to the BMO an application for subdivision must be accompanied by a detailed Bushfire Management Statement.

13 Cultural Heritage

Aboriginal Affairs Victoria (AAV) maps identify no areas of ‘cultural heritage sensitivity’ on or within 200m of the site as indicated in Figure 16 below and as such the future development of the land is exempt from a mandatory Cultural Heritage Management Plan.

Figure 16 - Cultural Heritage Sensitivity Map



14 Access and Movement

The ADP aims to create a safe and convenient neighbourhood that provides a clear and legible street network allowing for appropriate access through the development and links with adjoining roads.

A functional road network has been proposed to provide vehicle access within the development, via 20m wide road reserves for primary roads and 15m wide road reserves for secondary roads. Whilst detailed design would be required at the planning permit stage, the provision of 20m and 15m road widths would be more than adequate to provide for safe and efficient movement.

The road network utilises a series of cul-de-sacs in response to site constraints, namely the steep topography which simply prohibits through roads across much of the land. The exception is within the eastern portion of the low density residential area which is significantly flatter and accommodates a loop road for efficient circulation.

Road treatments can and will be provided in accordance with the recommendations of the Traffic Engineers, Council and VicRoads at the subdivision stage. All internal roads are to conform with the Latrobe City Design Guidelines. In instances where the applicable standards cannot be met, a shared access way (i.e. common property) is to be considered. In the context of the development plan, instance where the appropriate standards may not be achieved could include places where the topography is steep and, as such, appropriate grades cannot be achieved.

Interface treatments for residential lots with side boundaries onto reserves and pedestrian links can be appropriately dealt with at subdivision stage by implementation of design guidelines.

Three key external access points can provide access to the estate as follows:

- To Moe-Glengarry Road near the southeast corner of the site, providing the primary access to the majority of lots and secondary access to the larger ridgeline lots;
- To Tyers-Walhalla Road along the western boundary of the site, providing access to larger allotments north of the ridgeline and linking with internal roads south of the ridgeline and with pedestrian/cycling access to the eastern boundary and Boulton Crescent;
- To Tyers-Walhalla Road near the northern end of the site, providing primary access to the north eastern ridgeline lots and secondary access to the low density residential lots.

In addition there is opportunity for connection to the Hinde Road reserve in the south west corner and Fitzgibbons Road in the north east corner of the site. It is noted that Boulton Crescent (to the north-east of the site) is a no through road, ending in a court arrangement with a narrow pedestrian/emergency link that extends to the boundary of the subject site. No vehicle access is identified within the ADP to link to Boulton Crescent, rather the existing pedestrian/emergency link will be maintained.

Traffic volume increases have been estimated by Traffic Engineers in the attached reports, who have concluded that the existing road network will not be impacted upon by the

modest traffic increases created by the development. Road treatments can and will be provided at the subdivision stage.

The Movement Network Plan at Appendix 13 demonstrates the vehicle and pedestrian links within the site and to external destinations. In accordance with the Latrobe City Healthy Urban Design Good Practice Guideline, the proposed road and path network has been designed to enhance the permeability of the development footprint (refer to the Movement Network Plan).

14.1 Pedestrian Connectivity

Given the likely vehicle movements and large nature of the lots it is likely that pedestrians will utilise road verges rather than constructed footpaths as per other low density areas surround Tyers Township.

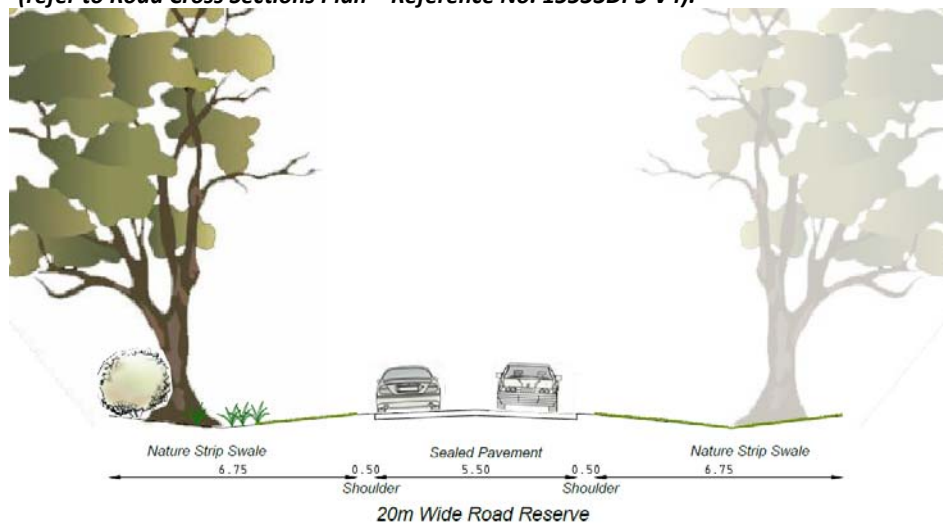
In order to encourage pedestrian connectivity to Tyers Township there is a high degree of connectivity for pedestrians/cyclists within The Acreage Development Plan area, with excellent links to external destinations. Off road shared pathways have been provided to link vehicle cul-de-sacs and a pedestrian link is provided to the unmade Hinde Road Reserve, as well as a link to Boulton Crescent to the east.

The ADP provides for appropriate linkages in accordance with the Latrobe City Bicycle Plan.

14.2 Road Hierarchy

The hierarchy of proposed roads is in part attributed to the volume of traffic utilising the road. The Latrobe Planning Scheme has been utilised to determine the road hierarchies for the development. Hierarchies and Cross Sections are as shown on the attached Road Cross Sections Plan and at Appendix 10 and Figure 17 below. Final grades will be determined at a later stage, to Council and CFA requirements.

Figure 17 – Road Cross Section 20m wide road
 (refer to Road Cross Sections Plan – Reference No. 15533DP5 V4).



14.3 Intersection Design

As discussed in the Traffic Engineering Assessments (Appendix 3) based on the existing traffic volumes and the expected future site generated volumes the proposed access intersections to Tyers-Walhalla Road only require BAL (basic left turn) and BAR (basic right turn) type treatments. With regard to the proposed access intersection to Moe-Glengarry Road the left turn will only require a BAL type treatment however the right turn volumes are very close to the threshold between a BAR type treatment and a CHR(S) (short channellised right turn) type treatment and therefore future subdivision should include a CHR(S) treatment at this location.

Site inspections indicate the sight distance at the proposed access intersection with Moe-Glengarry Road is excellent. The locations of the intersections with Tyers-Walhalla Road have been chosen to maximise sight distances along the winding road. Intersections will be designed to the requirements of the responsible authority at the subdivision stage.

14.4 Public Transport

It is considered unlikely that public transport access will be increase as a result of the development of this precinct. It is expected that existing public transport infrastructure will be capable of accommodating a future resident's needs.

It is noted that public transport (presumably a bus network) is being considered for Tyers in the future. The Acreage Development Plan road layout would provide for a logical bus loop if deemed appropriate.

15 Infrastructure

15.1 Electricity

As discussed above the site is serviced by reticulated electricity, with power lines dissecting the south eastern corner of the site. John Barnett of SP Ausnet has provided the following advice regarding electricity supply:

- *Based on advice from our Network Planner – the 22kV lines crossing the south east corner of your property – can, at present, support your development based on 4kVA per lot.*
- *SP AusNet policy for alteration to existing assets requires the customer/developer to contribute the full cost of the augmentation works. Therefore, any alteration to the alignment of the 66kV/22kV overhead line or low voltage underground service to Lot 1, PS603049 would be at the customer/developer expense.*
- *Services to any existing houses will be required to be relocated to the underground network within the estate, at the expense of the customer/developer.*
- *As the average lot size is greater than 2000 square metres then the development would be classed as low density and the customer/developer would pay the total cost of works for HV and LV cables less SP AusNet’s contribution based on expected revenue from assets installed.*
- *Current SP AusNet construction lead time for overhead works is 150 days (5 months) after negotiations are complete (contracts signed and supply contribution paid).*
- *Current SP AusNet construction lead time for underground works is 100 days (3 months) after negotiations are complete (contracts signed and supply contribution paid).*

Electricity can be provided to proposed lots in accordance with the requirements of the responsible authority as part of the subdivision process.

It is noted that the proposed effluent disposal envelopes for a handful of the indicative allotments enters the electricity easement. The effluent envelopes occur at ground level and the easement contains overhead electricity only, thereby there is no potential for conflict. The electricity easement does not preclude the use of effluent envelopes.

15.2 Gas

APA Group are unable to supply this estate with natural gas. Initial feasibility enquiries have determined that there is currently no natural gas distribution infrastructure within the area. APA Group’s Mains Extension Coordinator, Julieanne Free, has confirmed that there are currently no plans to extend the network into the area.

15.3 Telecommunications

Telecommunication is currently transitioning from copper wire to broadband technology. Currently Telstra are responsible for any infrastructure upgrades required to bring standard service to the proposed subdivision. Pit and pipe infrastructure will be required to be provided by the developer within the subdivision in accordance with the usual requirements of Telstra and NBN Co. If deemed viable by Telstra/NBN Co, Fibre to the Premises (FTTP) may be required, instead of copper service, as part of the National Broadband Network. NBN Co. requirements will be based on whether the proposed development is within their current broadband footprint as the development meets the size trigger point currently in use.

The technology and services required would be determined at the subdivision stage, depending on Telstra/NBN Co. deployment of FTTP policy and any negotiations based on a commercial agreement.

15.4 Water Supply

As discussed reticulated water is available to land below the 110m contour, however land beyond this contour cannot be serviced with town water. This has formed a major consideration to the preparation of the development plan. Lots above the 110m contour average 1.22ha and as such these lots are significantly large enough to capture roof run off as a potable water supply for both domestic and fire fighting purposes.

15.5 Sewerage

As discussed, there is no reticulated sewerage available to the area and as such allotments within The Acreage Development Plan will be required to treat and retain wastewater. The LCA (Appendix 14) includes a series of recommendations for wastewater treatment as outlined at section 3.3 above and demonstrated in Figure 18 below.

It should be noted that extensive consultation was carried out with neighbouring property owners, the Sasses, and Council's Environmental Officers before finalising the report. The key findings of the report can be summarised as below:

- *Install a system that provides a minimum secondary treatment with disinfection to meet EPA requirements for irrigation¹⁰⁸. Indicative target effluent quality is a minimum EPA standard 20mg/L BOD and 30mg/L SS irrigated to an application area to achieve a minimum 600mm separation from seasonal groundwater. Several suitable options are available, including aerated wastewater treatment systems (AWTS) and single pass sand filters. Either of these options is capable of achieving the desired level of performance and final selection is the responsibility of the property owner, who will forward details to Council for approval.*
- *Careful selection of imported fill (if required) for the irrigation area must be carried out in accordance with ASNZ1547 2012 "On site Domestic Wastewater management"*
- *On-site disposal of domestic wastewater should occur within the proposed Effluent Management Areas (refer Site Features Plan 345281-LC1(A)). The client is allowed flexibility in selecting the final location and configuration of the irrigation system, provided it remains within this envelope and in accordance with the relevant codes/standards.*

- Calculation of Irrigation Area based on AS/NZ 1547 equation $A=Q/DIR$, for a 5 bedroom dwelling

Slope %	0 – 10%	11-20%	21-30%	> 30%
Q (L/day)	900	900	900	900
DIR (mm/day)	2	1.6	1	NR
Irrigation Area (m ²)	450	562	900	-
LAA recommended (m ²)	750	1000	2075	-
EMA recommended (m ²)	1500	20000	4150	-
Min Lot Size Req'd	4000m ²	4000m ²	1.0 ha	-
Water Balance max WSUD (mm)	19	34	39	-

- To determine if the irrigation area (LAA) recommended above is adequate, a water balance¹¹¹ modelling has been undertaken to achieve a maximum wet weather storage depth of less than 50mm. Refer Appendix B of the LCA for full details and calculations.
- Minimum setbacks and buffer distances must be obtained when establishing effluent disposal fields (LAA's), as per EPA Code of Practice – Onsite Wastewater Management, publication 891.3, (Feb 2013).¹¹²
- Council should condition the provision of a detailed hydraulic design for each proposed sub-surface LAA system during the Building Approval process. The owner shall consult a suitably qualified professional experienced with wastewater irrigation, to design and install the irrigation system. The irrigation plan must ensure good, even application of effluent.
- Council is recommended to request a detailed soil management plan be submitted with any Building Application for construction of the proposed LAA's on each lot. Detail should also be provided regarding ongoing management of the dispersion/sodicity risk over the expected life of the LAA.

Further details are available in the attached Infrastructure Servicing Report (Appendix 5) and LCA (Appendix 15). It is noted that the existence of the electricity easement to the south of the development plan does not preclude the siting of an effluent management area within the easement.

Figure 18 – LCA Site Features Plan.



- DENOTES EXCLUSION ZONES - Land not suitable for on-site effluent disposal (ie. grades > 30%, or areas within 30m of Ephemeral Watercourses or Dams)
- SLOPE ARROWS: 0 - 10% grade (standard DIR req'd)
- SLOPE ARROWS: 11% - 20% grade (20% reduction in DIR req'd)
- SLOPE ARROWS: 21% - 30% grade (50% reduction in DIR req'd)
- EFFLUENT MANAGEMENT AREA (EMA) REQUIRED - PRIMARY & RESERVE FOR SECONDARY TREATED EFFLUENT DISPOSAL (i.e. AWTs & Sub-surface Irrigation)
- DENOTES IRRIGATION AREA REQUIRED (For a 5 bedroom dwelling)
- TP2 TEST PIT LOCATIONS
- B1 TEST BORE LOCATIONS
- EPHEMERAL WATERCOURSE
- ALL PONDS ON SITE TO BE BACKFILLED DURING DEVELOPMENT OF SUBDIVISION
- ACTIVE GROUNDWATER BORE LOCATIONS (Including 20m BUFFER FOR SECONDARY TREATED EFFLUENT (Cat. 2b to 6 SOILS))

15.6 Urban Runoff

A Preliminary Drainage Strategy has been prepared for the development plan area by Millar Merrigan (Appendix 16). The report outlines stormwater management obligations for the development to ensure best practice guidelines can be met. The strategy recommends that each allotment install an appropriately sized rain water tank with a minimum detention in the top of the tank of 1000L with excess rainwater to be directed to an underground pipe system.

Road reserve run off is to be directed via grass swale drains proposed along road reserves to three nominated locations. A retarding basin will be provided within the reserve at the intersection of Moe-Glengarry Road and the entrance to the estate, with an additional two smaller basins contained within the reserves at intersections with internal roads and Tyers-Walhalla Road. Each installation will be sized to suit the contributing area and will be determined by detailed design at the subdivision stage. A suitably qualified Geotechnical or Hydrological Engineer will outline the design and construction techniques to be utilised to ensure that the proposed water retention systems will not cause detrimental impact to the adjacent roads or road users.

As discussed there are two designated waterways within the site, one of which is a mapping error as advised by West Gippsland Catchment Management Authority and the other which is to be contained in an easement in favour of the relevant catchment authority (subject to West Gippsland CMA's approval), or a restriction must be created on the Plan of Subdivision to limit ground disturbance around/along waterways to allow for its ongoing protection. This is something that will need to be adequately addressed at the permit stage.

16 Implementation

A Staging Plan has been prepared for the ADP (Appendix 8). It has been designed to ensure the outcomes of the ADP are met logically and effectively.

The Staging Plan illustrates that the LDRZ and RLZ areas are capable of being developed independently. Development could occur concurrently and likely in the sequence shown and with stage sizes to suit market demand. It is envisaged that Stage 1 will commence first and that either Stage A or B (or both) will commence prior to Stage 3, subject to market demand. These stages can be developed independently as services do not connect internally.

Preceding development of the site and/or Statement of Compliance, the following points should be considered:

- Subdivision layouts must be generally in accordance with the Acreage Development Plan;
- Public open space of 5 percent to be provided in accordance with the Development Plan with a cash contribution to be paid for any shortfall of public open space;
- Effluent envelopes must be shown on each lot as a restriction on any plan of subdivision lodged. The envelopes are to be in locations as stipulated in 'Land

Capability Assessment for On-Site Domestic Wastewater Management, Proposed 80 Lot Subdivision at Tyers-Walhalla Road, Tyers by Simon Anderson Consultants (8 August 2014);

- A section 173 agreement must be entered which registers the Simon Anderson Consultants report referenced above on every title issued in the ADP so that future owners will know their obligations with regard to the treatment of wastewater on their lot;
- Land capability assessments for each lot will be required as part of any septic tank permit application at the building permit stage;
- Remnant trees are to be retained where appropriate. Remnant trees to be retained on lots to be privately owned to be managed including having tree protection zones. New owners will be informed of the protection and management of the trees via a S173 agreement registered on the applicable title(s);
- Building envelopes are not required to be shown on each lot unless specifically stipulated by a referral authority;
- Defendable space for bushfire must be contained wholly within the ADP and not on any adjoining lot;
- Lots directly abutting reserves should be designed to facilitate passive surveillance. Boundary fences adjoining reserves should be visually permeable rural style fencing. Urban design guidelines for lots abutting reserves should be developed and approved by Council and registered on the title of applicable lots via a section 173 agreement;
- A planning permit application will be required for any removal of native vegetation to accommodate the Tyers-Walhalla Road intersections;
- Street networks must support building frontages with two way surveillance;
- Any future planning permit application for subdivision will be referred to WGCMA to provide advice on the location of buildings and of effluent envelopes for proposed lots near waterways;
- Detailed design of the detention basins for stormwater must be provided to Council's satisfaction at the time of subdivision;
- Infrastructure must be designed and constructed in accordance with Council's infrastructure design guidelines and the *Victorian Stormwater Committee Best Practice Guidelines*;
- Drainage modelling must be undertaken to ensure that the staging of development does not result in adverse impacts on adjoining and downstream undeveloped lots;
- A landscape masterplan must be prepared and submitted as part of any subdivision application. The landscape plan must be generally in accordance with the Acreage Development Plan and include:

- The location of pedestrian pathways, signage, fencing, public lighting and street furniture.
 - The areas of public open space and road reserve to be planted, including landscape detail.
 - The detailed design of drainage areas.
 - The shapes, species, height and placement of trees.
 - The vegetation to be retained and removed.
- The landscape design must:
- Ensure landscaping supports surveillance and provides shades in streets, parks and public open space.
 - Develop appropriate landscapes for the intended use of public open space including areas for passive and active recreation, the exercising of pets, playgrounds and shaded areas.
 - Provide for walking and cycling networks that link with community facilities.
 - Provide appropriate pathways, signage, fencing, public lighting and street furniture.
 - Utilise existing trees and areas of planting as settings for recreational and play areas, and take advantage of their aesthetic qualities as a feature within the development.
 - Create low maintenance, durable landscapes that are capable of a long life.
 - Streetscapes and public open space must be planted with native vegetation from Councils preferred planting schedule.

16.1 Detail required at Permit Application Stage

- Dimensioned lot layout incorporating effluent envelopes, roads and reserves generally in accordance with the approved Development Plan;
- Open space landscape design concept;
- Detailed area of public open space and delineation of encumbered and unencumbered areas;
- The location/characteristics of existing remnant vegetation on site, notation on whether vegetation is being retained or removed, methods to ensure effective retention of vegetation and to offset any remnant vegetation required to be removed;
- As required by Clause 52.47 of the Latrobe Planning Scheme a Bushfire Management Statement will be prepared. This will follow on from the Bushfire Considerations Plan that has been prepared.

16.2 Detail at Development Stage

- Detailed design of all roads, drainage and other services to the satisfaction of Latrobe Council and CFA;
- Design of external intersections to VicRoads and Latrobe Council satisfaction;
- Drainage design in accordance with the recommendations of the Preliminary Stormwater Management (Millar Merrigan, August 2015);
- Provide for pedestrian linkages in accordance with the Movement Network Plan, particularly to provide for pedestrian access to Tyers Township;
- Provide design guidelines for lot interfaces with reserves.