



# Infrastructure Servicing Report

## Baldwin Road Development Plan

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# Baldwin Road Development Plan

## Executive Summary

Millar Merrigan were engaged by NBA Group Pty Ltd to investigate servicing provisions required to support the proposed Baldwins Road Development Plan (BRDP), Traralgon North. The following report investigates the existing conditions of the site and the current services within the vicinity of the site that could support future development in accordance with the BRDP.

The site is currently zoned Farming Zone (FZ1) and General Residential Zone (GRZ3) and covers an area of 133.78 hectares bounded by Traralgon-Maffra Road to the east, Baldwin Road to the south and the Latrobe River floodplain to the north and west. The BRDP applies to 59.78ha of the site, incorporating all of the residentially zoned land and parts of the farming zone land.

The investigation involved a review of the planning scheme applicable to the site, the Traralgon North Development Plan (DP), servicing information provided from the relevant authorities, the Traralgon Growth Areas Review, advice from third party expert consultants and other detailed information pertaining to servicing works and requirements resulting from nearby neighbouring developments.

The findings are detailed in the body of the report, with a summary as follows:

- Sewer – A sewer pump station has been constructed – Marshalls Road North. A hydraulic model with a scenario created to incorporate future growth, including the subject site, was used to inform the flows into and capacities of the sewer assets. The additional pump station will suitably accommodate the Development Plan Area.
- Water – A new 300mm main extension has been provided along Traralgon Maffra Road and is currently being interconnected into the main within Park Lane to the south. There are no anticipated issues with water supply and assets are available for appropriate reticulated extension across the Development Plan Area.
- Electricity – Based on advice from SP-AusNet's Network Planner – the 22kV lines bounding the site – can, at present, support future development based on 4kVA per lot. There are two 22kV feeders in the area – TGN 11 which runs along Park Lane and Marshalls Road and TGN 31 feeder which runs along Traralgon Maffra Road.
- Telecommunications – The responsible authority for telecommunications is NBN Co, who have provided that they have services down both Marshalls Road and Traralgon Maffra Road. It is assumed that the network has the capacity to be extended into the development area.
- Gas – APA Group are the relevant gas authority in the area. Natural gas mains are available to the area and may be able to be extended to throughout the site. APA have significant assets to the north of the site which are affected by this application. Three licenced Esso mains pipelines and, one suspended pipeline, are contained within the activity area, contained within the Longford to Long Island Point Easement

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- Roads – The Traffic Assessment concludes that the traffic impacts of the proposed development plan will be adequately catered for and will not cause any adverse impacts to the surrounding road network.
  - Amenity: Expert studies in relation to road noise and pollution associated with Traralgon Maffra Road have confirmed that there is no unreasonable air pollution from the road network that would impact the development plan. Some recommendations in relation to noise mitigation are provided and can be implemented at the construction stage.

Through review of the surrounding regulatory provisions, drainage strategy and service infrastructure, it is concluded that the subject site can be developed in an economic and efficient manner.

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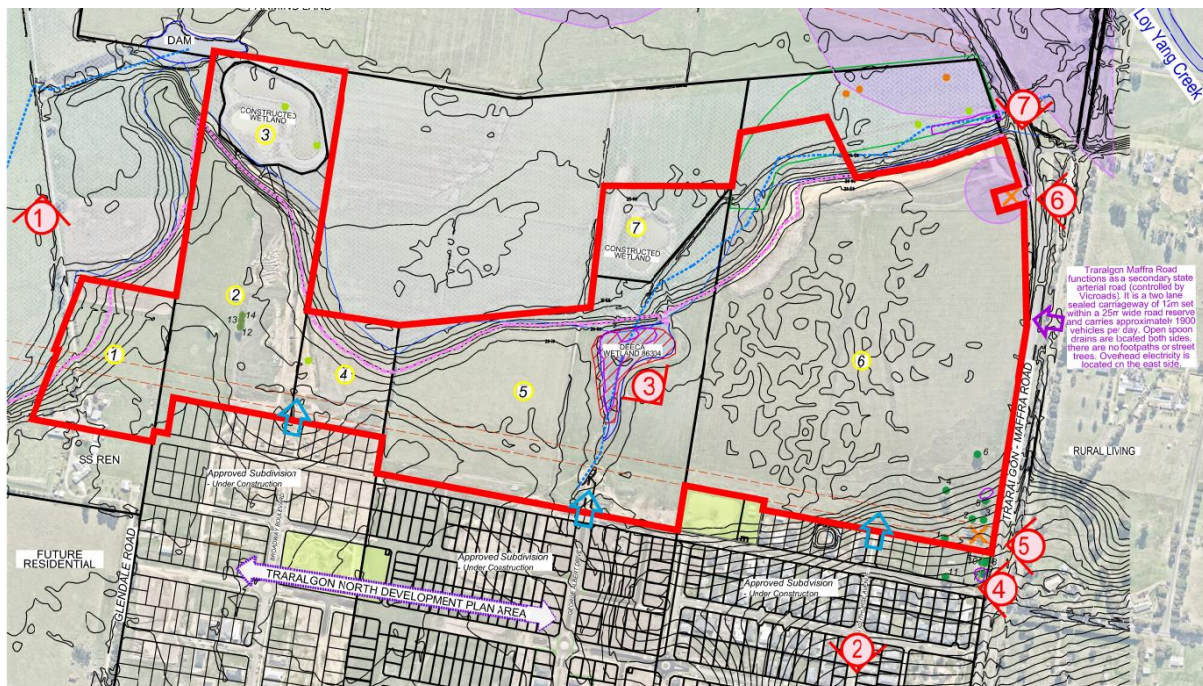
Version	Date	Description	Prepared By	Approved By
1	02/03/2021	Report		
2	28/1/2022	Report & Amended Layout		
3	14/08/2024	Report & Amended Layout		
4	01/04/2025	Report Amendment		

# Baldwin Road Development Plan Area

## 1.0 Background & Context

The subject land is located on the northern outskirts of Traralgon. Traralgon is Latrobe Valley's largest town and it is strategically located on the Princes Freeway approximately 160 kilometres east of Melbourne.

The subject land is made up of seven properties, all of which are currently zoned for farming and general residential land uses. They are in separate ownership. The properties are located to the north of the Traralgon North Development Plan area, west of Traralgon- Maffra Road and south of the Latrobe River flood plain as depicted in Figure 1 below.



**Figure 1 – Aerial of Site Context (North up the page)**

A summary of the landholdings can be found overleaf in Table 1.

# Baldwin Road Development Plan Area

**Property 1:**

Unit 2, 55 Glendale Road Traralgon  
Crown Allotment 26F Parish of Traralgon

**Property 3:**

50 Glendale Road, Traralgon  
Res 1 on PS917901

**Property 5:**

50 Baldwin Road, Traralgon  
Lot 2 on PS835779

**Property 7:**

Lot H on PS826075  
Res 1 PS917899

**Property 2:**

50 Glendale Road, Traralgon  
Lot 1 PS329021

**Property 4:**

110 Marshalls Road, Traralgon  
Proposed Lot G PS907112

**Property 6:**

Traralgon Maffra Road, Traralgon  
Lot H on PS826075

*Table 1 – Summary of landholdings*

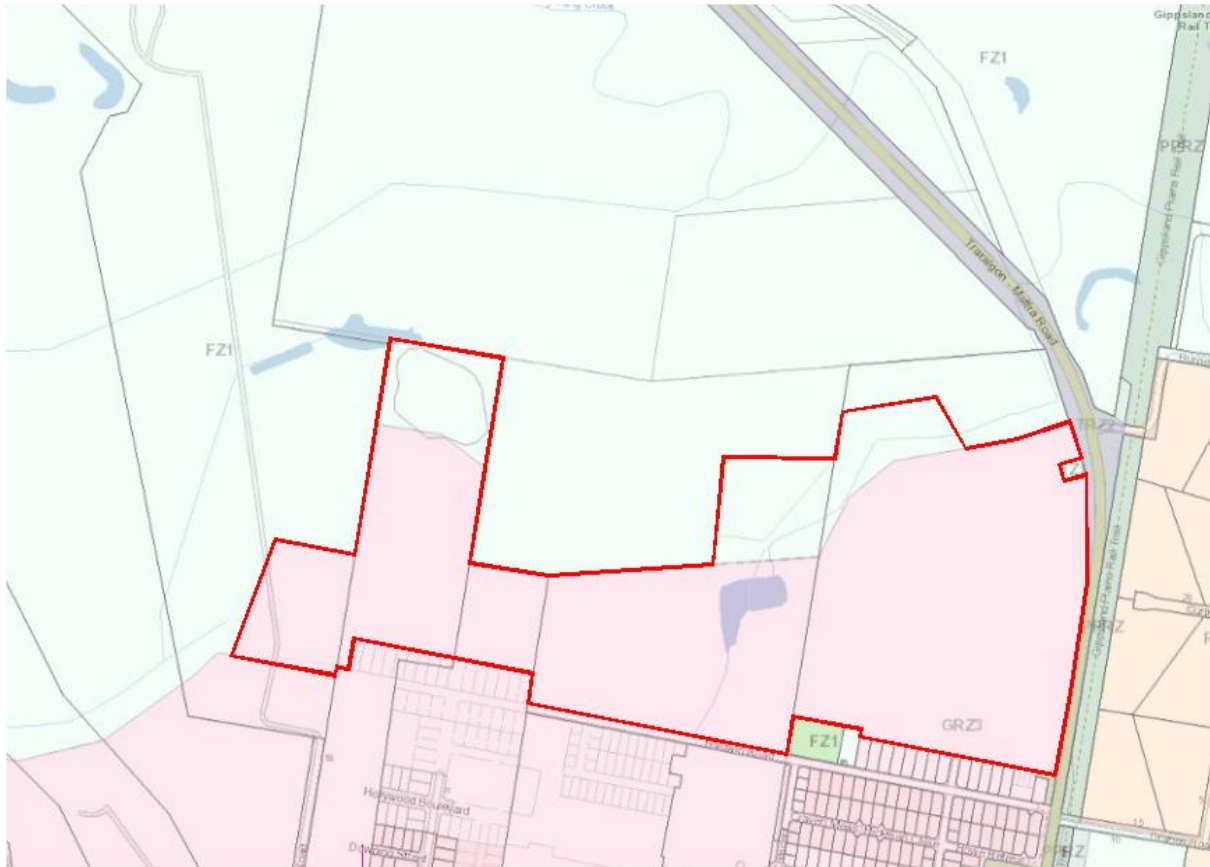
# Baldwin Road Development Plan Area

## 2.0 Site Zoning & Provisions

The following outlines the current zoning and relevant state and local regulations.

### Zoning

The south of the site is zoned General Residential Zone (GRZ), Schedule 3, and the north of the site is zoned Farming Zone (FZ1), schedule 1.

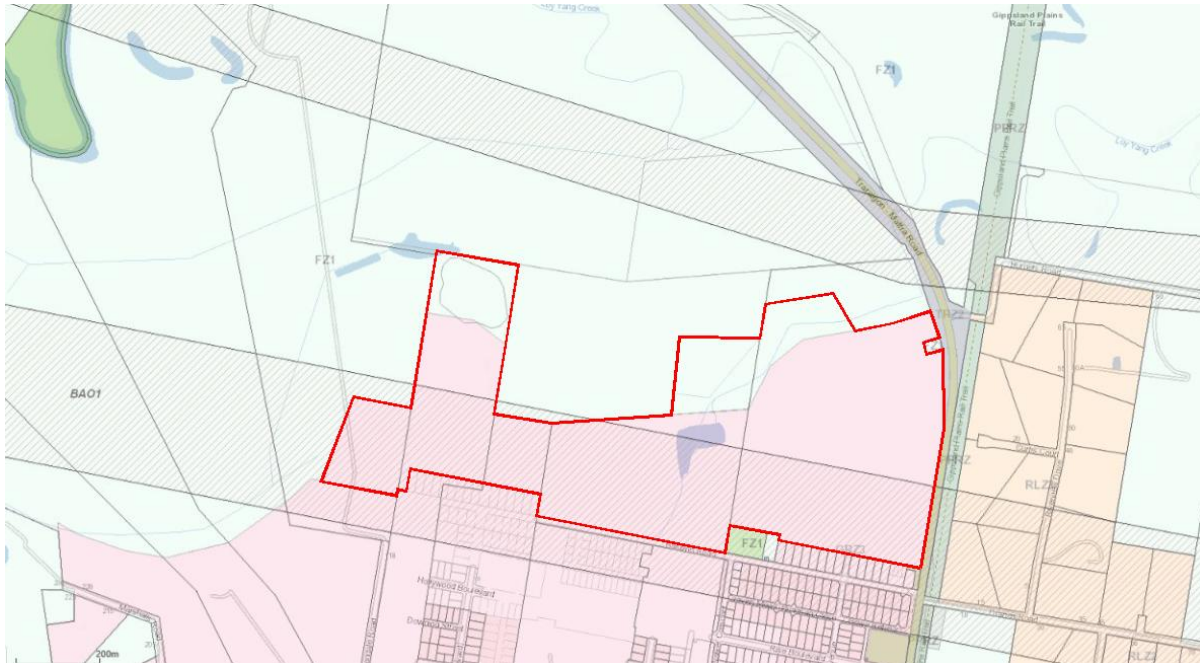


**Figure 2 - Site Zoning – GRZ and FRZ**



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There are three gas transfer mains within the subject site which are covered by the Buffer Area Overlay, schedule 1.

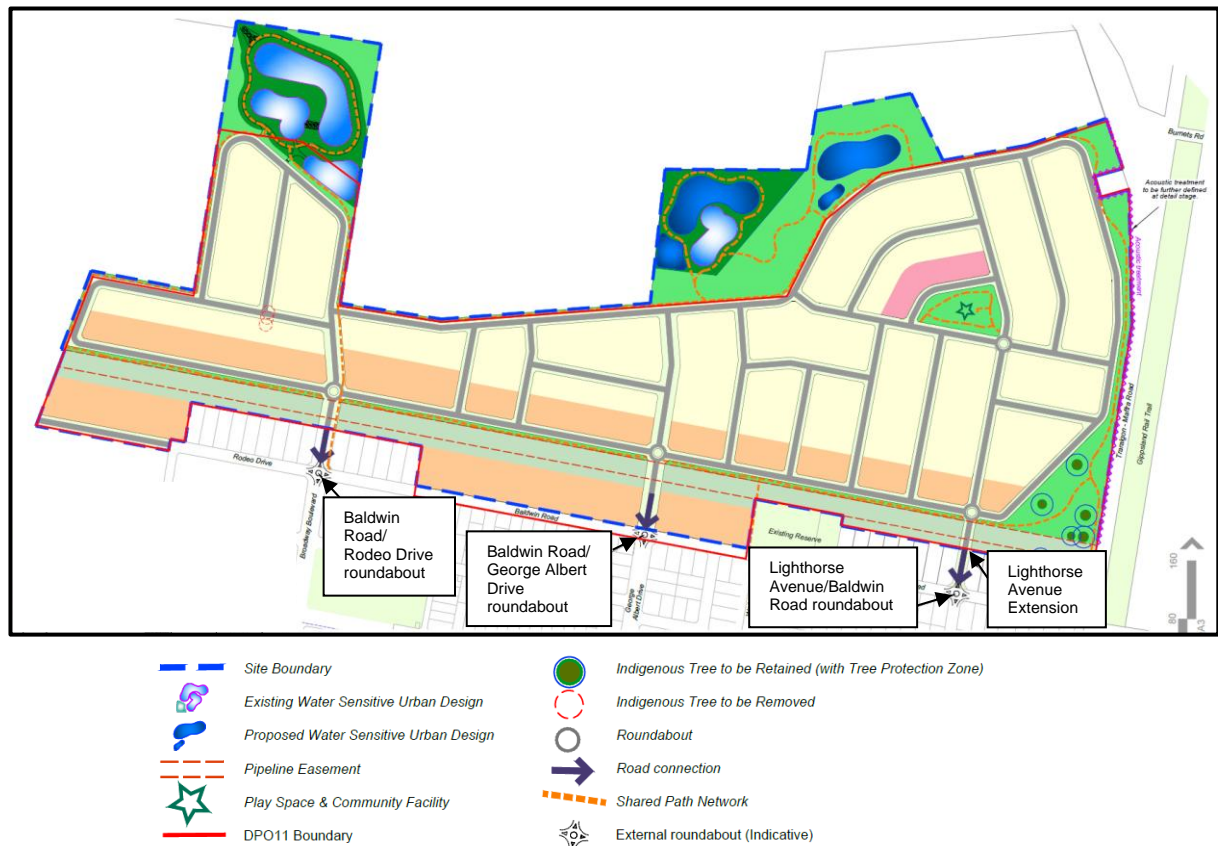


**Figure 3 - Site Zoning – BAO**

## Proposal

Following the rezoning of the subject site to General Residential – Schedule 3, consistent with the surrounding residential areas to the south, a Development Plan Overlay (Schedule 11) has been applied to the land (shown in pink within the red line). A comprehensive Development Plan is required to be prepared and approved for the site prior to any residential development. Pursuant to the Development Plan Overlay, a development plan and supporting documentation have been prepared to demonstrate the delivery of residential subdivision development for the Baldwins Road Development Plan Area. Once approved, future subdivision must occur in accordance with the BRDP.

# Baldwin Road Development Plan Area



**Figure 4 – Baldwin Road Development Plan featuring external works outside DPO11**

## Staging

Each of the seven properties can be developed independently. Recent water main and sewer pump station asset construction provides each of the properties access to necessary services to facilitate development. The Staging Plan prepared for the BRDP caters for future development, making use of existing infrastructure to the south of the DP area and sequencing according to extension of assets into the site.

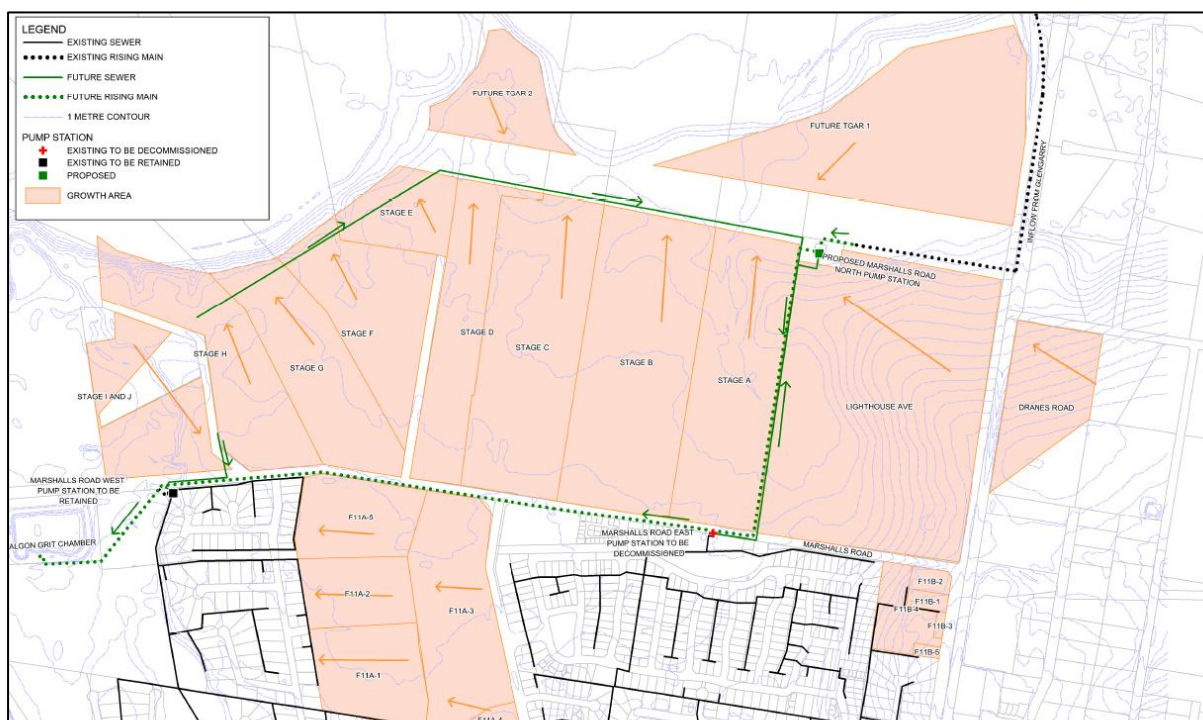
Each property contains one crossing of the Esso Pipeline reserve which have been designed to allow connection to trunk services from the Traralgon North Development Plan immediately to the south.

## 3.0 Servicing and Infrastructure

### Sewer

A new pump station, Marshalls Road North (West end of Baldwin Road) has been constructed to receive flow from the existing Marshalls Road East Pump Station catchment and surrounding growth areas, including those north of Marshalls Road. The pump station is also intended to have provision for flows for Glengarry. The configuration is shown in Figure 6.

The predicted inflows discharged into the proposed Marshalls Road North Pump Station were estimated using a hydraulic model with a scenario created to incorporate future growth, including the areas identified in TGAR. Gippsland Water have indicated the pump station servicing capability is constrained to the finished ground levels of the subject sites which lots are proposed to be generally filled to ensure sufficient grade and cover along future sewer alignment to the pumping station.



**Figure 5 – Baldwin Road SPS Catchment Plan (Gippsland Water)**

The assumed network arrangement was as follows:

- The Marshalls Road East pump station is decommissioned. A gravity sewer is constructed to the proposed Marshalls Road North Pump Station.
- A new rising main is constructed from the proposed Marshalls Road North Pump Station to the Traralgon Grit Chamber with a discharge level of 35.0 m AHD.
- The Marshalls Road West Pump Station is retained and injects into the new Marshalls Road North rising main. Stages I and J of future development discharge into Marshalls Road West Pump Station (Figure 7).



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- The Glengarry Pump Station discharges into the wet well of the Marshalls Road North pump station. This provides flexibility for the design of Marshalls Road North Pump Station to receive these flows should the disadvantages associated with the alternative redirection be unacceptable.
- Glengarry discharges approximately 20 L/s in wet weather to allow for future upgrade of the rising main.
- North-western zoning area (Future TARG 2) to be generally filled and graded to provide sewer service for future lots.

A summary of growth areas incorporated into the model is shown in Table 2.

Subcatchment ID	Total area (ha)	Population
DRANES ROAD	6.0	78
F11B-1	0.4	5
F11B-2	0.5	6
F11B-3	0.1	2
F11B-4	2.1	27
F11B-5	0.2	2
FUTURE TGAR 1	20.0	260
FUTURE TGAR 2	5.0	65
LIGHTHOUSE AVE	30.7	244
STAGE A	13.5	154
STAGE B	17.9	200
STAGE C	15.9	178
STAGE D	7.9	90
STAGE E	4.1	53
STAGE F	8.8	105
STAGE G	9.1	106
STAGE H	9.6	105
Total	151.5	1680

**Table 2 - Future Growth Areas Discharging into Marshalls Road North Included in Ultimate Model Scenario**



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AusNet's Development Industry Briefing, 14<sup>th</sup> of November 2023, advises that design approaches are increasing from 4kVA to up to 8kVA via introducing additional electrical kiosk substations within subdivisions. Consultation with AusNet may be required to facilitate supply of additional electrical kiosk substations within subdivision stage.

## **Gas**

### **APA**

APA Group are the relevant gas authority in the area. Natural gas is available within the area and may be extended to service any future development within the development plan area. Should gas be required and/or available at the time of subdivision stage, applications made to suppliers directly per changes in state legislation for gas provision.

APA have significant assets to the north of the site which are not affected by this application.

APA & AGN have indicated in the north-eastern corner of the development plan area the City Gate gas facility provides reduction of high-pressure mains for reticulated services for residential usage in the area. It has been indicated there could be a requirement for buffer distances due to noise with details to be determined at the development plan stage. An Acoustic Report prepared by DDEG investigated noise pollution proximal to the gas facility and Traralgon-Maffra Road, the findings conclude construction methodology for residential development fronting the facility and road should be constructed in general accordance with Construction Category 1 and 2 as prescribed in AS 3671:1989. Design considerations should maximise locating habitable rooms away from the gas facility and road. This is considered a satisfactory design response to be incorporated at the subdivision stage to protect resident's amenity.

### **ESSO**

There are licenced Esso pipelines that are contained within the activity area, within the Longford to Long Island Point Easement. These pipelines are:

- The operating DN 700 crude oil pipeline (LFD700);
- The suspended DN 700 pipeline, which is filled with inhibited water;
- The DN 250 liquefied petroleum gas (LPG) pipeline (LPG250);
- The DN 350 crude oil pipeline (LFD350).



# Baldwin Road Development Plan Area

Pipeline Parameter	LPG250	LFD700	Suspended DN 700
Inlet	Longford Gas Plant	Longford Crude Stabilisation Plant	Longford Crude Stabilisation Plant
Outlet	LIP Fractionation Plant	LIP Tank Farm	Westbury Station
Contents	Liquid Petroleum Gas	Stabilised Crude Oil	Inhibited Water
Length	186 km	186 km	87 km
Licence Number	PL 27 <sup>1</sup>	PL 126 <sup>2</sup>	PL 35
Design Pressure	8275 kPa	4500 kPa	-
Design Code	B31.4 – 1966	AS 2018 – 1977	B31.4 – 1966
Year of Construction	1969	1980	1969

Note:

1. The LPG250 operates under Victorian pipeline licence PL 34 from Bayview Valve Station to LIP.
2. The LFD700 operates under Victorian pipeline licence PL 35 from Westbury to LIP.

**Table 3 – Pipeline Operational Parameters**

An AS2885 Safety Management Study (SMS) review was conducted across February to April 2024, for threats associated with the future residential subdivision and associated infrastructure works that would be allowed for by the approved BRDP.. The objectives of an AS2885.1 SMS review are to:

- Systematically identify threats to the pipeline that may result in loss of integrity;
- Review the external interference protection and other design/procedural protection measures and assess their effectiveness;
- Determine whether the effectiveness of the protective measures renders the threat fully mitigated;
- Evaluate the frequency and severity of hazardous events, leading to a risk ranking in accordance with the AS2885.1 risk matrix; and if required;
- To propose additional physical or procedural controls.

The findings of the SMS review include mitigation techniques specific to detailed design and Construction Management Plan measures to be implemented at future subdivision/development stage. The SMS findings conclude that impacts on the ESSO pipelines by the development will continue to be in compliance with AS2885 SMS requirements. At development plan stage, the 3 proposed crossings have been reviewed and assessed with mitigation techniques proposed prior to and during construction of the crossings. In addition, the development plan has included reduced densities and larger lot sizes within proximity to the infrastructure to mitigate risk. Appropriate risk mitigation measures are available to support future development.

## Telecommunications

The responsible authority for telecommunications is NBN Co, who have provided that they have services down both Marshalls Road and Traralgon Maffra Road. It is assumed that the network has the capacity to be extended into the development area.

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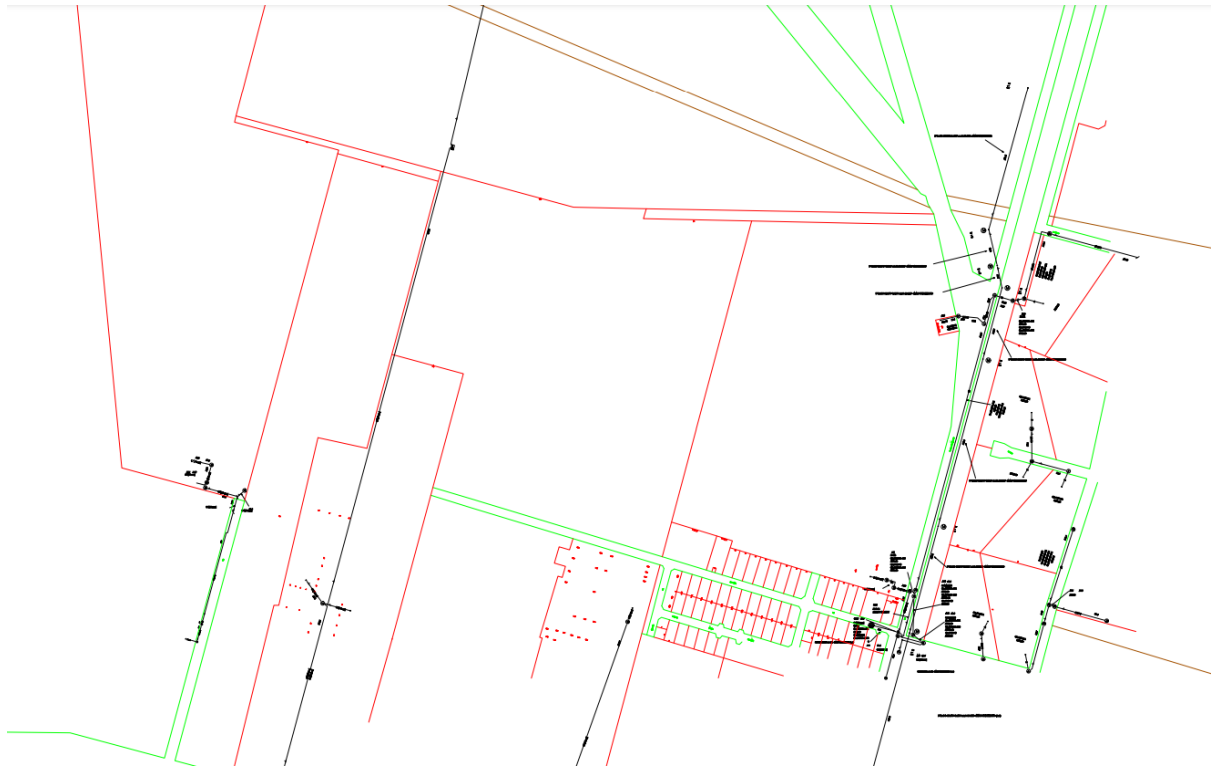


Figure 7 – Telecommunications Asset Map (NBN/Telstra) (2024)

## Traffic, Transport and Roads

As previously mentioned, the site directly adjoins the Traralgon North Development Plan Area which discusses the preferred development pattern and street connectivity. The structure plan also nominates indicative cross sections which have been incorporated into the cross sections for the DP, as shown below in excerpts from the Streetscape Cross Sections Plan (Millar Merrigan).

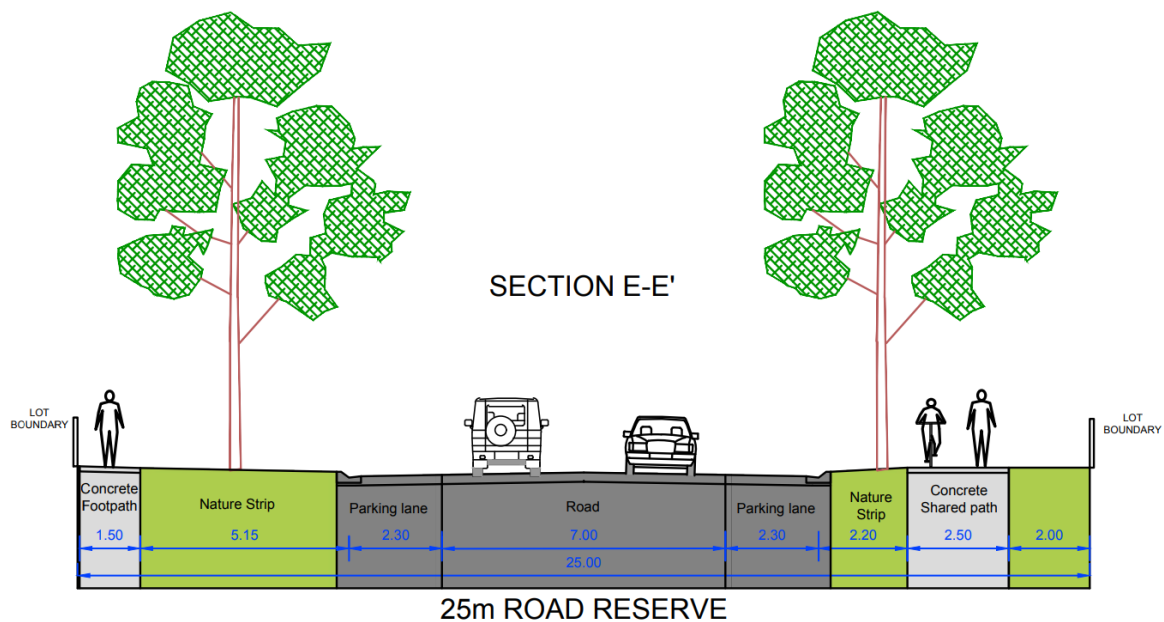
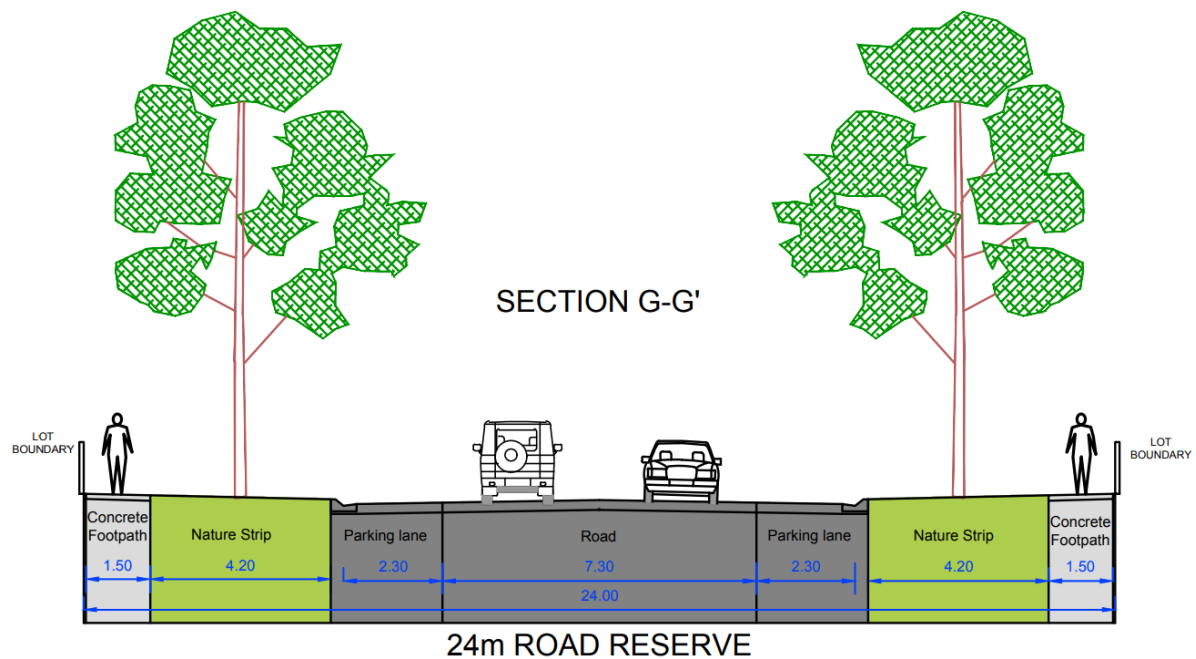
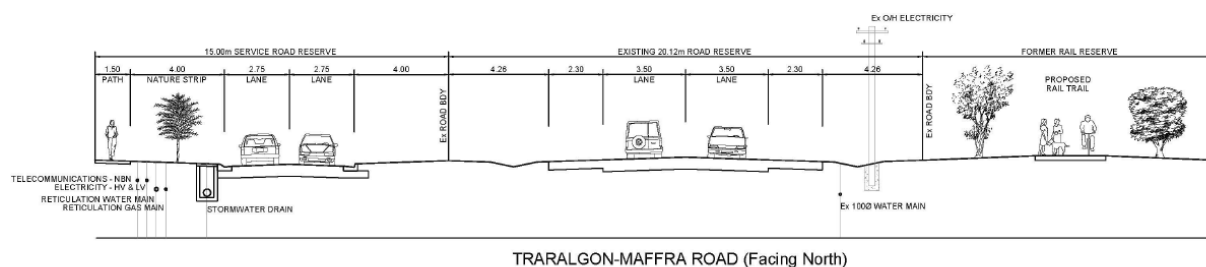


Figure 8 - 25m Road Reserve cross section interface to Broadway Boulevard

# Baldwin Road Development Plan Area



**Figure 9 - 24m Road Reserve cross section interface to George Albert Drive**



**Figure 10 –Road Reservation Cross Section from the Traralgon North Development Plan**

Figure 12 details the Traralgon North Development Plan cross section for the reserve interface between Traralgon-Maffra Road and the internal road to the east of the below development plan area. A similar approach has been proposed for the Baldwins Road Development Plan interface to the main road.

It is logical that the cross sections be referenced and adapted for the Baldwin Road Development Plan Area.

A Traffic Impact Assessment has been prepared by O'Brien Traffic and notes the following in relation to the existing road network:

Traralgon-Maffra Road is an arterial road (Road Zone Category 2) under the control and management of Department of Transport. It runs in a north-south orientation. In the vicinity of the subject site, Traralgon-Maffra Road has a road reserve of approximately 20 metres and a pavement width of approximately 12 metres providing one traffic lane (3.8 metres wide) and a sealed shoulder (between 2 and 2.5 metres wide) in each direction.



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The posted speed limit on Traralgon-Maffra Road changes along the site frontage. A posted speed limit of 80 km/h applies from the southern boundary of the site for a distance of approximately 250 metres. North of this point, the posted speed limit increases to 100 km/h.

Department of Transport open data indicates that Traralgon-Maffra Road in the vicinity of the subject site carries traffic volumes of 5,100 vehicles per day with a split of 2,600 northbound and 2,500 southbound.



***Figure 11 – 16m Proposed access onto Traralgon-Maffra Road***

Baldwin Road is a local road to the south of the subject site that has been constructed from Traralgon Maffra Road up to property 4 and is to continue along to property 1 as per the approved TNDP.

Land within the TNDP area (and therefore Baldwin Road) is being developed prior to development of the subject site, and therefore road connections to Baldwin Road are readily available for most north-south road interfaces to the Baldwin Road Development Plan Area.

# Baldwin Road Development Plan Area

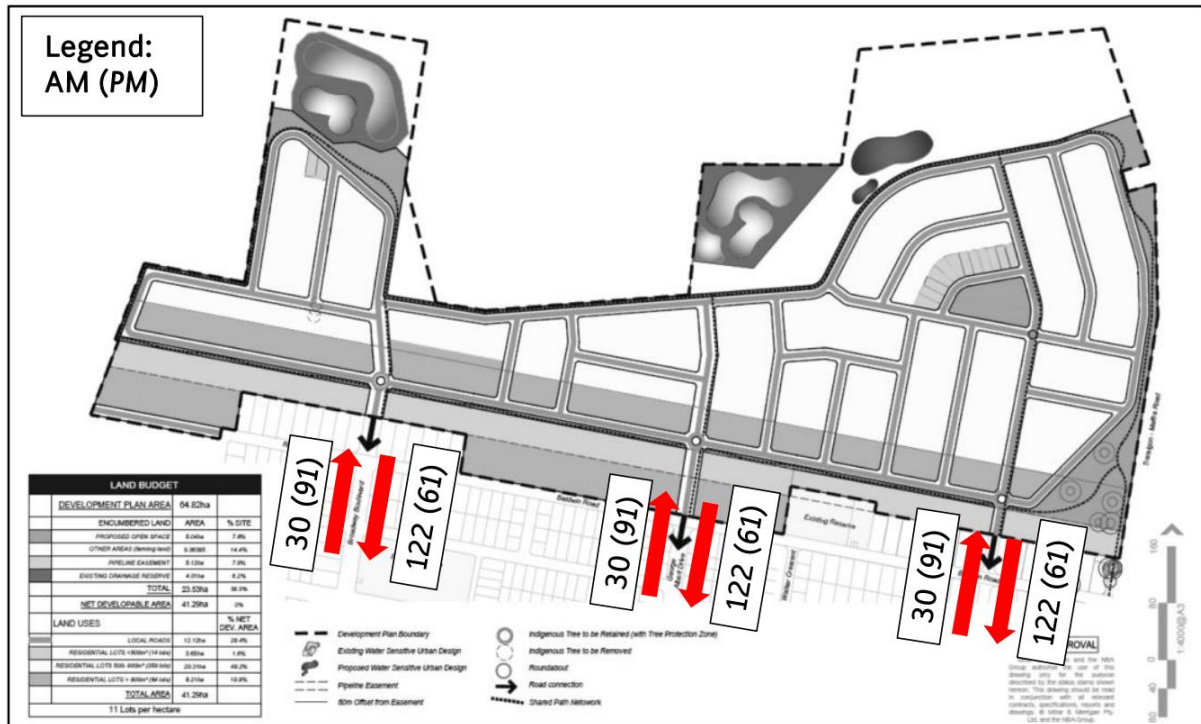


Figure 12 - Anticipated Traffic Volumes (TIA Extract, O'Brien Traffic)

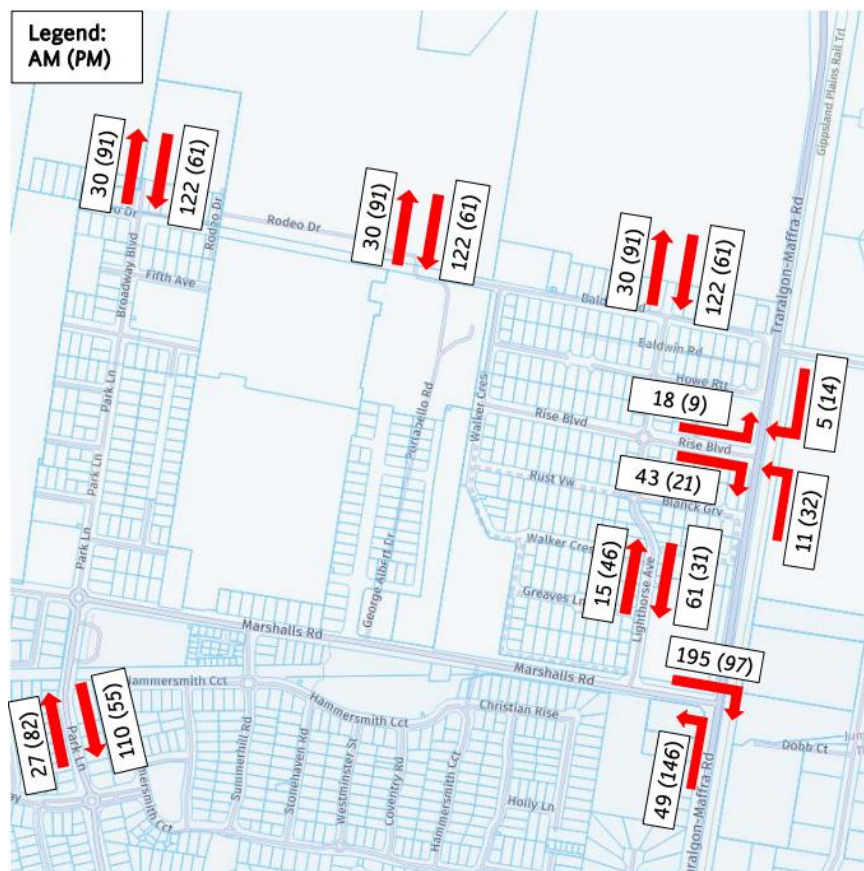


Figure 13 – Distribution of Traffic (AM and PM Peak Hours)

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The Traffic Impact Assessment Report from O'Brien Traffic & extract figures above note below the following:

- *Given that there will ultimately be three north-south connection roads between the subject site and Marshalls Road, equally spaced along the southern boundary of the site, it is anticipated that at full build-out each of the three north-south connector road would carry one third of the total trips generated by the site*
- *On the basis of the above traffic assessment, the traffic movements anticipated to be generated by the proposal would be readily accommodated by the intersection of the proposed roads with the approved and future subdivisions to the south without any significant adverse impacts.*

In relation to the proposed internal road network, the Traffic Assessment notes that future development should be designed in accordance with the requirements of the IDM. The proposed cross sections have been prepared accordingly. Detailed design will need to be provided at the subdivision stage of development.

Department of Transport has indicated that access is not preferred onto Traralgon-Maffra Road and therefore the proposed rezoning area seeks to continue the southernly road connections for access to northern area along the key east-west linkage road.

The Traffic Assessment concludes that there would be no traffic related grounds to prevent the proposed development plan proceeding, and:

- Any proposed residential subdivision on the subject land would be in accordance with the IDM;
- The traffic generated by the proposal would have little impact on the surrounding road network.

## 4.0 Conclusion & Recommendations

The subject site is adequately equipped with nearby services and infrastructure to support residential development in accordance with the BRDP. The site is well situated near to the Traralgon township and provides a logical extension to the Traralgon North Development Plan area.

A new pump station, Marshalls Road North has been constructed. The predicted inflows discharged into the proposed Marshalls Road North Pump Station were estimated using a hydraulic model with a scenario created to incorporate future growth, including the subject site.

APA Group are the relevant gas authority in the area. Natural gas is available within the area and may be extended to service any future development within the development plan area, to be determined by supplier applications within future subdivision of the properties. APA have significant assets to the north of the site which are not affected by this application and remain protected by the Buffer Area Overlay provisions.

Three licenced Esso pipelines are contained within the activity area, contained within the Longford to Long Island Point Easement. These pipelines are:

- The operating DN 700 crude oil pipeline (LFD700);
- The suspended DN 700 pipeline, which is filled with inhibited water;
- The DN 250 liquefied petroleum gas (LPG) pipeline (LPG250);
- The DN 350 crude oil pipeline (LFD350).

An AS2885 Safety Management Study (SMS) review has been conducted, determining threat mitigation methodology associated with future residential subdivision and associated infrastructure works, particularly regarding the three north-south road connections. No findings of the SMS have adversely impacted connectivity to the subdivisions to the south nor future residential developments.

All other services are readily available to be extended to service future residential development on a stage by stage basis. Application for service will be required to be made to each service authority at the subdivision stage to confirm capacity and availability, however, due to the significant investment in the Traralgon North Development Plan Area it is not anticipated that there will be any servicing issues or delays.



# Baldwin Road Development Plan Area

## References

- Acoustic Engineering Report – Baldwin Road Development by DDEG, 13<sup>th</sup> December 2024.
- Safety Management Study Report - LPG250/LFD350 & LFD700 Pipeline Traralgon Development, Vic by Delphi Risk Management Consulting, 8<sup>th</sup> April 2024.
- Traffic Impact Assessment – Proposed Development Plan by O'Brien Traffic, 1<sup>st</sup> August 2024