

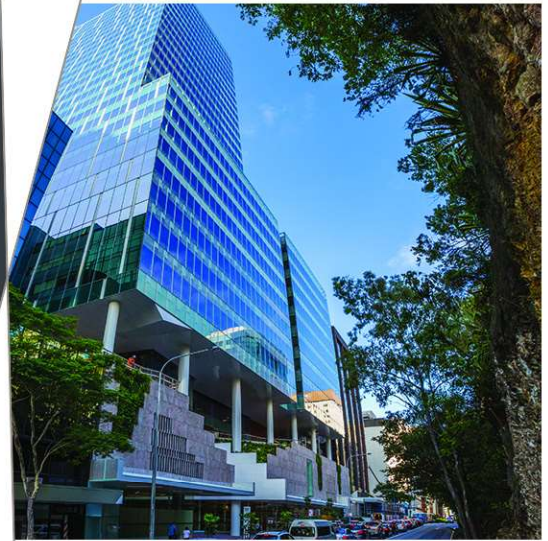
# TRARALGON NORTH DEVELOPMENT PLAN

## PRELIMINARY SERVICING REPORT

V191111

Prepared for  
Latrobe City

25 September 2019



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A	26/03/2019		Joe Lynch	Joe Lynch
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## 1 Introduction

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This servicing report for the Traralgon North Development Plan has incorporated information supplied by Latrobe City Council which includes previous investigative reports for the area. Further information was acquired during the Traralgon North Agency and Authority Workshop which was held in Traralgon on Tuesday the 7<sup>th</sup> of February 2012 and facilitated by Planisphere (now Ethos Urban). The report is updated as requested by La Trobe City Council dated the 9<sup>th</sup> of September, 2019 as a result of an additional two parcels of land acquired to the north of the existing development. These additional parcels are shown in Appendix A.

## 2 Sewerage Facilities

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Gippsland Water (GW) is the authority responsible for the provision of sewerage facilities.

Significant sewerage infrastructure exists within and surrounding the vicinity of the Traralgon North area which is shown on the sewer strategy plan (Figure 1). In summary the following infrastructure is present:

- the Glengarry-Traralgon rising main is located in the land to the north of Marshalls Road where it runs west from the Maffra-Traralgon Road before it changes direction and heads south to the Marshall Road East Sewer Pump Station.
- The Marshall Road East Sewer Pump Station and the Regional Outfall Sewer Booster Pump Station are located to the eastern end of Marshalls Road. The Marshall Road West Sewer Pump Station and the Traralgon Emergency Storage Facility receives all sewage flows from the Traralgon area, which is then pumped to the Gippsland Water Storage Facility, located to the western end of Marshalls Road.
- From the Marshalls Road Sewer Booster Pump Station the Regional Outfall Sewer connects to the Traralgon Emergency Storage Plant via land to the south of Marshalls Road.
- Risings mains are located on both the north and south side of the Marshall Road reserve.

Gippsland Water (who were present at the Traralgon North Agency and Authority workshop conducted in Traralgon on February 7, 2012) provided the following advice:

- Gippsland Water recently engaged Engineers GHD to undertake modelling of the current sewer system within the development area. The results concluded that the sewer system including the Marshalls Road Pump Station are at capacity and need to be replaced with a single pump station. Both of the pump stations in Marshalls Road should be decommissioned. The preferred location of the pump station is north of the development area located north of the Esso gas pipelines and above any flood plain area. The preference of GW is to provide an odour buffer zone of minimum 300m in which no residential development is permitted. A rising main of approximately 300mm is required to discharge from this new pump station to the emergency storage facility via Marshalls Road. The proposed location of the pump station and associated pipe work is shown in the sewer strategy plan (Figure 1).

NOTE: Due to the recent acquisition of land to the North of the Esso pipeline, the proposed pump station location will need to be reconsidered due to constraints caused by both the 1 in 10-year flood gauged area and the proposed residential development area in order to provide the required 300m odour radius buffer, as the current location impacts on the additional land parcels.

- All major Gippsland Water assets shall ideally be located within the proposed road reserve and clear of any road pavement. Any other alternative locations would need to be confirmed with Gippsland Water.
- Based on current EPA guidelines the Traralgon Emergency Storage facility should have an odour buffer zone which is a minimum 300m offset from the edge of the plant. This is already compromised. Any future residential development should be clear of the odour buffer zone, unless consent from GW is permitted to develop in closer proximity.

GW has advised that future potential development to the land north of the Esso gas lines as indicated by Latrobe City Council will require the conceptual sizing to be reviewed. It is expected that this has been completed.

- The Regional Outfall Sewer that connects to the Traralgon Emergency Storage Plant via land to the south of Marshalls Road will require protection and therefore Gippsland Water require appropriate reserve rights. It is understood that the reserve width is a minimum of 20m wide. The pipeline is shallow and fragile, and any infrastructure crossing the reserve shall require careful planning and assessment.
- The developers of the Traralgon North area shall be required to construct the proposed sewer pump station and associated pipe work. Funding arrangements shall be determined in consultation with Gippsland Water.

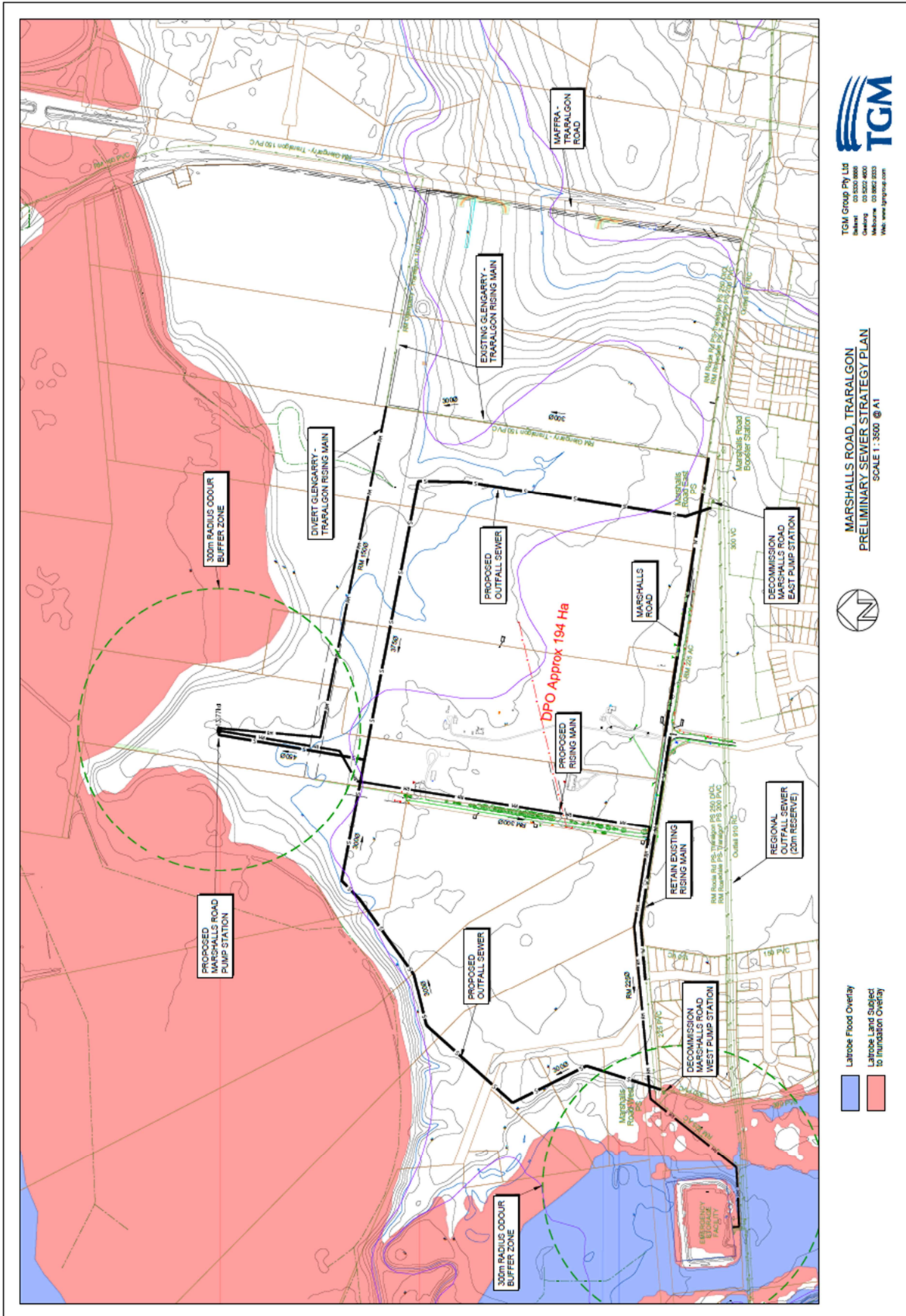


Figure 2-1 Sewer strategy plan

### 3 Potable Water supply

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GW is the authority responsible for the provision of water supply facilities.

Limited water supply infrastructure exists within and surrounding the vicinity of the Traralgon North area.

Gippsland Water who was present at the Traralgon North Agency and Authority workshop conducted in Traralgon on 7 February 2012 provided the following advice:

- In general terms GW have no issues with servicing this development.
- All developments will require construction of new mains to service new properties. Typically, watermains shall be laid in the road reserve with individual water connections to each new property.
- All new watermains and associated infrastructure shall be constructed at the developer's cost and transferred to GW ownership.
- A 300mm diameter watermain will need to be extended in Marshall Road east and west from Park Lane as detailed in the water supply strategy plan (Figure 2). The length west is approximately 500m interconnecting with the existing 150mm main in Greenfield Drive. The length to the east is approximately 600m but this may be extended further depending on the proposed road layout of the Traralgon North Development Plan. Allocation of space within the road reserve is necessary to position the proposed watermain.
- The developers of the Traralgon North area shall be required to construct the proposed 300mm diameter watermain. Funding arrangements shall be determined in consultation with Gippsland Water.

### 4 Recycled Water supply

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There is no mandate by GW to provide recycled water reticulation. Recycled Water is made possible if GW were to develop a recycling plant, or alternatively that any other authority was to consider the possibility of a stormwater harvesting plant. In this instance pipelines can be provided similar to potable supply in order to reticulate the proposed development area.

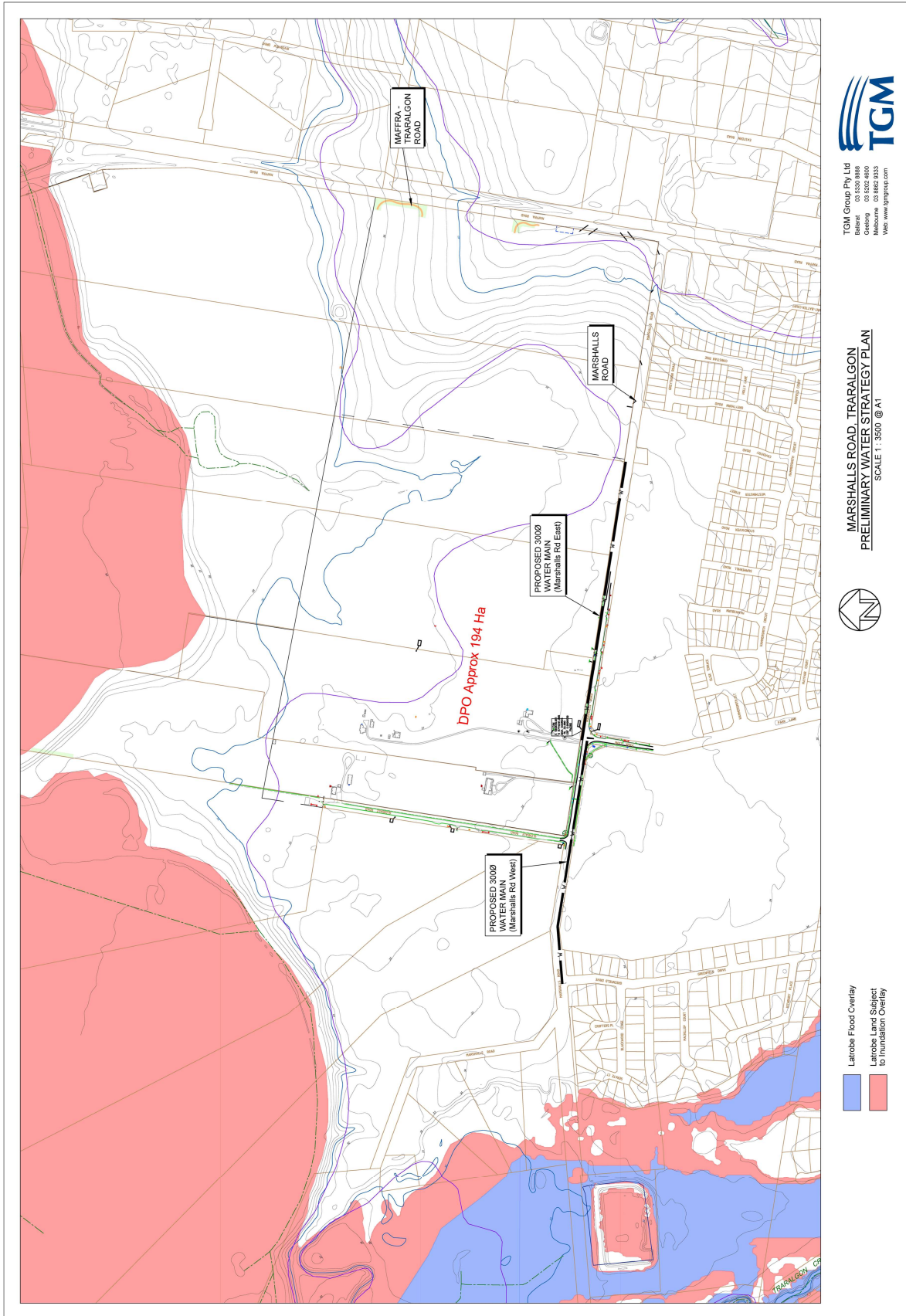


Figure 4-1 Water strategy plan

## 5 Stormwater Drainage

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West Gippsland Catchment Management Authority (WGCMA) is the authority responsible for regional waterways whilst the Latrobe City Council is responsible for local drainage works.

The Latrobe River, Traralgon Creek and Loy Yang Creek are the receiving water bodies for the entire development. The land to the west is land subject to inundation overlay (LSIO). The land generally has little slope in places but falls towards the north. The land immediately to the west of Traralgon-Maffra Road falls to the west at a reasonable grade.

There are several stormwater overland flows paths that are not clearly defined. An existing Council stormwater drain of 1500mm diameter (from the Sanctuary Lakes and the Strand developments located to the south of Marshalls Road) discharges into an existing waterbody to the north of the Traralgon North development area. This is shown on the Stormwater Strategy Plan. It is unclear if this pipe has capacity to convey the 1 in 100-year Average Recurrence Interval (ARI) event. Historical floods in the Traralgon area have seen local flooding issues south of the Traralgon North development area. Provision of improved overland flow paths such as road reserves are necessary to accommodate not only internal overland flow but also external overland flow. This is particularly important for Catchment 3. Further flood modelling is necessary to determine the contribution of external stormwater flows which must be accommodated in any future road or drainage reserve conveying major storm flows to the north.

At the south western area of the Traralgon North Development Plan located in Marshalls Road is a 1500mm diameter stormwater drain that discharges to Traralgon Creek, just north of the Gippsland Water emergency treatment plant.

WGCMA advises that the stormwater drainage from the proposed development area will be controlled by local Council. However, the CMA shall still act as referral authority for any town planning applications and shall mandate Water Sensitive Design protocols to comply with Victorian Stormwater Committee Best Practice Guidelines. They shall also mandate the on-site detention of stormwater run-off, to ensure discharges to CMA designated receiving waters are of the highest water quality and maintained at pre-development levels.

The WGCMA have indicated that the current flood overlays shall still remain but they are not based on any specific flood study. At present the land subject to inundation overlay (LSIO) effects the south and north west corners of the site which are also impacted by the odour buffer overlay. A detailed flood study is being undertaken but shall not be completed for another 18 months. It is possible this flood study is complete but Cardno TGM are not aware of the availability.

Latrobe City Council advises that Council adopts the policies and requirements of the Latrobe City Design Guidelines for subdivisional developments. Latrobe City Council will mandate requirements for both Water Sensitive Design protocols to comply with Victorian Stormwater Committee Best Practice Guidelines, and the on-site detention of stormwater run-off. Latrobe City Council has indicated that the existing drainage infrastructure is limited and that all runoff from the development are to be maintained at the current pre-developed flow.

Cardno TGM have prepared a preliminary drainage strategy plan (Figure 3), which is based on information available at the time TGM was initially engaged in 2012 plus the subsequent additional lots within. The plan details proposed areas for detention of stormwater runoff, key drainage catchments and initiatives that can be adopted for water quality improvements. All overland flows shall be conveyed via the proposed road network and where this is not possible open space reserves are nominated to convey such flows. All existing watercourses are agricultural drains and shall be integrated within the new development. Cardno TGM have also prepared preliminary road gradings that ensure development can maintain appropriate overland flow paths. This requires moderate earthworks to regrade the land, which is common practice for most land development construction.



## 6 Electricity Supply

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SP AusNet is the franchised authority responsible for the electrical supply to this development. Existing 66kV and 22 kV high voltage low voltage overhead power lines surround the development area which encompasses Marshalls Road, Park Lane and the Traralgon-Maffra Road. Overhead power lines are also present within the Traralgon North development area which currently service existing properties.

SP Ausnet (who were present at the Traralgon North Agency and Authority workshop conducted in Traralgon on February 7<sup>th</sup>, 2012) provided the following advice:

- The current network planning conducted for the development indicates that existing infrastructure shall be suitable to service the Traralgon North Area.
- SP-Ausnet requires all new electrical infrastructure to be constructed underground and handed over as an SP-Ausnet. Low voltage rebates and reimbursements for high voltage works shall apply.
- Electrical substations shall be required within the development area strategically located as an SP-Ausnet asset. These are best located within open space reserves and require a reserve or a designated easement in favour of SP-Ausnet.
- All existing overhead powerlines within the Traralgon North Development Area are to be retired at the expense of the developer.

## 7 Telecommunications

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Telecommunication services based on standard copper assets can be provided to the site by way of extension of the existing assets located within and to the south of Marshalls Road.

Telstra (who were present at the Traralgon North Agency and Authority workshop conducted in Traralgon on February 7<sup>th</sup>, 2012) provided the following advice:

- Telstra's emphasis is to upgrade their wireless network due to a 300% increase in mobile internet use in the area. Capacity upgrades are expected to cover the Traralgon North area although this is subject to further system planning.
- Mobile upgrade works shall include works on existing towers and the construction of a new tower.

Recent changes to the telecommunications industry have seen the rollout of high-speed broadband. NBN Co is the responsible authority for the rollout of the broadband. NBN has indicated that given that the Traralgon North development area is greater than 100 lots, it shall fall within NBN's rollout criteria for new developments.

## 8 Gas

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As obtained in a 2013 Planisphere Final Traralgon North development Plan, both a major crude oil and gas pipeline (LPG) runs along the North of the area and is the property of ESSO, who will need to be contacted prior to the commencement of works.

The pipeline is approximately 1.2m below ground level with a 500mm vertical clearance required around the pipeline. Other services (sewerage, water and road infrastructure) are permitted to cross the pipeline vertically, provided the previously mentioned clearance is maintained, however in general a 10m horizontal separation must be maintained from the pipelines. It should also be noted that an assessment may be required during the planning permit stage of infrastructure with APA group as well as ESSO. Any works conducted within the vicinity will necessitate the completion of a Safety Management Study.

## 9 Implications on the servicing strategy

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This report is based on information prepared by previous investigative reports and recent discussions between key stakeholders. The infrastructure upgrades to service the area are generally well understood.

The key servicing matters that require further discussion and planning are:

- Relocation, protection and decommissioning of existing sewer infrastructure impacted by future development.
- Location of proposed infrastructure within the major Gas and Oil Pipeline buffer, including sewer pump station and stormwater treatment devices, e.g. Wetlands.
- WGCMA updated flood overlay upon completion of flood study.
- Proposed layout of Marshall Road.
- Existing surface contours accurate to 200mm or less.

## 10 Conclusion

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The Traralgon North area is located close to major infrastructure generally capable of servicing future development. There is expected to be upgrades to existing infrastructure but this is generally within close proximity to the area.

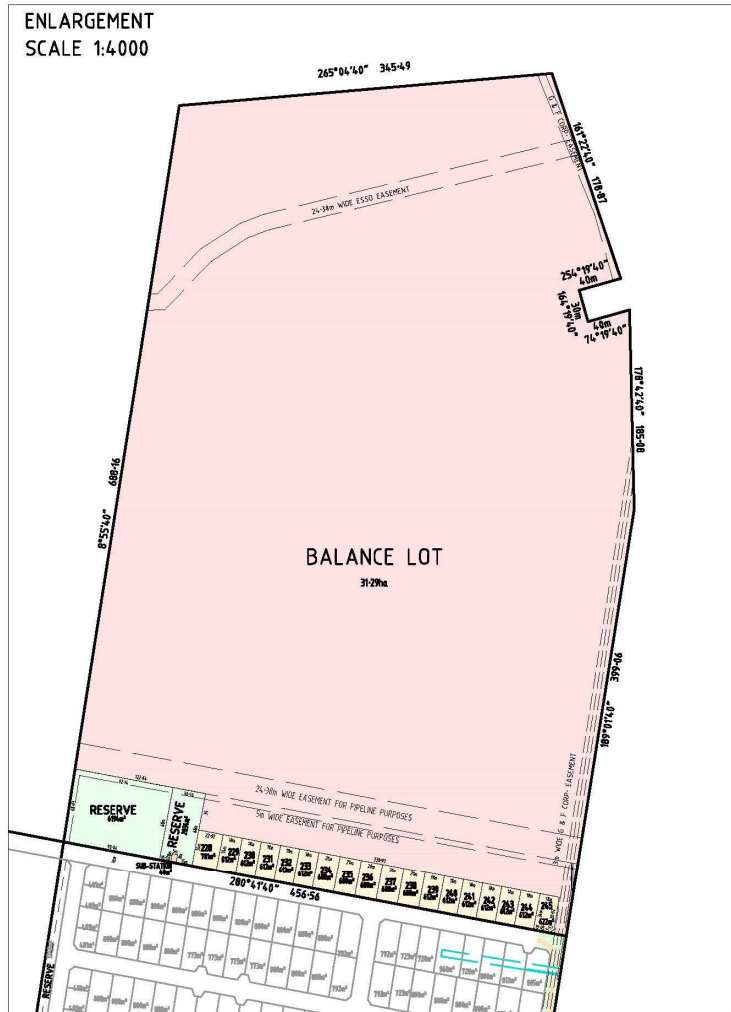
Further consultation and planning is necessary to refine the servicing strategies, particularly once an overall concept plan is prepared. The servicing strategy can also focus on the internal works within the Traralgon North Development Area.

APPENDIX

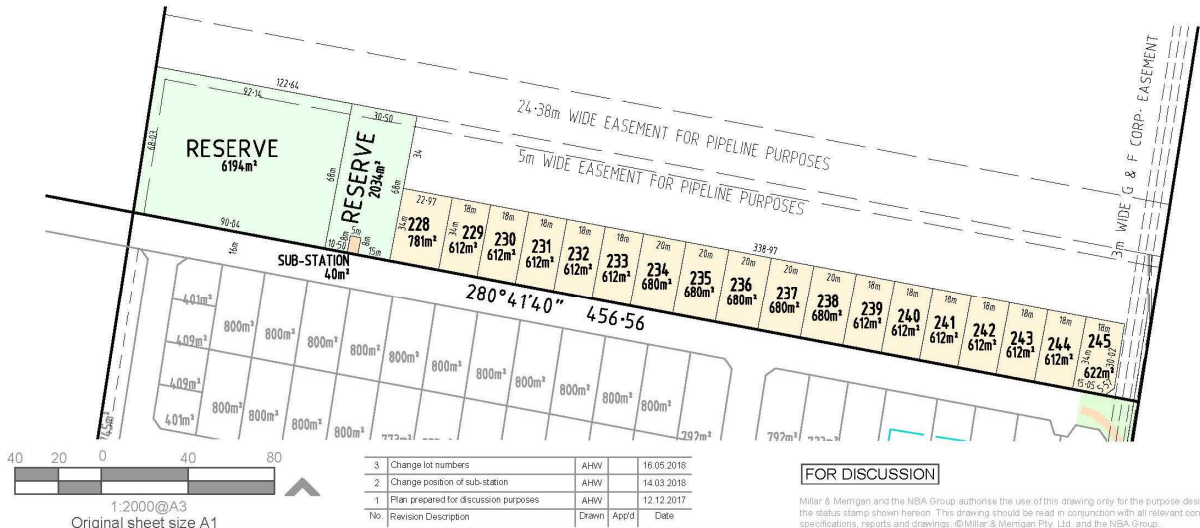
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INDICATIVE SUBDIVISION PLANS

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3	Change lot numbers	AHW	16.05.2018
2	Change position of sub-station	AHW	14.03.2018
1	Plan prepared for discussion purposes	AHW	12.12.2017
No.	Revision Description	Drawn	Appd Date

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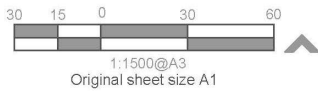
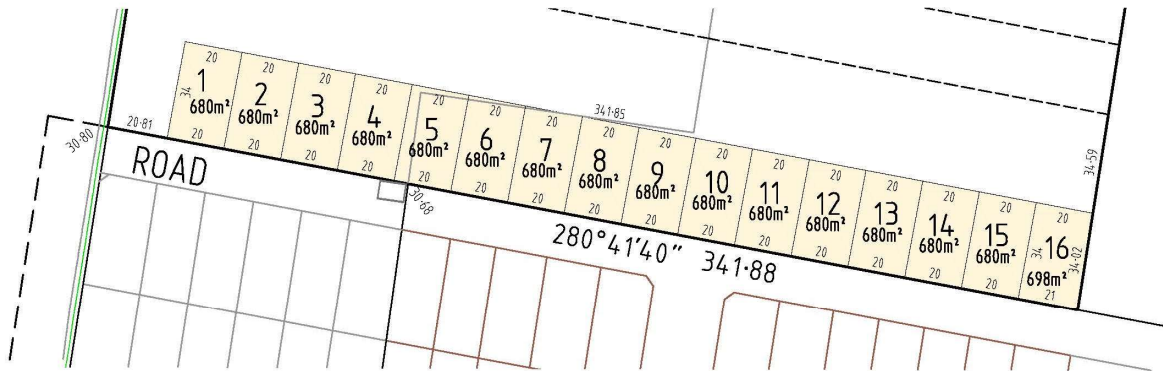
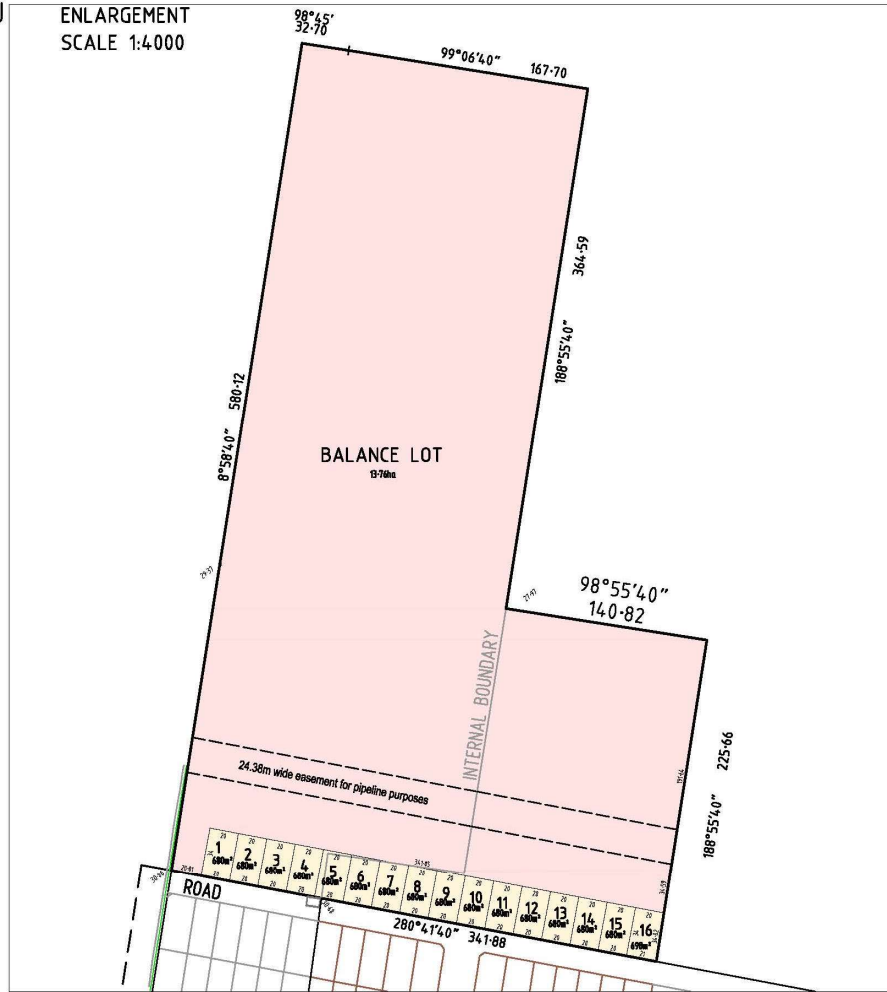
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1	Plan prepared for discussion purposes	AHW	EB	28.06.2018

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