Services Assessment Report
Maldon Bridge Road

Boral Land & Property Group

78181-Services Assessment Report
09 November 2020

DOCUMENT/REPORT CONTROL FORM

File Location Name:	78181-Services Assessment Report
Project Name:	40 / 45 Maldon Bridge Road, Maldon
Project Number:	300178181.00
Revision Number:	02

Revision History

Revision #	Date	Prepared by	Reviewed by	Approved for Issue by
00	04-08-2020	Brendan Stokes		
01	05-11-2020	Paul D'Orazio, Tahsen Rasheed and Murphy Su	Graeme Fleming	Graeme Fleming
02	9-11-2020	Paul D'Orazio	Graeme Fleming	Graeme Fleming

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1. Executive Summary

This report prepared by SMEC Australia undertakes a review of the availability of existing utility services for 40 / 45 Maldon Bridge Road & Staff Road, Maldon. The subject site includes Lot 1 DP 748675, Lot 1 DP795225, Lot 1 DP1138675, Lot 2 DP1138675, Lot W DP163774, Lot X DP161196 and Lot 1 DP 162140.

A Dial Before You Dig (DBYD) search was undertaken on the 29th July 2020 to investigate the proximity of key existing service infrastructure within the vicinity of the Subject Site. Enquiries were also made with Sydney Water and Endeavour Energy to clarify assumptions from the DBYD search.

Based on the results of the DBYD as well as feasibility applications submitted to Endeavour Energy, Sydney Water and Telstra our advice for the 22.5Ha, 4 lot industrial site is as follows:

- Sewer is not readily available to the site. Sydney water has advised that lead in infrastructure would be required as well as a capacity upgrade at the Picton Treatment Facility. SMEC has included an option and costings for onsite reticulation, detention, and treatment in section 3.1.3
- Potable Water services is available to the site, but will require augmentation to service the proposed development (SMEC has included a breakdown of costs in section 3.2.3)
- Electricity is available to the site but will require the duplication of feeders once the existing feeders reach capacity (estimated 70% of site). (SMEC has included estimated costs for duplication as well as other options in section 3.4.2)
- Telstra and NBN Co. have advised that the National Broadband Network does not service the site. There are options to provide telecommunication services to the site, which vary in cost and lead times (See section 3.5)
- Jemena have advised that there are currently no gas assets that can be utilised to service the site. Lead-in construction would be required to provide gas reticulation (Information and high-level costing available in section 3.6)

2. Introduction

This report prepared by SMEC Australia undertakes a review of the availability of existing utility services for 40 / 45 Maldon Bridge Road & Staff Road, Maldon.

The Subject Site includes Lot 1 DP 748675, Lot 1 DP795225, Lot 1 DP1138675, Lot 2 DP1138675, Lot W DP163774, Lot X DP161196 and Lot 1 DP 162140. The total land area is approximately 22.50Ha.

Figure 1 - Subject Site (Six Maps)

3. Services

3.1 Sewer

3.1.1 Services Inspection

A small number of existing dwellings within the nominated area (Staff Road) are all connected to onsite septic tanks. The nearest existing sewer reticulation is shown in Matthews Lane approximately 2kms northeast of the site on Picton Road.

The NSW Planning Growth Area 'Utility Services Report' prepared for Wilton provides an 'Indicative Wastewater Infrastructure Augmentation and Upgrade Plan', see Figure 2 below, showing a proposed pumping station (orange dot) south of the subject site (red rectangle below) becoming operational in 2026.

Figure 7-4 – Indicative Wastewater Infrastructure Augmentation and Upgrade Plan

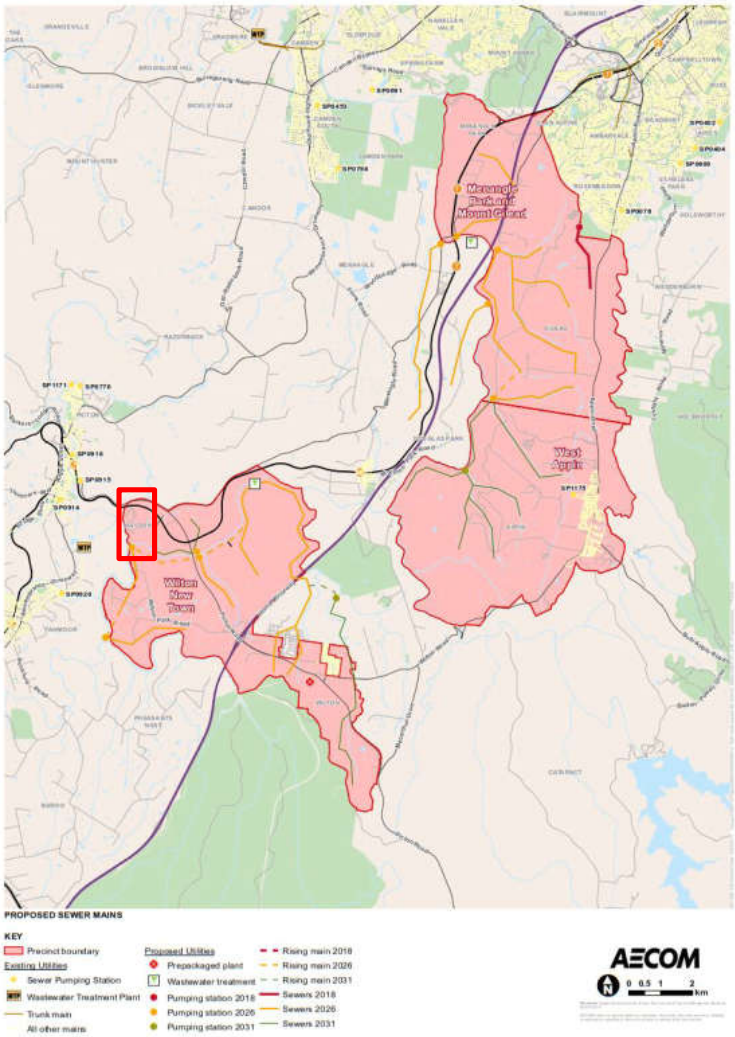

Figure 2- Wilton and Greater Macarthur Priority Growth Areas, Utilities Services Study by AECOM

Other options could be available to services the subject site for a period of time until the future infrastructure reaches the development such as an Interim Operating Procedure (IOP).

3.1.2 Feasibility Application

A Feasibility Application was submitted to Sydney Water for the subject site on the 12/08/2020. The feasibility letter was received on the 12/10/2020 from Sydney Water. The letter states that the advice is a guide only and it provides general information about what Sydney Water requirements could be when the developer applies for a section 73 Certificate for the proposed development. Sydney Water advice is accurate as of the issued date only.

Refer to Appendix A for Sydney Water Feasibility Letter

The Sydney Water assessments found that:

- The subject site has no sewer mains close to the proposed development and the nearest wastewater scheme is the Picton Sewerage System.
- Currently, the Picton Wastewater Recycling Plant has no capacity to manage additional treated effluent.
- Sydney Water is presently working with the Environmental Protection Authority (EPA) to increase effluent management capacity at the Picton Wastewater Recycling Plant. Based on their projected timelines, Sydney Water are aiming to obtain EPA approval to their Environmental Protection Licence variations by July 2021 and subject to the EPA's approval, upgrades to the Picton Wastewater Recycling Plant upgrades could take up to four years to deliver.
- Sydney Water will not be able to provide a wastewater connection for any proposed development or partial development outside of the existing Picton Sewerage Scheme boundary until such time as Sydney Water has implemented its effluent management strategy to expand the Picton wastewater scheme and these required amplification works have been implemented.

As per the Sydney Water advice there is no existing sewer system in the area. Additionally, the wastewater treatment plant is at full capacity and cannot manage additional treated effluent. Sydney Water advised that they are seeking approval to increase the capacity of the Picton treatment facility. If this is approved the additional capacity works can be undertaken and completed circa 2025.

3.1.3 Costings

On site reticulation Sewer system with Septic tank and onsite wastewater treatment management is the only option to service the proposed site.

For each lot in the subdivision the following will be required:

Item	Estimated Cost (Excl. GST)
Design / Water Service Coordination	$20,000
Construction	$250,000
TOTAL	$270,000 per lot.

The above prices will vary depending on the size and capacity requirements of each individual lot.

3.2 Potable Water

3.2.1 Utility Investigation

An existing 150mm diameter cast iron Cement Lined (CICL) potable water main that runs from Picton Road to the subject site within Maldon Bridge Road. There is also a 100mm diameter cast iron Cement Lined (CICL) potable water main that services both Staff Road & Park Road.

Figure 3- Sydney Water existing reticulation map (SWC – 29/07/2020)

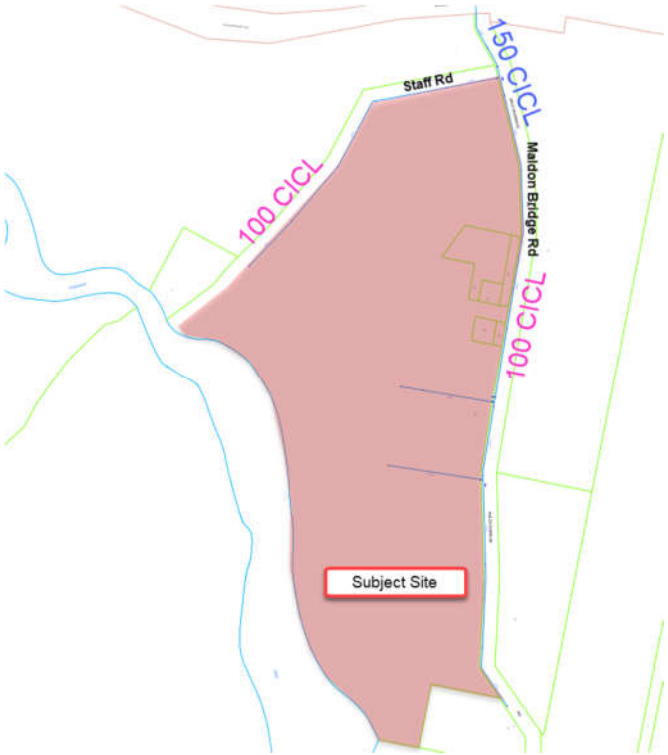

Figure 4- Sydney Water existing reticulation map (SWC – 29/07/2020)

The NSW Planning Growth Area 'Utility Services Report' prepared for Wilton provides an 'Indicative Potable Water Infrastructure Augmentation and Upgrade Plan', see Figure 5 below, showing a proposed utility strategy for the lead-in trunk main (blue line) to reach Maldon in Approximately 2031.

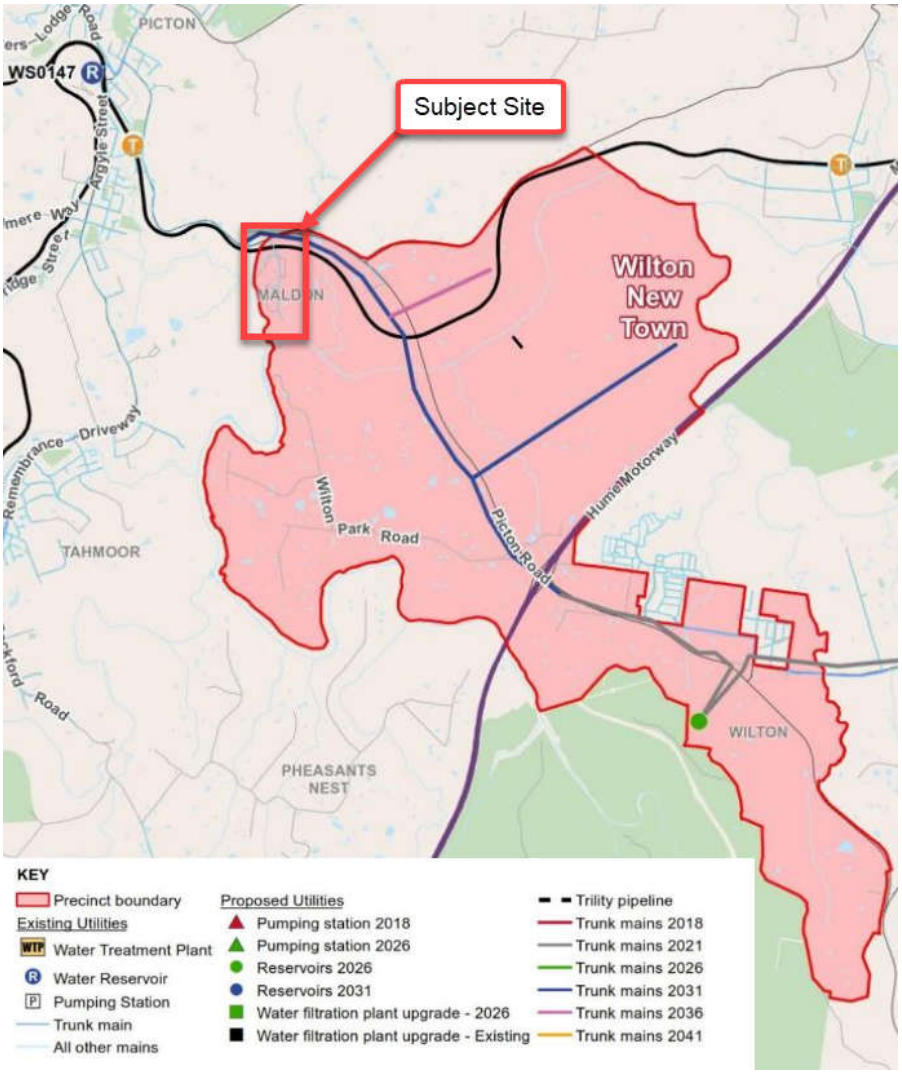

Figure 5- Wilton and Greater Macarthur Priority Growth Areas, Utilities Services Study by AECOM

3.2.2 Feasibility Application

A Feasibility Application was submitted to Sydney Water for the subject site on the 12/08/2020. The feasibility letter was received on the 12/10/2020 from Sydney Water. The letter stated that the advice is a guide only and it provides general information about what Sydney Water requirements could be when the developer applies for a section 73 Certificate for the proposed development. Sydney Water advice is accurate as of the issued date only.

Refer to Appendix A for Sydney Water Feasibility Letter

Sydney Water has assessed the application and found that:

- The existing 100mm potable water main located in Maldon Bridge Road fronting the proposed development site does not have the capacity to supply the required water demand to the site. An amplification of the existing potable water main would be required.

- It is advised that the developer would need to engage a hydraulic consultant to model the water demand and identify the size and length of the amplification to service the proposed development.

3.2.3 Options and Costings

Option 1:

The existing DN100 main fronting the development as per Sydney Waters advice will need to be upsized to DN150.

The required upgrade length will be approx. 1km

The estimated costs of upsizing the existing Water main to DN150 are:

Item	Estimated Cost (Excl. GST)
Design / Water Service Coordination	$75,000
Construction ($300/m)	$300,000
Disconnection and removal of the existing DN100 Water main ($50/m)	$50,000
TOTAL	$425,000

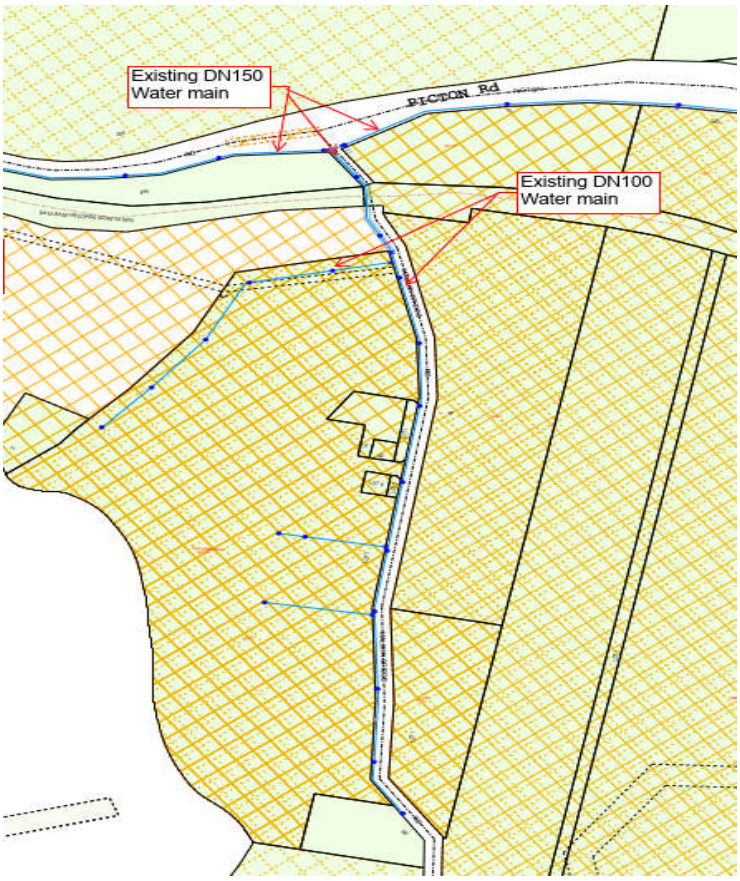

Figure 6 - Existing Sydney Water Potable Water mains surrounding the proposed site.

Figure 7 - Proposed required upsizing.

Option 2:

Should option 01 not reach the requirement for the proposed development the following may also be required.

- Booster pumps with tanks for each lot to provide the required flow and Pressure. Anticipated costs are as follows:

Item	Estimated Cost (Excl. GST)
Design / Water Service Coordination (From Option 1)	$75,000
Construction ($300/m) (From Option 1)	$300,000
Disconnection and removal of the existing DN100 Water main ($50/m) (From Option 1)	$50,000
Booster Pump ($37,000 x 4 lots)	$148,000
Tank (If Required) ($12,500 x 4 lots)	$50,000
TOTAL	$623,000

Option 3:

Upgrade existing DN100 and DN150 Water main from the intersection of Old Hume Hwy and Menangle St to the proposed site for approx. 5km.

Analysis for required sizing and costing in conjunction with Sydney Water would be required only if options 1 and 2 are proven not feasible for the proposed development.

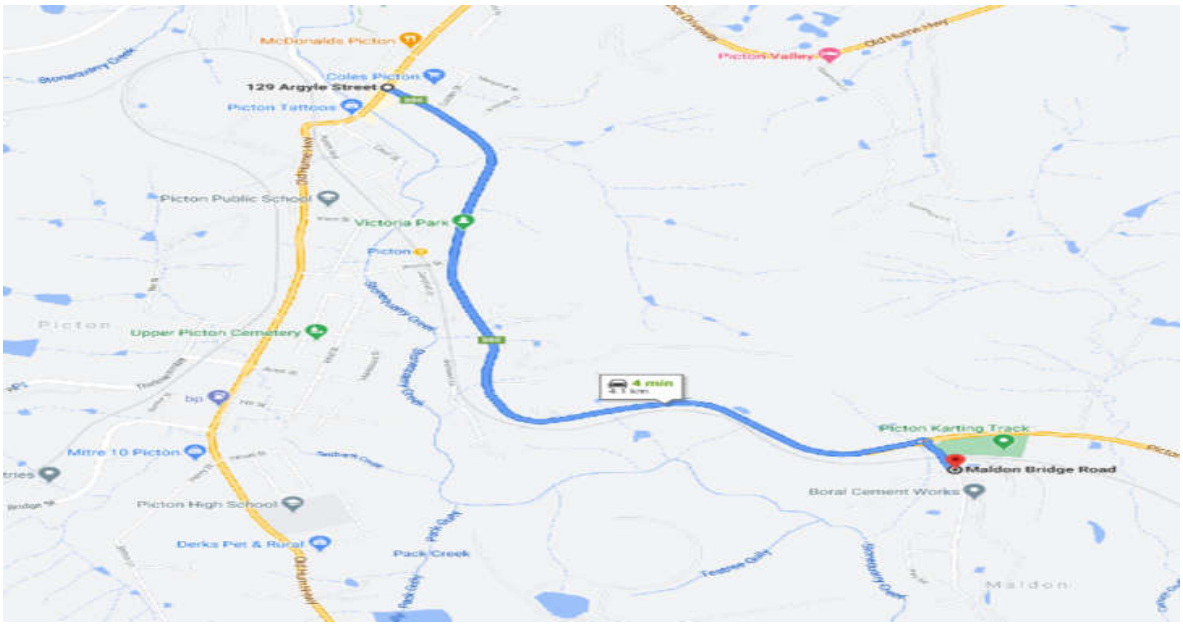

Figure 8 - Google Map showing the location and distance of the required upsize.

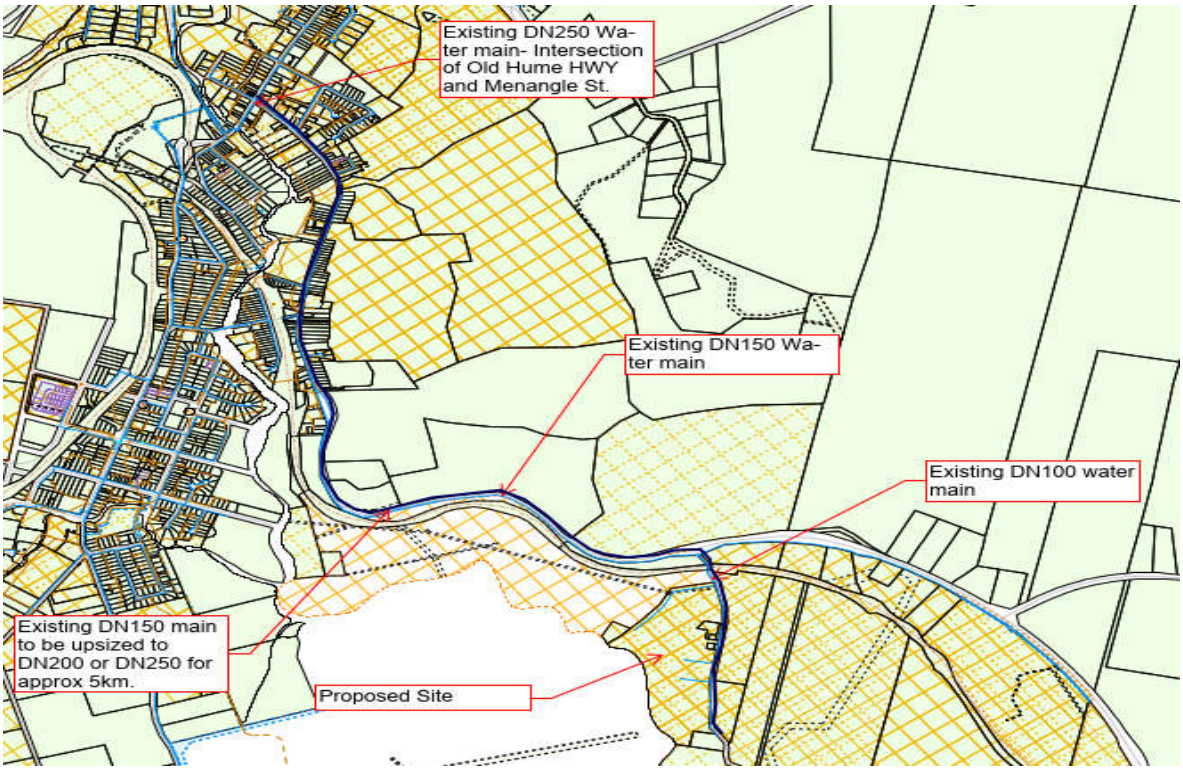

Figure 9 - Sydney Water record – showing existing and proposed water main along Menangle St and Picton Rd to the proposed site

3.4 Electricity

3.4.1 Existing Infrastructure

The existing Boral Cement Works, east of Maldon Bridge Road is a 66kV High Voltage Customer directly supplied from Endeavour Energy Maldon 66kV/11kV Zone substation located at 270 Picton Road, which is approximately 980m away from the site (route length along the existing road of Picton Road and Maldon Bridge Road).

Endeavour Energy Maldon Zone Substation is an 66kV to 11kV step-down substation primarily supply the communities with 11kV feeders except Boral Cement Works.

The subject site has 3 x 66kV feeders running from Maldon Bridge Rd / Picton Rd Intersection to the south. These feeders are:

- Feeders 846 and 847 running from the Maldon Bridge Rd / Picton Rd Intersection to the south for approximately 400m turning into the Boral Cement Works Switching station;
- Feeder 848 continues south toward the Tahmoor Zone Substation.

The subject site has 2 x 11kV feeders off Maldon Zone Substation bypassing the site:

- Feeder 35891 runs along the northern edge of the subject site. This feeder is an overhead line with 19/3.25AAC (Neptune) conductor.
- Feeder 61617 runs along Maldon Bridge Rd and turns west along the southern edge of the site. This feeder is an overhead line with mixed 7/4.50 AAC (Mercury) and 30/7/3.50 ACSR (Lime) conductor.

The existing Pole Transformer DS10184 is located at middle of Maldon Bridge Rd. This Pole Transformer is not recorded with its capacity but from Google Street view, it appears to be a 200kVA Pole Transformer.

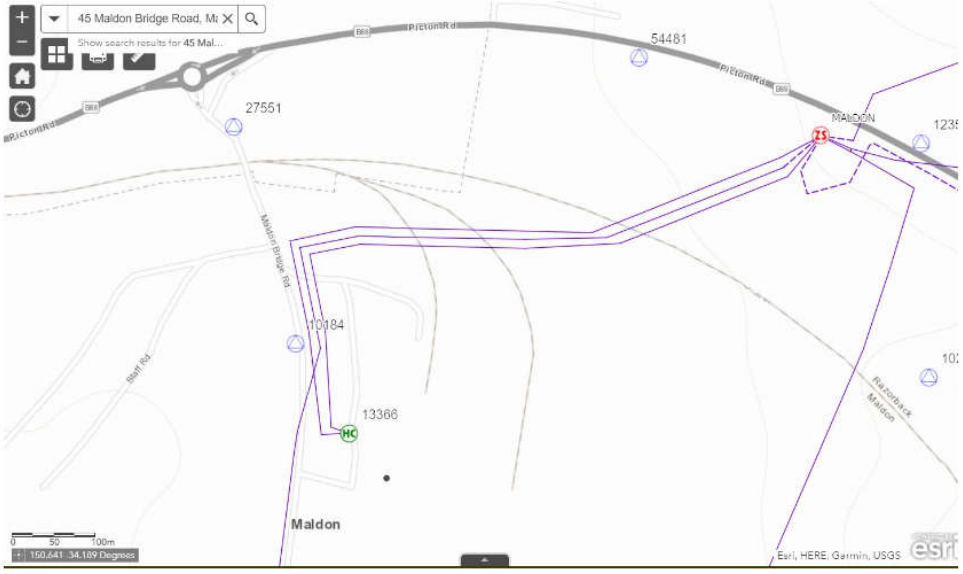

Figure 10 – Existing 66KV Feeders from Maldon Zone Substation

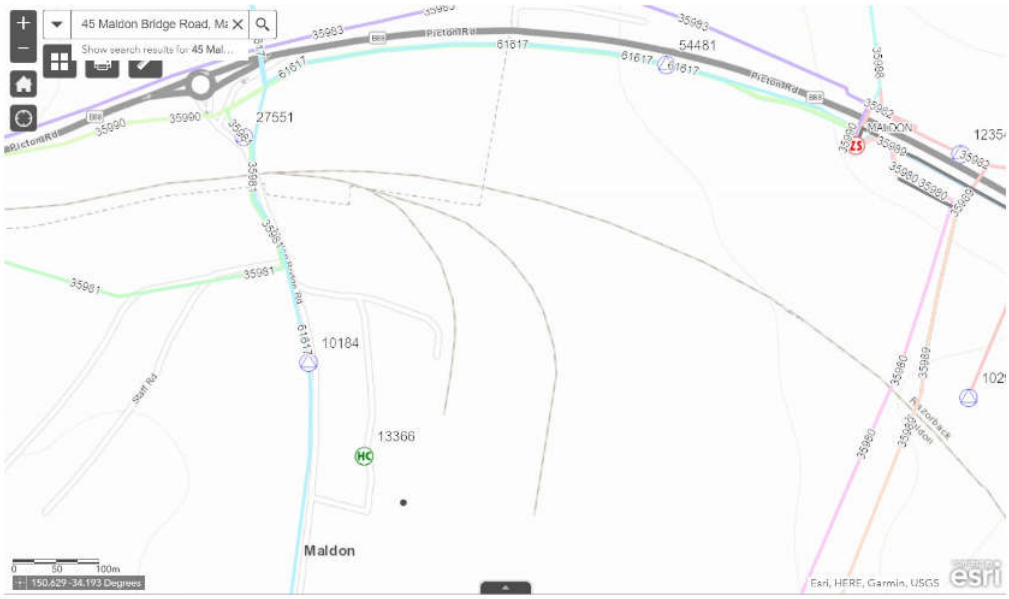

Figure 11 – Existing 11KV feeders from Maldon Zone Substation bypassing subject site.

3.4.2 Desktop Capacity Assessment Endeavour Energy Advice

The required capacity for the subject site situated at 45 Maldon Bridge Rd, Maldon with the approximately development area of 22.5HA is assumed as industrial (heavy). In accordance with AS3000 Table C3, the proposed max demand is calculated as 15,750kVA, which is 15.75MVA. With other reduction factor such as un-useable land and public roads, the max demand is deemed to be reduced to 14MVA, from 15.75MVA.

Spare Capacity from the existing Endeavour Energy network (date sourced from Endeavour Energy Distribution Annual Planning Report at https://dapr.endeavourenergy.com.au/#)

The substation consists of 2 x 35MVA transformers. The firm rating of this zone substation is 35MVA that is secured to the community.

Voltage Levels	Transformer Description (MVA)	Installed Capacity Total 'N' (MVA)	Firm Rating Secure 'N-1' (MVA)	95% Peak Load Exceeded (hours)	Embedded Generation (MW)
66/11kV	2 x 35	70	35	2.75	5.51

1. Maldon Zone Substation anticipated summer load at 2023 is 24.8MVA.

Forecast Data Summer

Forecast PF	Actual (MVA)			Forecast (MVA)			
	2018	2019	2020	2021	2022	2023	2024
0.998	21.2	23.5	24.5	24.8	24.9	24.8	24.8

2. Maldon Zone Substation anticipated winter load at 2023 is 19.8MVA.

Forecast Data Winter

Forecast PF	Actual (MVA)			Forecast (MVA)			
	2017	2018	2019	2020	2021	2022	2023
0.990	17.4	16.5	19.3	19.9	19.9	19.9	19.8

3. Endeavour Energy from the response ENL3835 to preliminary enquiry confirmed as of the time of the report, Maldon Zone Substation has enough capacity. However the assessment is based on diversified load but not on peak load / maximum demand. Endeavour Energy

requires that any large spot loads to be assessed further on a case by case basis.

Potential supply requirements

At present time, it is envisaged that there is spare capacity at Endeavour Energy's Maldon Zone Substation (ZS) to supply this proposed development without zone substation capacity upgrades. This is assessed by Endeavour Energy for normal industrial & commercial subdivisions based on its diversified load. However, if large spot load is identified by the developer for particular tenants or subsequent developments within the subdivision, the implication of the load must be assessed on case by case basis.

4. Existing feeders 35891 And 61617 are not overloaded at the moment.

Distribution HV Feeder Overload

FDR Name	Extent of Primary Feeder Overload (% above normal cyclic rating) (Summer)			Extent of Primary Feeder Overload (% above normal cylic rating) (Winter)			Reduction Required (MVA)	Potential Solution
	Actual 18/19	Forecast 19/20	Forecast 20/21	Actual 2019	Forecast 2020	Forecast 2021		
35988	6.2%	9.1%	12.1%	0.0%	0.0%	0.0%	0.55	Load Transfer
35990	2.8%	5.6%	8.5%	0.0%	0.0%	0.0%	0.39	Monitor
35991	0.0%	0.0%	0.0%	0.0%	0.1%	2.8%	0.13	HVC

5. Existing overhead feeder 35891 has 90A / 1.71MVA spare capacity as of the report time.
   - Commercial & industrial spare capacity on Maldon 35981 Haddon Pl is around 90 A (1.71MVA).
6. Existing overhead feeder 61617 has 50A / 0.95MVA spare capacity as of the report time.
   - Commercial & industrial spare capacity on feeder 61617 is around 50 A (0.95MVA);

Due to the excessive demand from the proposed site, the existing Endeavour Energy overhead network of feeders 35891 and 61617 does **not** have enough capacity to feed the proposed industrial site as full load. However, as a new subdivision, it seems approximately 70% site can be supplied from Endeavour Energy with installing two additional 11kV feeders from Maldon Zone Substation to the site. From Endeavour Energy from the response ENL3835, Endeavour Energy confirmed that supplying the site can be utilized by using existing feeders 35891 and 61617 until they reach the limit.

Existing Maldon ZS 11 kV feeders 61617 Tahmoor & 35981 Haddon Pl can be utilised to supply this proposed development until a new 11kV feeder from Maldon ZS is required. Below provides information on feeder spare capacity at time of this assessment:

Once the limit is reached to feeders 61617 and 36981, a new HV feeder from Maldon Zone Substation to the site will be required. The preferred method is the feeder to be installed underground from Maldon Zone Substation to the site along Picton Road and then Maldon Bridge Road. This estimate is based on Endeavour Energy Asset Valuation Sheet (AVS), which is used by Endeavour Energy to estimate the cost, if this work were completed by Endeavour Energy itself. With different margin and industrial overhead cost, it is common that the contestable work (funded and constructed by the customer) has 20%-25% extra cost on Endeavour Energy AVS value as AVS does not include any auxiliary cost such as traffic control, road full restoration etc.

In this case, AVS returns $398,000 at the developers cost. With 25% extra including working on Picton Road and railway crossing, it is anticipated the developer Cost is approximately $500,000. It shall be noted under current Endeavour Energy HV reimbursement scheme, all HV cables are funded by Endeavour Energy directly at cost of approximately $76,000 but at no cost to the developer.

Item	Estimated Cost (Excl. GST)
AVS Cost (Works)	$398,000
Additional 25% - additional works	$99,500
HV Cable ($76,000)	Supplied by Endeavour Energy
TOTAL	$497,500

The cost estimate includes HV lead-in works for trenching, conduit laying and cable installation only and excludes HV cable material supply cost and any power supply to any subdivided lot as there has

been no strategy to the development yet. Further cost estimate can be completed once supply strategy is given to each lot (e.g. LV customer or HV customer etc.).

Table C3 Maximum Demand – Energy Demand Method for non-Domestic Installations

Type of occupancy		Energy demand	
		Range, VA/m2	Average, VA/m2
Offices	Light and Power Air conditioning -cooling -reverse cycle -zonal reheat -variable volume	40-60 30-40 20-30 40-60 20	50 35 25 50 20
Carparks	Open Air EV charging Basement EV charging	0-10 5-15 10-20 10-30	5 10 15 20
Retail Shops	Light and Power Air conditioning	40-100 20-40	70 30
Warehouses	Light and Power Ventilation Special Equipment	5-15 5 (use load details)	10 5
Light industrial	Light and Power Ventilation Air conditioning Special Equipment	10-20 10-20 30-50 (use load details)	15 15 40
Taverns, licensed clubs	Total	60-100	80
Theatres	Total	80-120	100

Figure 12– Table C3 'Maximum Demand, AS3000

3.4.3 Further Recommendation

It is strongly recommended that the developer considers renewable generator to be installed with building / workshop construction. Solar panels would be the preferred method as the power consumption from industrial sites almost perfectly aligns with solar power generation curve, unless significant night-time activities are proposed.

Further assessment can be taken to for the above.

3.5 Telecommunications

The existing telecommunication utilities available within the vicinity of the Subject Site is provided by Telstra & NBN Co. A summary of the existing services is outlined below:

- Telstra main: Underground telecommunication line parallel to Maldon Bridge Road which is transferred to an overhead wire via a UGOH pole in Staff Road to service the existing dwellings.

Figure 13 - Telstra Pit Staff Road & Maldon Bridge Road (Google street maps 29/07/2020)

- NBN Co: Refer to Figure 14 for the NBN Co Rollout Map. NBN has been constructed in Picton to the west of the Subject Site. No other NBN as a result of the DBYD search is available within the proximity of the Subject Site.

Option 1 – existing technology utilised for the area

- NBN have advised that utilising the Sky Muster Satellite Technology will be quite expensive as you are essentially paying for the data that you use. It is understood that the only cost will be the ongoing contract that the client will enter into with a service provider
- NBN have also advised to have testing undertaken to investigate if the site can utilise the Fixed Wireless network, which they believe can be done as there are multiple NBN towers located within the area. This will incur a cost for NBN to attend site and conduct an investigation of the signal strength. The cost will be provided by NBN prior to testing being undertaken.

Option 2 – Technology Change

- In order to undertake a cost analysis for option 2 the developer will need to submit an application to NBN as they will carry out the works required inhouse. It is likely that the cost for this will be excessive as the closest NBN Pit and pipe infrastructure is approximately 2.5km away. NBN has advised that this process could take up to 3 months to return the required information.

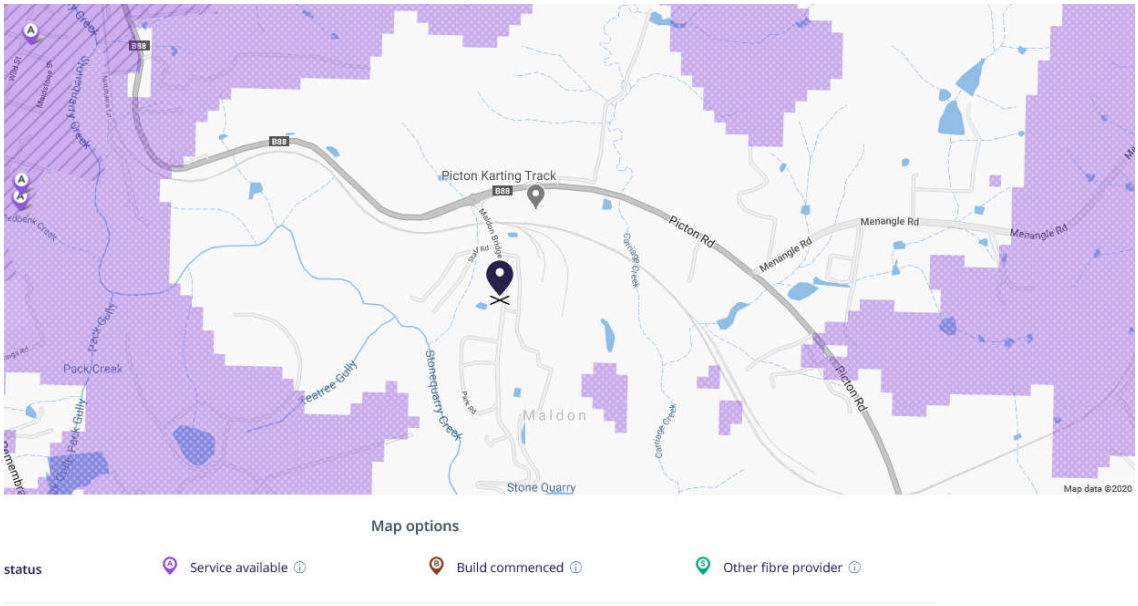

Figure 14 - NBN Co Network Rollout Map (NBN Co – 31/07/2020)

3.6 Gas

No existing gas reticulation is located on any of our DYBD searches.

Jemena correspondence outlined in the Wilton and Greater Macarthur Priority Growth Areas, Utilities Services Study prepared by AECOM in June 2017 states *'Jemena has no substantial infrastructure in the vicinity to supply this development. At this stage a significant contribution of greater than $15 Million (Desktop Estimate) would be required in order for Jemena to consider bringing natural gas this this development'.*

Appendix A – Sydney Water Feasibility Letter

Case Number: 186539

12 October 2020

BORAL LAND AND PROPERTY GROUP
c/- SMEC AUSTRALIA PTY LTD

FEASIBILITY LETTER

Developer:	**BORAL LAND AND PROPERTY GROUP**
Your reference:	**78181-Feas**
Development:	**Lot 1 DP748675 MALDON BRIDGE RD, Maldon**
Development Description:	**Proposed Heavy Industrial development.**
Your application date:	**12 August 2020**

Note: **Level 1 water restrictions are now in place**, which limits how and when water can be used outdoors. This can impact you and your contractors in the activities they need to undertake for this proposal.

Using water to suppress dust is not restricted, but this does mean that you/your contractors will need to apply for an exemption permit to use water for most outdoor uses including:

- Cleaning equipment and the exterior of new buildings
- Drilling and boring, and
- Batching concrete on-site

Fines for deliberate breaches of restriction rules apply from 1 September 2019.
For more information on the restrictions and for applying for an exemption, visit our web site at http://www.sydneywater.com.au/SW/water-the-environment/what-we-re-doing/water-restrictions/index.htm
The more water everyone saves, the longer we can stave off the progression to stricter restrictions or emergency measures.
Please provide this information to your contractors and delivery partners to inform them of their obligations.

Dear Applicant

This Feasibility Letter (Letter) is a guide only. It provides general information about what Sydney Water's requirements could be if you applied to us for a Section 73 Certificate (Certificate) for your proposed development. **The information is accurate at today's date only.**

If you obtain development consent for that development from your consent authority (this is usually your local Council) they will require you to apply to us for a Section 73 Certificate. You will need to submit a new application (and pay another application fee) to us for that Certificate by using your current or another Water Servicing Coordinator (Coordinator).

Sydney Water will then send you either a:

- Notice of Requirements (Notice) and Developer Works Deed (Deed) or
- Certificate.

These documents will be the definitive statement of Sydney Water's requirements.

There may be changes in Sydney Water's requirements between the issue dates of this Letter and the Notice or Certificate. The changes may be:

- if you change your proposed development eg the development description or the plan/ site layout, after today, the requirements in this Letter could change when you submit your new application; and

- if you decide to do your development in stages then you must submit a new application (and pay another application fee) for each stage.

No warranties or assurances can be given about the suitability of this document or any of its provisions for any specific transaction. It does not constitute an approval from Sydney Water and to the extent that it is able, Sydney Water limits its liability to the reissue of this Letter or the return of your application fee. You should rely on your own independent professional advice.

What You Must Do To Get A Section 73 Certificate In The Future.

To get a Section 73 Certificate you must do the following things. You can also find out about this process by visiting www.sydneywater.com.au > Plumbing, building & developing > Developing > Land development.

1. **Obtain Development Consent from the consent authority for your development proposal.**

2. **Engage a Water Servicing Coordinator (Coordinator).**

   You must engage your current or another authorised Coordinator to manage the design and construction of works that you must provide, at your cost, to service your development. If you wish to engage another Coordinator (at any point in this process) you must write and tell Sydney Water.

   For a list of authorised Coordinators, either visit www.sydneywater.com.au > Plumbing, building & developing > Developing > Providers > Lists or call **13 20 92.**

   The Coordinator will be your point of contact with Sydney Water. They can answer most questions that you might have about the process and developer charges and can give you a quote or information about costs for services/works (including Sydney Water costs).

3. **Developer Works Deed**

   It would appear that your feasibility application is served from existing mains and does not require any works to be constructed at this time. Sydney Water will confirm this with you after you have received Development Approval from Council and your Coordinator has submitted a new Development application and Sydney Water has issued you with a formal Notice of Requirements.

4. **Water and Sewer Works**

   4.1 **Water**

   Your development must have a frontage to a water main that is the right size and can be used for connection.

   Sydney Water has assessed your application and found that:

   - The existing 100mm potable water main located in Maldon Bridge Road fronting the proposed development site does not have the capacity to supply the required water demand to the site. An amplification of the existing potable water main would be required.
   - It is advised that the developer would need to engage a hydraulic consultant to model the water demand and identify the size and length of the amplification to service the proposed development.

4.2 Sewer

Sydney Water has assessed your application and found that:

- The subject site has no sewer mains close to the proposed development and the nearest wastewater scheme is the Picton Sewerage System.
- Currently, the Picton Wastewater Recycling Plant has no capacity to manage additional treated effluent.
- Sydney Water is presently working with the Environmental Protection Authority (EPA) to increase effluent management capacity at the Picton Wastewater Recycling Plant. Based on our projected timelines, Sydney Water are aiming to obtain EPA approval to our Environmental Protection Licence variations by July 2021 and subject to the EPA's approval, upgrades to the Picton Wastewater Recycling Plant upgrades could take up to four years to deliver.
- Sydney Water will not be able to provide a wastewater connection for any proposed development or partial development outside of the existing Picton Sewerage Scheme boundary until such time as Sydney Water has implemented its effluent management strategy to expand the Picton wastewater scheme and these required amplification works have been implmented. For more information please see https:// www.sydneywater.com.au/SW/water-the-environment/what-we-re-doing/current-projects/ improving-our-wastewater-system/picton-water-recycling-plant/index.htm

5. Ancillary Matters

5.1 Asset adjustments

After Sydney Water issues this Notice (and more detailed designs are available), Sydney Water may require that the water main/sewer main/stormwater located in the footway/your property needs to be adjusted/deviated. If this happens, you will need to do this work as well as the extension we have detailed above at your cost. The work must meet the conditions of this Notice and you will need to complete it **before we can issue the Certificate**. Sydney Water will need to see the completed designs for the work and we will require you to lodge a security. The security will be refunded once the work is completed.

5.2 Entry onto neighbouring property

If you need to enter a neighbouring property, you must have the written permission of the relevant property owners and tenants. You must use Sydney Water's **Permission to Enter** form(s) for this. You can get copies of these forms from your Coordinator or the Sydney Water website. Your Coordinator can also negotiate on your behalf. Please make sure that you address all the items on the form(s) including payment of compensation and whether there are other ways of designing and constructing that could avoid or reduce their impacts. You will be responsible for all costs of mediation involved in resolving any disputes. Please allow enough time for entry issues to be resolved.

OTHER THINGS YOU MAY NEED TO DO

Shown below are other things you need to do that are NOT a requirement for the Certificate. They may well be a requirement of Sydney Water in the future because of the impact of your development on our assets. You must read them before you go any further.

Approval of your building plans

Please note that the building plans must be approved when each lot is developed. This can be done at Sydney Water Tap in™. Visit www.sydneywater.com.au > Plumbing, building & developing > Building > Sydney Water Tap in™.

This is not a requirement for the Certificate but the approval is needed because the construction/building works may affect Sydney Water's assets (e.g. water, sewer and stormwater mains).

Where a Sydney Water stormwater channel, pipe or culvert is located within ten (10) metres of your development site it must be referred to Sydney Water for further assessment.

Your Coordinator can tell you about the approval process including:

- Possible requirements;
- Costs; and
- Timeframes.

Note: You must obtain our written approval before you do any work on Sydney Water's systems. Sydney Water will take action to have work stopped on the site if you do not have that approval. We will apply Section 44 of the *Sydney Water Act 1994.*

Soffit Requirements

Please be aware that floor levels must be able to meet Sydney Water's soffit requirements for property connection and drainage.

Requirements for Business Customers for Commercial and Industrial Property Developments

If this property is to be developed for Industrial or Commercial operations, it may need to meet the following requirements:

Trade Wastewater Requirements

If this development is going to generate trade wastewater, the property owner must submit an application requesting permission to discharge trade wastewater to Sydney Water's sewerage system. You must wait for approval of this permit before any business activities can commence.

The permit application should be emailed to Sydney Water's Business Customer Services at businesscustomers@sydneywater.com.au

It is illegal to discharge Trade Wastewater into the Sydney Water sewerage system without permission.

A **Boundary Trap** is required for all developments that discharge trade wastewater where arrestors and special units are installed for trade wastewater pre-treatment.

If the property development is for Industrial operations, the wastewater may discharge into a sewerage area that is subject to wastewater reuse. Find out from Business Customer Services if this is applicable to your development.

Backflow Prevention Requirements

Backflow is when there is unintentional flow of water in the wrong direction from a potentially polluted source into the drinking water supply.

All properties connected to Sydney Water's supply must install a testable **Backflow Prevention Containment Device** appropriate to the property's hazard rating. Property with a high or medium hazard rating must have the backflow prevention containment device tested annually. Properties identified as having a low hazard rating must install a non-testable device, as a minimum.

Separate hydrant and sprinkler fire services on non-residential properties, require the installation of a testable double check detector assembly. The device is to be located at the boundary of the property.

Before you install a backflow prevention device:

1. Get your hydraulic consultant or plumber to check the available water pressure versus the property's required pressure and flow requirements.
2. Conduct a site assessment to confirm the hazard rating of the property and its services. Contact PIAS at NSW Fair Trading on **1300 889 099**.

For installation you will need to engage a licensed plumber with backflow accreditation who can be found on the Sydney Water website:
http://www.sydneywater.com.au/Plumbing/BackflowPrevention/

Water Efficiency Recommendations

Water is our most precious resource and every customer can play a role in its conservation. By working together with Sydney Water, business customers are able to reduce their water consumption. This will help your business save money, improve productivity and protect the environment.

Some water efficiency measures that can be easily implemented in your business are:

- Install water efficiency fixtures to help increase your water efficiency, refer to WELS (Water Efficiency Labelling and Standards (WELS) Scheme, http:// www.waterrating.gov.au/
- Consider installing rainwater tanks to capture rainwater runoff, and reusing it, where cost effective. Refer to http://www.sydneywater.com.au/Water4Life/InYourBusiness/ RWTCalculator.cfm
- Install water-monitoring devices on your meter to identify water usage patterns and leaks.
- Develop a water efficiency plan for your business.

It is cheaper to install water efficiency appliances while you are developing than retrofitting them later.

Contingency Plan Recommendations

Under Sydney Water's customer contract Sydney Water aims to provide Business Customers with a continuous supply of clean water at a minimum pressure of 15meters head at the main tap. This is equivalent to 146.8kpa or 21.29psi to meet reasonable business usage needs.

Sometimes Sydney Water may need to interrupt, postpone or limit the supply of water services to your property for maintenance or other reasons. These interruptions can be planned or unplanned.

Water supply is critical to some businesses and Sydney Water will treat vulnerable customers, such as hospitals, as a high priority.

Have you thought about a **contingency plan** for your business? Your Business Customer Representative will help you to develop a plan that is tailored to your business and minimises productivity losses in the event of a water service disruption.

For further information please visit the Sydney Water website at: http:// www.sydneywater.com.au/OurSystemsandOperations/TradeWaste/ or contact Business Customer Services on **1300 985 227** or businesscustomers@sydneywater.com.au

Fire Fighting

Definition of fire fighting systems is the responsibility of the developer and is not part of the Section 73 process. It is recommended that a consultant should advise the developer regarding the fire fighting flow of the development and the ability of Sydney Water's system to provide that flow in an emergency. Sydney Water's Operating Licence directs that Sydney Water's mains are only required to provide domestic supply at a minimum pressure of 15 m head.

A report supplying modelled pressures called the Statement of Available pressure can be purchased through Sydney Water Tap in™ and may be of some assistance when defining the fire fighting system. The Statement of Available pressure, may advise flow limits that relate to system capacity or diameter of the main and pressure limits according to pressure management initiatives. If mains are required for fire fighting purposes, the mains shall be arranged through the water main extension process and not the Section 73 process.

Large Water Service Connection

A water main are available to provide your development with a domestic supply. The size of your development means that you will need a connection larger than the standard domestic 20 mm size.

To get approval for your connection, you will need to lodge an application with Sydney Water Tap in™. You, or your hydraulic consultant, may need to supply the following:

- A plan of the hydraulic layout;
- A list of all the fixtures/fittings within the property;
- A copy of the fireflow pressure inquiry issued by Sydney Water;
- A pump application form (if a pump is required);
- All pump details (if a pump is required).

You will have to pay an application fee.

Sydney Water does not consider whether a water main is adequate for fire fighting purposes for your development. We cannot guarantee that this water supply will meet your Council's fire fighting requirements. The Council and your hydraulic consultant can help.

Disused Water Service Sealing

You must pay to disconnect all disused private water services and seal them at the point of connection to a Sydney Water water main. This work must meet Sydney Water's standards in the Plumbing Code of Australia (the Code) and be done by a licensed plumber. The licensed plumber must arrange for an inspection of the work by a NSW Fair Trading Plumbing Inspection Assurance Services (PIAS) officer. After that officer has looked at the work, the drainer can issue the Certificate of Compliance. The Code requires this.

Other fees and requirements
The requirements in this Notice relate to your Certificate application only. Sydney Water may be involved with other aspects of your development and there may be other fees or requirements. These include:

- plumbing and drainage inspection costs;
- the installation of backflow prevention devices;
- trade waste requirements;
- large water connections and
- council fire fighting requirements. (It will help you to know what the fire fighting requirements are for your development as soon as possible. Your hydraulic consultant can help you here.)

No warranties or assurances can be given about the suitability of this document or any of its provisions for any specific transaction. It does not constitute an approval from Sydney Water and to the extent that it is able, Sydney Water limits its liability to the reissue of this Letter or the return of your application fee. You should rely on your own independent professional advice.

END

Appendix B – Endeavour Energy Technical Review

28 September 2020

Endeavour Energy Ref: ENL3835 – 2014/02306/001

SMEC Australia
20 Berry Street
NORTH SYDNEY NSW 2060

Attention: Murphy Su

ENL3835 – Technical Review | LOT 1, DP 748675, 80 Maldon Bridge Road, MALDON

Thank you for your technical review request, providing information of the proposed development at the above location. Your enquiry has been registered under the above reference number. Please quote this reference number on all future correspondence.

Endeavour Energy understands that the proposed industrial rezoning and subdivision development is located west of Boral Cement Works in Maldon and is probably to yield 20Ha of usable lands for industrial purpose. The indicative subdivision lot layout is shown in Figure 1 below.

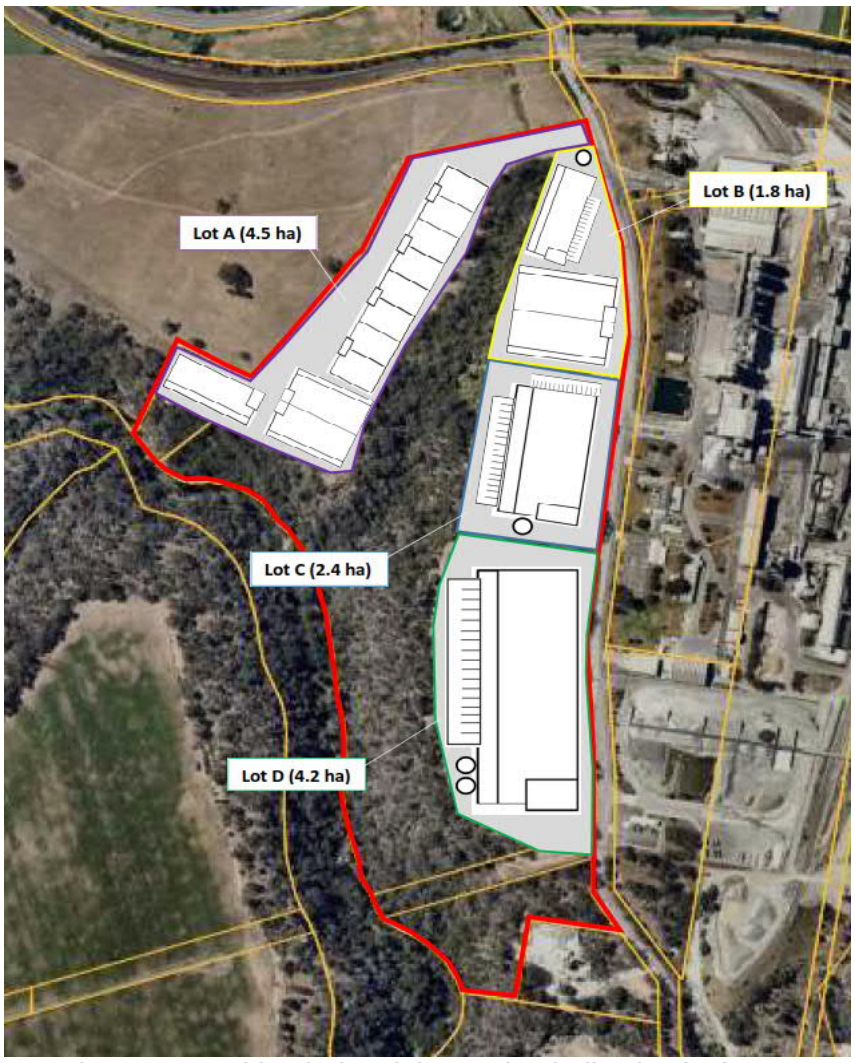

Figure 1 – Maldon industrial rezoning indicative lot layout

Endeavour Energy assessed load

Endeavour Energy assessed load for the proposed Maldon industrial rezoning and subdivision is 6MVA (diversified load) based on 40VA/sqm with some reasonable diversity factor applied on top.

Potential supply requirements

At present time, it is envisaged that there is spare capacity at Endeavour Energy's Maldon Zone Substation (ZS) to supply this proposed development without zone substation capacity upgrades. This is assessed by Endeavour Energy for normal industrial & commercial subdivisions based on its diversified load. However, if large spot load is identified by the developer for particular tenants or subsequent developments within the subdivision, the implication of the load must be assessed on case by case basis.

Existing Maldon ZS 11 kV feeders 61617 Tahmoor & 35981 Haddon Pl can be utilised to supply this proposed development until a new 11kV feeder from Maldon ZS is required. Below provides information on feeder spare capacity at time of this assessment:

- Commercial & industrial spare capacity on feeder 61617 is around 50 A (0.95MVA);
- Commercial & industrial spare capacity on Maldon 35981 Haddon Pl is around 90 A (1.71MVA).

To supply the rest of this development, a new feeder will need to be constructed from Maldon ZS. Endeavour Energy will investigate and nominate suitable feeder connection CB at Maldon ZS during connection application stage and works associated with making connection point CB available within Zone Substations are generally funded and constructed by Endeavour Energy in parallel with customer's connection works.

Please note that above response is based on the information and data available at present time. Endeavour Energy does not reserve capacity, and network capacity investigations will need to be conducted when the formal application for subdivision or connection of load is submitted in the future.

Endeavour Energy is committed to making provisions for proponents to connect to its network in a fair and equitable manner. This is in line with reasonable legislated user pays principles for connection works and in a manner, which will ensure an acceptable quality of supply for all existing and future customers. In general, design and construction of the connection assets must be funded by the customer and gifted to Endeavour Energy under the contestable works framework. This process is documented in Endeavour Energy's Model Standing Offer for a Standard Connection Service. The customer must engage Level 3 and Level 1 Accredited Service Providers (ASP) for the proposed electrical works.

Should you have any questions regarding the response to your technical review request please contact the undersigned.

Yours faithfully,

J. Lei

Jonathan Lei
Contestable Works Project Manager
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