



BARWON REGION WATER CORPORATION

69B HARVEY STREET, ANGLESEA

INFRASTRUCTURE & SERVICING ASSESSMENT

TGM GROUP PTY. LTD.

Level 1, 27-31 Myers Street
Geelong, Victoria 3220
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Reference: 13629-06 Rev00

Client: Barwon Region Water Corporation
Project Name: 69B Harvey Street, Anglesea – Rezoning
Document: Infrastructure & Servicing Assessment

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Project Details

Project Name:	69B Harvey Street, Anglesea
Client:	Barwon Region Water Corporation
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TGM Reference:	13629-06

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1. EXECUTIVE SUMMARY

The 69B Harvey Street site encompasses seven (7) existing allotments, zoned Public Utility Zone (PUZ). This site is owned by Barwon Water and contains a water supply pump station to service Anglesea with the majority of the remaining being previously utilised as a water storage basin which has been partially rehabilitated in 2016.

TGM has been engaged to undertake an Infrastructure and Servicing Assessment for the subject land to support the rezoning of this site to General Residential Zone via a Planning Scheme Amendment to allow residential development of the existing allotments.

The purpose of the assessment is to review existing infrastructure and services available to the site and identify the necessary future infrastructure required to service the proposed development. Services that have been investigated include water supply, sewer, electricity, gas, telecommunications, stormwater and road infrastructure. Development and design responses have been formulated for each respective service to ensure the development can be serviced in an economical, efficient and sustainable manner.








Preliminary investigations have confirmed there is sufficient capacity within the existing supply networks for all essential services to facilitate servicing of the land i.e. existing allotments, in accordance with Authority standards and requirements without the need for major augmentation works.

It has been determined from this investigation that the necessary infrastructure is available to provide all essential services and required infrastructure to the rezoned land of 69B Harvey Street, Anglesea.

2. BACKGROUND

TGM has been requested by the Owner, Barwon Region Water Corporation, of the property known as 69B Harvey Street, Anglesea to undertake an Infrastructure & Servicing Assessment to review existing infrastructure and report on the feasibility and availability of services to the subject land. It is proposed to rezone the land to General Residential Zone.

Services investigated include:

-  Potable Water
-  Sewer
-  Electricity
-  Gas
-  Telecommunications
-  Drainage
-  Roads

Contact has been made to all responsible Authorities for the provision of the essential services. Their responses have been reviewed and impacts and constraints discussed within this report. Copies of the responses are provided in the Appendices at the end of this document.

It should be noted that a number of Servicing Authority responses are based on higher lot numbers than the current proposal of 7 lots. This reduction in lot numbers does not affect the servicing response from the Authorities.

3. EXISTING SITE CONDITIONS

69B Harvey Street, Anglesea is a 6,650 m² land parcel located in the residential precinct of Anglesea. The site is located to the south-west of the Anglesea Township and is situated upon a natural ridgeline which boasts elevated views over the surrounding coastline.

The subject land has three road frontages which includes Parker Street (fully developed and sealed) on the northern frontage, Harvey Street on the southern frontage (sealed road only) and Sparrow Avenue (gravel construction) on the eastern boundary.

Figure 1 below depicts the site location within Anglesea.



Figure 1 – Site Location

The subject land (LP20002 lots 116-122) historically formed part of Barwon Water's water supply infrastructure and acted as a holding basin to supply potable water to the Anglesea Township. Barwon Water's operation of the basin ceased approximately 10 years ago when Anglesea's water supply network was connected as part of the broader regional water supply scheme which is supplied from the upper catchment of the Barwon and Moorabool Rivers.

Since the period operation the basin has remained unused and had fallen into disrepair. The basin was characterised as an empty concrete-lined basin that is surrounded on all sides by a cyclone wire fence. The basin is described as being a 'turkeys nest' design and is prominently situated above the levels of Harvey Street and Parker Street. A mixture of native vegetation and introduced plant species populate parts site surrounds and extend to the adjoining road reserves. In early 2016 Barwon Water undertook partial rehabilitation of the basin with filling it to approximately 1m of the top of the basin.

Outside of the basin area, but within the same land unit, the site has also been used as an office (converted dwelling) located on lot 122 LP20002 and sheds for storage. A water pump station which is maintained and operated by Barwon Water is located (lot 122 LP20002) in one of the onsite structures. More recently the CFA has used the sheds for storage of their fire prevention appliances. A telecommunications tower has also been erected for emergency services.

4. SITE LAYOUT

The existing residential subdivision, LP20002 shows lots that have road frontages, Parker Street and Harvey Street. The layout is shown in Figures 2 & 3 below.

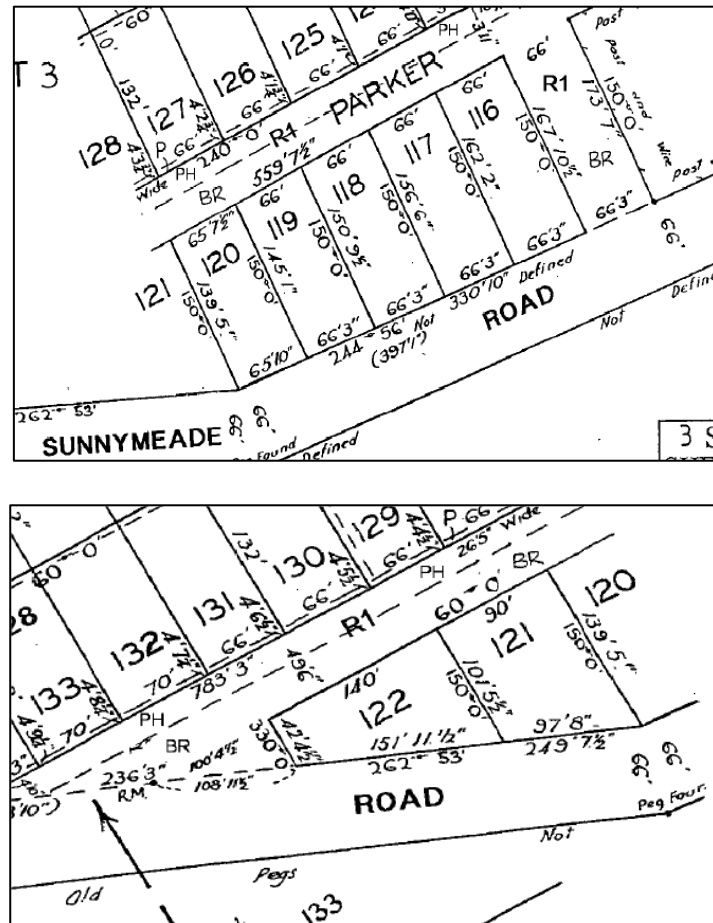


Figure 2 – LP20002 Layout



Figure 3 – Site Layout

6. SEWERAGE

Barwon Water is the responsible authority for the collection, pumping, treatment and disposal of sewage to all customers within their designated region and is responsible for all sewerage collection within Anglesea.

Barwon Water has advised that the proposed development can be serviced via connection to the existing sewer network. There is sufficient capacity in the existing system to cater for the additional demand that will be generated following rezoning of the subject land to Residential Zone.

Subject to confirmation of final filled site levels the preferred sewer connection point for the proposed development is to the existing 150 mm diameter vitreous clay (DN150 VC) sewer main which is located on the western boundary of 75 Parker Street. This sewer network is quite shallow. Further information will be provided during detailed design to confirm that this connection point is appropriate to satisfy command requirements for the entire development. If unsatisfactory, an alternative connection point exists to the east of the site within Parker Street road reserve (northern boundary of 69 Harvey St) which should have sufficient depth to command the proposed development.

The proposed sewer layout is shown in Figure 4 below. Note, the purple line indicates the preferred alignment and the red line indicates the alternative alignment.

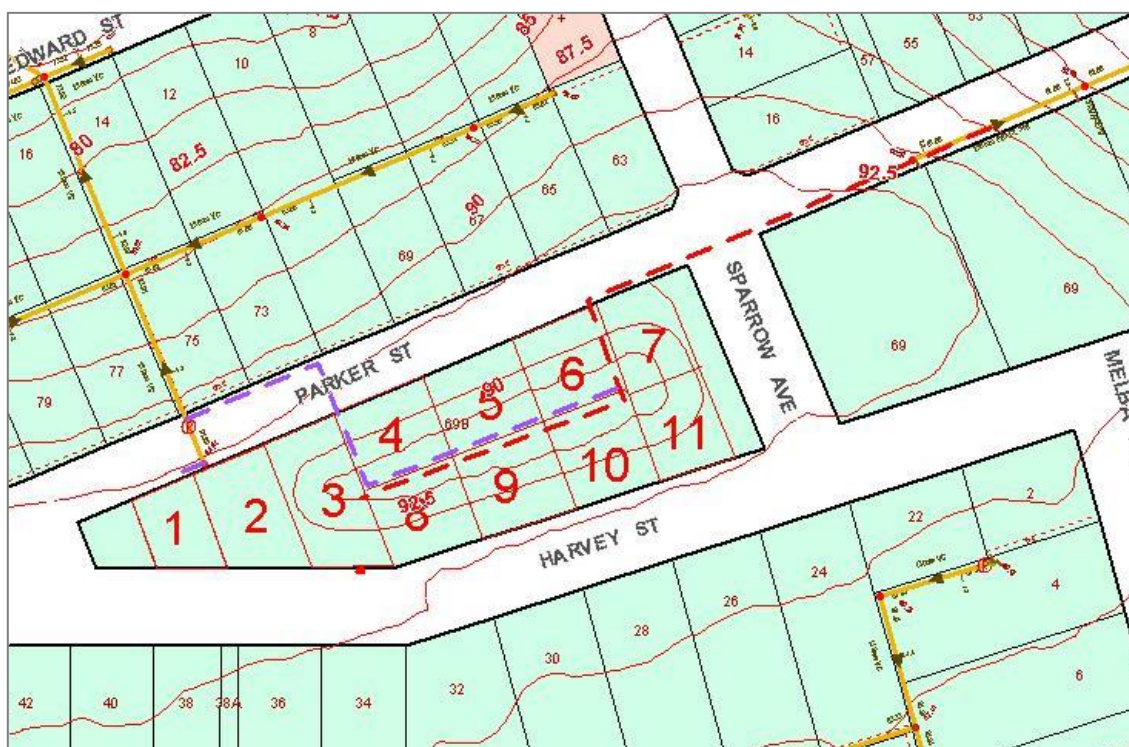


Figure 5 – Proposed Barwon Water Sewer Layout (11 lot concept)

It should be noted that the above plan refers to developing 11 lots, the same connection points will apply to serve fewer lots with altered reticulation main locations.

Under Barwon Water supply conditions the Developer will design, construct and fund the necessary infrastructure.

Refer **Appendix A** for Barwon Water's formal response on existing and proposed sewerage assets.

7. RECYCLED WATER

Barwon Water does not have any proposal to supply or develop systems to provide recycled water to the residential sector of Anglesea.

8. ELECTRICITY

Powercor is the supply service authority for power supply in the region and is responsible for building, operating and maintaining the electricity network within Anglesea.

Powercor advised that they have no concerns with supply to the subject land if rezoned to Residential Zone 1. A System Planning Scope has been provided by Powercor which outlines the works required to provide electricity to the proposed development.

As per Powercor's advice, an existing 200 kVa pole type substation has sufficient capacity to service the proposed development. The substation is located on Sparrow Avenue adjacent to the subject site and has capacity to supply the extra 62 kVA for the development. Electrical supply accounts for an extra 22 kVA for the upgrade of the existing Barwon Water onsite pump in addition to 40 kVA required for the subdivision. As such, the development may be supplied from existing underground low voltage street circuits. The proposed closure of Sparrow Road will not impact on Powercor assets.

The existing electrical infrastructure which affects the site is documented in Figure 5 below.

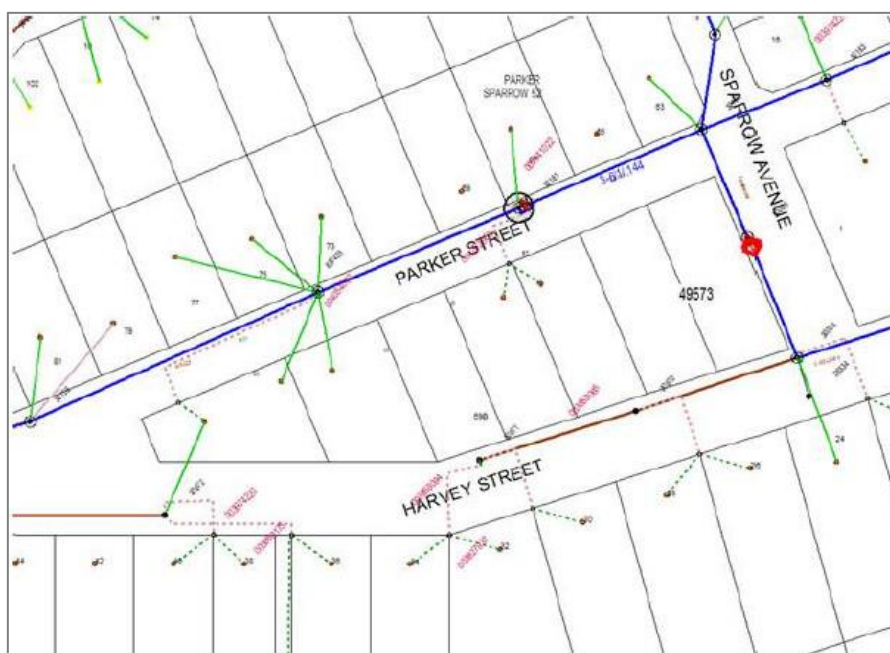


Figure 6 – Existing Electrical Infrastructure¹

Refer to **Appendix B** for Powercor's formal response on the provision of electrical services to the proposed site. Under Powercor supply conditions the Developer will design, construct and fund the necessary infrastructure.

¹ N. Hodge - Powercor, email dated 18 June 2015, 69B Harvey St Anglesea: 17 Lot Subdivision – Request for Servicing Advice

9. GAS SUPPLY

AusNet Services are the main local gas distributor for reticulated gas supply in the region. AusNet were contacted about the provision of gas to the development and have advised that Anglesea does not have a natural gas reticulated network. There is no expectation that this infrastructure will be provided in the foreseeable future.

As such, adoption of a conventional gas supply strategy will not be required for the development. Each residential household will require a bottled gas supplier that will be maintained and serviced by the resident.

Refer **Appendix C** for AusNet Service's formal response on the supply of gas to the proposed development.

10. TELECOMMUNICATIONS

NBN Co. has been contacted regarding the provision of telecommunication and data infrastructure services to the proposed development. A request for pre-qualification of infrastructure installation within the development was submitted and the application rejected on the grounds that the proposed development is less than 100 premises and therefore does not meet the criteria application to NBN infrastructure. NBN Co. has advised that the land is not located within their fibre network footprint.

Refer **Appendix D** for NBN Co.'s formal response on supply of fibre optic to the development.

Under government policy new developments are to have ready access to telecommunications. Telstra support smaller developments outside of the NBN footprint and, as such, will be the chosen provider. Via Telstra, the proposed development will be connected to standard phone line connections, ADSL internet and other relevant telecommunication infrastructure available in the area.

11. STORMWATER

TGM has undertaken a separate site stormwater management plan (SSMP) for the site which provides detailed guidance on the future stormwater mitigation processes required supporting the rezoning.

The SSMP provides a *prima facie* assessment of the proposed rezoning of 69B Harvey Street to show that the stormwater runoff can be effectively managed to ensure no worsening of stormwater peak discharge for a 2 year ARI design storm event.

12. ROADS

The subject land is bordered by roads on all sides. The road frontage and existing pavement of Harvey Street and Parker Street is to be maintained. The Traffic Impact Assessment indicates that the proposed development will have negligible impact on existing traffic and road conditions. The current road widths and geometry are consistent with current Council standards.

13. CONCLUSION

The infrastructure and servicing assessment undertaken for this report has identified that the proposed rezoning of 69B Harvey Street, Anglesea, allowing the future development of the existing allotments can be readily serviced and infrastructure provided for water supply, sewer, electricity, gas and telecommunications. Each relevant service authority has confirmed that this can be achieved from current supply assets without the need for any major augmentation work.

Based on the results and information presented in this investigation it has been determined that the necessary infrastructure is available to provide all essential services to the proposed subdivision of 69B Harvey Street, Anglesea.

TGM notes that additional fees and charges will apply for the provision of infrastructure and essential services from the relevant authorities. The Developer will be responsible for these costs. Fees will vary depending on the relevant authority and will be confirmed pending formal supply applications.

APPENDIX A

Barwon Water – Water & Sewer Supply Advice

Leigh Prossor

From: Tina Ainsworth <Tina.Ainsworth@barwonwater.vic.gov.au>
Sent: Monday, 15 June 2015 11:12 AM
To: Isaac Clarey
Subject: 69B Harvey St, Anglesea: 17 Lot Subdivision - Request for Servicing Advice (Ref-L006741)

Hello Isacc,

I refer to you email of 12th June 2015 regarding the servicing for the proposed subdivision at the subject site. The initial development was to be 17 lots, however this has been downsized to 11 lots.

Sewer

The proposed 11 lot development site can be serviced by connection to existing sewers.

Water

Lots fronting Parker St can tap the 150mm main in Parker St and lots fronting Harvey St can tap the 100mm main in Harvey St.

Kind Regards,

Tina Ainsworth

Land Development Officer | Barwon Water

40-44 Lonsdale Street (PO Box 659), South Geelong VIC 3220

Ph: 5226 9152

From: Isaac Clarey [<mailto:isaacc@tgmgroup.com>]
Sent: Monday, 4 May 2015 2:12 PM
To: Tina Ainsworth
Cc: Development Services
Subject: 69B Harvey St, Anglesea: 17 Lot Subdivision - Request for Servicing Advice

Hi Tina,

TGM has been engaged by Barwon Water to undertake a service assessment for the proposed development of the above site. The site is located within an existing residential neighbourhood along Harvey St, Anglesea. It is proposed to remove the existing concrete-lined basin from the site and provide a 17 lot subdivision with street frontage to Harvey St and Parker St. Refer proposed layout plan attached.

We are preparing a report to indicate servicing requirements and are seeking Barwon Water's early assessment of this proposed development to identify the capacity of the existing sewer and water infrastructure. We request a servicing strategy in line with the above scope of works.

We look forward to receiving your advice as soon as possible.

Regards,

Isaac Clarey | Design/Environmental Engineer

Email isaacc@tgmgroup.com



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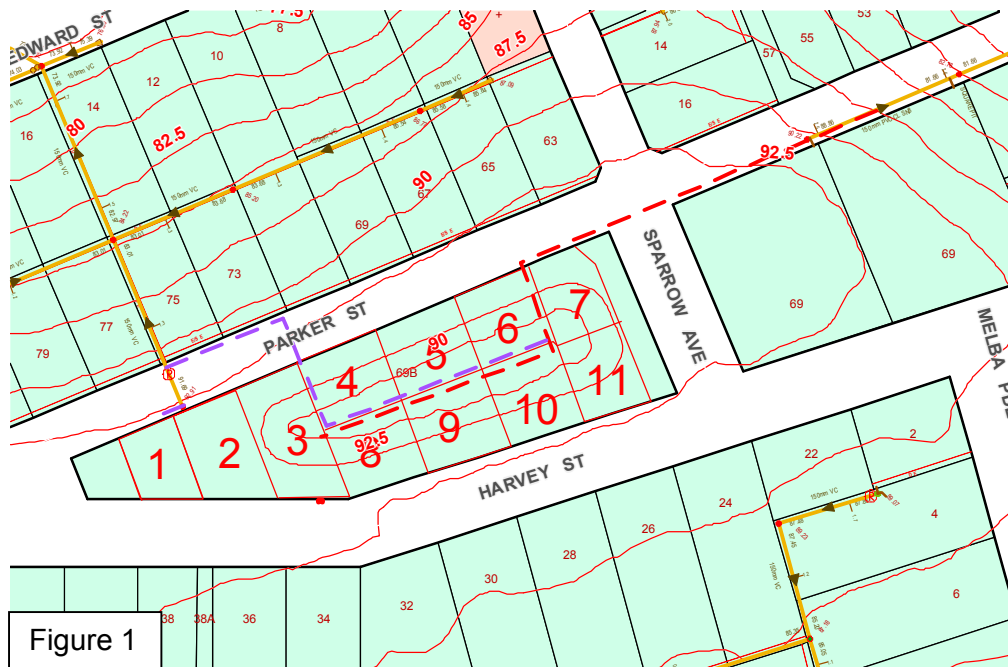
Internal Memo

To: Tina Ainsworth
From: Peter Van Wyk - Senior Planning Engineer
Date: 12 June 2015
Subject: 69B Harvey Street Anglesea – 11 Lot Subdivision
Objective ID: A3345177

Dear Tina,

I refer to your email of 5th June 2015 regarding a proposed subdivision at the subject site. Barwon Water owns this site and consultants TGM have been engaged to prepare a planning permit application to develop the site. The initial development was to be 17 lots, however this has been downsized to 11 lots.

The site can be serviced by connecting to existing sewers. Final filled site levels are not known and subject to lots being able to be commanded, connection to the sewer crossing at 75 Parker Street is preferred as shown by the purple line in figure 1 below. An alternative alignment is shown in red which would be allowed if the preferred alignment could not adequately command the site.



In summary the development can be serviced by extension off existing sewers.

Regards

Peter Van Wyk

Senior Engineer, Asset Planning

Leigh Prossor

From: Kristian Webb <Kristian.Webb@barwonwater.vic.gov.au>
Sent: Tuesday, 9 June 2015 4:24 PM
To: Tina Ainsworth
Cc: dq-list; Michael Harris
Subject: RE: 69B Harvey St Anglesea - 17 Lot Subdivision - Request for Servicing Advice

Hi Tina,

Servicing of this area is pretty straight forward. Lots fronting Parker Street can tap the 150mm main in Parker Street and lots fronting Harvey street can tap the 100mm main in Harvey Street. Both these mains are fed from the Anglesea HL Pumped system and should be good for at least 30m pressure.

Kind regards,

Kristian Webb
Engineer Water Systems Planning | Asset Planning | Barwon Water
49-51 Malop Street (PO Box 659) Geelong VIC 3220 T (03) 5226 2484 | F (03) 5223 1716
www.barwonwater.vic.gov.au

Please think before you print

-----Original Message-----

From: Tina Ainsworth
Sent: Friday, 5 June 2015 9:05 AM
To: dq-list; Michael Harris
Subject: FW: 69B Harvey St Anglesea - 17 Lot Subdivision - Request for Servicing Advice
Importance: High

Hi Guys,

Please provide your comments for the attached request for servicing advise, a Profis plan is attached for you info.

Kind Regards,

Tina Ainsworth
Land Development Officer | Barwon Water
40-44 Lonsdale Street (PO Box 659), South Geelong VIC 3220

APPENDIX B

Powercor – Electrical Supply Advice

Network Planning Scope – Option 2A

Customer Project Details:

Housing Estate	Harvey St, Anglesea Subdivision
Customer Projects Officer	Neville Hodge
Network Planning Engineer	Elyse Green
Number of lots	17
ADMD per lot – kVA	2.3
Work File – CPM No.	211451
Network Order	5096889
Date of scope issue	19/05/2015

Background and Scope:

An existing Barwon Water basin is being removed to provide space for a 17 Lot subdivision (ADMD of 3.2kVA/Lot) between Harvey Street and Parker Street Anglesea. The Barwon Water pump sight will remain and is to be upgraded from a 25A/phase 3 phase system to 55A/phase.

The 'Parker Sparrow 52' 200kVA pole type substation has capacity to supply the extra 62kVA (22kVA due to pump upgrades and 40kVA for subdivision). As such, this development may be supplied from existing LV street circuits.

Please note that Barwon Water pumps must have soft starters.



Figure 1: Existing Electrical Infrastructure

APPENDIX C

AusNet Services – Gas Supply Advice

Leigh Prossor

From: Mark Baker <mark.baker@ausnetservices.com.au>
Sent: Monday, 4 May 2015 2:41 PM
To: Isaac Clarey
Subject: RE: 69B Harvey St, Anglesea: 17 Lot Subdivision - Request for Servicing Advice

Good Afternoon Isaac,

Anglesea unfortunately does not have a natural gas reticulated network and will not for the foreseeable future.

Hope this is of assistance.

Mark Baker
Principal Engineer Network Planning - Gas



AusNet Services
Level 30, 2 Southbank Boulevard,
Southbank Victoria 3006 Australia
Tel +61 3 9695 6223 Mobile +61 (0) 409 544 783
mark.baker@ausnetservices.com.au
www.ausnetservices.com.au

From: Isaac Clarey [<mailto:isaacc@tgmgroup.com>]
Sent: Monday, 4 May 2015 2:21 PM
To: Mark Baker
Subject: 69B Harvey St, Anglesea: 17 Lot Subdivision - Request for Servicing Advice

Hi Mark,

TGM has been engaged to undertake a service assessment for the proposed development of the above site. The site is located within an existing residential neighbourhood along Harvey St, Anglesea. It is proposed to remove the existing concrete-lined basin from the site and provide a 17 lot subdivision with street frontage to Harvey St and Parker St. Refer proposed layout plan attached.

We are preparing a report to indicate servicing requirements and are seeking SP-Ausnet's early assessment of this proposed development to identify the gas network servicing requirements. We request a servicing strategy in line with the above scope of works.

We look forward to receiving your advice as soon as possible.

Regards,

Isaac Clarey | Design/Environmental Engineer
Email isaacc@tgmgroup.com



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APPENDIX D

NBN Co – Servicing Advice

Leigh Prossor

From: no-reply@nbnco.com.au
Sent: Monday, 4 May 2015 11:06 AM
To: Isaac Clarey
Subject: NBN Co: Your development application does not qualify - Reference number: 511066-126630539

Dear Isaac Clarey,

Thank you for submitting your request for NBN infrastructure.

Your request details:

Date issued: **04/05/2015**

Reference number: **511066-126630539**

Contact name: **Isaac Clarey**

Contact email: isaacc@tgmgroup.com

Search address entered: **69B Harvey Street, Anglesea VIC 3230, Australia**

Development address accepted: **69B Harvey Street, Anglesea, VIC 3230**

Latitude and Longitude: **-38.415301, 144.174942**

We are basing our assessment on the latitude and longitude; **-38.415301, 144.174942** coordinates that you indicated on the map.



<https://maps.googleapis.com/maps/api/staticmap?center=-38.415301,144.174942&markers=-38.415301,144.174942&zoom=17&size=702x335&sensor=false>

Unfortunately your development is less than 100 premises (units/dwellings) and does not meet the criteria applicable to NBN infrastructure under the 'Telecommunications Infrastructure in New Developments Policy'. We are therefore unable to progress with your registration at this time.

The Telecommunications Infrastructure in New Developments Policy, can be found [here](#), which sets out options for the provision of infrastructure and services in this situation.

If you have any questions and would like to contact NBN Co please call 1800 OUR NBN (1800 687 626) and quote your reference number.

Thank you and regards,

NBN Co - New Developments Team



Contact us on 1800 OUR NBN (1800 687 626)

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