

WGA

WALLBRIDGE GILBERT
AZTEC

Humby Consulting

Lot 104 & 105
Port Elliot Rd,
Middleton

**SERVICES FEASIBILITY
ASSESSMENT**

Project No. WGA220181

Doc No. WGA220181-RP-CV-0001

Rev. B

05 August 2022

WGA

Revision History

Rev	Date	Issue	Originator	Checker	Approver
A	14/07/2022	Draft	RD	SA	SA
B	5/08/2022	Final	RD	SA	SA

CONTENTS

1 Introduction.....	1
1.1 Background	1
1.2 Services Considered	1
2 Potable Water.....	2
3 Sewer	3
4 Electricity	4
5 Gas.....	5
6 Telecommunications.....	6
7 Qualification.....	7

Appendices

Appendix A Infrastructure Services Plan

Appendix B Service Authority Correspondence

1 INTRODUCTION

1.1 BACKGROUND

WGA has been engaged to provide advice relating to an external services investigation for the rezoning of deferred urban land to residential (neighbourhood zone). The subject land is located on Port Elliot Rd and abuts Basham Beach Rd to the west, Mindacowie Tce to the East and a rail corridor to the South. The site is approximately 9ha in size.

The development concept plan is provided in Appendix A along with adjacent existing services.

Email correspondences with service authorities is included in Appendix B.

1.2 SERVICES CONSIDERED

The assessment has been undertaken in consultation with the service authorities mentioned below and using Dial Before You Dig (DBYD) information and the SA Government's Location SA Map viewer.

The infrastructure considered as part of this preliminary investigation includes:

- Potable water (SA Water)
- Sewer
- Electricity (SA Power Networks)
- Gas; and
- Telecommunications (Telstra, NBN and NEXTGEN).

2 POTABLE WATER

The following potable water infrastructure are in the vicinity of the development area:

- A 450 MSCL potable water main on Port Elliot Rd;
- A 150 AC potable water main on Basham Beach Rd;
- A 100 AC potable water main on Mindacowie Tce.

SA Water's feedback dated 6/06/2022:

(SA Water) did investigate this site in 2019 for 150 lots (north land also) and it was determined that no headworks or augmentation work was required to service this site. I don't believe this would have changed at all but can be investigated when you are ready to proceed. There were some onsite meters that needed removing etc, but the system had the capacity overall.

Your details on pipe locations and sizes are accurate also.

In summary, the existing potable network located at the development area has sufficient capacity to service the development with no headworks required. Further details such as connection point/s to the SA Water network and new pipe sizes will be confirmed in detailed design.

3 SEWER

There is no SA Water sewer infrastructure in the vicinity of the development area. The closest connection point to SA Water infrastructure is located at Chiton, over 5 km away from the development site. In addition, there is no CWMS infrastructure in the vicinity of the development area.

Since connection to existing sewer infrastructure is impractical, the properties of the development will be installed with onsite wastewater systems. Council approval is required for any wastewater works that are not serviced by SA Water. It is noted that the development lots have been adequately sized to enable the installation of a septic tank or onsite wastewater treatment.

4 ELECTRICITY

The following services are within the development area:

- A 11 kV overhead main on Port Elliot Rd;
- A 11 kV overhead main on Basham Beach Rd;
- 11 kV underground mains at Port Elliot Road and Goolwa Road intersection;
- A 11 kV overhead and underground main on Mindacowie Tce.

SAPN's feedback dated 19/08/2021:

- *The information on the attached PDF appears incomplete but you have captured all our relevant infrastructure on your Infrastructure Service Plan.*
- *There would be sufficient capacity in the existing infrastructure to support this development. We would require an 11kV on Port Elliot Rd and Basham Beach Rd. This development would require 2 x 315kVA pad transformers installed to supply this new load.*
- *No head works would be required, and augmentation would be charge at the standard rate that is reviewed and changes annually.*
- *There are no trigger points within the infrastructure where significant costs/upgrades will be required.*

Connection to the lot will likely be undertaken by SAPN as non-contestable works. Costs for connection will be confirmed through an application to SAPN for a firm offer.

Internal electrical reticulation including transformers, cabling and public lighting would be undertaken by the developer once the development proceeds.

5 GAS

There is no reticulated gas infrastructure in the vicinity of the development site. Therefore, reticulated gas will not be available to the site. Individual sites will require gas bottles if gas is required.

6 TELECOMMUNICATIONS

The development site is surrounded by NBN infrastructure. According to Aussie Broadband Limited, the address is eligible for high-speed broadband on the NBN network.

NBN's feedback dated 18/08/2021:

The proposed development is within the existing NBN fixed line network footprint so there would likely be no backhaul charges (subject to confirmation of lot count) to service this development with Fibre to the Premises (FttP) services with capacity to cater for residential grade connections. If required, we can also explore the availability of enterprise grade 1Gbps ethernet services.

A standard capped per premises contribution would apply to service the development (invoiced on a stage-by-stage basis). We will review this contribution charge subject to further discussions on the developers' requirements as well as other current and future developments with NBN.

Under our standard Master Developer Agreement, the developer would be responsible for the design and construct of the pit and pipe to NBN guidelines.

This advice excludes the cost of moving any existing NBN assets that may need to be relocated to service the development as well as any assets within the development boundary that need to be relocated as part of the site works. Dial Before You Dig info will indicate any NBN assets that may clash with the proposed development. Further details on asset relocations (including obtaining a quote) can be found at <https://www.nbnco.com.au/develop-or-plan-with-the-nbn/relocation-works>. We could also potentially minimise any of these costs by allowing pit and pipe for the asset relocation to be designed and built under a Master Developer Agreement.

In addition:

- *I can confirm that the NBN infrastructure has sufficient capacity to service the 52-lot development without issue.*
- *As above, I can confirm the feasibility suggests no backhaul costs. However, we will need to ensure that there are no NBN asset relocation costs.*
- *As above, the only real additions I can see are the possible costs associated with relocation of any existing assets.*

There is an existing NBN/Telstra service that runs along the inside of the southern boundary of the development site. Although engineering survey will confirm service alignment, it is likely contained within the proposed shared path. If, however, the service is later confirmed to be within properties, it will need to be relocated by Telstra at developer's expense.

7 QUALIFICATION

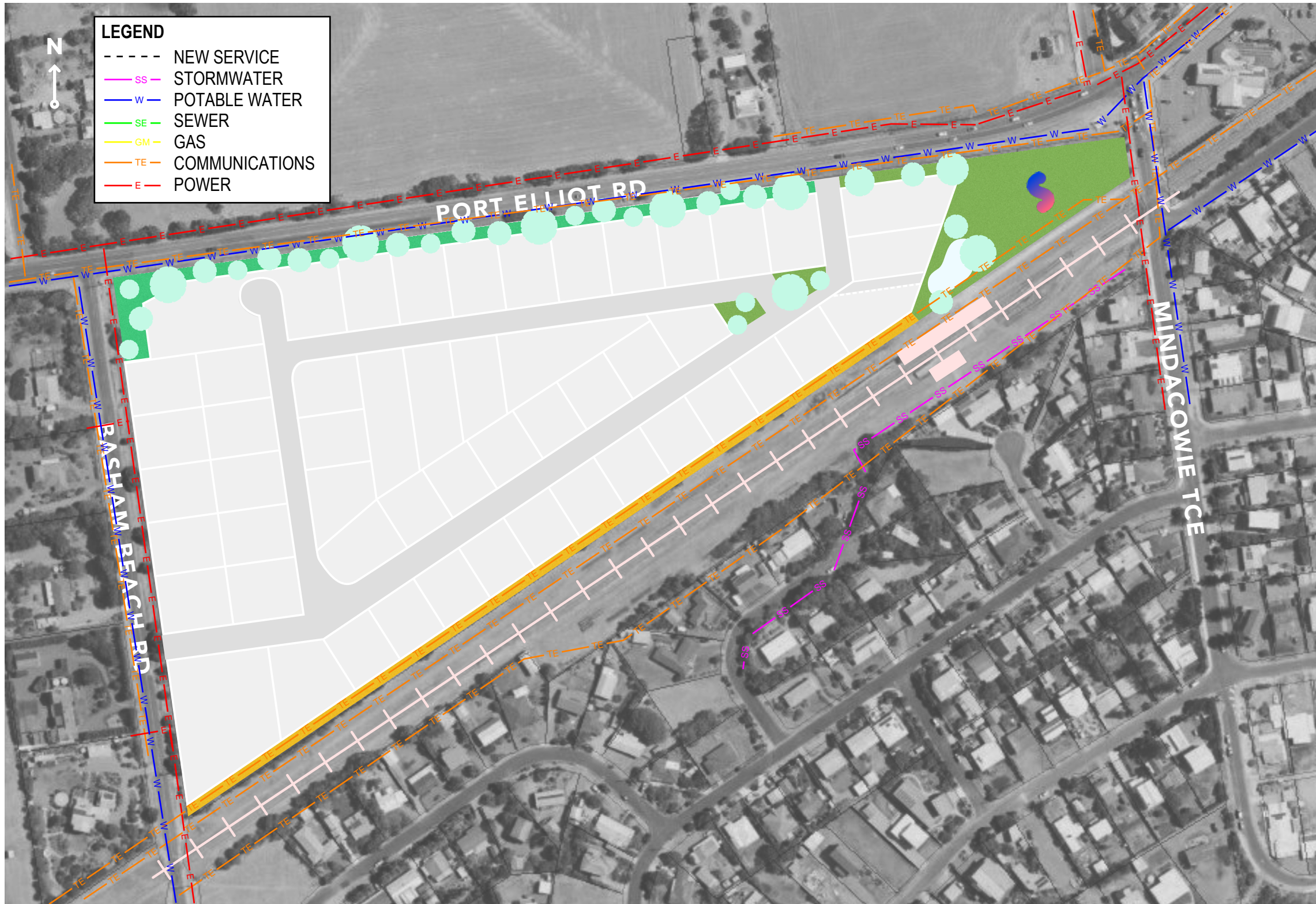
This services review is provided by WGA for information only and has been developed upon information available in undertaking the desktop assessment. WGA does not accept any responsibility or liability arising from discrepancies or changes required to service the site including any subsequent advice change from service authorities or Council.

It is possible that changes or modifications to the recommendations may occur following detailed discussion with respective service authorities and if other nearby developments occur.

APPENDIX A

INFRASTRUCTURE SERVICES PLAN





- LEGEND**
- NEW SERVICE
 - SS STORMWATER
 - W POTABLE WATER
 - SE SEWER
 - GM GAS
 - TE COMMUNICATIONS
 - E POWER

LEGEND

- Allotment
- Easement
- Road
- Reserve
- Vegetated Screening
- Bicycle/Walking Reserve
- Ⓢ Playground
- Pond
- Trees
- Train Platform
- Train Track

Proposed Concept Plan

Middleton Rezoning

LOT 104 PORT ELLIOT RD &
LOT 105 MINDACOWIE TCE

52 Allotments

February 2022
Scale 1:3000



APPENDIX B

SERVICE AUTHORITY CORRESPONDENCE



Robert Dixon

From: Grapentin, Corey <Corey.Grapentin@sawater.com.au>
Sent: Monday, 6 June 2022 2:17 PM
To: Robert Dixon; Majorld
Cc: Simon Abboud
Subject: RE: Lot 104 Port Elliot Road - Services Feasibility - SAW

Follow Up Flag: Follow up
Flag Status: Completed

Hi Robert,

Whilst this isn't "current" advice, we did investigate this site in 2019 for 150 lots (north land also) and it was determined that no headworks or augmentation work was required to service this site. I don't believe this would have changed at all but can be investigated when you are ready to proceed. There were some onsite meters that needed removing etc but the system had the capacity overall.

Your details below on pipe locations and sizes is accurate also.

Regards,

Corey Grapentin

Account Manager, Development Services

corey.grapentin@sawater.com.au • 7424 1633 • 0414 661 277
250 Victoria Square/Tarntanyangga ADELAIDE SA 5000



sawater.com.au



SA Water respects and acknowledges the deep spiritual connection, knowledge and relationship Aboriginal and Torres Strait Islander people have to land and water.

From: Robert Dixon <RDixon@wga.com.au>
Sent: Tuesday, 31 May 2022 5:07 PM
To: Majorld <majorld@sawater.com.au>
Cc: Simon Abboud <SAbboud@wga.com.au>
Subject: FW: Lot 104 Port Elliot Road - Services Feasibility - SAW



External sender
Think before you click, open with caution

Hi Major Land Development Team,

I've just been notified that Debbie has retired from SA Water.

Please refer below request.

Please contact me if you require any further information.

Thank you,
Robbie

From: Robert Dixon
Sent: Tuesday, 31 May 2022 5:03 PM
To: Snoswell, Debbie <Debbie.Snoswell@sawater.com.au>
Cc: Majorld <majorld@sawater.com.au>; Simon Abboud <SAbboud@wga.com.au>
Subject: Lot 104 Port Elliot Road - Services Feasibility - SAW

Hi Debbie,

We have been engaged to undertake concept feasibility work for the above-mentioned project.

After our desktop review, we understand that the SAW infrastructure within the area includes:

- A 450 MSCL potable water main on Port Elliot Road;
- A 150 AC potable water main on Basham Beach Road;
- A 100 AC potable water main on Mindacowie Terrace.

To assist our feasibility assessment, could you please advise:

- If the above and attached DBYD information obtained is complete and correct;
- If the SAW infrastructure has sufficient capacity to service the 52-lot development;
- If any augmentations or headworks are required and applicable costs; and
- Any trigger points within the infrastructure where significant costs/upgrades will be required.

Please contact me if you require any further information.

Thank you,
Robbie

From: DBYD - SA Water <dbyd@1100.com.au>
Sent: Friday, 13 May 2022 1:01 PM
To: Robert Dixon <RDixon@wga.com.au>
Subject: DBYD - Job 31938776 - Referral 211341931 - 29 Encounter Crescent

This content was sent by email from SA Water in response to your Dial Before You Dig enquiry.

Original subject DBYD Response for Job No 31938776, Sequence No 211341931 - 29 Encounter Crescent, Middleton

Original sender DBYD3@SAWater.com.au

Received 13 May 2022 1:00:46pm ACST

Robert Dixon

From: Andrew Harding <Andrew.Harding@sapowernetworks.com.au>
Sent: Friday, 13 May 2022 2:15 PM
To: Robert Dixon
Subject: FW: Lot 104 Port Elliot Road - Services Feasibility - SAPN
Attachments: Infrastructure Services Plan.pdf; 210278658.pdf

Hi Robert

I can confirm that your desktop scoping of our existing infrastructure is correct.

- If the above and attached DBYD information obtained is complete and correct; **The information on the attached PDF appears incomplete but you have captured all our relevant infrastructure on your Infrastructure Service Plan.**
- If the SAPN infrastructure has sufficient capacity to service the 52-lot development; **There would be sufficient capacity in the existing infrastructure to support this development. We would require an 11kV on Port Elliot Rd and Basham Beach Rd. This development would require 2 x 315kVA pad transformers installed to supply this new load.**
- If any augmentations or headworks are required and applicable costs; and **No head works would be required and augmentation would be charge at the standard rate that is reviewed and changes annually.**
- Any trigger points within the infrastructure where significant costs/upgrades will be required. **No**

Regards

Andrew Harding
Network Project Officer

Direct: 08 8275 0918
Mobile: 0429 144 467
Facsimile: 08 8275 0901
andrew.harding@sapowernetworks.com.au

33 Ayliffes Road, St Marys SA 5042
www.sapowernetworks.com.au



From: Luke Georgeff <Luke.Georgeff@sapowernetworks.com.au>
Sent: Monday, 2 May 2022 8:18 AM
To: rdixon@wga.com.au
Cc: Simon Abboud <sabboud@wga.com.au>; LLukanov@wga.com.au; Steven Pearsons <Steven.Pearsons@sapowernetworks.com.au>
Subject: FW: Lot 104 Port Elliot Road - Services Feasibility - SAPN

Hi Robert,

Thank you for your enquiry, for future enquires can you please submit through the SA Power Networks website, www.sapowernetworks.com.au, Connections Tab> Request a Quote.

By lodging this way it will go to the correct group/Customer Solutions Manager.

Hi Steve,

Can you please assign to a team member in the St Marys team.

Kind Regards,

Luke Georgeff

Senior Network Project Officer – Southern Suburbs & Fleurieu

Mobile: 0418 413 325

luke.georgeff@sapowernetworks.com.au

33 Ayliffes Road, St Marys SA 5042

www.sapowernetworks.com.au



From: Robert Dixon <RDixon@wga.com.au>

Sent: Sunday, 1 May 2022 1:59 PM

To: Charles Donovan <Charles.Donovan@sapowernetworks.com.au>; Luke Georgeff <Luke.Georgeff@sapowernetworks.com.au>

Cc: Simon Abboud <sabboud@wga.com.au>; Lyubomir Lukanov <LLukanov@wga.com.au>

Subject: Lot 104 Port Elliot Road - Services Feasibility - SAPN

External email! - Think before you click.

Hi Charles/Luke,

We have been engaged to undertake concept feasibility work for the above-mentioned project.

After our desktop review, we understand that the SAPN infrastructure within the area includes:

- A 11 kV overhead main on Port Elliot Road;
- A 11 kV overhead main on Basham Beach Road;
- 11 kV underground mains at Port Elliot Road and Goolwa Road intersection;
- A 11 kV overhead and underground main on Mindacowie Terrace.

To assist our feasibility assessment, could you please advise:

- If the above and attached DBYD information obtained is complete and correct;
- If the SAPN infrastructure has sufficient capacity to service the 52-lot development;
- If any augmentations or headworks are required and applicable costs; and
- Any trigger points within the infrastructure where significant costs/upgrades will be required.

Please contact me if you require any further information.

Thank you,
Robbie

Robert Dixon

From: .DPLH \$QJ ~NDPLHDQJ#QEQFR FRP DX!
Sent: 7KXUVGD\ " 0D\ ~ \$0
To: 5REHUW 'L[RQ° 6FRWW 0DWWKHZV° (PPDQXHO &KDODF
Cc: 6LPRQ \$EERXG
Subject: 5(/RW 3RUW (OOLRW 5RDG 6HUYLEFHV)HDVLELOL
Attachments: ,QIUDVWUXFWXUH 6HUYLEFHV 3ODQ SGI° ^^^^B

NBN Classification - Commercial

Hey Robbie,

The proposed development is within the existing NBN fixed line network footprint so there would likely be no backhaul charges (subject to confirmation of lot count) to service this development with Fibre to the Premises (FtTP) services with capacity to cater for residential grade connections. If required, we can also explore the availability of enterprise grade 1Gbps ethernet services.

A standard capped per premises contribution would apply to service the development (invoiced on a stage by stage basis). We will review this contribution charge subject to further discussions on the developers requirements as well as other current and future developments with NBN.

Under our standard Master Developer Agreement the developer would be responsible for the design and construct of the pit and pipe to NBN guidelines.

This advice excludes the cost of moving any existing NBN assets that may need to be relocated to service the development as well as any assets within the development boundary that need to be relocated as part of the site works. Dial Before You Dig info will indicate any NBN assets that may clash with the proposed development. Further details on asset relocations (including obtaining a quote) can be found at <https://www.nbnco.com.au/develop-or-plan-with-the-nbn/commercial-works>. We could also potentially minimise any of these costs by allowing pit and pipe for the asset relocation to be designed and built under a Master Developer Agreement.

As for your points below:

- If the above and attached DBYD information obtained is complete and correct; - @Emmanuel Chalacas will need to confirm this.
- If the NBN infrastructure has sufficient capacity to service the 52-lot development; - I can confirm that we can cater for this number of services without issue
- If any augmentations or headworks are required and applicable costs; and – As per above statement, I can confirm the feasibility suggests no backhaul costs, but @Emmanuel Chalacas will need to ensure there are no Q E @asset relocation costs
- Any trigger points within the infrastructure where significant costs/upgrades will be required. – As above, the only real additions I can see are the possible costs associated with relocation of any existing assets.

Hopefully this covers off the high level information you're after, but please let me know if you have any further questions. @Emmanuel Chalacas would you mind doing a check on the DBYD and site docs attached to give Robbie some comfort around any additional costs that may be in play with relocations?

Kind Regards,

Kamie Ang
Senior Account Manager (WA/SA/NT), New Developments

M +61 429 688 612 | E kamieang@nbnco.com.au

4/202 Pier St, Perth, Western Australia, 6000

Noongar Country



nbn acknowledges and pays respects to the traditional custodians of all the lands upon which we work.

Notice to recipient: This e-mail is intended only to be read or used by the addressee. It is confidential and may contain information that is subject to legal professional privilege or protected by copyright. If you are not the addressee indicated in this message (or responsible for delivery of the message to that person), you may not copy or deliver this message to anyone, and you should destroy this message and kindly notify the sender by reply e-mail. Copyright, confidentiality and legal professional privilege are not waived or lost by reason of mistaken delivery to you. Emails to/from nbn co limited ABN 86 136 533 741 may undergo email filtering and virus scanning, including by third party contractors, however, nbn co limited does not guarantee that any email or any attachment is secure, error-free or free of viruses or other unwanted or unexpected inclusions. Any views expressed in this message are those of the individual sender, except where the sender specifically states them to be the views of nbn co limited.

PLEASE CONSIDER OUR ENVIRONMENT BEFORE PRINTING

From: Robert Dixon <RDixon@wga.com.au>
Sent: Sunday, 1 May 2022 12:17 PM
To: Kamie Ang <kamieang@nbnco.com.au>; Scott Matthews <scottmatthews@nbnco.com.au>
Cc: Simon Abboud <SAbboud@wga.com.au>
Subject: [External] Lot 104 Port Elliot Road - Services Feasibility - NBN

Hi Kami/Scott,

We have been engaged to undertake concept feasibility work for the above-mentioned proposed project.

After our desktop review, we understand that NBN infrastructure is within direct vicinity of the site.

To assist our feasibility assessment, could you please confirm:

- If the above and attached DBYD information obtained is complete and correct;
- If the NBN infrastructure has sufficient capacity to service the 52-lot development;
- If any augmentations or headworks are required and applicable costs; and
- Any trigger points within the infrastructure where significant costs/upgrades will be required.

Please contact me if you require any further information.

Thank you,
Robbie

From: DBYD - NBN Co SANT <dbyd@1100.com.au>
Sent: Tuesday, 12 April 2022 6:13 PM
To: Robert Dixon <RDixon@wga.com.au>
Subject: DBYD - Job 31758874 - Referral 210278657 - Lot 104 Port Elliot Road

This content was sent by email from NBN Co SANT in response to your Dial Before You Dig enquiry.

Original subject DBYD JOB:31758874 SEQ:210278657 - Lot 104 Port Elliot Road , Middleton , SA , 5213 email(1/1)

Original sender DONOTREPLY@nbnco.com.au



WALLBRIDGE GILBERT
AZTEC

Robbie Dixon
CIVIL ENGINEER

Telephone: 8223 7433

Email: rdixon@wga.com.au

ADELAIDE

60 Wyatt St
Adelaide SA 5000
Telephone: 08 8223 7433
Facsimile: 08 8232 0967

MELBOURNE

Level 2, 31 Market St
South Melbourne VIC 3205
Telephone: 03 9696 9522

PERTH

Level 1, 66 Kings Park Road
West Perth WA 6005
Telephone: 08 9336 6528

BRISBANE

Ground Floor, 154 Melbourne Street
South Brisbane QLD 4101
Telephone: 07 3519 5555

DARWIN

Suite 7/9 Keith Ln
Fannie Bay NT 0820
Telephone: 08 8941 1678
Facsimile: 08 8941 5060

WHYALLA

1/15 Darling Tce
Whyalla SA 5600
Phone: 08 8644 0432

WALLBRIDGE GILBERT AZTEC

www.wga.com.au

Click and type email address
