Hyder

Utilities Strategy Report

SIMTA

SYDNEY INTERMODAL TERMINAL ALLIANCE

Transitional Part 3A Concept Plan Application

August 2013

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SIMTA

Moorebank Intermodal Terminal Facility

Utilities Strategy Report

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This report has been prepared for SIMTA in accordance with the terms and conditions of appointment dated 17 August 2010. Hyder Consulting Pty Ltd (ABN 76 104 485 289) cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

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Executive summary

To support the Concept Plan Application for the SIMTA proposal at Moorebank Avenue, Moorebank, an investigation of the utilities within the vicinity has been carried out.

The outcome of the investigation is that all necessary major utilities can be made available to service the SIMTA proposal. The extent of upgrades of existing utility provider assets and the connection are subject to detailed negotiations with utility providers at final design stage.

1 Introduction

The Sydney Intermodal Terminal Alliance (SIMTA) is a consortium of Qube Logistics and Aurizon. The SIMTA Moorebank Intermodal Terminal Facility (SIMTA proposal) is proposed to be located on the land parcel currently occupied by the Defence National Storage and Distribution Centre (DNSDC) on Moorebank Avenue, Moorebank, south west of Sydney. SIMTA proposes to develop the DNSDC occupied site into an intermodal terminal facility and warehouse/distribution facility, which will offer container storage and warehousing solutions with direct rail access to Port Botany. Construction of the rail connection from the SIMTA site to the Southern Sydney Freight Line (SSFL) will be undertaken as part of the first stage of works for the SIMTA proposal.

The SIMTA site is located in the Liverpool Local Government Area. It is 27 kilometres west of the Sydney CBD, 17 kilometres south of the Parramatta CBD, 5 kilometres east of the M5/M7 Interchange, 2 kilometres from the main north-south rail line and future Southern Sydney Freight Line, and 0.6 kilometres from the M5 motorway.

The SIMTA site, approximately 83 hectares in area, is currently operating as a Defence storage and distribution centre. The SIMTA site is legally identified as Lot 1 in DP1048263 and zoned as General Industrial under Liverpool City Council LEP 2008. The parcels of land to the south and south west that would be utilised for the proposed rail link are referred to as the rail corridor. The proposed rail corridor covers approximately 75 hectares and adjoins the Main Southern Railway to the north. The rail line is approximately 3.5 kilometres in length, 20 metres in width (variable width) and includes two connections to the SSFL, one south and one north.

The proposed rail corridor is owned by third parties, including the Commonwealth of Australia, RailCorp, private owners and Crown Land held by the Department of Primary Industries, and would link the SIMTA site with the Southern Sydney Freight Line. Existing uses include vacant land, existing rail corridors (East Hills Railway and Main Southern Railway), extractive industries, and a waste disposal facility. The rail corridor is intersected by Moorebank Ave, Georges River and Anzac Creek. Native vegetation cover includes woodland, forest and wetland communities in varying condition. The proposed rail corridor is zoned partly ‘SP2 Infrastructure (Defence and Railway)’ and partly ‘RE1 - Public Recreation’. The surrounding Commonwealth lands are zoned ‘SP2 Infrastructure (Defence)’.

This report details the strategy to provide utilities for the SIMTA proposal of a rail–truck intermodal terminal facility on the DNSDC site at Moorebank Avenue, Moorebank.

This report is intended to accompany the submission documents for a Concept Plan Application under the transitional Part 3A provisions of the *Environmental Planning and Assessment Act 1979*.

As a part of these investigations all relevant utility service providers were contacted in order for them to investigate the capacity of their existing networks to cater for the loading from the redeveloped site. These include:

- Sydney Water Corporation for potable water and sewer.
- Integral Energy for electrical supply.
- Jemena for gas supply.
- Telstra for telecommunications.

The following report aims to identify the following:

- Locations of existing utilities.
- The process of consultation with the utility service providers.

- The estimated demands from the developed site.
- The capacity of existing utility networks to cater for the SIMTA proposal.
- Upgrades to the existing utility networks that will be necessary to cater for the demands from the SIMTA proposal.

The site is currently used by Department of Defence for the Defence National Storage and Distribution Centre (DNSDC) and is currently serviced from the public utility networks through services which are currently Department of Defence owned assets.

The extent or scale of values likely to be affected as a result of the SIMTA proposal are outlined further within this report. The extent or scale refers to areas within the SIMTA site and rail link construction footprint. Design information regarding the location of the rail link within the rail corridor is not available at this time. As a result, the extent or scale of impacts have been estimated; potential impacts may be reviewed when design and siting studies are completed for the SIMTA project application stage. In preparing this report it has been assumed that ownership of these assets will not be transferred to the relevant utility providers and that the existing public utility networks in the vicinity will be extended to supply the SIMTA proposal. Figure 1 shows the site and surrounding main roads.

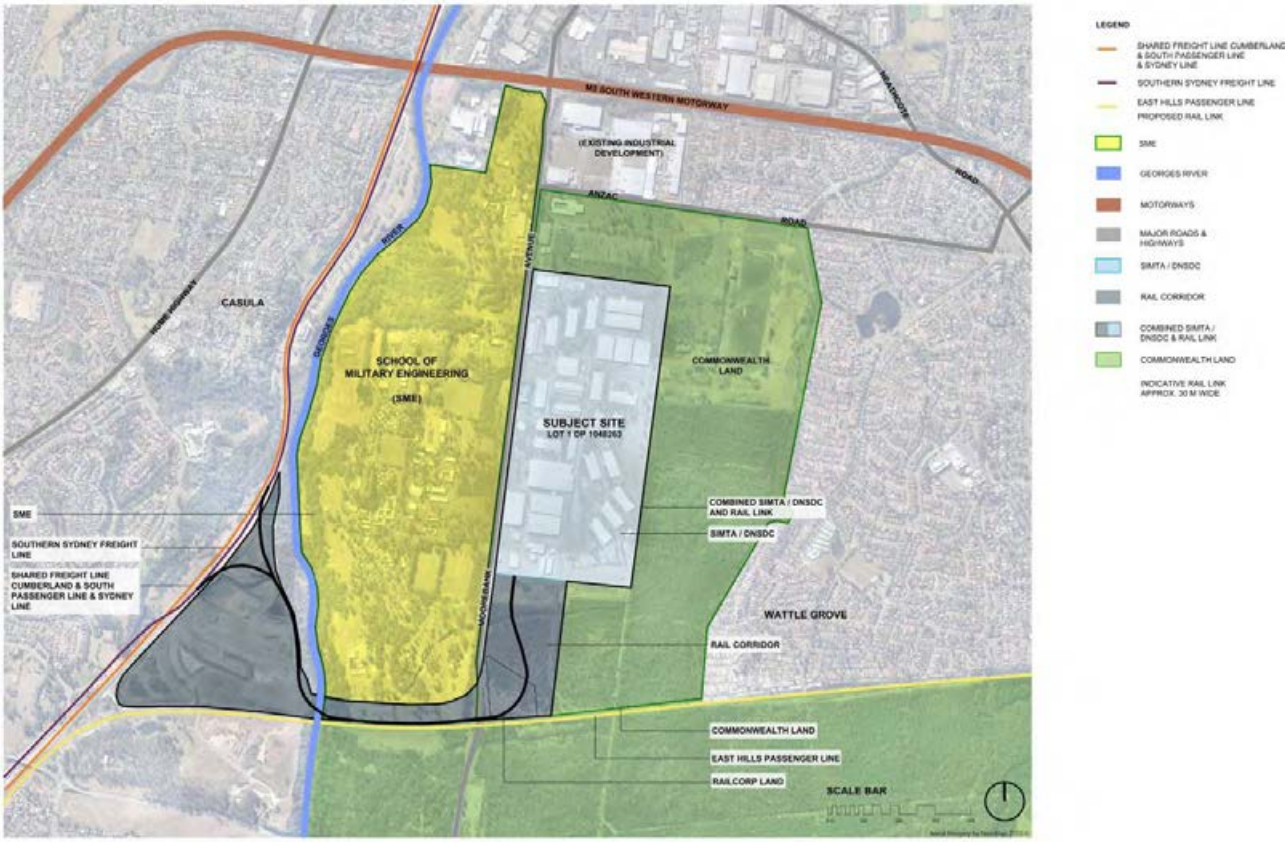

Figure 1: Moorebank intermodal terminal site

2 Utilities investigations

2.1 Existing utility networks

The existing utility networks supplying the current site were investigated and identified through the following sources:

- A review of recent reports undertaken for either SIMTA or Department of Defence relating to the following:
  - Existing network supply.
  - Potential future supply for a redeveloped site.
- A Dial Before You Dig services search.
- An inspection of the site and surrounding roads.
- Formal correspondence to each of the major utility providers, Sydney Water, Integral Energy, Jemena and Telstra requesting they review their existing network capacity:
  - Confirm that the redeveloped site can be serviced by that utility provider.
  - Advise on the capability of the existing network to cater for the demands.
  - Advise a point of connection to their existing network.
  - Advise on any upgrade to the existing network.
  - Advise on any requirements for land dedications or easements.

Copies of correspondence to each of the utility providers and their responses are located in Appendix B.

2.2 Utility providers responses

2.2.1 Sydney Water (SWC)

A formal enquiry was registered with Sydney Water eDeveloper in relation to supply to the SIMTA site.

A formal reply was issued on Thursday 21 October 2010 and is included in Appendix B.

A description of the existing assets and a summary of SWC's response are as follows:

Potable water

Existing assets

The existing potable water services in the vicinity of the SIMTA site include both SWC owned and Department of Defence (DoD) owned assets (refer Drawing No. CP032, Appendix A) and are as follows:

- A SWC owned 500 millimetres diameter main in Heathcote Road.
- A DoD owned 375 millimetres diameter lead in main from the above SWC asset, running in Anzac Road from the intersection with Heathcote Road to a booster pumping station in Greenhills Road reserve.

- A DoD owned 300 millimetres diameter main runs from the booster pumping station along Greenhills Road reserve to two DoD owned storage reservoirs located 800 m south of the East Hills railway line.
- A DoD owned 375 millimetres diameter ring main from the storage reservoirs which services existing DoD facilities in both the SIMTA site as well as the School of Military Engineering (SME) site on the western side of Moorebank Avenue. The Deposited Plan indicates that this main crosses the subject site via a formalised 7.5 metres wide easement for water supply.
- A 150 millimetres diameter main on the west side and a 100 millimetres diameter main on the east side of Moorebank Avenue. Both are indicated as privately owned (DoD) on the Sydney Water network diagrams.

Drawing CP032-AA003210-01 of Appendix A shows the location of the proposed mains and existing private and public water supply infrastructure.

Sydney Water response to application

SWC's response dated Thursday 21 October 2010, advises that:

> "Sydney Water has sufficient capacity within the Liverpool water system to service the SIMTA proposal."

And further advises that the water supply for the SIMTA site will be provided from the 500 mm water main at the corner of Anzac Road and Heathcote Road.

Anticipated construction impacts

Installation of the proposed water mains would be below ground within the road reserve of Greenhills Road and Anzac Road, connecting to the mains on Heathcote Road. Works associated with installation are likely to include trenching work and temporary shutdown of the water main on Heathcote Road during tie-in works. Any tie in works would be coordinated with Sydney Water to minimise inconvenience to surrounding residences. Trenching works within the road reserves would also be timed and managed to minimise disruptions to traffic.

Sewer

Existing assets

The SIMTA site is currently serviced by DoD owned wastewater infrastructure which discharges to the Liverpool sewerage system via SWC SPS 1094.

The existing SWC sewer assets (refer Drawing No. CP031, Appendix A) which form part of the Liverpool sewerage system in the vicinity of the SIMTA site include:

- A 375 millimetres diameter gravity sewer in Greenhills Road reserve.
- A 375 millimetres diameter gravity sewer in Moorebank Avenue.
- A 300 millimetres diameter gravity sewer in Australia Avenue, Wattle Grove.

Sydney Water response to application

SWC's response dated Thursday 21 October 2010, advises that:

> "Sydney Water will permit the transfer of flow from the SIMTA proposal site and connection to a Sydney Water sewer."

To service the SIMTA site, there will be a requirement to extend the existing SWC sewer network. The particular SWC sewer asset and the connection location will be subject to ongoing

design development and identification of a SWC approved servicing option. This servicing option may involve an extension of an existing gravity main or construction of a new pumping station and associated rising main. Drawing CP-031-AA003210-01 of Appendix A shows the possible location of a pump station (if required), the existing rising mains and proposed rising mains.

Anticipated construction impacts

Installation of the proposed rising mains would be below ground within the easement of Greenhills Road, connecting to the mains within the relocated DNSDC site. Works associated with installation are likely to include trenching work and temporary shutdown of the rising main through the DNSDC site during tie-in works. Any tie in works would be coordinated with DNSDC and Sydney Water to minimise inconvenience to DNSDC operations.

2.2.2 Electrical supply

A formal enquiry was registered with Integral Energy in relation to supply to the SIMTA site (Reference No. ENL 1330). A formal reply was received on Monday 23 August 2010 and a copy is included within Appendix B.

A summary of the Integral Energy advice is as follows:

Existing assets

An existing Integral Energy Zone Substation (Anzac Village Substation) is located at the corner of Anzac Road and the Greenhills Road reserve (refer Drawing No. CP030, Appendix A).

The existing site is supplied as a high voltage customer (HC4391).

Integral Energy response to application

Integral Energy has advised that they are able to provide supply from the existing Anzac Village Substation.

To make a supply available to the SIMTA site, the existing high voltage supply must be disconnected.

The SIMTA site will be supplied as a low voltage tariff customer. The service will be supplied via two new 11 kilovolts feeders, each comprising two 11 kilovolts 240-squared-millimetre copper cables from Anzac Village Zone Substation.

To cater for the staging of the SIMTA site, the proposed concept is to install one of the new feeders along Anzac Road and Moorebank Road to the southern end of the site and the second in Greenhills Road, thereby providing supply to both sides of the SIMTA site. Drawing CP030-AA003210-01 of Appendix A shows the location of the proposed substation and the new feeders.

Anticipated construction impacts

Installation of the proposed new feeder lines to the SIMTA site would be below ground within the road reserve of Greenhills Road and Moorebank Avenue, connecting to the existing substation within the relocated DNSDC site. Works associated with installation are likely to include trenching work and temporary shutdown of the substation during tie-in works. Any tie in works would be coordinated with DNSDC and Integral Energy to minimise inconvenience to DNSDC operations and conform to Integral Energy's stringent safety standards. Works within the public road reserves would be managed to minimise disruption to traffic.

2.2.3 Gas

A meeting was held with Jemena Gas Networks on Wednesday 30 June 2010 to discuss the feasibility of supply of gas to the SIMTA site. Formal correspondence was received on Monday 5 July 2010 and a copy is included within Appendix B.

A summary of the Jemena advice is as follows:

Existing assets

Jemena has advised that they have the following assets in the area (refer Drawing No. CP033, Appendix A):

- A 75 millimetres Nylon medium pressure natural gas main operating at about 210 kilopascal is located in Moorebank Avenue, adjacent to the site.
- A High Pressure 1050 kilopascal steel network is located in Moorebank Avenue, to the north of the SIMTA site terminating at Bapaume Road.

Drawing CP033-AA003201-01 of Appendix A shows the location of the existing gas infrastructure in the area.

Anticipated construction impacts

Installation of the proposed gas main linkages would be below ground within the road reserve of Moorebank Ave and leading into the SIMTA site. Works associated with installation are likely to include trenching work and temporary shutdown of the gas main that follows Moorebank Ave during tie-in works. Any tie in works would be coordinated with Jemena to minimise inconvenience to surrounding residences and meet Jemena's stringent safety standards.

Jemena response to application

Two types of supply may be possible:

The 75 millimetres main in Moorebank Avenue is suitable for light commercial applications and a connection can be provided at any location along the length of the site to suit the SIMTA site.

The high pressure main at Bapaume is capable of supplying an alternative energy source such as co- or tri-generation. Should the gas load and capital outlay meet Jemena's economic viability model, the infrastructure will be supplied by Jemena at no cost.

2.2.4 Telstra

Existing Telstra assets are located in Moorebank Avenue and Anzac Road.

A formal application has been made through the Telstra Smart Communities website on Wednesday 30 June 2010 (Reference No. 12038535).

Telstra has verbally advised that this area has been reviewed by their planners previously and that communications services can be provided to the SIMTA site.

Telstra have issued a Telecommunications Network Infrastructure Notification dated Wednesday 27 July 2011 for the SIMTA project. A copy is included within Appendix B.

2.2.5 AGL Upstream Investments Pty Ltd

The SIMTA site is located in an area over which AGL Upstream hold an exploration licence for Coal Seam Gas.

Greg Ives, of Hyder Consulting, met with Adam Lollback and Andrew Farley of AGL on Wednesday 6 July 2011 as part of the consultation process with service and infrastructure providers. Subsequent to the meeting, Hyder Consulting provided details of the SIMTA proposal for review by AGL.

An email response was received from Adam Lollback on Tuesday 9 August 2011 confirming that AGL have no immediate plans for the SIMTA site. A copy of this correspondence is included in Appendix B.

3 Summary

All standard utility services are available to service the SIMTA site.

Some lead in works and possibly some network upgrade works will be required. Sketches CP030, CP031, CP032 and CP033 (refer Appendix A) indicate the location of relevant existing utility assets and potential connection to service the SIMTA site. Lead in infrastructure works would predominantly occur within road reserves, including Greenhills Road, Anzac Road and Moorebank Ave. Works would be managed to minimise impacts on utility providers, surrounding residences and to meet the stringent safety requirements of the utility operators and to comply with the notification requirement for each utility provider. Vegetation clearing are not predicted for installation of these works. These works will be subject to ongoing discussions with the utility provider and will be undertaken at the cost of SIMTA proposal.

Appendix A

Drawings

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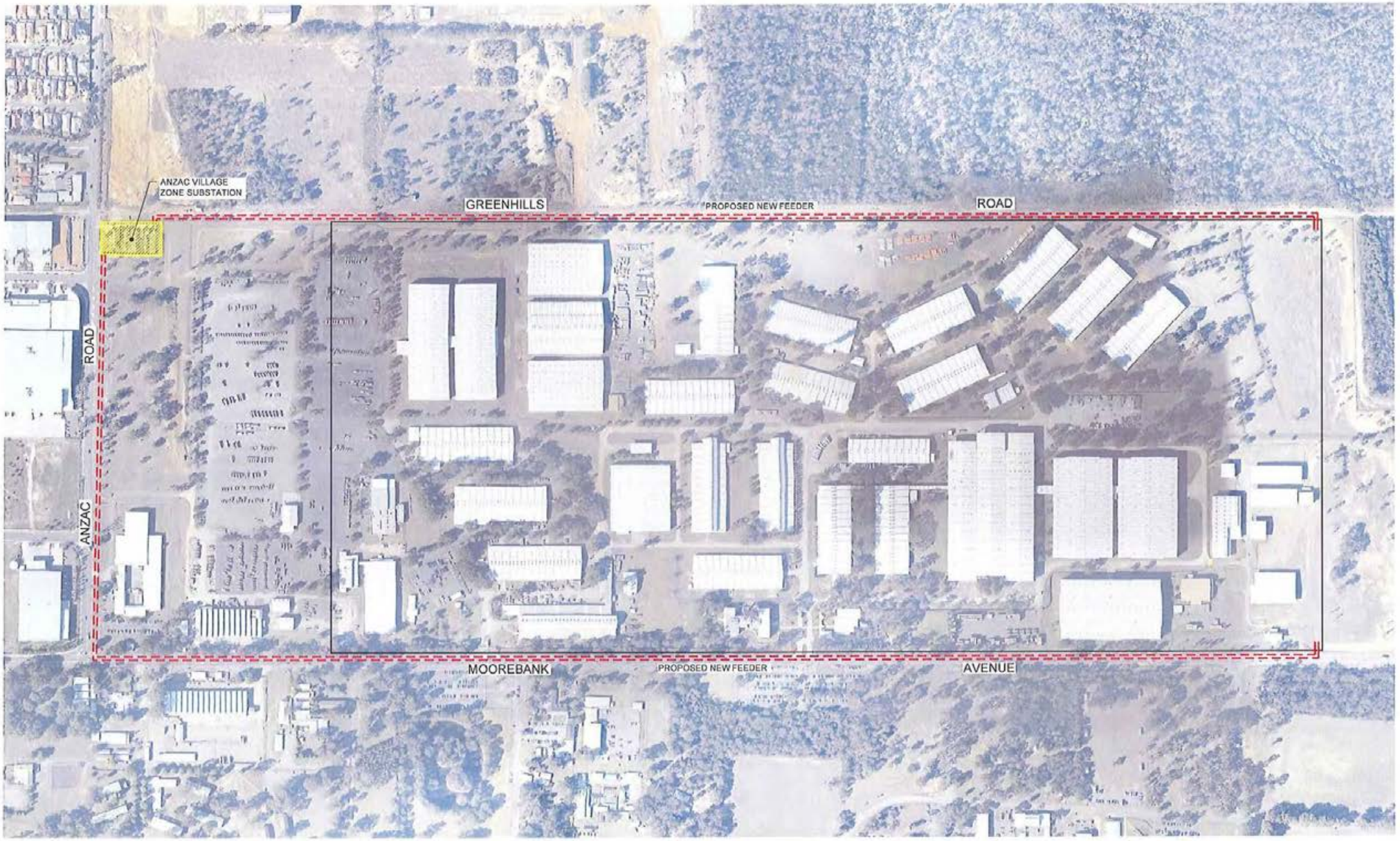

Issue	Description	Date
01	ISSUE FOR REVIEW	03/09/10

Client: SIMTA

Status: PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

		Current Issue Signatories	
Scales	NTS	Drawn	D BALL
Original Size	A1	Designed	D WHITEVERS
Height Datum	AHD	Checked	G IVES
Grid	MGA	Approved	R SMITH
Eliginha			

Project: SIMTA MOOREBANK INTERMODAL TERMINAL FACILITY

Title: PROPOSED CONNECTION TO EXISTING ELECTRICAL

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Drawing No	Project No	Issue
CP030	AA003210	01

Date Plotted: 3 Sep 2010 - 02:30PM File Name: P:\AA003210\E-CABLE-C...\SC-Group\CP030-AA003210-A00-03-CP-Proposed_Electrical.dwg

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Issue	Description	Date
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Status: PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

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Original Size	A1	Designed	S HUNTSLVERE
Height Datum	AHD	Checked	G NES
Grid	MGA	Approved	B SMITH

Filename:

Project: SIMTA MOOREBANK INTERMODAL TERMINAL FACILITY

Title: PROPOSED CONNECTION TO EXISTING SEWER

HYDER CONSULTING PTY LTD
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Drawing No.	Project No.	Issue
CP031	AA003210	01

Date Plotted: 3 Sep 2013 - 02:20PM File Name: P:\AA003210\04-CAD\C-Civil\Concept\CP031-AA003210-S00-03-CP-Proposed_Sewer.dwg

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01	ISSUE FOR REVIEW		GB/DB/KL
Issue	Description		Date

Client: SIMTA

Status: PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Scales	NTS	Current Issue Signatures	
		Drawn	1: SMS
Original Size	A1	Designed	2: MONTELEVERDE
Height Datum	AHD	Checked	3: VES
Grid	MGA	Approved	4: SMITH

Filename:

Project: SIMTA MOOREBANK INTERMODAL TERMINAL FACILITY

Title: PROPOSED CONNECTION TO EXISTING WATER

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Drawing No.	Project No.	Issue
CP032	– AA003210 –	01

Date Plotted: 3 Sep 2010 - 09:32PM File Name: P:\AA\003210\04_CAD\02_Concept\CP032-AA003210-04-CD-Proposed_Water.dwg V1

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01	ISSUE FOR REVIEW	03/09/10
Issue	Description	Date

Client: SIMTA

Status: PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

		Current Issue Signatures	
Scales	NTS	Drawn	D. BALL
Original Size	A1	Designed	D. HINTON/L.WEBB
Height Datum	AHD	Checked	G. IVES
Grid	MGA	Approved	B. SMITH

Filename:

Project: SIMTA MOOREBANK INTERMODAL TERMINAL FACILITY

Title: PROPOSED CONNECTION TO EXISTING GAS

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Drawing No	Project No	Issue
CP033	AA003210	01

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Appendix B

Correspondence

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George Gilto

From: Adam Lollback [ALollbac@agl.com.au]
Sent: 9 August 2011 7:18 PM
To: Greg Ives
Subject: RE: Moorebank

Hi Greg,

Apologies for the late response.

At present, AGL does not have any immediate plans in regards to the proposed Moorebank terminal site.

AGL does however reserve the rights pursuant to our exploration licences and production leases in the area.

I would appreciate being kept informed of the progress of your project.

Please contact me if you would like to discuss.

Regards,

Energy in action.

Adam Lollback
Land & Approvals Manager - Upstream Gas
AGL Energy Limited
L20, 101 Miller St
North Sydney NSW 2060
Locked Bag 1837 St Leonards NSW 2065
M: 0404 027 940
T: 02 9921 2017
F: 02 9921 2474
E: alollback@agl.com.au
www.agl.com.au

This email is intended solely for the use of the addressee and may contain information that is confidential or privileged. If you receive this email in error please notify the sender and delete the email immediately.

Please consider our environment before printing this email.

From: Greg Ives [mailto:Greg.Ives@hyderconsulting.com]
Sent: Tuesday, 19 July 2011 3:46 PM
To: Adam Lollback
Subject: Moorebank

Adam,

Attached correspondence as discussed

many thanks

Greg Ives
Principal Engineer

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Progressive engineering, environment and management solutions

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Telstra

Phone: 02 8907 9082
Facsimile:

Email: Greg.Ives@hyderconsulting.com
Attention: Greg Ives

Phone: 1800226543
Facsimile: 02 49249212
E-mail: F0516090@team.telstra.com

Our ref:

Your ref – Moorebank Road

27.07.2011

Dear Sir/Madam

TELECOMMUNICATIONS NETWORK INFRASTRUCTURE NOTIFICATION

Telstra Corporation Limited (Telstra) has received a request for telecommunications network infrastructure for the following development:

LOT NUMBERS REQUESTED FOR NETWORK	PLAN NUMBER
Lot 1403	DP848565

NAME OF DEVELOPMENT & LOCATION
Moorebank Road, Moorebank NSW 2170

The Government announced changes to its policies relating to the provision of infrastructure to new Developments on June 20. Details are available on http://www.dbcde.gov.au/broadband/national_broadband_network/policy_statements.

Telstra will work with NBN co and Government to assist in the implementation of these new policies.

In the interim and until further notice Telstra may provide pit and pipe infrastructure in shared trenches that are available. This arrangement will be reviewed and may change as changes to regulatory standards or further developments in the Government's plans for new developments and the NBN are released.

Additional works will still be required in order for telecommunications services to be provided in the development. At this time we advise that these works may be carried out by Telstra or other parties, and Telstra reserves the right to require a contribution from the proponent for the cost of those additional works that may be provided by Telstra.

To confirm whether Telstra has provisioned telecommunications network infrastructure at the proposed development, a Telecommunications Infrastructure Provisioning Confirmation Letter can be issued upon request.

Telstra is not responsible to any recipient of this notification or anyone else who relies upon this notification for any loss or damage suffered in connection with this notification and excludes, to the maximum extent permitted by law, any liability which may arise as a result of the issue of this notification or its content.

If you have any enquiries or require any further information, please contact me at the above address.

Yours sincerely ,

Wendy Clissold
Contractor|Ross managed Services|Data Services|Test and Fulfillment|
National Delivery Solution and Service Advantage

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Sydney WATER

Case Number: 120644

21 October 2010

HYDER CONSULTING AUST. P/L
c/- QALCHEK PTY LTD

FEASIBILITY LETTER

Developer:	**HYDER CONSULTING AUST. P/L**
Your reference:	**PM 7416**
Development:	**Lot 1 DP1048263 MOOREBANK AVE, Moorebank**
Development Description:	**Proposed Warehouse Development**
Your application date:	**19 July 2010**

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 Works Agreement (Agreement); 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, e.g. 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.

You have made an application for specific information. Sydney Water's possible requirements are:

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 > Building and Developing > Developing Your Land.

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 > Building and Developing > Developing Your Land 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. **Major Works Agreement**

   After the Coordinator has submitted your new application, they will receive the Sydney Water Notice and Works Agreement. You will need to sign and lodge **both originals** of that Agreement with your nominated Coordinator.

   The agreement sets out for this development:
   - your responsibilities;
   - Sydney Water's responsibilities; and
   - the Coordinator's responsibilities.

   You must do all the things that we ask you to do in that Agreement. This is because your development does not have water and sewer services and you must construct and pay for the following works extensions under this Agreement to provide these services.

   After Sydney Water has signed the documents, one of them will be returned to your Coordinator.
   Note: The Coordinator must be fully authorised by us for the whole time of the agreement.

4. **Water and Sewer Works**

   The servicing requirements detailed in this Letter are based upon information received from your Water Servicing Coordinator that you will be undertaking all aspects of this project as part of one development application as detailed on the page one of this Letter.

4.1 Water

Sydney Water has sufficient capacity within the Liverpool water system to service your development. You will be required to extend the existing water system to serve the proposed development and Sydney Water provides the following advise:

- The water supply for the development will be provided from the 500mm water main at the corner of Anzac Road and Heathcote Road.
- The watermain extension shall be designed to accommodate your development site and for the potential industrial redevelopment of the surrounding Moorebank military reserve.
- Both the water trunk and reticulation main to serve your development shall be sized according to the National Water Supply Code WSA 03 (Sydney Water Edition).
- All water mains shall have unrestricted access and be located in either public roads or easements if located in private roads or Commonwealth property.
- Sydney Water will not accept water mains within a single ownership enterprise.
- Sydney Water will consider the handover of private water mains that are quality assured and configured with Sydney Water network.

4.2 Sewer

The Commonwealth owned wastewater infrastructure and discharges to the Liverpool sewerage system via SPS 1094 currently services the development site.

Sydney Water will permit the transfer of flow from the proposed development site and connection to a Sydney Water sewer.

To do this Sydney Water advises you of the following:

- Preliminary investigation has identified the following potential connection points to service your development:
  - 375 mm gravity sewer in Green Hills Road,
  - 375 mm gravity sewer in Moorebank Avenue,
  - 300 mm gravity sewer in Australis Avenue, Wattle Grove
- To service your development you may need to extend the existing Sydney Water sewer network.
- Subject to the approved servicing option, your development will either require a gravity extension or sewer pumping station and associated sewer rising main. Amplification of the existing trunk sewer mains may be required. Note that building pumping station take considerable time.
- Clarification needs to be provided as to the development land to be served. The

proposed works may need to be designed to accommodate your development site and the potential industrial redevelopment of the surrounding Moorebank military reserve.

- Both the sewer trunk and reticulation mains to serve your development shall be sized according to the appropriate Water Service Association Code to suit the type of sewage collection technology adopted. The technology used must be compatible for the entire catchment and represent low life-cycle cost.
- A privately owned and operated transfer solution will also be considered.
- All sewer mains shall have unrestricted access and be covered by easements if traversing through Commonwealth property.
- Sydney Water will not accept sewer mains within a single ownership enterprise.

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.

5.3 Costs

Construction of these **future** works will require you to pay project management, survey, design and construction costs **directly to your suppliers**. Additional costs payable to Sydney Water may include:

- water main shutdown and disinfection;
- connection of new water mains to Sydney Water system(s);
- design and construction audit fees;
- contract administration, Operations Area Charge & Customer Redress prior to project finalisation;

- creation or alteration of easements etc; and
- water usage charges where water has been supplied for building activity purposes prior to disinfection of a newly constructed water main.

Note: Payment for any Goods and Services (including Customer Redress) provided by Sydney Water will be required prior to the issue of the Section 73 Certificate or release of the Bank Guarantee or Cash Bond.

Your Coordinator can tell you about these costs.

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.

Other fees and requirements

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

- construction/building plan stamping fees;
- 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

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Ryan Smith

From: Greg Saunders [GSaunders@connecteng.com.au]
Sent: 23 August 2010 12:49 PM
To: Greg Ives
Subject: FW: ENL1330 - Lot 1 DP 1048263, Moorebank Avenue, Moorebank
Attachments: FPJ4096 - Application for Connection of Load.pdf; FW: COMMERCIAL IN CONFIDENCE - Moorebank - Enquiry application; GS email 29-7-2010-FW MIMT Integral Energy Query.msg; Moorebank Intermodal Proposed Schematic.pdf

Greg

IE's response below

Regards
Greg Saunders

Connect Infrastructure
Tel: 9733 3333
Fax: 9733 3330
Mob: 0412 597 620
Email: gsaunders@connecteng.com.au

Website: www.connecteng.com.au

From: Peter Freckelton [mailto:Peter.Freckelton@integral.com.au]
Sent: Monday, 23 August 2010 12:27 PM
To: Greg Saunders
Subject: ENL1330 - Lot 1 DP 1048263, Moorebank Avenue, Moorebank

Greg

Further to your emails dated 7/7/2010 and 29/7/2010 (refer attached) regarding supply to the proposed development at Lot 1 DP 1048263, Moorebank Avenue, Moorebank, this enquiry has been registered under reference number ENL1330, please quote this number for all future correspondence.

Based on the information provided it appears that the existing installation located within Lot 1 DP 1048263 is supplied via 11kV high voltage customer HC 4391. To make supply available to the proposed development, the existing installation is required to be disconnected from HC 4391. The proposed development would be supplied at low voltage as a low voltage tariff customer(s).

At present there is no capacity in the 11kV network to make supply available to the proposed development or any stage of the proposed development.

To make supply available to the proposed development, two new 11kV feeders each comprising two 11kV 240mm2 copper cables will be required to be established from Anzac Village Zone Substation (located in Anzac Road (near Yulong Close), Moorebank) to two new switching stations with RM6 22kV switchgear (refer Integral Energy SDI207 for information) to accommodate the double cable feeders. The switching stations are to be located within the proposed development. Note, as an option, in place of establishing the switching stations, the switchgear for the switching stations could be installed within distribution substations established for stage 5 and stage 6. From each switching station, two 240mm2 copper cables would be developed with each stage being supplied by either padmount and/or indoor distribution substations. Refer attached proposed schematic.

The connection to Integral Energy's network would be subject to compliance with Integral Energy's Network Connection Contestable Works General Terms and Conditions, AS/NZS3000 Wiring Rules and the Service and Installation Rules of NSW.

The customer will be responsible for the installation and funding of the "Connection Assets" in accordance with Integral Energy's Network Connection Contestable Works General Terms and Conditions and the AER (Australian Energy Regulator) determination for capital contributions. The connection assets include all works to make supply available to the proposed development including the establishment of the new 11kV feeders.

A Level 3 Accredited Service Provider (refer Department of Fair Trading at www.fairtrading.nsw.gov.au) will need to be engaged by the customer to carry out the electrical network design of the connection assets. A Level 1 Accredited Service Provider (refer Department of Fair Trading at www.fairtrading.nsw.gov.au) will need to be engaged by the customer to carry out the electrical network construction of the connection assets.

To proceed with the provision of supply for the proposed development, please complete the attached application and forward to Integral Energy at CWAdmin@integral.com.au. The customer should submit the application to Integral Energy prior to making any financial commitments or undertaking any works on site. It should be noted that capacity is not reserved in Integral Energy's network and the conditions of supply may change at the time of making an application.

The advice provided above is in response to an enquiry only and does not constitute a formal method of supply but an indication of the works required to make the connection.

Regards
Peter Freckelton
Contestable Projects Manager Central & Southern Region
Network Connections
Ph - 0403 343 228
Ph - (02) 4252 2970
Ph - 8 2970
Fax - (02) 4252 2892
Email - peter.freckelton@integral.com.au

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****

5 July 2010

Hyder Consulting P/L
Level 5, 141 Walker St
NORTH SYDNEY NSW 2060
Att. G. Ives

Dear Greg,

RE: PROPOSED SUBDIVISION OF
MOOREBANK INTERMODAL
MOOREBANK AVE, MOOREBANK

We appreciate the opportunity to participate in the forward planning of this development and would like to pursue the potential for the connection to the natural gas network

It is noted that currently a 75mm Nylon medium pressure natural gas main operating at approximately 210kPa, extends along Moorebank Ave between Cypress Rd in the North and Jaquinot Rd to the south. This network is suitable for residential and light commercial applications and a connection could be provided at a suitable location adjacent to Stage 1 on the proposed masterplan. Estimated costs associated with this connection could be approximately $5 550.00

Should heavy industry manufacturing at this site be considered an extension of the High Pressure 1050kPa steel network would be required to supply this market type. This network currently terminates at Bapaume Rd and an estimated cost of over $ 880 000.00 would be required to extend this infrastructure.

Jemena Gas Networks (NSW) Ltd will respond to a request for supply of infrastructure from Energy Retailers or known customers. Should the gas load and capital outlay meet our economic viability model the infrastructure will be supplied. Capacity is not reserved for any individual project during a planning phase.

Thank you for your inquiry. If further information or assistance is required, please do not hesitate to contact me on (02) 9270 4695.

Yours faithfully,

Neale Hilton

Neale Hilton
Network Development Manager

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