

APPENDIX B

SIMTA Intermodal Terminal Facility- Stage 1 Utilities Strategy Report



SIMTA

SYDNEY INTERMODAL TERMINAL ALLIANCE

Part 4, Division 4.1, State Significant
Development

Utilities Strategy Report

Client: SIMTA

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Table of Contents

Executive Summary	1
1.0 Introduction	2
1.1 Background	2
1.2 Report Purpose	2
1.3 Key Terms	3
1.4 Proposal overview	6
1.5 Site Description	6
1.6 Report Assumptions	7
2.0 Potable Water	8
2.1 Existing Infrastructure	8
2.2 Demand Assessment	8
2.3 Proposed Supply Network	8
2.4 Future Work Plan	9
3.0 Sewer	10
3.1 Existing Infrastructure	10
3.2 Demand Assessment	10
3.3 Proposed Supply Network	10
3.4 Future Work Plan	10
4.0 Communications	12
4.1 Existing Infrastructure	12
4.2 Demand Assessment and Proposed Supply Network	12
4.3 Future Work Plan	12
5.0 Electricity	13
5.1 Existing Infrastructure	13
5.2 Demand Assessment	13
5.3 Proposed Supply Network	13
5.4 Future Work Plan	14
6.0 Natural Gas	15
6.1 Existing Infrastructure	15
6.2 Demand Assessment	15
6.3 Reticulation Network	15
6.4 Future Work Plan	15
7.0 Conclusions and Recommendations	16
Appendix A	
Utility Supply Layout Drawings	A
Appendix B	
Part 3A Concept Plan Application Correspondence with Service Authorities	B
Appendix C	
Updated Correspondence with Service Providers	C
Appendix D	
Utilities Enabling Report	D

Executive Summary

To support the Part 4, State Significance Development Application for the Sydney Intermodal Terminal Facility Stage 1 proposal at Moorebank Avenue, Moorebank, an investigation of the utilities within the vicinity of the development has been carried out.

The outcome of the investigation is that all necessary major utilities can be made available to service the Sydney Intermodal Terminal Alliance (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.

In producing this report the following Service Providers have been contacted;

- Potable Water - Sydney Water
- Sewer – Sydney Water
- Communications – NBN/Telstra
- Electricity – Endeavour Energy
- Gas - Jemena

AECOM has undertaken a preliminary analysis of the utility demands based on information received from SIMTA. The demand estimates have been provided to the Service Providers and preliminary advice received from each on their existing infrastructure capacity.

An assessment has also been undertaken of the implications of the proposed works on existing utility infrastructure. This has been provided as a supplementary report in Appendix D.

1.0 Introduction

AECOM was engaged by the Sydney Intermodal Terminal Alliance (SIMTA), to assess the Utility Services Infrastructure Strategy for the Stage 1 operational Moorebank Intermodal Terminal for the State Significant Development Application. AECOM has prepared this report to document the potential Services Strategy to the SIMTA site, its development from the scheme proposed under the Concept Plan Approval (MP10_0193), and to respond to the Secretary's Environmental Assessment Requirements (SEARs) received in December 2014 from the Department of Planning and Environment (DPE), for the project.

1.1 Background

The SIMTA Project involves the development of an intermodal facility, including warehouse and distribution facilities, freight village (ancillary site and operational services), stormwater, landscaping, servicing and associated works on the eastern side of Moorebank Avenue, Moorebank (the SIMTA site). The SIMTA Project also includes a rail link, within an identified rail corridor (the Rail Corridor), which connects from the southern part of the SIMTA site to the Southern Sydney Freight Line (SSFL) (the entire area, SIMTA site and Rail Corridor referred to as the Project site). The SIMTA Project is to be developed in three key stages:

- Stage 1- Construction of the Intermodal Terminal Facility and rail link
- Stage 2- Construction of warehouse and Distribution Facilities
- Stage 3- Extension of the Intermodal Terminal Facility and completion of Warehouse and Distribution Facilities.

A summary of the approvals undertaken to date for the SIMTA site, relating to the SIMTA Project, include:

- **EPBC Approval** (No. 2011/6229) granted in March 2014 for the impact of the SIMTA Project on listed threatened species and communities (sections 18 and 18A of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)) and Commonwealth land (sections 26 and 27A of the EPBC Act).
- **Concept Approval** (No. 10_0193) granted by the Planning Assessment Commission (PAC) on the 29 September 2014 for the 'Concept Approval' of the SIMTA Project under Part 3A of the EP&A Act.

Both of these approvals involved the preparation of design and environmental assessment documentation.

1.2 Report Purpose

This report has been prepared for approval of the initial stage of the SIMTA Project, known as the Stage 1 Proposal. A summary of the works included in the Stage 1 Proposal is provided below. This report has been prepared to support a State Significant Development (SSD) Application for which approval is sought under Part 4, Division 4.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

This report has been prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs) (ref: SSD 14-6766 and dated December 2014). Table 1 provides a summary of the SEARs and the section where they have been addressed in this report.

Table 1 SEARs (SSD 14-6766) compliance table

Section/number	SEARs	Where addressed
16. Property and Infrastructure	b) Assessing the service demand, capacity and augmentation of existing and proposed utilities and infrastructure including any relocation as a result of the development	This report addresses the service demand and augmentation of existing utilities as a result of the Stage 1 Proposal, in particular sections 2-6. Relocation of utilities and infrastructure is addressed in a supplementary report provided in Appendix D.

Section/number	SEARs	Where addressed
17. Consultation	Services and Infrastructure providers Sydney Water Corporation Endeavour Energy Jemena Telstra	Appendix B and C provides correspondence with the Utility Providers listed

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.
- Endeavour Energy for electrical supply.
- Jemena for gas supply.
- NBN/Telstra for telecommunications.

This 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.

1.3 Key Terms

Table 2 provides a summary of the key terms which are included within this report. Figure 1 also provides an indication of the site areas discussed in this table.

Table 2 Key Terms

Term	Description
Concept Plan Approval	Concept Plan Approval (MP 10_0193) granted on 29 September 2014 for the development of the SIMTA Moorebank Intermodal Terminal Facility at Moorebank. This reference includes the associated Conditions of Approval (CoA) and Statement of Commitments (SoC) which form the approval documentation for the Concept Plan Approval.
EPBC Approval	Approval (No. 2011/6229) granted under the EPBC Act on March 2014 by the Commonwealth Department of Environment for the development of the SIMTA Moorebank Intermodal Terminal Facility at Moorebank.
SIMTA Project	The SIMTA Moorebank Intermodal Terminal Facility at Moorebank as approved by the Concept Plan (MP_10_0913).
SIMTA site	Includes the former Defence National Storage and Distribution Centre (DNSDC) site, the land owned by SIMTA which is subject to the Concept Plan Approval (refer to Figure 1).
Rail Corridor	Area defined as the 'Rail Corridor' within the Concept Plan Approval. The rail link is also included within this area (refer to Figure 1).
Project site	Includes the SIMTA site and the Rail Corridor, i.e. the entire site area which was approved under the Concept Plan Approval (refer to Figure 1).

Term	Description
Stage 1 site	The subject of this EIS, the western part of the SIMTA site which includes all areas to be disturbed by the Stage 1 Proposal (including the Operational area and Indicative Construction area) (refer to Figure 1). This area does <u>not</u> include the Rail Corridor.
Construction area	Extent of construction works, namely areas to be disturbed during construction of the Stage 1 Proposal (refer to Figure 1).
Operational area	Extent of operational activities for the operation of the Proposal (refer to Figure 1).
Proposal site	Includes the Stage 1 site and the Rail Corridor, i.e. the area for which approval (construction and operation) is sought within this EIS.
rail link	The rail link including the area on either side to be impacted by the construction works included in the Stage 1 Proposal.
Former DNSDC South	The land to the south of the operational footprint of the Intermodal Terminal, to the boundary fence of the former DNSDC.
Southern Boot Land	Commonwealth owned land to the south of Former DNSDC South, and to the north of the RailCorp Land (part of the Boot Land in the MIC proposal).
RailCorp Land	Lot 1 DP 825352 (part of the Rail Corridor) and owned by RailCorp.
The Proposal	Stage 1 of the SIMTA Moorebank Intermodal Terminal Facility including construction and operation of the intermodal terminal facility and rail link, i.e. all works and built form for which approval is sought in this EIS/Technical Report.
MIC Proposal	The development of an intermodal facility, associated commercial infrastructure (warehousing) and a rail link (3 options have been provided) to be located on the MIC site, for which an approval, under Part 4, Division 4.1 of the <i>Environmental Planning and Assessment Act 1979</i> . This proposal is currently under assessment by the Department of Planning and Environment.
MIC site	The former School of Military Engineering site to the immediate west of the SIMTA site, across Moorebank Avenue.

Figure 1 Key terms and proposal locations

Environmental Impact Statement - Stage 1



1.4 Proposal overview

The Stage 1 Proposal involves the construction and operation of the necessary infrastructure to support a container freight volume of 250,000 TEU (twenty-foot equivalent units) throughput per annum. Specifically, the Stage 1 Proposal includes the following key components, which together comprise the intermodal terminal facility (IMT):

- Truck processing, holding and loading areas- entrance and exit from Moorebank Avenue.
- Rail loading and container storage areas – installation of four rail sidings with adjacent container storage area serviced by manual handling equipment initially and overhead gantry cranes progressively. .
- Administration facility and associated car parking- light vehicle access from Moorebank Avenue.
- The rail link – located within the Rail Corridor, including a connection to the intermodal terminal facility, traversing of Moorebank Avenue, Anzac Creek and Georges River and connection to the SSFL.
- Ancillary works- vegetation clearing, remediation, earth works, utilities installation/connection, signage and landscaping.

1.5 Site Description

The SIMTA site, including the Stage 1 site, is located approximately 27 kilometres south-west of the Sydney Central Business District (CBD) and approximately 26 kilometres west of Port Botany. The SIMTA site is situated within the Liverpool Local Government Area (LGA), in Sydney's South West Sub-Region, approximately 2.5 kilometres from the Liverpool City Centre.

The SIMTA site is located approximately 800 metres south of the intersection of Moorebank Avenue and the M5 Motorway. The M5 Motorway provides the main road link between the SIMTA site and the key employment and industrial areas within the West and South Western Sydney Sub-Regions. The M5 Motorway connects with the M7 Motorway to the west, providing access to the Greater Sydney Metropolitan Region and NSW road network. Similarly the M5 Motorway is the principal connection to Sydney's north and north-east via the Hume Highway.

The Southern Sydney Freight Line (SSFL) is located one kilometre to the west of the proposed SIMTA site. The SSFL is a 36 kilometre dedicated freight line between Macarthur and Chullora.

The SIMTA site was recently operating as the Defence National Storage and Distribution Centre (DNSDC) however Defence has recently relocated this operation and vacated the SIMTA site. The majority of land immediately surrounding the SIMTA site is owned and operated by the Commonwealth and comprises:

- School of Military Engineering (SME), on the western side of Moorebank Avenue directly adjacent to the SIMTA site.
- Holsworthy Military Reserve, to the south of the site on the southern side of the East Hills Passenger Railway Line.
- Commonwealth Residual Land, to the east between the SIMTA site and the Wattle Grove residential area.
- Defence National Storage and Distribution Centre (DNSDC), to the north and north east of the SIMTA site.

The site to immediate west of the SIMTA site which currently includes the SME is the subject of a Development Application (DA) (SSD-5066), under Part 4, Division 4.1 of the EP&A Act, for the development of an intermodal facility known as the Moorebank Intermodal Terminal Project (MIC Proposal). The EIS for the MIC Proposal has recently been prepared and publically exhibited on 8 October 2014 to 8 December 2014. A Preferred Project Report (PPR) is currently under preparation to respond to submissions received during public exhibition. The MIC Proposal has yet to be determined by the Department of Planning and Environment (DP&E).

A number of residential suburbs are located in proximity to the Stage 1 site, including:

- Wattle Grove, located approximately 600 metres from the Stage 1 site and 750 metres from the rail link to the east.
- Moorebank, located approximately 1,700 metres from the Stage 1 site and more than 2,700 metres from the rail link to the north.
- Casula, located approximately 1,100 metres from the Stage 1 site and 250 metres from the rail link to the west.

- Glenfield, located over 1,700 metres from the Stage 1 site and 750 metres from the rail link to the south-west.

1.6 Report Assumptions

The following provides a list of assumptions made in the preparation of this report:

- Services within the roads, to the extent in which the works are in public roads or a right of easement has been granted for necessary services, will be constructed by the developer and transferred to the local service authority to own, operate and maintain.
- Reticulation of local services within the site would be private services and largely dependent on final building layouts and landscape designs. Provision for connection points for these internal site services has been included in the schematic drawings provided but would be subject to agreement with the relevant Service Provider and will be finalised in Detailed Design.
- In order to account for variation in usage across the development, a diversity factor is generally applied to most utilities covered by this assessment. The diversity factors commonly applied vary depending upon the utility type and the potential reduction due to the variation in peak demand. Consideration of this factor has not been included for the purpose of this assessment as this is usually defined by the Utility provider in detailed design stages.

2.0 Potable Water

Sydney Water is the service authority responsible for the operation and maintenance of the existing local potable water infrastructure.

2.1 Existing Infrastructure

A DBYD search has been undertaken and the existing potable water services in the vicinity of the SIMTA site include both SWC owned and Department of Defence (DoD) owned assets and are as follows:

- A SWC owned 500 millimetre diameter main in Heathcote Road.
- A DoD owned 375 millimetre 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 millimetre 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 millimetre 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.

2.2 Demand Assessment

A preliminary potable water demand assessment has been undertaken. A summary of the demands are provided in Table 1

Table 3 Peak Demands

Stage	Peak Demand	Daily Demand (kL)
SIMTA Intermodal Terminal Facility Stage 1*	0.281l/s	1.125kL
Future Development of SIMTA Site	30.821l/s	123.282kL
Total Estimated Demand for Entire SIMTA Site (including future stages)	31.102l/s	124.407kL

*subject area for State Significance Development Application

The entire SIMTA potable demand provided in the table above is an estimate only and is subject to further assessment of the development sites and stages.

2.3 Proposed Supply Network

As per the requirements of the Water Services Association of Australia, it is estimated the proposed water main is likely to be 200mm or larger. The size of water main/s will be governed by Sydney Water based on modelling to be determined in detailed design. Based on a preliminary review of the available supply points adjacent the development the works outlined below are anticipated. The proposed supply strategy was discussed with Sydney Water representatives at a meeting held on the 15th January 2015;

- The existing DN200 CICAL SWC main will be extended south along Moorebank Avenue from Bapaume Road.
- As part of Moorebank Avenue is currently a Defence lot an easement will be required for Sydney Water.
- Given the above preliminary advice, a 50 kilolitre potable water storage tank and booster pump set has been allowed for in the SIMTA site master plan. This will be a private asset.
- A single main authorities' meter is to be provided at the street frontage to monitor the consumption of water. SIMTA owned individual warehouse sub-meters will be provided at each warehouse facility for monitoring and billing purposes in future stages.

Private Booster pumps may potentially be required at each development within the SIMTA site for firefighting requirements. On site storage tanks could be provided to reduce the demand on mains water supply during emergency firefighting scenarios. The sizing of storage tanks and booster pumps will depend on the final layout and size of each development lot within the site

Within the development, there will be a separate connection for potable water and fire water supply along with any fire booster requirements and storage tanks into each building.

The space allocated for each pump and tank will need to be confirmed however a preliminary estimate of 25m² is considered likely to be conservative (subject to detailed analysis).

2.4 Future Work Plan

Sydney Water will need to be engaged through a Sydney Water accredited Water Servicing Coordinator to prepare an assessment prior to the detailed design phase. This enables Sydney Water to undertake an investigation and modelling into the capacity of existing infrastructure and provide general information about what Sydney Water's requirements are. Should the proposed site layout change, the requirements of the assessment may change.

The Section 73 Certificate is typically required from the development authority if development consent is granted. It is applied for through the Sydney Water accredited Water Servicing Coordinator. Sydney Water will then provide either a Notice of Requirements and Works Agreement or a Certificate which is a definitive statement of Sydney Water's requirements and commentary on any upsizing, easement and funding.

Given the development is likely to be constructed in stages, payment or developer of potential upgrades to Sydney Water assets may also be staged under certain conditions. Sydney Water may also fund the upsizing component of these upgrades where the works will benefit another development.

3.0 Sewer

Sydney Water is the service authority responsible for the operation and maintenance of the existing local sewer reticulation water infrastructure.

3.1 Existing Infrastructure

A DBYD search has been undertaken and the existing sewer services in the vicinity of the SIMTA site include both SWC owned and Department of Defence (DoD) owned 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 sewer assets which form part of the Liverpool sewerage system in the vicinity of the SIMTA site include:

- A 225mm diameter PVC gravity sewer in Moorebank Avenue.
- A 250mm DICL rising main in Anzac Road.
- A 750mm SCL rising main on Moorebank Avenue (believed to be at capacity)

3.2 Demand Assessment

A preliminary sewer demand assessment has been undertaken and is based on a sewer discharge factor of 80% of the potable water demands. A summary of the demands are provided in Table 2.

Table 4 Peak Demands

Stage	Peak Demand	Daily Demand (kL)
SIMTA Intermodal Terminal Facility Stage 1*	0.225l/s	0.900kL
Future Development of SIMTA Site	24.656l/s	98.626kL
Total Estimated Demand for Entire SIMTA Site (including future stages)	24.881l/s	99.526kL

*subject area for State Significance Development Application

The entire SIMTA potable demand provided in the table above is an estimate only and is subject to further assessment of the development sites and stages.

3.3 Proposed Supply Network

Based on a preliminary review of the available discharge points adjacent to the developments the options outlined below are anticipated. The proposed strategy was discussed at a meeting with Sydney Water representatives on the 15th January 2015;

- Provide a new private sewer rising main and connection on Moorebank Avenue.
- The rising main would extend north and connect to the existing SWC sewer adjacent to the intersection between Moorebank Avenue and Bapaume Road. There may be a short extension of the existing SWC sewer.
- A new private sewer pumping station within the SIMTA Stage 1 site.

The permissible sewer discharge from the site will be governed by Sydney Water and their development conditions therefore the size and arrangement of the pump and emergency storage would depend on Sydney Water and their development conditions.

3.4 Future Work Plan

Prior to the detailed design phase Sydney Water will need to be engaged through an Sydney Water accredited Water Servicing Coordinator to prepare an assessment. This enables Sydney Water to undertake a detailed

investigation into the capacity of existing infrastructure and provide general information about what Sydney Water's requirements are.

A Section 73 Certificate is typically required from the development consent authority if development consent is granted. It is applied for through the Sydney Water accredited Water Servicing Coordinator. Sydney Water will then provide either a Notice of Requirements and Works Agreement or a Certificate which is a definitive statement of Sydney Water's requirements including easements.

Given the development is likely to be constructed in stages, payment or developer of potential upgrades to Sydney Water assets may also be staged under certain conditions. Sydney Water may also fund the upsizing component of these upgrades where the works will benefit another development.

4.0 Communications

National Broadband Network Corporation (NBN Co) or Telstra is the service authority responsible for the supply, operation and maintenance of telecommunication infrastructure to the development.

An application to NBN has been completed and they have notified that the development does not meet the criteria for a provision of a new supply. In this instance Telstra becomes the default telecommunication supplier.

4.1 Existing Infrastructure

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

Currently there is no NBN infrastructure in the area.

4.2 Demand Assessment and Proposed Supply Network

During the Part 3A Concept Application Telstra verbally advised that the area has been reviewed by their planners and that communication services can be provided to the site. Telstra have issued a Telecommunications Network Infrastructure Notification dated Wednesday 27 July 2011 for the SIMTA project.

Following NBN's notification that a supply will not be provided an updated application was submitted to Telstra. Telstra have notified that the previous application has been updated and a summary of verbal conversations has been provided below;

- Telstra will be able to provide a supply to the proposed development
- The Stage 1 development is planned to commence construction late 2015.
- Future stages of development will follow within the site.
- Contact with Telstra Planners should be made at least 3 months prior to Stage 1 construction start to agree lead in infrastructure, developer responsibilities and services agreements.
- It is anticipated the lead in infrastructure will be the extension of copper and/or fibre south along Moorebank Avenue.
- The ownership of Moorebank Avenue and future plans will have further clarity and will require further consideration from Telstra to inform their supply strategy.

4.3 Future Work Plan

Telstra has advised that at least 3 months prior to construction contact should be made to agree the extent of lead in infrastructure, developer responsibilities and finalisation of services agreements. This will also allow the detailed design and construction of the pit and pipe lead in network to the proposed development boundary.

5.0 Electricity

Endeavour Energy is the service authority responsible for the operation and maintenance of the existing electricity infrastructure, local to the development.

5.1 Existing Infrastructure

The existing infrastructure consists of an Endeavour Energy zone substation, Substation No. 9633 Anzac Village, located at Anzac Road. There are currently three 11kV feeders situated at Anzac Road originating from the zone substation. Two feeders are located under Secombe Place and the third one, located overhead, at Moorebank Avenue. It is our understanding that at least two 11kV circuit breakers are potentially available for SIMTA Intermodal Terminal Facility Stage 1 development.

5.2 Demand Assessment

An assessment of the estimated electricity demand for the Stage 1 Proposal has been conducted to assist in determining the required infrastructure upgrades that may be required. A summary is provided in the table below;

Table 5 Stage 1 Estimated Power Demand

Intermodal	Estimated Load MVA
Gantry cranes (HV)	4.17
Loco Shifter (HV)	0.01
IMEX Terminal	0.65
Gates	0.01
Truck loading bays	0.19
Admin / Control tower building	0.08
Admin / Control tower carpark	0.01
Utility infrastructure	0.21
Total	5.26

An estimate of the future developments has also been undertaken. It is estimated that an additional 13MVA will be required to cater for future developments within the SIMTA site.

It should be noted that the above estimates do not account for diversity at this stage. As the design progresses and the power demands can be accurately estimated a diversity of approximately 80% may be applied to the estimated loads. A higher diversity may be applied to the gantry cranes and as such the demands above will be reduced and expected to be approximately 12-14MVA.

5.3 Proposed Supply Network

The preferred network supply strategy for the Stage 1 works is to install 2 new 11kV feeders from Anzac Village. An 11kV feeder is capable of providing up to 7MVA which will be sufficient to meet the stage 1 maximum demand requirements, but an additional feeder is required to be installed to provide n-1 redundancy. This is to ensure a constant supply of power in the event of failure of one feeder. The feeders will be located underground, with one of them being used to meet the maximum demand requirements for Stage 1 development and the second feeder to provide n-1 redundancy. The feeders will be terminated within two typical Endeavour Energy 11kV switching stations located on site, with the second feeder in a 'normally open' position. The actual maximum demand will be monitored after Stage 1 is commissioned and used to adjust the load forecast for future development stages.

For future development works, subject to the actual maximum demand in Stage 1, it may not be possible to provide power from the feeders built in Stage 1 as they will not meet the n-1 redundancy requirement. An additional feeder is proposed to be installed from Anzac Village zone substation to meet the electrical requirements for the future development stages. The additional feeder will also meet the n-1 redundancy requirements. In the event of a failure, the remaining two feeders can collectively provide 14MVA.

This option assumes that there are spare circuit breakers available for use at Anzac Village zone substation and that the substation can meet the additional capacity requirements. If this is not feasible, Endeavour Energy capital works programme may upgrade the substation and provide additional circuit breakers to meet the increase in demand. However, establishing a 33/11kV substation adjacent to the site may be more economical depending on the additional power requirements works in the future. There is an existing overhead 33kV feeder at Moorebank Avenue that can be used.

5.4 Future Work Plan

Prior to the detailed design phase ongoing formal consultation will be required with Endeavour Energy to confirm the proposed supply strategy. A meeting has been held with Endeavour Energy on the 20th February 2014 to outline the preferred supply strategy; initial discussions from this meeting included

- An outline of the preferred strategy as above including the preference to be a HV customer.
- Endeavour Energy outlined their current plan for provision of power to the site including the availability of supply from the Anzac Village zone substation. It was noted that 1 circuit breaker had been allocated for the SIMTA site.
- It was noted that the initial development will not have the gantry cranes included for approximately 1-2 years of operation. In this instance Endeavour noted the HV supply to the site may not be initially preferred. It was also noted that power demand for the site initially could be serviced by a kiosk substation (0.5-1MVA)
- An overview of the proposed demands including Stage 1 and future stages within the SIMTA boundary was provided.
- Endeavour Energy noted that a formal application will be required outlining SIMTA's preference to be a HV customer with justification.

A connection of load application has been submitted following this meeting and ongoing consultation will be undertaken to agree the preferred supply strategy.

6.0 Natural Gas

Jemena is the service authority responsible for the operation and maintenance of the existing natural gas infrastructure.

6.1 Existing Infrastructure

The following Jemena assets have been identified in the area

- 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.

6.2 Demand Assessment

For the proposed Stage 1 works no gas demand is anticipated and it is not proposed to provide a supply to support the initial development.

Future developments in the SIMTA site may require a gas supply but this is undefined at present.

6.3 Reticulation Network

As the site is developed in the future the requirement for a gas supply will be reassessed. Based on previous correspondence with Jemena during the Part 3A Concept Plan Application the following advice was received;

- 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.

6.4 Future Work Plan

Jemena is a private company and makes decisions on investment in infrastructure based on a review of the business case and their expected commercial return.

Jemena is continually reviewing the capacity of its network in relation to potential developments and that expansion of their network is based on an as-needs basis/ long-term planning. Additional capacity would be delivered where a feasible future demand can be confirmed.

It is critical that information on development proposals is provided to them as it becomes available to enable them to undertake a further detailed assessment of gas layouts and costing, and to ensure works can be carried out without delays. Ongoing consultation with Jemena through the development definition and detailed design stages should ensure that allowance is made within Jemena's network planning to service the potential development sites.

Ongoing communication with Jemena should be maintained to determine the gas supply requirements for future developments. Should they be required, the detailed connection requirement will have to be investigated.

7.0 Enabling Works

The construction of Stage 1 will require works to be undertaken to either protect or relocate existing utility services. The majority of these works will be associated with the construction of the rail link.

A preliminary investigation has been undertaken to identify those utility services which will be potentially impacted by Stage 1 works and a summary is located within Appendix D.

The next stages of detailed design will require significant consultation with all asset owners, site survey and investigation to confirm the location including the excavation and physically locating critical services.

The investigation has identified the following asset owners with key utility services which are potentially impacted by the works.

7.1 Sydney Trains (RailCorp)

The rail link enters two Sydney Trains owned corridors of the East Hills Passenger Line at the Moorebank Avenue Overbridge and the Southern Sydney Freight Line.

The rail link will impact Sydney Trains assets within the East Hills Passenger Line corridor and this will require ongoing consultation and planning with Sydney Trains to either protect these assets during construction or relocate. These assets include signalling and other communication assets, high and low voltage electrical assets (underground and aerial).

The majority of these works are likely to be required to be undertaken under a possession which will be planned in consultation with Sydney Trains.

7.2 ARTC

The northern and southern connections to the Southern Sydney Freight Line will require the relocation and adjustment of signalling. This will be undertaken as a part of the overall signalling strategy to incorporate the operation of the rail link into ARTC's communications and signalling network.

7.3 High Pressure Ethane Pipeline

A 300mm diameter Ethane pipeline is located within the Sydney Trains corridor and crosses from the southern side of the corridor to the northern side in the vicinity of Moorebank Avenue Overbridge. The new rail link will travel over the existing pipeline alignment, with the cover between the rail construction and the asset being maintained.

The owner / operator of the pipeline, the APA Group have been consulted and have advised that they will require the installation of protection slabs.

APA Group have advised that the following process will be required for ongoing consultation and approval:

- a detailed drawing of the proposed works to be submitted for review and acceptance. This process may require further consultation within APA Group.
- an IWR (Intrusive Works Request) form to be submitted prior to any accepted works commencing. We will require a minimum of 10 working days' notice from the anticipated start date for Scheduling purposes also the IWR will expire in 2 weeks from the Start date and if the works go beyond this timeframe a IWR extension will need to be submitted.
- the Pipeline be positively identified by means of potholing, the preferred method is with a Water Lance & Vacuum Truck, at the location where the works will take place and under the direct supervision of an APA Group Representative.
- provide a minimum clearance of 1 metre separation around the circumference of the High Pressure Ethane Pipeline and any works within 5 metres of the Pipeline will need to be supervised by an APA Group representative.
- A number of specific construction conditions including:
 - Maximum excavator size allowed is 30 tonnes and no toothed buckets allowed within the Pipeline easement;

- No mechanical excavation within 1m of the Pipeline;
- No tiger teeth to be used on mechanical excavator on the Pipeline easement
- Installation of Power, water, gas & telecommunications conduit to be installed above the pipeline;
- The construction of the roads shall not commence until APA has completed all required risk mitigation measures (slab installation) if required
- No vibratory compaction within 10m of Pipelines. A 600mm plate compactor or jumping jack to achieve compaction;
- In accordance with AS2885.3 section 7.5.1. (d) No mechanical equipment to be used for excavation within 1 m of the pipeline in any radial direction, even after the pipeline location has been proven, except when approved by, and under explicit 'on -site' direction from, the Licensee's inspector.
- Under no circumstances is mechanical equipment other than hand-held and operated equipment to be used closer than 0.3 m to the pipeline. Exposure of the pipeline to be performed by hand digging, to minimise the risk of pipeline or coating damage.

This process of consultation and approval will continue as a part of ongoing design development.

7.4 Sydney Water

Sydney Water has a 750mm diameter sewage rising main which is located within Moorebank Avenue and crosses under the East Hills Passenger Corridor and hence will pass under the rail link alignment.

The protection of this asset will be discussed and agreed as a part of the overall project consultation with Sydney Water.

7.5 Defence Owned Assets

The site is currently serviced by Department of Defence owned assets which will be decommissioned as a part of the construction of Stage 1 works. This will be part of an overall Department of Defence precinct wide strategy to decommission their utility assets once they are no longer required to service those facilities that are no longer in use by Defence.

This will be subject to ongoing consultation with Department of Defence.

8.0 Conclusions and Recommendations

The intention of this report is to provide a high-level supply infrastructure strategy for the Stage 1 Proposal.

Power, water, sewer, gas and telecommunications infrastructure are all present either adjacent to or in the vicinity of the Sites.

The assessment has indicated that this existing infrastructure is suitable to service the estimated demands for the proposed development either with augmentation or in its current condition.

Consultation with Sydney Water has been undertaken on the likely water infrastructure upgrades required in the area. This advice is current at the time of providing and a Sydney Water S73 application has been commissioned to provide further definition of the required upgrades and network reticulation following further progression of the development requirements. Given Sydney Water is the responsible sewer reticulation service provider for the area, the application would also cover requirements for this infrastructure.

An updated application has been submitted to Telstra and they have indicated that the SIMTA development can be serviced from the Telstra Network with lead in works along Moorebank Avenue.

A proposed service strategy has been outlined to Endeavour Energy and ongoing consultation will be required to confirm the supply arrangements.

Although there is no planned gas demand for the Stage 1 works, previous advice from Jemena indicates that the existing infrastructure should have adequate capacity to service the development of the site as required.

Further assessment of services demand and infrastructure requirements from authorities would be required as the development planning and design process progresses. It should also be noted that advice received from Utility companies is based on the current demand scenario for the area. As the areas around the site may be developed over the coming years, the existing utility demands may change and advice received from the Utility companies may vary.

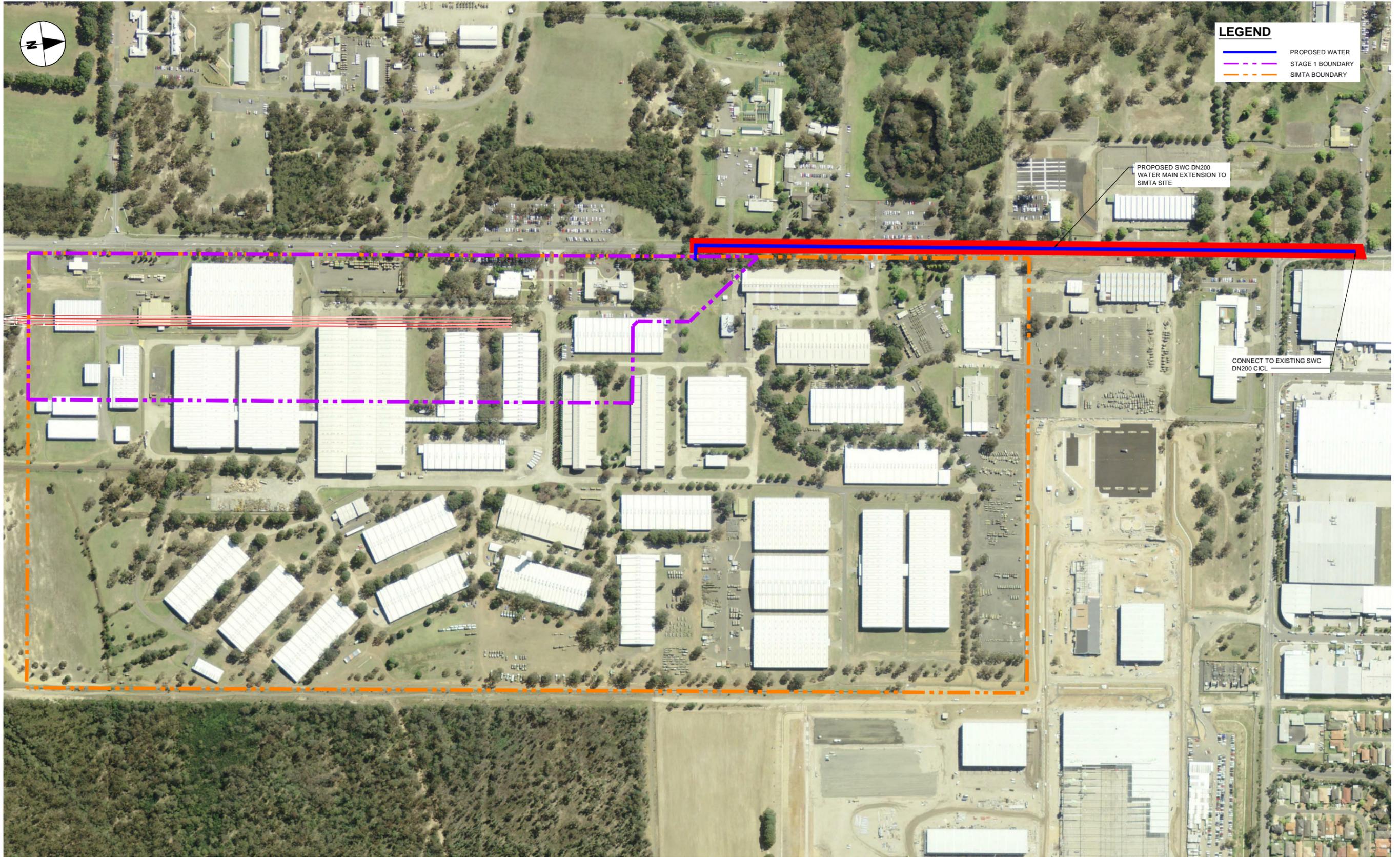
Appendix A

Utility Supply Layout Drawings



LEGEND

- PROPOSED WATER
- - - STAGE 1 BOUNDARY
- - - SIMTA BOUNDARY



PLAN
SCALE 1:5000

This drawing is confidential and shall only be used for the purpose of this project. The signing of this title block confirms the design and drafting of this project have been prepared and checked in accordance with the AECOM quality assurance system to ISO 9001-2000.

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A.B.N 20 093 846 925
www.aecom.com

PROJECT
SIMTA
INTERMODAL
TERMINAL FACILITY
STAGE 1

CLIENT
SIMTA
SYDNEY
INTERMODAL
TERMINAL
ALLIANCE

PROJECT MANAGER
TACTICAL
GROUP

SAFETY IN DESIGN INFORMATION
ARE THERE ANY ADDITIONAL HAZARDS / RISKS NOT NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING?
 NO
 YES

SCALES
0 125 250 m
1:5000

PROJECT MANAGEMENT INITIALS

G.D	D.P	J.M
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	SURVEY
-------	--------

ISSUE/REVISION

IR	DATE	DESCRIPTION
P3	24.03.2015	FOR SSD APPLICATION
P2	05.03.2015	ISSUED FOR INFORMATION
P1	02.02.2015	ISSUED FOR INFORMATION

PROJECT NUMBER
60337283

SHEET TITLE
MOOREBANK INTERMODAL
UTILITIES INFRASTRUCTURE
WATER SERVICES PLAN

SHEET NUMBER
60337283-SHT-10-UT-0005

NOT FOR CONSTRUCTION



PLAN
SCALE 1:2500

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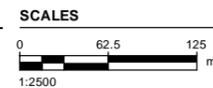


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PROJECT
SIMTA
INTERMODAL
TERMINAL FACILITY
STAGE 1



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 NO
 YES



PROJECT MANAGEMENT INITIALS		
G.D	D.P	J.M
DESIGNER	CHECKED	APPROVED
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P1	02.02.2015	ISSUED FOR INFORMATION
IR	DATE	DESCRIPTION

PROJECT NUMBER
60337283
SHEET TITLE
MOOREBANK INTERMODAL
UTILITIES INFRASTRUCTURE
SEWER SERVICES PLAN
SHEET NUMBER
60337283-SHT-10-UT-0010

NOT FOR CONSTRUCTION



PLAN
SCALE 1:2500

NOTES

1. ESTIMATED ENDEAVOUR ENERGY SWITCHING STATIONS ON SITE (INDICATIVE LOCATION TO BE FINALISED IN DETAILED DESIGN). SWITCHING STATION TO BE DESIGNED AS PER ENDEAVOUR ENERGY STANDARDS MCI0006 & MDI0044 AND OTHER RELEVANT STANDARDS.
2. 2.75m x 2.75m EASEMENT TO BE PROVIDED FOR EACH SWITCHING STATION.
3. 3m UNDERGROUND EASEMENT TO BE PROVIDED FOR UNDERGROUND HV CABLES IN PRIVATE ROAD.
- 4.

LEGEND

- HV TRENCH WITH 6x125mm CONDUITS AND 2x11KV FEEDERS
- - - STAGE 1 BOUNDARY
- ⊗ ENDEAVOUR ENERGY SWITCHING STATION (1320mm x 904mm)
- - - STAGE 1 BOUNDARY
- - - SIMTA BOUNDARY

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PROJECT
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STAGE 1

CLIENT
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TACTICAL
GROUP

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 NO
 YES

SCALES
0 62.5 125 m
1:2500

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G.D	D.P	J.M
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	SURVEY
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ISSUE/REVISION

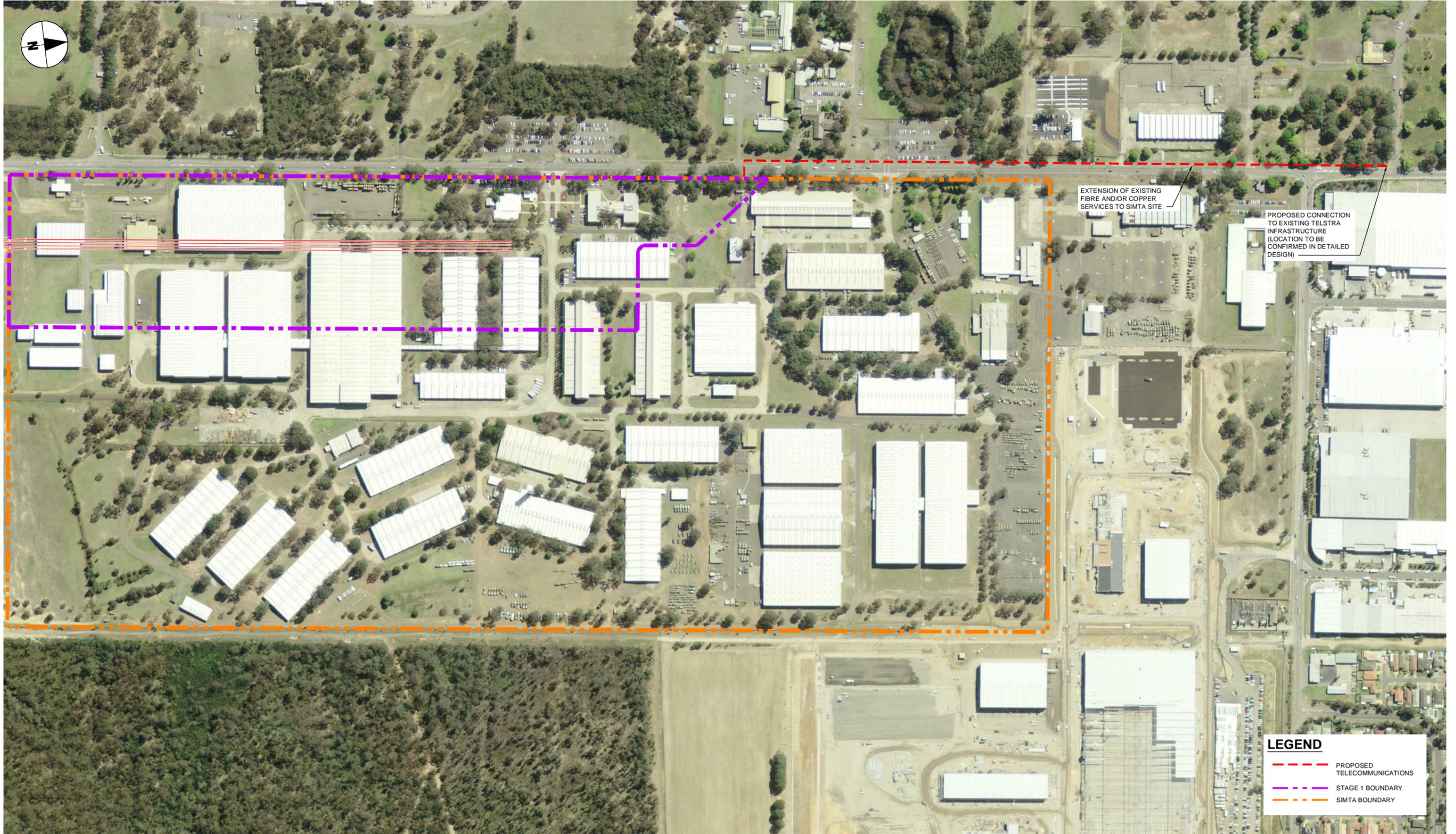
IR	DATE	DESCRIPTION
P3	24.03.2015	FOR SSD APPLICATION
P2	05.03.2015	ISSUED FOR INFORMATION
P1	02.02.2015	ISSUED FOR INFORMATION

PROJECT NUMBER
60337283

SHEET TITLE
MOOREBANK INTERMODAL
UTILITIES INFRASTRUCTURE
ELECTRICAL SERVICES PLAN

SHEET NUMBER
60337283-SHT-10-UT-0015

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LEGEND

- - - PROPOSED TELECOMMUNICATIONS
- - - STAGE 1 BOUNDARY
- - - SIMTA BOUNDARY

PLAN
SCALE 1:2500

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PROJECT
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SCALES
0 62.5 125 m
1:2500

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G.D	D.P	J.M
DESIGNER	CHECKED	APPROVED

PROJECT DATA

DATUM	SURVEY
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ISSUE/REVISION

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P3	24.03.2015	FOR SSD APPLICATION
P2	05.03.2015	ISSUED FOR INFORMATION
P1	02.02.2015	ISSUED FOR INFORMATION

PROJECT NUMBER
60337283

SHEET TITLE
MOOREBANK INTERMODAL
UTILITIES INFRASTRUCTURE
TELECOMMUNICATION SERVICES PLAN

SHEET NUMBER
60337283-SHT-10-UT-0025

NOT FOR CONSTRUCTION

Appendix B

Part 3A Concept Plan Application Correspondence with Service Authorities



Phone: 02 8907 9082
Facsimile:

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

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

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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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 [G Saunders@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

Please consider our environment before printing this email.

NOTICE - This communication contains information which is confidential and the copyright of Integral Energy Australia or a third party.

If you are not the intended recipient of this communication please delete and destroy all copies and telephone Integral Energy on 131081 immediately. If you are the intended recipient of this communication you should not copy, disclose or distribute this communication without the authority of Integral Energy.

Any views expressed in this Communication are those of the individual sender, except where the sender specifically states them to be the views of Integral Energy.

Except as required at law, Integral Energy does not represent, warrant and/or guarantee that the integrity of this communication has been maintained nor that the communication is free of errors, virus, interception or inference.

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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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Appendix C

Updated Correspondence with Service Providers

New development registration

Development reference: AYCA-1ULEKD

Your internal reference:

Developer

ABN:	14149723053
Registered entity name:	QUBE HOLDINGS LIMITED

Development details

Development name:	SIMTA Intermodal Terminal Facility
Development location:	Unnamed Road, Moorebank NSW 2170 Australia
Local government authority:	Liverpool City Council
Approximate total number of stages in your development:	8
Total number of premises/lots in your overall development:	10
Premises/lots to be developed over the next 3 years:	5
Total number of premises/lots already developed:	0
Real property description (e.g. Lot/Plan):	Lot 1 DP 1048263

External roadwork

Are you aware of any external utility works being planned or roads being built/upgraded to serve this development:	No
--	----

Developer contact

Name:	David Knight
Email address:	david.knight@qube.com.au
Office:	02 8917 0300
Mobile:	0451 670 093
Postal address:	Level 14, 3 Spring Street, Sydney, NSW, , Sydney, NSW 2000

Consultant contact (Preferred contact)

Name:	Duncan Price
Email address:	duncan.price@aecom.com
Office:	02 8934 0662
Mobile:	
Postal address:	AECOM, Iv5, 420 George Street, Sydney, NSW 2000

Attachments

Site Plan.pdf

Site Plan1.pdf (Master plan)

Staging Plan.pdf

Additional information

Fibre application

Fibre application reference: **AYCA-1UZR3**
Your internal reference: **IMEX Stage 1**

Development details

Development reference:	AYCA-1ULEKD
Email address:	duncan.price@aecom.com

Overall development details

Development name:	SIMTA Intermodal Terminal Facility
Business name:	QUBE HOLDINGS LIMITED
State:	NSW

Current stage details

Current stage number(s) for this application:	1
Stage location:	Unnamed Road, Moorebank NSW 2170 Australia
Development type:	Entirely Super Lots

Entirely super lots details

Estimated trench works start date:	03/08/2015
Number of super lots:	1
Super lot description (e.g. Lot 123):	Lot 1 (with up to 10 premises)

Attachments

Staging Plan.pdf (Development plan)

Additional information

The Sydney Intermodal Terminal Alliance (SIMTA) Moorebank Intermodal Terminal Facility 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 site into an intermodal terminal facility and warehouse/distribution facility, which will offer container storage and warehousing solutions with direct rail access. The purpose of this application is to support an Utility Strategy Report for the rail-truck intermodal terminal facility EIS and subsequent production of tender documentation.

Price, Duncan

From: developerliaison@nbnco.com.au
Sent: Tuesday, 17 February 2015 1:45 PM
To: david.knight@qube.com.au; Price, Duncan
Subject: NBN Co: Development rejected for SIMTA Intermodal Terminal Facility - AYCA-1ULEKD

Development reference: AYCA-1ULEKD

Your development: SIMTA Intermodal Terminal Facility

Dear David Knight,

Thank you for your registration for SIMTA Intermodal Terminal Facility.

Unfortunately, as your new development is for less than 100 premises (units/dwellings), and therefore doesn't meet the Federal Government's 'Fibre in New Developments Policy', we are unable to progress your registration at this time.

The Federal Government's 'Fibre in New Developments Policy', which can be found at <http://www.nbnco.com.au/industry/new-developments/new-developments-policy-information.html>, sets out options for the provision of infrastructure and services in this situation.

If you have any questions, please call us on 1800 OUR NBN (1800 687 626) or email DeveloperLiaison@nbnco.com.au.

Thank you and regards,
NBN Co Developer Liaison Team



Visit our New Developments site: www.nbnco.com.au/newdevelopments

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Price, Duncan

From: Price, Duncan
Sent: Wednesday, 4 March 2015 10:54 AM
To: 'Melville, Mark'
Subject: RE: AFR 17315507 SIMTA Intermodal Terminal Facility, Moorebank Avenue, Moorebank 2170

Hi Mark – thanks for your time this morning

Further to our discussion I'd like to summarise the following points.

- Telstra will be able to provide a supply to the proposed development
- The Stage 1 development is planned to commence construction late 2015.
- Future stages of development will follow within the site.
- Contact with Telstra should be made at least 3months prior to Stage 1 construction start to agree lead in infrastructure, developer responsibilities and services agreements.
- It is anticipated the lead in infrastructure will be the extension of copper and/or fibre south along Moorebank Avenue.
- The ownership of Moorebank Avenue and future plans will have further clarity and will require further consideration from Telstra to inform their supply strategy.

Please can you review and confirm

Thanks
Duncan

Duncan Price

Principal Civil Engineer
D +61 2 8934 0662
Duncan.Price@aecom.com

AECOM

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T +61 2 8934 0000 F +61 2 8934 0001
www.aecom.com

Please consider the environment before printing this email.

From: Price, Duncan
Sent: Tuesday, 24 February 2015 6:01 PM
To: 'Melville, Mark'
Subject: AFR 17315507 SIMTA Intermodal Terminal Facility, Moorebank Avenue, Moorebank 2170

Hi Mark – thanks for your email, I'm aware of Greg Ives previous application.

We have made an application to NBN however they've notified us that they will not be able to service the development. I've attached their rejection notification.

As such we would be looking to Telstra to provide telecommunications to the site. Could you inform me on the next steps, in the first instance we'd like confirmation that Telstra will be able to supply telecommunications to the site.

I'm happy to come and meet you to discuss the proposed development and staging

Thanks
Duncan

Duncan Price

Principal Civil Engineer
D +61 2 8934 0662
Duncan.Price@aecom.com

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www.aecom.com

Please consider the environment before printing this email.

From: Melville, Mark [<mailto:Mark.Melville@team.telstra.com>]
Sent: Friday, 20 February 2015 2:58 PM
To: Price, Duncan
Subject: AFR 17349884, SIMTA Intermodal Terminal Facility, Moorebank Avenue, Moorebank 2170

Duncan,

I was unable to contact you by phone today. As you may know, this site was subject to a previous application by Greg Ives of Hyder Consulting. As we have recorded Greg's application in our system already I have updated it with the details you have supplied. Please quote AFR 17315507 in any correspondence.

I have recorded your project as notionally NBN, noting your application AYCA-1ULEKD and NBN rollout area 2LIV-09. Please contact me by email or ring me on 0249188567 if they cannot service your development.



Mark Melville Development Liaison Planner

Forecasting & Area Planning | Networks & Access Technologies | Telstra Operations
P 02 49188567 | E mark.melville@team.telstra.com

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Price, Duncan

Subject: FW: Moorebank Intermodal meeting
Location: Room - HO 7-02 Woodford Bay

Start: Thu 15/01/2015 10:00 AM
End: Thu 15/01/2015 11:00 AM
Show Time As: Tentative

Recurrence: (none)

Meeting Status: Not yet responded

Organizer: MCNALLY, CHRISTIAN

-----Original Appointment-----

From: MCNALLY, CHRISTIAN [<mailto:CHRISTIAN.MCNALLY@sydneywater.com.au>]

Sent: Friday, 9 January 2015 3:33 PM

To: MCNALLY, CHRISTIAN; McDermott, John; sryan@tacticalgroup.com.au; Duffell, Greg; FOSTER, DARRYL; HARRISON, VIRGINIA

Subject: FW: Moorebank Intermodal meeting

When: Thursday, 15 January 2015 10:00 AM-11:00 AM (UTC+10:00) Canberra, Melbourne, Sydney.

Where: Room - HO 7-02 Woodford Bay

Hi John Steve,

Please find meeting invite to discuss initial servicing of water/sewer to Moorebank Intermodal sites with SWC.

Regards,
Greg Duffell

-----Original Appointment-----

From: MCNALLY, CHRISTIAN [<mailto:CHRISTIAN.MCNALLY@sydneywater.com.au>]

Sent: Friday, 9 January 2015 3:06 PM

To: MCNALLY, CHRISTIAN; Duffell, Greg; FOSTER, DARRYL; HARRISON, VIRGINIA

Subject: Moorebank Intermodal meeting

When: Thursday, 15 January 2015 10:00 AM-11:00 AM (UTC+10:00) Canberra, Melbourne, Sydney.

Where: Room - HO 7-02 Woodford Bay

Greg,

I am able to meet next Thursday to discuss the issues below. Some of the relevant areas/staff may not be available so an anticipated requirements application could be submitted through EDeveloper to capture/transfer information.

Please let me know ASAP if time suits and attendees.

Regards

Christian McNally | **Manager, Property Development**

Urban Growth | Sydney Water
Level 7, 1 Smith Street, Parramatta NSW 2150
PO Box 399 Parramatta NSW 2124

Office: 8849-4042

Mob: 0409 393 546

CHRISTIAN.MCNALLY@SydneyWater.com.au

From: Duffell, Greg [<mailto:Greg.Duffell@aecom.com>]
Sent: Friday, 19 December 2014 12:39 PM
To: FOSTER, DARRYL
Subject: FW: Moorebank Intermodal meeting 12th JAN+

Hi Darryl,

John Perry has referred me to you as the best person to discuss about Moorebank Intermodal Project (see below email) I rang your phone and Ian Barnes said that you are back on the 30th Dec 2014, so I have sent this email.

Due to the short time frame for approvals for the project (stage 1 construction to start in late 2015), the intermodal of approx. 90Ha with possible another 150Ha a masterplan needs to be developed now for all utilities.

Prior to submitting a S73/adjustment application, some issue to be discussed are;

1. Defence land & easements for SWC assets, (Moorebank Ave is on Defence land and not a public road - although used as one)
2. Existing SWC assets in defence lands
3. Proposed servicing strategy for Sewer (ie private LP sewer, SWC SPS, gravity etc)
4. Staging of works
5. Funding arrangements – if any (ie SPS, upsize, any SWC future works etc)

Discussion will not be looking for approval at this meeting (as this will be done via eDeveloper) it is to discuss with SWC any objections to proposals.

A previous feasibility application was submitted in 2010 CN120644 (attached FYI)

Could you please advise what day/time are you available to meet in the week starting mon12th Jan 2015 ?

I'll be back from Tues 7th Jan 2015 and will forward information across to discuss along attendees prior to meeting date.

Any questions please let me know.

Regards,

Greg Duffell

Principal Engineer

D +61 2 8934 1199 M +61 408 554 867

Greg.Duffell@aecom.com

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www.aecom.com

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23 March 2015

Commercial-in-Confidence

Endeavour Energy
 51 Huntingwood Drive
 Huntingwood
 NSW 2148

Dear Sir/Madam

Sydney Intermodal Terminal Facility, Moorebank - Application for Connection of Load

Further to our meeting with Joe Degabriele, Brian Holdsworth and Jason Lu on the 20th February 2015 we are pleased to submit this load application for the Sydney Intermodal Terminal Facility at Moorebank. It should be noted that this application covers the Sydney Intermodal Terminal Alliance (SIMTA) site only, as indicated on the attached plan.

The development of the SIMTA site is being categorised into 2 stages;

- **Stage 1** is the construction of the rail freight intermodal and the supporting infrastructure. It is intended that construction will commence at the start of 2016 becoming operational by mid-2017.
- **Stage 2** is the further expansion of the site to provide logistics and warehouses over a 10 year period. The stage 2 development scenario is subject to commercial arrangements and as such the development electrical loads provided are indicative.

Estimated Power Demands

A power estimate has been undertaken for Stage 1 and Stage 2. The estimates have been undertaken in accordance with AS3000 and are based on the anticipated floor areas and electrical demands for HV cranes and loco loaders.

As noted in our meeting it is not intended to provide cranes to support the initial stage 1 development until the freight throughput requires it for operational efficiency. It is currently estimated that cranes will be required following 18 to 24 months of operation.

Stage 1 Power Demands

Intermodal	Estimated Load MVA
Gantry cranes (HV)	4.17
Loco Shifter (HV)	0.01
IMEX Terminal	0.65
Gates	0.01
Truck loading bays	0.19
Admin / Control tower building	0.08
Admin / Control tower carpark	0.01
Utility infrastructure	0.21
Total	5.26

The estimated load provided above does not include diversity and therefore we believe the power demand will be approximately 3-4MVA for the Stage 1 Development.

Stage 2 Power Demands

The Stage 2 Development will be a mixture of logistics and warehousing totalling a floor area of approximately 320,000m² and outdoor car parking of approximately 275,000m². The estimated non diverse power demand for the stage 2 works is approximately 13MVA and the diversified load is 10.6MVA.

Preferred Power Supply Strategy

It is SIMTA's preference to be a HV customer. This is to enable operational flexibility as the site is developed. An outline of the preferred power supply arrangement is presents below.

The preferred network supply strategy for the Stage 1 works is to install 2 new 11kV feeders from Anzac Village. An 11kV feeder is capable of providing up to 7MVA which will be sufficient to meet the stage 1 maximum demand requirements, but an additional feeder is required to be installed to provide n-1 redundancy. This is to ensure a constant supply of power in the event of failure of one feeder. The ongoing provision of HV power is operationally critical for the estimated freight throughput. The feeders will be located underground, with one of them being used to meet the maximum demand requirements for Stage 1 development and the second feeder to provide n-1 redundancy. The feeders will be terminated within two typical Endeavour Energy 11kV switching stations located on site, with the second feeder in a 'normally open' position. The actual maximum demand will be monitored after Stage 1 is commissioned and used to adjust the load forecast for future development stages.

For future development works, subject to the actual maximum demand in Stage 1, it may not be possible to provide power from the feeders built in Stage 1 as they will not meet the n-1 redundancy requirement. An additional feeder is proposed to be installed from Anzac Village zone substation to meet the electrical requirements for the future development stages. The additional feeder will also meet the n-1 redundancy requirements. In the event of a failure, the remaining two feeders can collectively provide 14MVA.

This option assumes that there are spare circuit breakers available for use at Anzac Village zone substation and that the substation can meet the additional capacity requirements.

We look forward to your response to this application. Please do not hesitate to contact the undersigned should you wish to discuss the development further.

Yours faithfully



Duncan Price
Principal Engineer

duncan.price@aecom.com

Direct Dial: +61 2 8934 0662

Direct Fax: +61 2 9262 5060

Application for Connection of Load including all Strata Developments



Please return completed form along with all attachments to: Endeavour Energy, PO Box 811 Seven Hills NSW 1730
 Email: cwadmin@endeavourenergy.com.au | Fax: 02 9853 7925 | For connection enquiries, please contact 133 718

This form should be used in the following cases:

All connections or augmentations of load other than single urban residential premises of less than 63 Amperes 3 phase or 100 Amperes single phase.

Note: When applying for a Temporary Builder's Supply (TBS), another application for connection of permanent load or reference number of existing application for connection of permanent load is also required.

All information requested should be provided. Where not applicable please insert N/A.
Applications submitted with inadequate information will not be accepted.

Retail Customer Details

In order for your application to be accepted, you must have a Retail Electricity account with the Retailer of your choice for your site and a National Meter Identifier (NMI). Please indicate below.

Retail Company N/A NMI _____
 Customer Name _____

Further information regarding establishing a Retail account and choosing a Retailer can be found at http://www.ipart.nsw.gov.au/Home/For_Consumers/Choosing_an_energy_supplier

Site Details

Lot & DP No. 1 / 1048263 Street No. _____ Street Name MOOREBANK AVE
 Cross Street _____ Suburb / Town MOOREBANK Post Code 2170
 Local Council / Shire LIVERPOOL CITY COUNCIL UBD Map & Reference No. _____ / _____
 Nearest Substation No. ANZAC VILLAGE Adjacent Pole No. _____ Pillar No. _____

- New Connection Existing Service Upgrade (3 phase)
 Additional Load Temporary Builder's Supply (TBS)
 Permanent Load for TBS submitted OR Permanent Load for TBS attached

Existing permanent load application ref. (where applicable): _____

Date permanent supply is required 01 / 07 / 2016

Specify Land Zoning (For land zoning, refer to local Council, Development Application or Rates Notice) _____

- Development Type: Domestic Commercial Shop Industrial
 Government Utilities Other Specify _____

Units, No. of Units _____ (Please provide NMI's for each unit as an attachment to this application)

Gas reticulation on site Yes No

Footpaths/driveways to be constructed on site Yes No

Load Details

Calculated Maximum Demand Summary			
	A	B	C
Removed Load			Amps
Existing Load			Amps
Additional Load			Amps
Total Load			Amps

Number of phases required: Single Phase Three Phase

REFER ATTACHED

- * Maximum demand assessment based on AS3000 must be attached
- * For multi-residential developments please provide details of floor area, in squares, for each unit on a separate attachment.
- * For industrial/commercial developments with uniform load, provide building area and VA/m² showing kVA and amps.
- * For larger developments supporting load details must be provided on a separate attachment.

Load Details (Continued)

Load details need to be completed by an electrician. For multiple occupancy residential premises, villas, units, townhouses, etc, calculate the maximum demand using Endeavour Energy's – "After Diversity Maximum Demand" (ADMD) OR AS/NZS 3000 – the most onerous calculation is to be used. The ADMD per unit applicable is 6.5 kVA. The final load assessment will be carried out by Endeavour Energy and the assessed load may be lower or higher than the applied load.

Note:

Please provide detailed information describing your development with site plans and a copy of the **Development Agreement (DA)** as attachments to support your request including harmonic loads, excessive motor starting or other types of load that may cause quality of supply issues on the network.

Applicant Contact Details

Name / Company QUBE HOLDINGS LIMITED Contact Person MICHAEL YIEND
Street No. 1413 Street Name SPRING STREET,
PO Box _____ Suburb / Town SYDNEY Post Code 2000
Phone _____ Mobile _____ Fax _____
Email MICHAEL.YIEND@QUBE.COM.AU

Applicant's Representatives Contact Details

Name / Company TACTICAL GROUP Contact Person STEVE RYAN
Street No. 15/12A Street Name WALKER STREET
PO Box _____ Suburb / Town NORTH SYDNEY Post Code 2060
Phone 161 406 995 822 Mobile _____ Fax _____
Email SRYAN@TACTICALGROUP.COM.AU

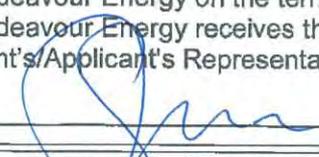
All correspondence to be sent to (select ONE only): Applicant Applicant's Representative

Applicant's Acknowledgement and Agreement

I acknowledge and agree that:

1. in signing and submitting this application I am requesting an expedited connection;
2. I have read and understood the terms of Endeavour Energy's Model Standard Offers for a LV Basic Connection Service and Standard Connection Service (as published on its website at www.endeavourenergy.com.au) and a connection offer by Endeavour Energy for a LV Basic Connection Service or Standard Connection Service on the terms of the relevant Model Standing Offer is acceptable to me; and
3. if Endeavour Energy is satisfied that the service requested by me falls within the terms of Endeavour Energy's Model Standing Offer for either a LV Basic Connection Service or Standard Connection Service, then I will have taken to have accepted a connection offer by Endeavour Energy on the terms of the relevant Model Standing Offer on the date that Endeavour Energy receives this application.

Applicant's/Applicant's Representative Signature:



Date: 20/3/15

* Do you consent to the release of your contact details to other customers with similar works in progress nearby to facilitate co-operation in design and construction activities. Yes No

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Jemena Gas Networks (NSW) Ltd
ABN 87 003 004 322

Level 20
111 Pacific Highway
North Sydney NSW 2060
PO Box 1220
North Sydney NSW 2059
T: 1300 137 078
F: (02) 9455 1673
www.jemena.com.au/Gas/

06/03/2015

AECOM
Level 21, 420 George Street,
Sydney, NSW 2000

Attention: Duncan Price

**RE: Moorebank Intermodal Moorebank Avenue,
Moorebank**

Natural Gas is available in the vicinity and may be able supply this development.

Our policy is to supply all developments wherever possible, depending upon economic viability.

In consideration of our shareholders' interests and under NSW regulation, Jemena Gas Networks (NSW) Ltd is required to ensure that any extension of the natural gas distribution system is commercially viable and therefore must assess each request for supply on an individual basis.

To assist in the planning of supply to the development

- I can confirm that we have a 75mm nylon medium pressure gas main operating at approximately 210kPa in Moorebank Avenue. This network is suitable for residential and light commercial application it may be able supply the proposed development at this site.
- Should heavy industrial and manufacturing at this site be considered an extension of the high pressure 1050kPa steel

network would be required, this network currently terminated at Bapaume Road.

Jemena Gas Networks (NSW) Ltd will respond to a request for supply of infrastructure from an Energy Retailer or a known customer. Upon the provision of the final layout and load configurations for the development a full economic evaluation can be undertaken to determine the availability of natural gas to the site.

A contribution may be required to assist in the economic viability of the proposal.

To enable a thorough economic evaluation to be undertaken we would require an accurate breakdown of the total yield envisaged for the site and hydraulic plans, including metering configuration once all approvals and zonings are in place.

Thank you for your enquiry. If further information or assistance is required, please do not hesitate to contact me on 0429 363 835.

Yours faithfully

A handwritten signature in black ink, appearing to read 'Bradley Gee', written in a cursive style.

Bradley Gee
Network Development Manager