

Southlands Remediation and Development Project

Environmental Assessment

Project Application (MP 06_0191)

Appendix F: Infrastructure Services Report



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*Orica/Goodman
Southlands Development*

Infrastructure Services Report

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Executive Summary

This Report outlines service requirements for the proposed development of the Southlands site. It provides a summary of the investigations undertaken on the existing and required services and the preliminary requirements for the provision.

Although the Southlands site has not been subject to previous development, it is located in an area that has existing services which are largely of sufficient capacity to accommodate the entire development of the site. In relation to the Stage 1 approval, service requirements have been set out in preliminary form and further discussions with servicing authorities will be required during the detailed design process.

In relation to the key services that will be provided, the following briefly summarises the requirements of service authorities:

- Proposed internal roads and driveways will be designed in accordance with Botany Bay City Council requirements where appropriate and new access arrangements onto and across McPherson Street will be agreed with Council.
- A new road link from McPherson Street to Botany Road would be provided prior to development in Stages 2 and 3 of the project. The crossing of this road over the SWOOS would be subject to the requirements of the Sydney Water Corporation (SWC).
- SWC have undertaken a preliminary assessment of the required network upgrading and have advised that water supply can be readily provided.
- The existing Orica Groundwater Treatment Plant (GTP) currently operating on the Botany Industrial Park (BIP) may be a source of non-potable water supply.
- Any sewer mains constructed on the site will be provided in accordance with an environmental management plan approved by the independent Contaminated Sites Auditor. The use of the existing 150mm private rising main, with a sharing agreement with the current owner, would be appropriate for sewage disposal.
- There is sufficient capacity to provide electricity to the development from the existing 11kV-supply distribution in McPherson Street and adjacent roads. Additional 1MVA substations may be required for each proposed warehouse development up to 1800m² in size.
- Other infrastructure services (telecommunications, gas) can be provided by the relevant service authorities.

1. Introduction

1.1 Scope

This report provides details of service requirements for the proposed development of the Southlands site on McPherson Street, Banksmeadow. It provides a summary of the investigations undertaken on the existing and required services and the preliminary requirements for the provision of services to meet the needs of new on site development. The existing and required services, which are applicable to this development, are documented on Connell Wagner's drawings C-101 and C-102.

Requirements provided by the service authorities are included in the report. These requirements are provisional and may alter when detailed analysis and design of the infrastructure proceeds.

1.2 Project description

The Southlands site is an approximate 18ha site owned by Orica. It is situated fronting McPherson Street, Banksmeadow and lies entirely within Botany Bay Local Government Area. The development will consist of high quality industrial and warehouse units, developed in three stages, as outlined in the Environmental Assessment.

The total project involves the staged development of the Southlands property and the provision of a new road link from McPherson Street through to Botany Road. The current Part 3A Application seeks Concept Approval for the total project and specific approval for Stage 1 of the development that will provide some 47,000m² of warehouse and office space.

1.3 General description of infrastructure

The site has not been previously developed and therefore does not currently have connections to the full range of municipal services.

A number of existing services do however cross the site via an 8 metre wide unformed road known as Nant Street. Services within Nant Street are generally oil and gas pipelines connecting surrounding industries, with appropriate licences to occupy the roadway. The services currently located within this road will be retained and protected by the necessary easements or service agreements.

2. Roads and transport

2.1 General

The concept for the project includes the staged provision of internal roads and a new road link from Botany Road to McPherson Street. The proposed internal roads and driveways will be designed in accordance with Botany Bay City Council requirements where appropriate and new access arrangements onto and across McPherson Street will be agreed with Council.

An unformed road known as Nant Street crosses the site. It remains in Council ownership although we understand that negotiations are underway with Council to potentially purchase this road and transfer it to private ownership.

The proposed new road link has been determined after a review of a number of options and significant traffic modelling work as outlined in the specialist traffic report prepared by Traffix. This would be provided prior to development in Stages 2 and 3 of the project, and details of the link are provided in the Environmental Assessment and Traffix report.

The "Port Feeder Road" currently exists to the west of the subject site, but Council has advised that at this stage this road remains a Private Road and is not available for access. It is understood that it will

be opened for public use in the future. All access to the Southlands site has thus been planned from McPherson Street. Traffix has undertaken detailed traffic analysis and the recommendations of this report have been included in the design of the proposed roads and parking areas.

2.2 SWOOS Crossing

The proposed new road linking Botany Road to McPherson street crosses the Sydney Water owned Southern and Western Suburbs Ocean Outfall System (SWOOS).

Discussions have been held with Sydney Water Corporation (SWC) regarding the technical engineering requirements for the crossing of the SWOOS. SWC advise that the following should be considered in any future crossing design:

- There is currently a parcel of land 13m wide which Sydney Water own, in which the SWOOS is located. Sydney Water advises that there are to be no piles, piers or other structures in this parcel of land.
- It may be necessary to provide additional concrete rectangular box culverts running parallel with the SWOOS, underneath the new road, for potential future upgrading of the SWOOS.
- A minimum clearance is to be provided between the underneath of roadway and the top of the SWOOS.
- Bridging will limit access to the SWOOS for that portion. Alternative access arrangements will need to be provided to allow Sydney Water access.
- Compensation may be required for the use of SWC land.
- A Geotechnical Report is to be provided along with a Safe Work Method Statement prior to any works taking place adjacent to the SWOOS.

More detailed design discussions will be required with Sydney Water prior to constructing the crossing.

3. Water and sewerage services

3.1 Water supply requirements

The development will generate an estimated water requirement of 1803 EP for the entire 18.03 Ah site. The existing 150mm diameter water main in McPherson Street is unable to provide this increased demand and additional mains will be required to maintain sufficient water pressure for domestic use and fire fighting.

SWC have undertaken a preliminary assessment of the required network upgrading and have provided the following advice (see Appendix A):

- Approximately 270 metres of new 200mm water main to be provided on the East side of Exell Street connected to the existing 375mm main in Botany Road.
- Approximately 430 metres of new 200mm water main to be provided on the South side of McPherson Street.
- 200mm cross connection to be provided to the existing 150mm main at the corner of McPherson and Exell Streets.
- 150mm cross connection to be provided to the existing 150mm main at the corner of McPherson and Nant Streets.

- Each individual lot within the development requires frontage to the water main to permit an individual connection and meter.
- Developer Charges for water supply for Stage 1 would be approximately \$ 91,250.

Refer to Appendix A for a diagram that illustrates the required water service upsizing extensions and connections:

3.2 Recycled water

There is an existing GTP operated by Orica for the Botany Groundwater Cleanup Project at the BIP. The GTP is currently generating approximately 5 megalitres of treated water per day. Treated water from the GTP is currently being used on the BIP and some water may be available for recycling for non-potable purposes at the Southlands site. It may be augmented by treated stormwater from the site. It is proposed that treated water be reticulated through the Southlands site for non-potable uses including toilet flushing and industrial uses. The separate Water and Energy Efficiency report for the project details these requirements and recycling opportunities.

3.3 Sewerage services

Any sewer mains constructed in the area will be subject to SWC's approval of the remediation done to the subsoils to ensure that any infiltration does not contaminate collected sewage. Each separate lot of the development requires a connection point to the sewer main within the confines of each lot boundary.

Earlier feasibility studies undertaken by SWC recommended that a pump station be provided within the site and that sewage be pumped to a connection point in Hill Street. Sydney Water has subsequently advised that the sewer in Hill Street does not have sufficient reserve capacity to accommodate this flow and has recommended that the site utilises an existing 150mm private rising main with a sharing agreement with the owner. The main is located in an easement south of McPherson Street and carries sewage from No. 20-22 McPherson Street (Solvay Interlox), immediately west of the site, to Sydney water's outfall to the south. In addition, a rising main currently leads from Foreshore Road to the SWOOS, extending through Discovery Cove. This main is DN200 cement lined ductile iron and is covered by an easement, but will require either replacement with concrete encased mild steel or deviated to avoid the new road location.

Sydney Water has advised that the following Developer Charges are applicable:

Development category	Developer charge (Stage 1)
Industrial	\$166,903

As charges are based on surface area, a similar service charge can be expected for Stages 2 & 3 combined.

4. Other services

4.1 Electrical supply

Electricity infrastructure within McPherson Street and the adjoining Port Feeder Road consists of underground high voltage feeder cables on the north side of McPherson Street and on the East Side of the Port Feeder Road.

JDG Consulting's investigations have indicated that there is sufficient capacity to provide electricity to the development from the existing 11kV-supply distribution in McPherson Street and adjacent roads. Additional 1MVA substations may be required for each warehouse development up to 1800m² in size. (see Appendix B).

The location of the proposed new substation sites is not critical, but a central location would be more efficient and cost-effective for electricity reticulation. Demands will need to be determined according to the nature of the proposed development and industry which will occupy the site.

4.2 Gas

Secondary gas mains exist in McPherson and Nant Streets. A 450mm, 1050 kPa main is located on the north side of McPherson Street and a 1050 kPa, 200mm main on the east side of Nant Street.

Agility has advised that there is sufficient combined capacity within these mains to service the proposed development, although the existing gas mains will need to be extended into the site with a gas reticulation network.

4.3 Telecommunications

Investigations were undertaken to determine the availability of telecommunications infrastructure that could be utilised for development within the release area and to determine if assets such as optic fibre cables were located within the area that could constrain development.

A review of the Telstra services revealed that optic fibre infrastructure exists on the south side of McPherson Street, while a review of the Optus services revealed that infrastructure exists on the north side of McPherson Street. Telstra have indicated that the existing infrastructure has sufficient capacity for the provision of telephone services to the development (see Appendix B).

4.4 Drainage

Stormwater drainage has been designed for roads to accommodate requirements of Botany Bay City Council. In relation to flooding, a separate report has been submitted with the Environmental Assessment.

4.5 Earthworks

Bulk earthworks plans for the site showing proposed finished ground levels have been prepared to reflect the proposed finished levels based on the results of the flood investigations. Details of the expected flood levels are contained with the Flood Investigation Report.

The level of Stage 1 of the site will be raised throughout by approximately 1.3 metres to ensure that it is above the 1 in 100 year flood level. Proposed detention basins and in-ground detention tanks are proposed to detain storm events to existing pre-development flows.

A detention basin excavated to 300mm above the ground water table on the Eastern side of the new road entry from McPherson Street will be provided as part of Stage 1.

5. Conclusions

We conclude that it is feasible to provide all infrastructure services to the development site including, water, sewerage, electricity, gas and communications. This report broadly sets out the required upgrades as notified by the relevant servicing authorities.

Road access arrangements and final design works will need to be agreed with the RTA and Botany Bay City Council as required.

Sydney Water have advised that arrangements must be made with the owner of No. 20-22 McPherson Street for sharing of the existing rising sewer pipeline in order to provide a new sewer connection to the site.

Crossing of the Sydney Water SWOOS for the future road will require further more detailed design and resolution of issues with Sydney Water.

Appendix A – Sydney Water Feasibility Letter

Connell Wagner Pty Ltd
C/- Rose Atkins Rimmer (Infrastructure) Pty Ltd

Dear Applicant

FEASIBILITY LETTER

Developer: Connell Wagner Pty Ltd
Your reference: 96/21068
Development address: Lot 1, DP 1078077 - McPherson Street, Botany
Development description: Stages 1 & 2 creating 2 lots. Proposed office and warehouse on each lot.

This Feasibility Letter (Letter) serves as a guide only and is current for the date of issue only. It provides general information concerning Sydney Water's potential requirements in response to your proposed project.

Should you obtain development consent from the local authority and are required to apply to Sydney Water for a Section 73 Subdivider/Developer Compliance Certificate (Certificate) for your proposed development, you will need to submit **a new application to Sydney Water for the Certificate by engaging your current or another authorised Water Servicing Coordinator (Coordinator)**.

In response to the Section 73 Subdivider/Developer Compliance Certificate application, Sydney Water will issue a Notice of Requirements (the Notice), Works Agreement (Agreement) or the Certificate. That Notice, Agreement or Certificate will be the definitive statement of Sydney Water's requirements at that stage.

The information provided on potential Developer Charges and reticulation requirements is **current at 5 October 2006 and is issued as a guide only**. There may be variations in respect of:

1. Developer Charges:

- (a) CPI adjustments of charges that might apply;
- (b) Adjustment of charges that may be scheduled for review, using the methodology established by IPART. After IPART's review, Sydney Water is required to apply the new charges;
- (c) Rezoning of land that may form all or part of the feasibility application. In this instance, a new schedule of Developer Charge fees will be applied to your new application for a Certificate.

2. Reticulation Recovery Charges:

Reticulation Recovery Charges recover part of the cost of works that have been provided by Sydney Water or other developers that benefit your development. This charge has been estimated before your points of connection have been determined. If later design investigation shows your development will be connected to other main/s, the Reticulation Recovery charge may be varied and/or you may need to construct other works.

3. Reconfiguration of the proposed development:

- (a) If you change the development proposal description when lodging Development Approval Consent with the relevant local authority (for example: Dual Occupancy Development changed to include subdivision) all indicative reticulation requirements and Developer/ Reticulation recovery charges identified within this Letter are subject to re-evaluation upon submission of your new application;
- (b) If you alter the plan/site layout in any form, all indicative reticulation requirements and Developer/Reticulation charges identified within this Letter are subject to re-evaluation upon submission of your new application; or
- (c) If you stage your development, the Coordinator must submit a new application, for each stage of your project.

Sydney Water potential requirements in response to your specific request is/are:

STEPS IN SYDNEY WATER DEVELOPMENT PROCESS

1. Receive Development Consent from the **local** authority.
2. Engage a Water Servicing Coordinator (Coordinator).

You must engage your current or another authorised Coordinator to submit your new Section 73 Development Application to Sydney Water. The Coordinator will manage the application process, the design and construction of works that you must provide, at your cost, to service your development.

For a list of authorised Coordinators, either logon to www.sydneywater.com.au and refer to *Developing Your Land* under *Building Developing and Plumbing* or call 13 20 92. Coordinators may provide you with a **quote or advice regarding costs for their and other supplier's services/ works as well as** other Sydney Water costs.

The Coordinator generally will be the single point of contact between you and Sydney Water and can answer any questions in the first instance you may have on Sydney Water's developer process and developer charges.

In response to the submitted Section 73 Certificate Application, Sydney Water will issue the formal Notice that will detail all reticulation requirements and Developer Charges that must be met prior to the issue of the Certificate.

3. Works Agreement.

After the Coordinator has lodged the new application for a Certificate, he/she will receive the **Sydney Water Notice and Agreement**. You will need to sign and lodge **both copies** of that Agreement with your nominated Coordinator. The Agreement identifies the responsibilities of Sydney Water, the Coordinator and you (the Developer) for your development's Water and Sewer construction. After execution by Sydney Water, one copy will be returned to your authorised Coordinator.

Note: The authorisation of the Coordinator must be current at all times throughout the project.

4. Water and Sewer works.

The Water and Sewer works you construct and pay for under the Agreement entered into must include extensions to Sydney Water's systems to ensure each lot in your development has:

- a frontage to a water main to enable a separate connection and meter;
- a sewer main with a connection point within the boundary of each lot.

Sydney Water's potential reticulation requirements for your project are:

Water:

There is an existing 150 mm main in Exell Street and McPherson Street which complies with the minimum water main sizing according to the Water Supply Code of Australia Sydney Water Edition for industrial zoning. The following described works are to be designed and constructed by the developer with the cost of the water main amplifications possibly borne by Sydney Water as upsizing, with only a water main extension in Nant Street to be developer funded. This arrangement will be further negotiated at the submission of design plans as part of an official Section 73 Application.

The following amplifications are required to maintain hydraulic capacity in the Area (see following diagram 1).

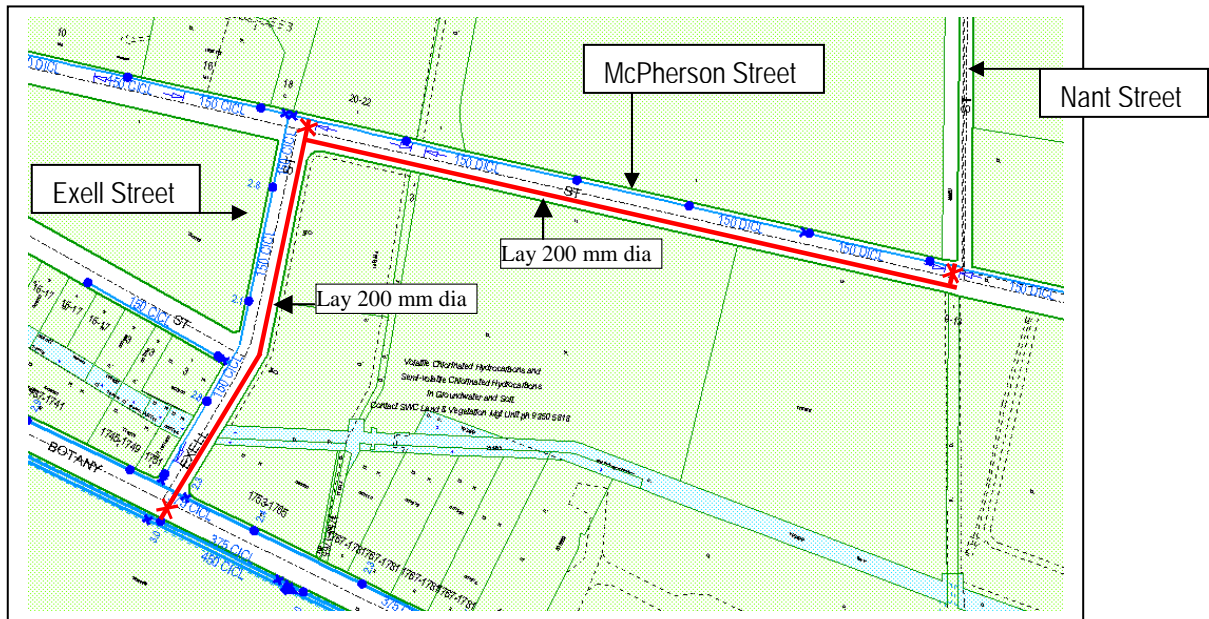
- Approximately 270 metres of 200mm diameter main to be laid along Exell Street from the existing 375 mm main on the south side of Botany Road at the corner of Botany Road / Exell Street to the corner of Exell Street / McPherson Street. The required connection point is from a different trunk main than that which supplies the existing 150 mm main in Exell Street in order to increase supply security.
- Approximately 430 metres of 200mm diameter main to be laid along McPherson Street from the corner of Exell Street / McPherson Street to the corner of McPherson Street / Nant Street.
- 200 mm cross-connection to existing main at the corner of Exell Street and McPherson Street & 150 mm cross-connection to existing main at the corner of McPherson Street and Nant Street.

Sydney Water does not consider the specific firefighting capability of the mains as part of the Section 73 Certificate Application process. Assessment of firefighting capability is the responsibility of the applicant and Sydney Water's role is limited to indicating modelled pressures at flows nominated by the applicant on a standard pressure enquiry form submitted with the applicable Schedule Fee. The applicant has ultimate responsibility to ensure that the required works would adequately meet the firefighting requirements of the development, or to notify Sydney Water of any further upsizing, which would be at applicant's cost.

Any proposed pump to draw directly from Sydney Water's watermain must be assessed by Sydney Water to ensure that its operation will not cause adverse pressure drawdown and surges to nearby customers. The applicant must submit a Pump Application with details of the pump and system, and a pressure enquiry result less than 12 months old, It is essential that Sydney Water acceptance of the pump drawoff be sought before purchase and installation.

The applicant would be responsible to ensure that the amplification stipulated above would adequately meet the firefighting requirements of the development.

Diagram 1



Sewer:

The previous feasibility letter for case 85130 nominated a pumping connection point for this development at a manhole in Hill Street. It has since been re-evaluated that this receiving sewer does not have sufficient capacity to cater for the proposed development.

Various properties along the SWSOOS between Exell Street and Beauchamp Road currently have direct pumping connections to the SWSOOS. However, Sydney Water Strategic Operations is adamant that there are to be no new direct connections to the SWSOOS. This limits the available servicing options for the Orica site.

It is observed that No. 20-22 McPherson Street is served by a private 150mm PVC rising main, which crosses McPherson Street and passes southerly via an easement and connects to the SWSOOS. (As per SSD 640971). This rising main starts close to the south/western corner of the Orica land and has sufficient capacity to cater for the proposed development. If this rising main were to be transferred to Sydney Water's ownership, it could be the basis for a low-pressure system serving both No. 20-22 and the Orica site. The feasibility of this option depends on the cooperation of Strategic Operations and the landholders involved.

Sydney Water records show that the land for development may be contaminated necessitating you to supply a remediation report to ensure the Sydney Water system is not contaminated. Specifically our records show this land as 'Volatile Chlorinated Hydrocarbons and Semi-volatile Chlorinated Hydrocarbons in Groundwater and Soil.'

Further, options for recycled water should be considered.

If the water main/ sewer/ stormwater main located in the footway/ your property is found, after the issue of the Notice, to require adjustment or deviation this work must be undertaken in conjunction with the above mentioned extension. The conditions of the Notice will apply including engagement of a Coordinator, signing of an agreement, and completion at no cost to Sydney Water **prior to the issue of the Certificate** (see also section on building plan stamping). After the design has been completed and its nature and complexity considered, Sydney Water may require your lodgement of an appropriate security that will be refunded upon completion.

Note: If construction must take place on neighbouring properties, written consent to enter for

design/construction on Sydney Water's **Permission to Enter** form(s) must be obtained from the relevant property owners and tenants. Your Coordinator has copies of the form(s) that are also available on the Internet at the address as above and can negotiate on your behalf.

In providing these works to Sydney Water, you will need to pay project management, survey, design and construction costs **directly to your suppliers**. These costs may include Sydney Water charges for:

- water main shutdown and disinfection;
- connection of new mains to Sydney Water system(s);
- design and construction audit fees;
- **contract administration on project finalisation**;
- creation or modification of Sydney Water interests in land (eg. easements);
- further application fees for staged developments; and
- Redress under Sydney Water's Customer Contract.

Your Coordinator can advise you about these costs and how these costs may be quoted.

5. Developer Charges.

Development Servicing Plan (DSP)	Basis of Calculation	Charge (\$) for Applicable period (05/10/06-30/06/07)	Charge (\$) for Applicable Period (01/07/07-04/10/07) (CPI adjusted)
Botany GravityWater DSP Area	Industrial - Area 95,338sqm @ \$9,698 per ha= \$92,459 based on Flow rates in paragraph below Less Credit of \$1,212 for previous payment/ use	\$91,247	\$TBA
SWSOOS Sewer DSP Area	Industrial - Area 95,338sqm @ \$17,739 per ha= \$169,120 based on Flow rates in paragraph below Less Credit of \$2,217 for previous payment/ use	\$166,903	\$TBA
Reticulation Recovery	See note below	See note below	See note below
DEVELOPER CHARGES TOTAL: <i>[OFFICE USE- Invoice Charges total- Developer \$258,149 and Upsizing \$Nil]</i>		\$258,149	\$TBA

Notes:

When your Coordinator has submitted the **Section 73 Subdivider/Developer Compliance Certificate** Application, the **Notice** will detail the applicable Developer Charges for your development.

New IPART Determination:

- Sydney Water is nearing completion of its five-yearly review of developer charges in accordance with IPART Determination No. 9 2000. Developer charges will be revised to take into account Sydney Water's latest capital expenditure projections as well as current development forecasts. For the latest information on this review please logon to our website www.sydneywater.com.au and refer to Building, Developing and Plumbing>Developing your Land>Review of Developer Charges. The new developer charges will then take effect after registration with IPART.
- Some of the new charges may significantly decrease, others may increase and additional charges may be introduced. Consequently, after you receive the Notice, it may be to your advantage

to consider when you will make payment. That is:

- If payment is made before the new charges are registered with IPART, then Sydney Water must apply the charges quoted in the Notice; or
- If payment is made after the new charges are registered with IPART, then:
 - If the new charges have **decreased** you will only have to pay the new lower charges that will be advised to you when you seek to make payment; or
 - If the new charges have **increased and/or additional charges introduced** then Sydney Water will apply the old lower charges, plus any CPI increase, for the remainder of the applicable period of the Notice. After that time, Sydney Water is required to apply the new higher and/ or additional charges when you re-apply.

Sydney Water is unable to advise possible new charges or to advise firm new charges until registration of the DSPs with IPART. Contact your Coordinator for advice on charges during this period.

Annual CPI adjustment from 1 July:

- If you do not pay the charges identified in column 3 of the above table by 30 June and before the new rates are registered with IPART (and as advised above), the total will be adjusted for inflation (based on the weighted average of the capital cities CPI for the 12 months to the end of the previous March) from 1 July for the balance of the 12 month period. The charge from 1 July is only shown in column 4 if the inflation figure is known.

Also:

- **DSP charges** are a contribution towards the cost of systems (eg treatment plants) which serve your development. They have been calculated using base developer charges that cannot be changed or waived by Sydney Water having been established in Plan(s), available on request, and registered with the Independent Pricing and Regulatory Tribunal (IPART) under its relevant Determination. For further details, and a copy of the IPART Act 1992 including section 31 that refers to arbitration rights, see the IPART web site www.IPART.nsw.gov.au. Costs of arbitration, if appropriate, are borne equally by you and Sydney Water irrespective of outcome.
- For additional information on Sydney Water Developer Charges logon to www.sydneywater.com.au
➤ *Building, Developing and Plumbing* ➤ *Developing Your Land* ➤ *Fees and Charges*.
- When the Notice is issued the charges are directly payable to Sydney Water.
- The DSP charges in the table are based on your development requiring an average day water demand based on an allowance of up to 49.4kl per day pure net hectare for light industrial.

If the development generates a greater demand, you may have to pay additional charges. If the development is to be sold, prospective buyers should be made aware of this situation under the requirements of Vendor Disclosure.

- **Reticulation Recovery Charges** recover part of the cost of works that have been provided by Sydney Water or other developers that benefit your development. This charge has been calculated before your points of connection have been determined. If later design investigation shows your development will be connected to other main/s, the Reticulation Recovery charge may be varied and/or you may need to construct other works.

6. Stamping and approval of your engineering and building plans.

You may need to have your building plans stamped and approved prior to the issue of the Certificate if your development is located over or adjacent to a Sydney Water asset. For information regarding this approval please logon to www.sydneywater.com.au then *Building And Renovating* under *Building, Developing and Plumbing*.

If any work on our assets is carried out without that approval, then Sydney Water will take action to have work on the site cease and apply the provisions of Section 44 of the Sydney Water Act 1994.

POSSIBLE FUTURE COSTS

The Requirements in the **Notice** relate to your Certificate application and may not cover all aspects of Sydney Water's involvement with your development. During design and construction of your development other Sydney Water fees/requirements may be necessary, including:

- construction/building plan stamping fees including fees to ensure the protection of Sydney Water assets
- plumbing and drainage inspection costs for private service lines (including property service connection and/ or disconnection and inspection fees)
- install backflow prevention devices for certain commercial/industrial connections
- trade waste requirements when constructing a building
- council fire fighting requirements (if not catered for by your current Sydney Water main). You should investigate fire fighting facility requirements for your development as soon as possible, including a standard pressure inquiry to Sydney Water if needed.

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

END

Appendix B: JDG Consulting Electrical Infrastructure Report

**DUE DILIGENCE
REPORT
on
ELECTRICAL
INFRASTRUCTURE**

Property:

**Lot 1 DP 1078077
Lot 1 DP 85542
Lot 11 DP 109505
Part Lot Land DP 752015
Orica Southlands Project
26-28 McPherson Street
Banksmeadow,
NSW 2019**

On behalf of:

Macquarie Goodman Management

as prepared on
9 August 2005

JDG CONSULTING IS THE TRADING NAME OF GREEN FUTURES PTY LTD A.C.N. 078 387 489

Report disclaimer:

The report which follows deals specifically with the electrical infrastructure and with those related aspects of the site which are visible and to which access could reasonably be gained at the time of carrying out the inspection, and is based upon a visual inspection only.

The report does not deal with those aspects of the site which were concealed, for example, underground electrical wiring or with aspects of the site specifically excluded in the report or to which access was in any way obstructed, or not reasonably practicable.

The report deals with electricity distribution and telecommunication services only. Gas, water and other services as may exist on the site are not covered by this report.

REPORT ON ELECTRICAL INFRASTRUCTURE ORICA SOUTHLANDS PROJECT, 26-28 McPHERSON STREET, BANKSMEADOW

1.0 INTRODUCTION

In response to a Macquarie Goodman Management request from Mr. Jeff Lord on Monday 1 August 2005, a site visit has been carried out of the proposed industrial site located at McPherson Street, Banksmeadow being Lots Lot 1 DP 1078077; Lot 1 DP 85542; Lot 11 DP 109505; Part Lot Land DP 752015, also known as Orica Southlands Project, on Wednesday 3 August 2005. Additionally 'Dial-Before-You-Dig' reports and verbal advice from representatives of EnergyAustralia and Telstra Corporation has been obtained.

This report addresses the electrical distribution and telecommunications infrastructure observed during the site visit together with advice received from EnergyAustralia and Telstra in consideration of the proposed development of the site to accommodate industrial warehouses up to 108,000m² based on a 60% site usage ratio.

In summary, there appears to be capacity to provide electricity supply to the development from the existing 11,000 volt supply distribution in McPherson Street and adjacent roads and to provide copper or fibre telecommunications services as required by prospective tenants in the proposed development of the site.

2.0 ELECTRICITY SUPPLY

The site lies to the north and west of major electricity distribution. There is a major services easement to the south and east side of the three lots. The attached sketch plan shows the discovered high voltage electricity cabling together with the proposed route of new 11kV distribution to supply kiosk substations for the future warehousing development on site.

In discussion with EnergyAustralia it is apparent that the site can be supplied via underground 11kV distribution off McPherson Street and adjacent roads. A dedicated kiosk transformer of 1,000 kVA capacity might be provided for each proposed warehouse development up to 18,000m² in size each depending on lessee requirements.

The order of cost to establish a single kiosk transformer is \$140,000.00 excluding GST based on the current EnergyAustralia electricity supply policy to charge only for infrastructure costs beyond the existing 11kV distribution system. Based on the likelihood of six (6) separate kiosks and the interconnecting 11kV distribution works, we anticipate a cost in the order of \$1,100,000.00 excluding GST. There is no allowance for the provision of the warehouse main switchboards in the above budget price.

3.0 TELEPHONE CABLING

The site can be supplied by copper and optic fibre services located to the south of the site in particular. Telstra undertake to supply one or other service as required to satisfy the telecommunication requirements of the development.

It is envisaged that 100 pairs copper incoming cabling needs to be allocated to each industrial warehouse and this service will be supplied via a 600 pair incoming PSTN/ISDN/ADSL service from Telstra to a suitable distribution point.

Tenants requiring Optus or other alternate service provider provisions will be satisfied by the above.

Telstra pre-provisioning is made at minimal cost to the development however the cost of the main distribution frame, tenant distribution frames, conduits and cabling on site is a cost to the development. For budgetary purposes, a provisional allowance of \$20,000.00 should be made for telecommunications infrastructure to the lots.

4.0 SUMMARY

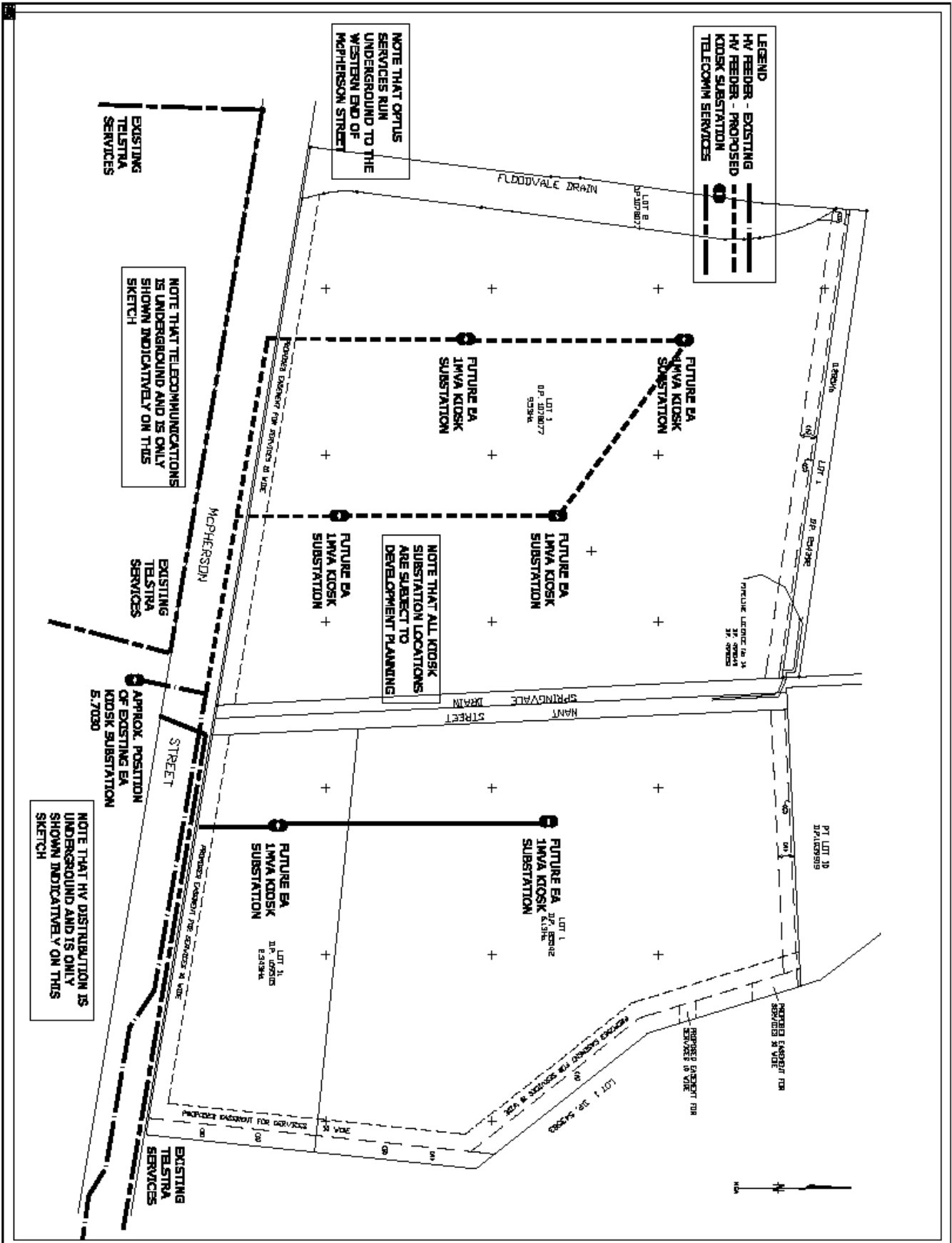
The site and warehousing developments can be supplied with a suitable electricity supply by EnergyAustralia at a cost in the order of \$1,100,000.00 excluding GST and can also be supplied with suitable telecommunication services Telstra Corporation at minimal cost in the order of \$20,000.00 excluding GST to the development.

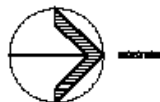
Report prepared by



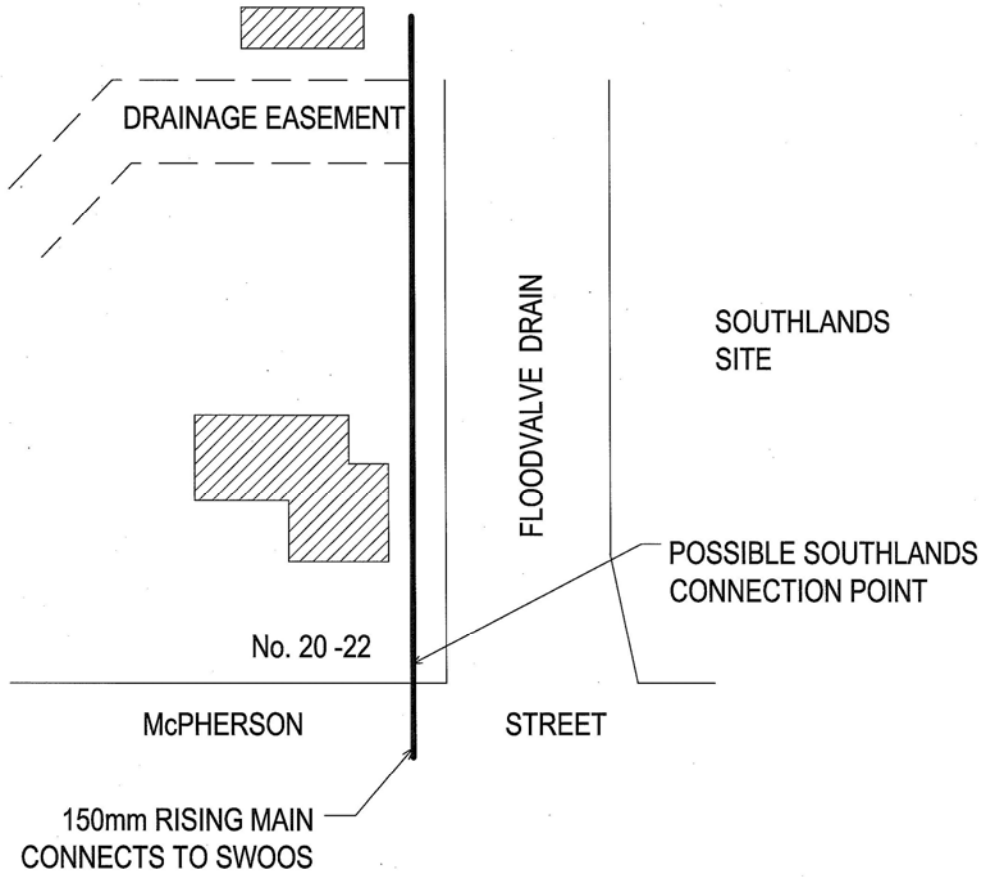
John Green
Principal - JDG Consulting
9 August 2005

Attached: Sketch 1346-SKE1



		<p>Manojuha Goonewardene Director</p>	<p>Southlands Project McPHERSON STREET BALAKMADAW NSW PRESTONS NSW</p>	<p>1346-SKE01</p> <p>DATE: 11/00 SCALE: A DRAWN BY: CA-1346</p>	<p>DATE: 8/8/05</p>
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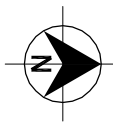
Appendix C: Location of Sewer Rising Main



LOCATION OF RISING MAIN CONNECTION

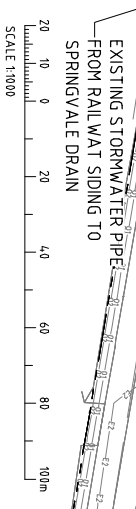
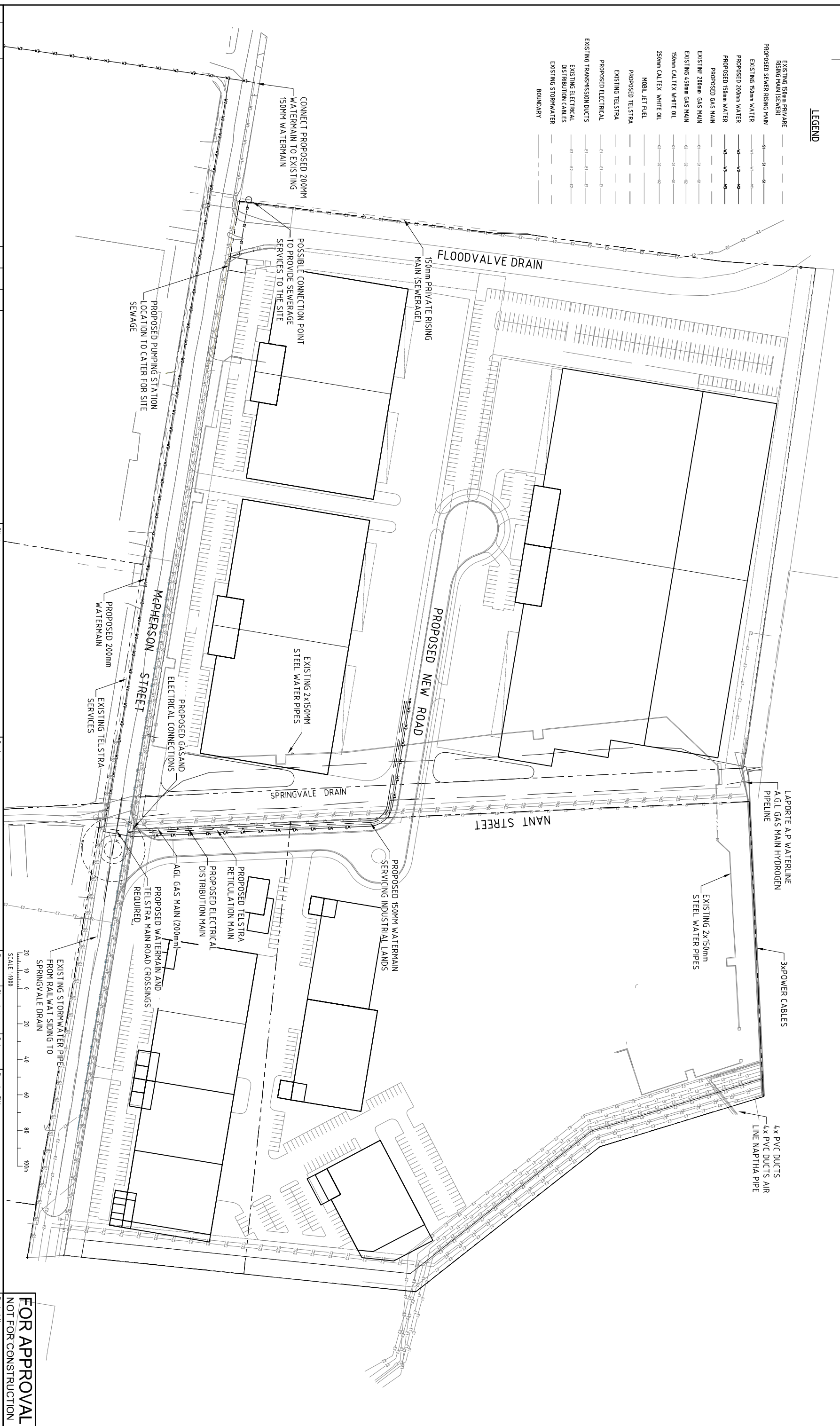
Appendix D

Site Services Drawings



LEGEND

- EXISTING 150mm PRIVATE RISING MAIN (SEWER)
- PROPOSED SEWER RISING MAIN
- EXISTING 50mm WATER
- PROPOSED 50mm WATER
- EXISTING 200mm WATER
- PROPOSED 200mm WATER
- PROPOSED GAS MAIN
- EXISTING 200mm GAS MAIN
- EXISTING 450mm GAS MAIN
- 150mm CALTEX WHITE OIL
- 250mm CALTEX WHITE OIL
- MOBIL JET FUEL
- PROPOSED TELSTRA
- EXISTING TELSTRA
- PROPOSED ELECTRICAL
- EXISTING TRANSMISSION DUCTS
- EXISTING ELECTRICAL DISTRIBUTION CABLES
- EXISTING STOPWATER
- BOUNDARY



Rev	Date	Revision Details	Drn	Ver.	App.
03	28.09.07	ISSUED FOR DA APPROVAL	MD		
02	08.05.07	ISSUED FOR PRE-DA APPROVAL	MD		
01	30.03.07	ISSUED FOR CO-ORDINATION	BL		

Cornell Wagner
 Client: GOODMAN/ORICA

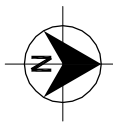
Project: SOUTHLANDS INDUSTRIAL ESTATE

Drawn	Signed	Date
MD		
Designed	Signed	Date
SV		
Verified	Signed	Date
RD		
Approved	Signed	Date

Drawing Title: SERVICES PLAN SHEET 1 OF 2

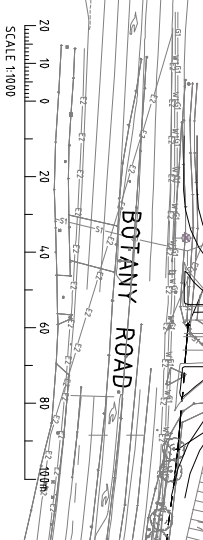
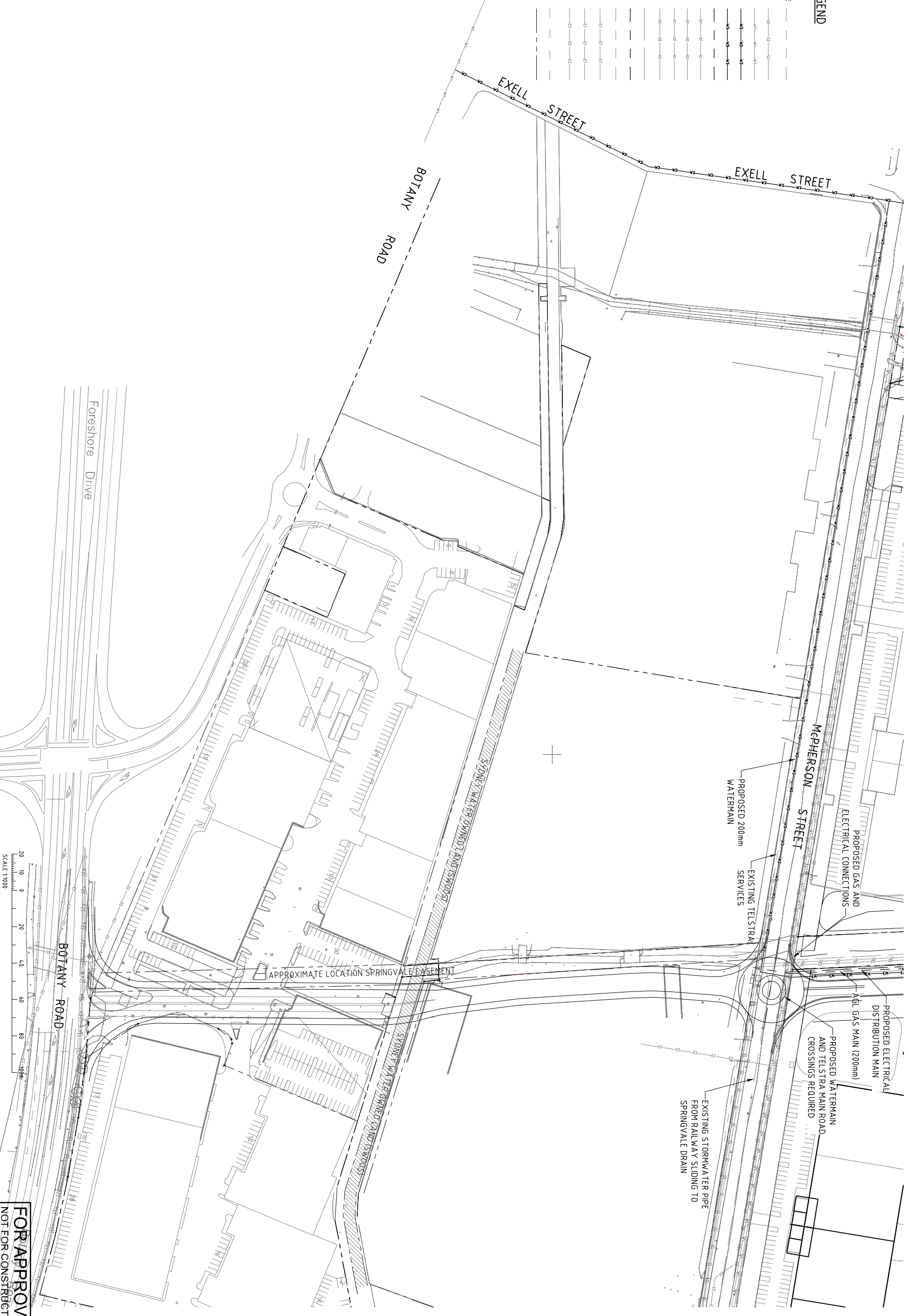
Project No: 22202
 Scale: 1:100
 Drawing No: C-101
 Rev: 03

FOR APPROVAL
 NOT FOR CONSTRUCTION



LEGEND

- EXISTING 150mm PRIVATE RISING MAIN (SEWER)
- DIS-USED RISING MAIN
- EXISTING WATER
- PROPOSED 200mm WATER
- PROPOSED 150mm WATER
- PROPOSED GAS MAIN
- EXISTING 200mm GAS MAIN
- EXISTING 450mm GAS MAIN
- 150mm CALTEX WHITE OIL
- 250mm CALTEX WHITE OIL
- MOBIL JET FUEL
- PROPOSED TELSTRA
- EXISTING TELSTRA
- PROPOSED ELECTRICAL
- EXISTING TRANSMISSION DUCTS
- EXISTING ELECTRICAL DISTRIBUTION CABLES
- EXISTING STORMWATER
- BOUNDARY



Rev	Date	Revision Details	Drn	Ver.	App.
03	28.09.07	ISSUED FOR DA APPROVAL	MD		
02	08.05.07	ISSUED FOR PRE-DA APPROVAL	MD		
01	30.03.07	ISSUED FOR CO-ORDINATION	BL		

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Client: **GOODMAN/ORICA**
 Project: **SOUTHLANDS INDUSTRIAL ESTATE**

Drawn	Signed	Date	Checked	Signed	Date
MD			SV		
			RD		

Drawing Title: **SERVICES PLAN SHEET 2 OF 2**

Project No: **22202**
 Scale: **1:100**
 Drawing No: **C-102**
 Rev: **03**

FOR APPROVAL
NOT FOR CONSTRUCTION