

If a building becomes architecture, then it is art. Clearly, if a building is not functionally and technically in order, then it isn't architecture either – it's just a building.
Arne Jacobsen

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Sustainable Design
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Macarthur Memorial Park Infrastructure Management Plan(Power and Telecommunications)

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Date	Rev	Issue	Notes	Checked	Approved
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Sydney 30th Sep 2015
Ref.

Baoying Tong
Electrical Engineer

baoying.tong@steensenvarming.com

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ELECTRICAL SERVICES

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1.0 Executive Summary

The details within this document are preliminary and are based on the information available at the time.

The report is provided to facilitate a record of the in-ground services, where there are clashes with proposed works and thus where diversions are required. The report also details records of consultation with other relevant agencies.

This report determines that the following services are located above ground within the proposed construction sites for the Macarthur Memorial Park buildings:

- High voltage and low voltage service cables and associated poles owned and operated by Endeavour Energy
- Aerial fibre and copper service cables and associated poles owned and operated by Telstra

This report also determines that the following services that are located near the proposed construction sites for the Macarthur Memorial Park buildings and may require diverting and/or relocating:

- Endeavour Energy underground high voltage and low voltage service cables and associated cable ducts
- Underground fibre and copper service cables and associated ducts owned and operated by Optus

This report also includes the proposed services augmentations for the following systems.

- New kiosk substation
- New telecommunication link

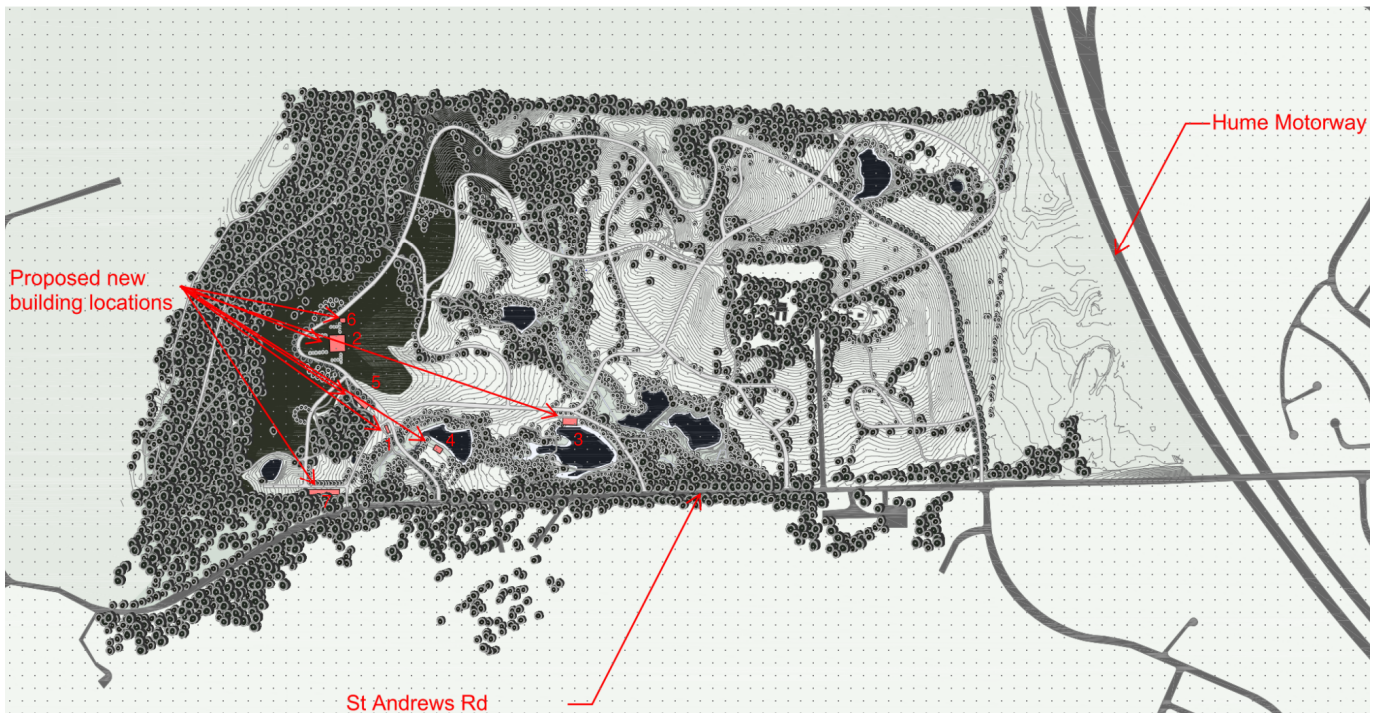
Details of correspondences between authorities are included in the appendix.

2.0 Extent of Work

Macarthur Memorial Park comprises a 113 hectare purchased by the Catholic Cemeteries Metropolitan Trust with a view to providing a community landscape cemetery within West Sydney. The facility will comprise the following developments:

1. Gate house
2. Chapel
3. Function Room
4. Café & Flower Shop
5. Administration Office
6. Mortuary
7. Ground Staff Facilities

The above developments are indicated on the following image:



With regards to the above developments, this report determines the above ground and below ground existing services with respect to power and communications systems.

This report also provides preliminary descriptions of the existing external site lighting.

3.0 Existing Building Services Infrastructure

For power and telecommunication assets, only Endeavour Energy and Telstra have assets directly falling inside the project boundary, which for the purpose of this report is the area of land defined by Camden Valley Way and the Hume Highway, south of St. James Road and the lots associated with St. Andrews Road.

It has also been established that Optus have assets distributing adjacent the project boundary along St. Andrews Road.

3.1 Confirmation of Authority Requirement

It has been determined that Endeavour Energy have no substation assets within, or near, the project boundary. Therefore a new substation will need to be constructed in order to provide the proposed developments with an electricity service.

It is anticipated that telecommunications services shall be provided to the proposed developments by Telstra. Steensen Varming have submitted an application to Telstra with regards to distributing lead-in services to the proposed developments. Telstra are in the process of reviewing this application.

3.2 Power

Based on the corresponding Dial Before You Dig (DBYD) information, Endeavour Energy (EE) do not have any underground services distributing within the project boundary, however Endeavour Energy have overhead high voltage and low voltage cables running on the site, which has been spotted by site observations made by Steensen Varming.

The following image indicates the existing overhead service cables, owned and operated by Endeavour Energy, that distribute within the project boundary:

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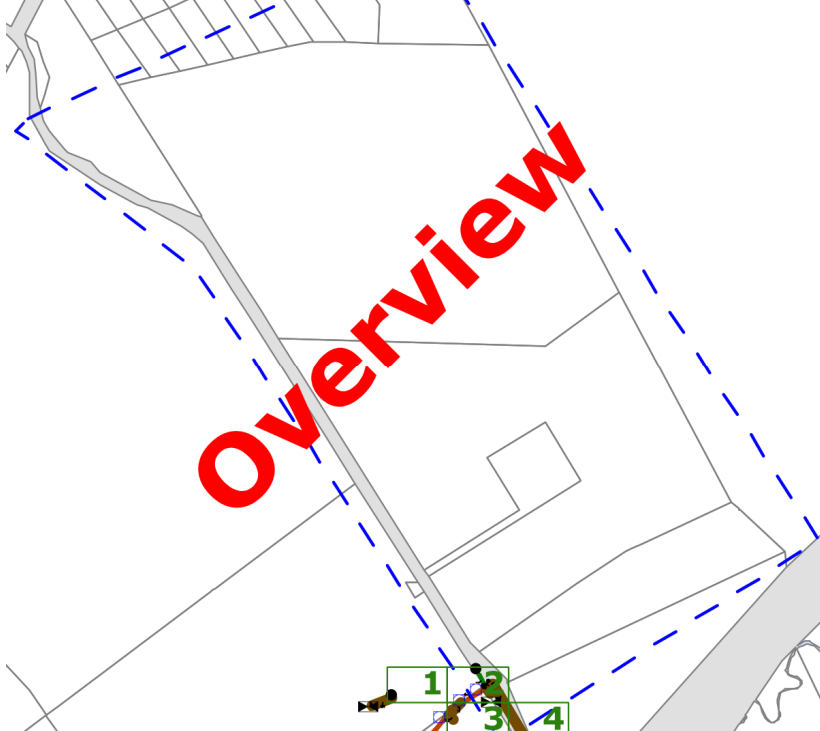
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The following image denotes the underground service cables, owned and operated by Endeavour Energy, that distribute along part of St Andrews Rd.



Steensen Varming submitted an application to Endeavour Energy in order to determine the location and free capacity of existing power assets (e.g. substations)

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local to the project boundary, determine if those existing assets are to be retained long-term and determine the feasibility of providing future services to the site from the existing power assets.

Steensen Varming are awaiting a response to the application.

3.3 Telecommunications

Based on the DBYD information, multiple telecommunication service providers have assets either inside or near the project boundary.

3.3.1 Optus

Per the following image there are below ground Optus services that distribute up to the project boundary, on the intersection of St. Andrews Road and Spitfire Drive.

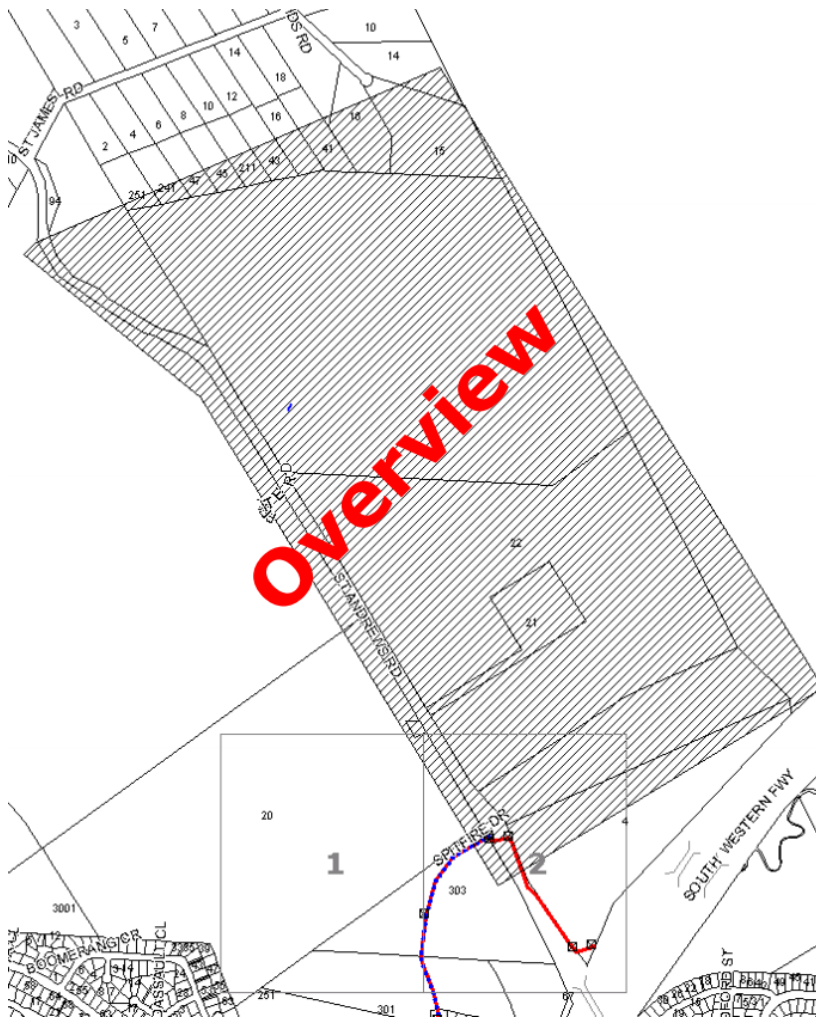
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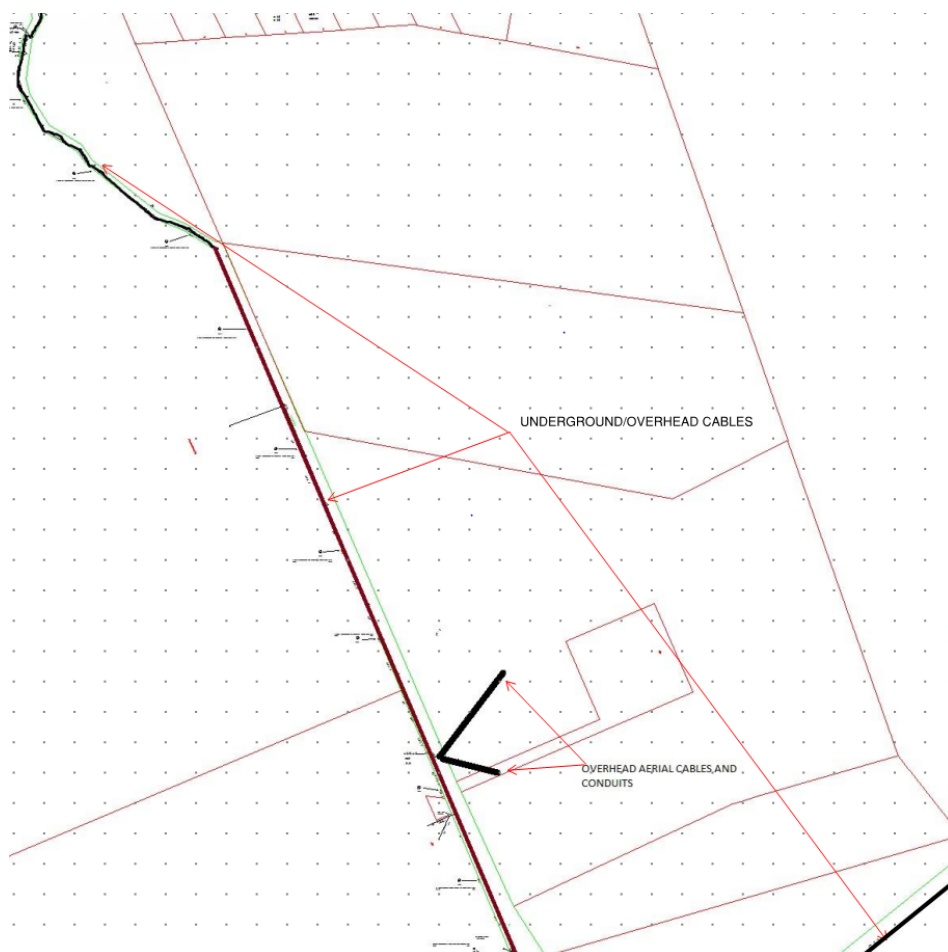
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Optus have informed Steensen Varming that they are unable to provide a telecommunications service to the project boundary and associated proposed developments.

3.3.2 Telstra

Per the following image, it has been identified that there are above ground copper and fibre service cables distributing within the project boundary. Furthermore, it has been identified that Telstra have below ground copper and fibre service cables, and associated conduits, distributing along St. Andrews Road and also Hume Motorway.



To confirm the availability of Telstra services for the proposed developments within the project boundary, an Application for Reticulation (AFR) was submitted to Telstra.

Steensen Varming is awaiting a response to the application. Records of the correspondence between Steensen Varming and Telstra are provided as an appendix to this report.

3.3.3 NBN

Using NBN online searching tool has determined that there is no existing below ground or above ground NBN services distributing within or near the project boundary. This has also been confirmed by direct correspondence between Steensen Varming and NBN.

NBN have also informed Steensen Varming that they are unable to provide a telecommunications service to the project boundary and associated proposed developments.

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3.4 External Lighting

Based upon site observations undertaken by Steensen Varming, there is no external lighting within the proposed project boundary. New fixtures will need to be provided to any new pedestrian routes and building surroundings that require illumination. The quantities and location of any new external lighting will be determined as the project design progresses.

4.0 Possible Service Augmentation

4.1 New power requirement

The estimated maximum load demand is 462kVA for all the proposed areas. This takes into account power, lighting, HVAC, and point loads.

As detailed within section 3, the existing Endeavour Energy power assets local to the proposed project boundary do not have the capacity to serve the proposed buildings, primarily as there are no local substations. Thus new power augmentation is required from the local supply authority Endeavour Energy.

A new high voltage service shall need to be derived from a local Endeavour Energy asset. The new kiosk substation shall service the proposed project development. A suitable location for the kiosk substation shall need to be agreed with Endeavour Energy and the project team.

4.2 New telecommunications requirement

The new facility will require a new telecommunications service. It is anticipated that the new service shall be provided by Telstra. As detailed within section 3, Steensen Varming are awaiting a response to the AFR application submitted in order to determine where new services shall be reticulated from.

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Appendix A Detail Reference List

Dial Before You Dig Information		
Document Owner	Relevant Information	Relevant Sections
Endeavour Energy	Sequence number 47721941	3.1 - Electrical Power
Optus Uecomm	DBYD reference 9630416, sequence number 47721943	3.2 - Telecommunications
Telstra	Drawing number 47721942	3.2 - Telecommunications
Sydney Water	Sequence number 47721945	Water
Jemena Gas West	No influence	Gas

Full DBYD (i.e. layouts) can be provided upon request.

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Appendix B

Correspondence of Emails to or from Authorities

Correspondences (additional to DBYD)		
Authority	Relevant Information	Relevant Sections
PIPE Network	Clarified that no asset influenced	Telecommunications
Telstra	Application for Reticulation Registration	Telecommunications
NBN	Unable to build up new connection points given the size of the development	Telecommunications

These correspondences are attached at the end of this report.

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Appendix C

Contact Details of Telstra and Endeavour Energy

Contacts		
Authority	Team/Person	Email
Telstra	Land Development Liaison Consultant	dev4national@team.telstra.com
Endeavour Energy	David Ho, Contestable Works Project Manager	david.ho@endeavourenergy.com.au

From: registration@telstrasmartcommunity.com
Sent: Thursday, 24 September 2015 8:59 AM
To: Baoying Tong
Subject: Application for Reticulation Confirmation - Macarthur Memorial Park Stage Proposal - Varroville 2566
Attachments: Terms-and-Conditions-All-Development-Types.pdf; 17362969.txt

Hi Baoying Tong,

Thank you for submitting your Application for Reticulation (AFR) on the Telstra Smart Community website for your development.

Your AFR number is: 17362969. You can use it and your password to view, change or add details at any stage of your development.

Please note this email is an acknowledgement of your application only. It is not a commitment by Telstra to provide infrastructure to your development.

Telstra's Land Development Liaison Consultant will discuss with you any charges and other conditions relating to Telstra infrastructure and/or service provisioning.

Attached are the details provided with your application, which you might want to keep handy.

They can also be viewed on the Telstra Smart Community website at

<https://www.telstra.com.au/smart-community>

The details of the files attached with this development are as follows:

File Name, File Type, File Size

1: 15814 Macarthur Memorial Park Layout.pdf, Adobe PDF files, 2Mb

For your reference, here are the details of Telstra's Land Development Liaison Consultant for Varroville:

dev4nsw@team.telstra.com

Locked Bag 6018 Hunter Region Mail Centre 2310

Please refer to the Telstra Smart Community website for further information on New Developments and your responsibilities as a Developer.

Important information for Developers and their Contractors regarding Asbestos

The construction of Telstra's network dates back over many years. Some of Telstra's pits and ducts were manufactured from asbestos-containing cement. You must take care in conducting any works in the vicinity of Telstra's pits and ducts. You must refrain from in any way disturbing and damaging Telstra's network infrastructure when conducting your works. We recommend that before you conduct any works in the vicinity of Telstra infrastructure that you ensure your processes and procedures eliminate any possibility of disturbing, damaging or interfering in any way with Telstra's infrastructure. Your processes and procedures should incorporate measures having regard to the nature of this risk.

Best regards,

Telstra's Land Development Liaison Team

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Privacy - <https://www.telstra.com.au/privacy/privacy-statement/>

Contact us - <http://www.telstra.com.au/help/contact/>

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Telstra Corporation Limited, ABN 33 051 775 556.

From: newdevelopments@nbnco.com.au
Sent: Wednesday, 16 September 2015 1:53 PM
To: Baoying Tong
Subject: Your nbn Enquiry 511066-152386714

Hello Baoying,

Thank you for your enquiry to nbn. The reference number for your enquiry is **511066-152386714**. It is only necessary to fill out a Development Application where nbn is not in service, for a large development. Small and medium developments under these circumstances will be rejected.

If your enquiry relates to a Large Development (more than 100 premises) then proceed with your application via the link below:

<http://www.nbnco.com.au/develop-or-plan-with-the-nbn/new-developments/large-developments.html>

If you require further information in the meantime, please reply to this email or call us on 1800 OUR NBN (1800 687 626) and a consultant will be happy to assist you.

Kind Regards,

Justine

nbn New Developments
Email | newdevelopments@nbn.com.au
Phone | 1800 OUR NBN (1800 687 626)
Website | www.nbn.com.au
Youtube | www.youtube.com.au/nbnco

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On 16/09/2015 11:55 AM, Baoying Tong wrote:

Dear Team.

We have several new buildings to develop and wonder if we can use NBN network to provide telecomm services. As now the project is only on the proposal stage, I don't have much info to fill in your development application form.

Hence this is sort-of a yes or no question. The address is 166/176/278 St Andrews Road Varroville NSW 2566. I have checked on your website and seems you don't have existing network coverage there. Would you please indicate that if you are capable of providing services on the site and if yes, whether there would be any issues associated with it?

Thanks in advance!

Kind Regards,

Baoying Tong

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From: PIPE DBYD <dbyd@pipenetworks.com>
Sent: Tuesday, 15 September 2015 9:48 AM
To: Baoying Tong
Subject: SD-385050 DBYD: 47721940
Attachments: 47721940.docx

Hi,

See attached file for your reference.

It shows that there are no asset affected.

Regards,

Nelissa Layosa
PIPE Dial Before You Dig
PIPE Networks Pty Limited - A TPG Telecom Company

Fibre Operations & Provisioning Group is Quality endorsed by the ISO 9001:2008 certification

Phone: 1800 201 100 Opt 4
Web: www.pipenetworks.com

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