



**128 HERRING ROAD
MACQUARIE PARK**

Electrical Services Infrastructure Due Diligence

Prepared For:



Prepared By:

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(LIPMAN)



CONTENTS

1	EXECUTIVE SUMMARY	1
2	SITE LOCATION	2
2.1	Map View	2
2.2	Satellite View.....	2
3	RELEVANT AUTHORTIES	3
4	ELECTRICAL SERVICES	4
4.1	Estimated Capacity Required	4
4.2	Infrastructure Connection Details.....	4
4.3	Amplification Requirements	4
4.4	Issues to Consider	4
5	COMMUNICATION SERVICES.....	6
5.1	Estimated Capacity Required	6
5.2	Infrastructure Connection Details.....	6
5.3	Amplification Requirements	6
5.4	Issues to Consider	6
	APPENDIX A – ELECTRICAL SERVICES STAGING PLANS	7
	APPENDIX B – AUTHORITY CORRESPONDENCE	8
	APPENDIX C - TYPICAL SUBSTATION LAYOUTS	9



1 EXECUTIVE SUMMARY

This document is a utility services infrastructure due diligence for 128 Herring Road Macquarie Park.

The site is being considered for redevelopment for residential use.

The residential development will be fronting Herring Road. It has been assumed that the site will be serviced by Herring Road accordingly.

The services that were investigated under ITC Group's engagement are as follows:

- Electricity;
- Telecommunications.

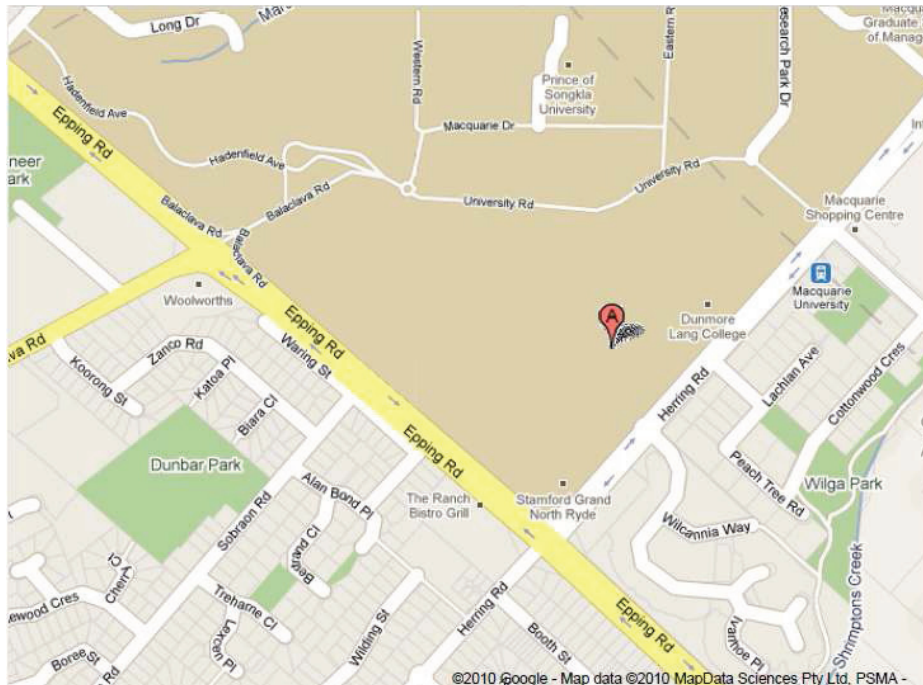
This report assesses the services requirements for the site and investigates whether the services infrastructure in the vicinity can accommodate the proposed development.

The review is preliminary and will need to be confirmed in more detail when the project proceeds into the design development phase.

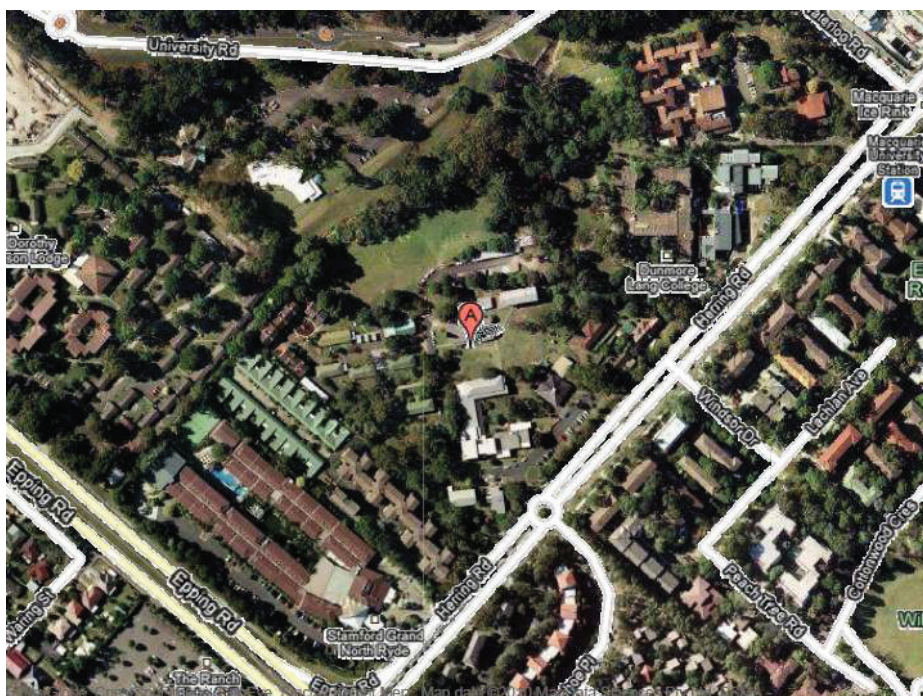
Although our investigations have not incorporated detailed negotiations with the relevant authorities at this early stage, we consider that the existing utility services are capable of servicing the proposed development.

2 SITE LOCATION

2.1 Map View



2.2 Satellite View





3 RELEVANT AUTHORTIES

The relevant electrical services authorities having jurisdiction over this site are as follows:

- Energy Australia for Electricity; and
- Telstra for Telecommunications.

4 ELECTRICAL SERVICES

4.1 *Estimated Capacity Required*

It has been estimated that two (2), 1000kVA kiosk type substations will be required to service the entire site.

This estimate is based on the following load calculations:

	VA per Apartment	No.of Apartments	Total Load (kVA)
Units	3000	550	1650
Carparks/Common Areas			346.1
TOTAL			1996.1

4.2 *Infrastructure Connection Details*

It has been assumed that one (1), 1000kVA kiosk substation will service Buildings A, B and E while the other 1000kVA kiosk substation will service Buildings C and D. Refer to Appendix A for staging plans of this proposal.

Energy Australia has been formally notified of this project. Refer to Appendix B for information relating to correspondence carried out with Energy Australia to date.

This is to be formally confirmed with Energy Australia once the project proceeds into the Design development phase leading to the Construction Certificate.

4.3 *Amplification Requirements*

Nil.

It is assumed that the two (2) new 1000kVA kiosk substations can connect directly onto the Herring Road High Voltage Feeder.

This is to be formally confirmed with Energy Australia once the project proceeds into the Design development phase leading to the Construction Certificate.

4.4 *Issues to Consider*

Lead times need to be considered in relation to negotiations, design, approvals and construction of the new kiosk substation on the site.



An area of minimum 5.3 x 3.3m is required for the each kiosk substation easement. These will need to on grade with 6m separation from an outside air intakes or openable windows. The easement needs to be clear of any of any covering or roof structure.

5 COMMUNICATION SERVICES

5.1 *Estimated Capacity Required*

It is assumed that One Thousand – Two Hundred (1200) pairs will be required to the site.

This assumes an allowance of two (2) pairs per apartment.

Refer to Staging Plans located in Appendix A of this document for further information regarding the telecommunications infrastructure proposed.

5.2 *Infrastructure Connection Details*

The existing site has a limited copper lead-in capacity provided by Telstra, this is consistent with a Baptist College facility which is what currently exists on the sites.

ITC has undertaken a carrier survey investigation and has identified that there are Telstra and Optus services available locally. It appears that fibre optic infrastructure is also locally available.

ITC would suggest that co-ordination and negotiation would be required with the carriers to obtain adequate telco services to the development, however from our experience there is limited risk associated with the provision of these services. Lipman could expect some costs associated with the provision of the carrier services however these costs will not be substantial. The costs would be dependant on the developments live requirements and the location of the existing infrastructure to be extended to the site.

This is to be formally confirmed with Telstra/Optus once the project proceeds into the Design development phase leading to the Construction Certificate.

5.3 *Amplification Requirements*

Nil

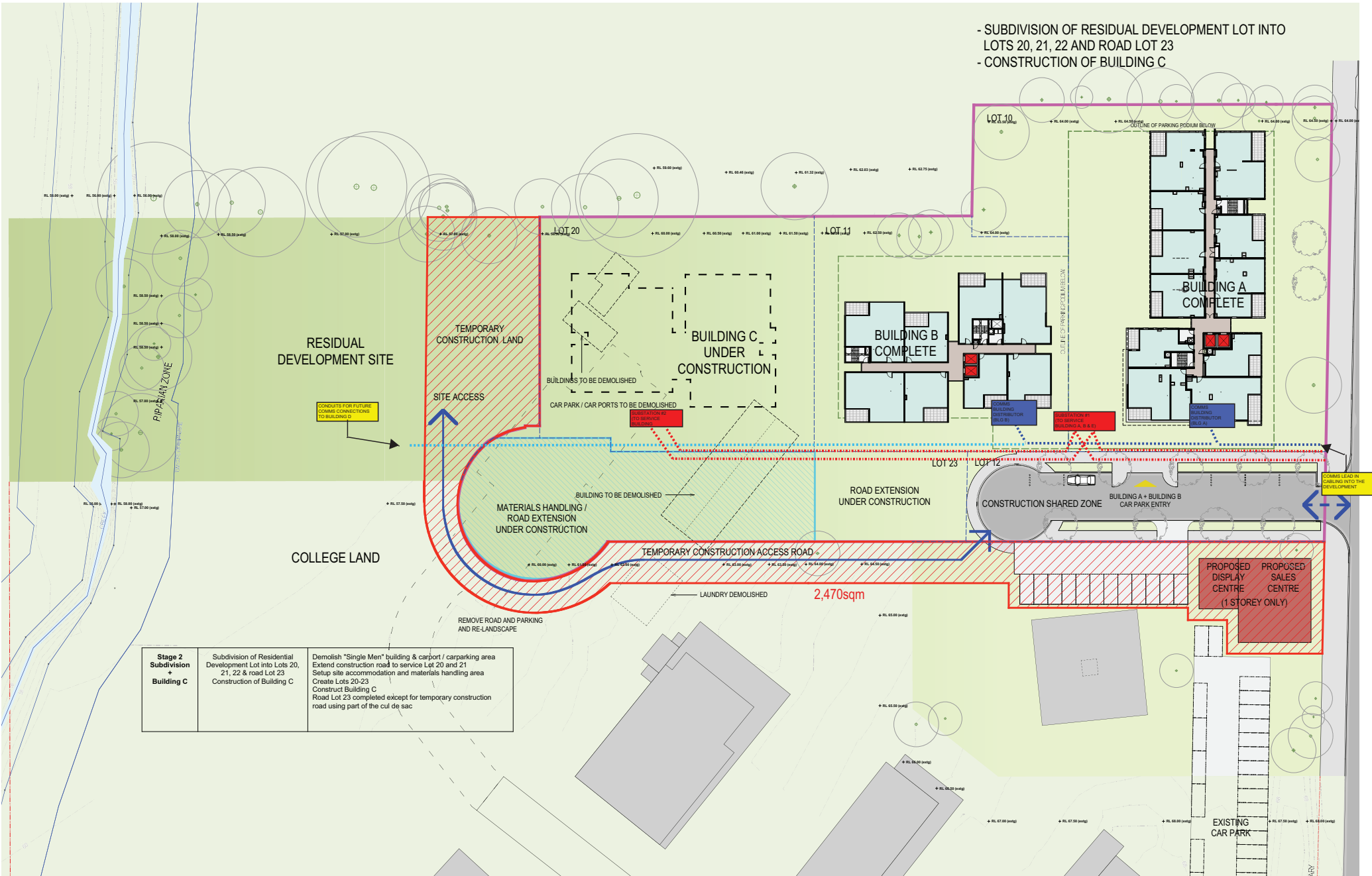
This is to be formally confirmed with Telstra/Optus once the project proceeds into the Design development phase leading to the Construction Certificate.

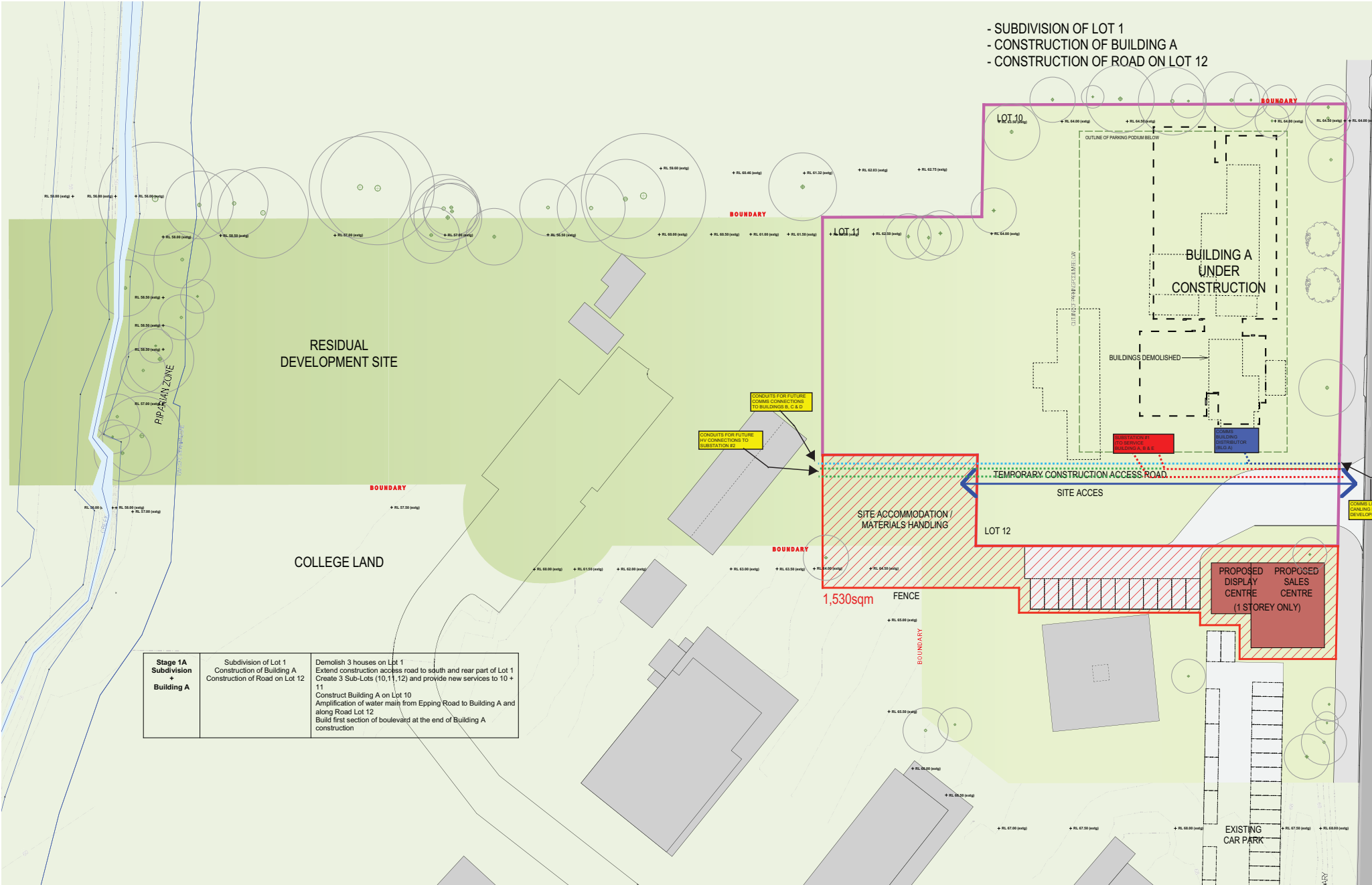
5.4 *Issues to Consider*

Nil.



APPENDIX A – ELECTRICAL SERVICES STAGING PLANS





- SUBDIVISION OF LOT 1
- CONSTRUCTION OF BUILDING A
- CONSTRUCTION OF ROAD ON LOT 12

Stage 1A Subdivision + Building A	Subdivision of Lot 1 Construction of Building A Construction of Road on Lot 12	Demolish 3 houses on Lot 1 Extend construction access road to south and rear part of Lot 1 Create 3 Sub-Lots (10,11,12) and provide new services to 10 + 11 Construct Building A on Lot 10 Amplification of water main from Epping Road to Building A and along Road Lot 12 Build first section of boulevard at the end of Building A construction
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APPENDIX B – AUTHORITY CORRESPONDENCE

Address all relevant correspondence to:
EnergyAustralia Contestability Section
PO Box 487 Newcastle NSW 2300
Australia

Facsimile: 02 49101842

Email:
EA_Contestability@energy.com.au



8th February 2010

ITC Group Pty Ltd
Attention: Nic Young
Level 7, 33 York Street
SYDNEY NSW 2000

Dear Nic

Confirmation of your Application at: 128 Herring Road Macquarie Park

We acknowledge receipt of your application dated 19th January 2010, and advise that an EnergyAustralia Project Coordinator will be in contact with you in due course to discuss how to proceed with your request.

Should you require any further information please contact EnergyAustralia on the phone number below.

Yours sincerely,

A handwritten signature in black ink, appearing to read "R Buttenshaw", is positioned above the printed name.

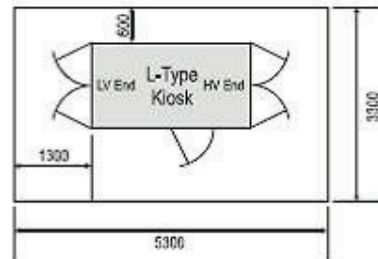
Renee Buttenshaw
Contestability Administrative Officer
EnergyAustralia

Direct Telephone Number 02 4910 1473
Facsimile: 02 4910 1842
Email: rbuttenshaw@energy.com.au

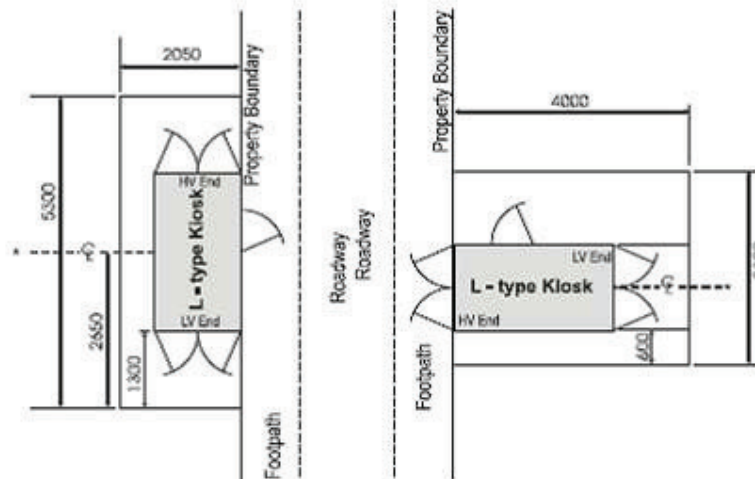
APPENDIX C - TYPICAL SUBSTATION LAYOUTS

L Type Kiosk

L type kiosk minimum site requirements are indicated in the following site plans and notes:



Site Plan A



Site Plan B

Site Plan C

(* Property boundary between lots, if kiosk site is located across adjacent residential lots.)

L Type Kiosk - Notes.

- Note 1. The L kiosk site plans shown with one edge of the kiosk structure on the street frontage property boundary (Site Plans B and C) are restricted options generally only available for underground residential distribution (URD) sites. Approval for these options in areas other than URD will be at the discretion of EnergyAustralia, after consideration of all relevant factors.
- Note 2. Where the 5300 mm x 3300 mm L kiosk site is set back from the street frontage property boundary (ie Site Plan A with additional set back), it will be necessary for an associated cable easement and a right-of-way for access to be established. (Refer to Section 3.8 in this Network Standard.)