

INFRASTRUCTURE REPORT

Escarpment Development at Church Lane, Cranbrook

Electrical and Water Servicing for a proposed 9 lot subdivision



Prepared for:

Penrith Lakes Development Corporation

13th November 2013

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- DOCUMENT CONTROL SHEET -

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1 INTRODUCTION

Penrith Lakes Development Corporation invited J. Wyndham Prince to provide an infrastructure report confirming whether or not the proposed 9 lot subdivision of the Escarpment Development at Church Lane, Cranbrook can be serviced by electricity and water

A desktop assessment has been undertaken on the proposed subdivision and current information available from Sydney Water and Endeavour Energy to assess the serviceability of the site.

RMA Infrastructure located at Penrith who are a Sydney Water recognised Water Service Coordinator, and Power Line Design at Mittagong who are an Endeavour Energy recognised Level 3 Accredited Service Provider were invited to review the proposed subdivision layout and provide information on the serviceability of the site.

A brief outline of the development and service design approval process is provided to inform the landowner/developer of the necessary steps to receive an approval from the service Authorities to construct the infrastructure and service the site

The following advice is based on the current:

- information available from service Authorities,
- existing infrastructure servicing Cranbrook, and
- the current Authority development and design policies.

This report can be used to support a Development Application for the proposed subdivision.

2 AUTHORITY APPROVALS

2.1 Subdivision of land

The proposed subdivision will require approval from Penrith City Council. Council's development consent will require the land owner/developer to issue a certificate from the service Authorities confirming adequate provisions have been arranged to service the site.

Typically, a Section 73 Certificate from Sydney Water is required to confirm satisfactory arrangements are in place for the provision of water and sewer services to the proposed development.

Typically, a Notice of Requirements from the electrical Authority, in this case Endeavour Energy, is required to confirm satisfactory arrangements are in place for the provision of electrical services to the proposed development.

A copy of each certificate will need to be issued to Council to complete the subdivision certification allowing the land owner/developer to finalise the subdivision process.

The proposed subdivision will yield 9 lots suitable for residential development.

2.2 Electrical Design and Notice of Requirements

To obtain a Notice of Requirements to satisfy the development consent issued by Council, the following process needs to be followed.

- Engage a Level 3 accredited service provider (L3 ASP) to undertake an electrical design and submit a design to Endeavour Energy for approval.
- The design process involves:
 - L3 ASP to submit application for Method of Supply
 - Endeavour Energy issues a Design Brief outlining the design requirements to adequately service the proposed subdivision
 - Developer enters into an agreement with Endeavour Energy by signing the Design Brief
 - Preparation of electrical reticulation design in accordance with the Design Brief
 - Prepare street light design if required, street light certification and signoff by Council
 - Submission of design to Endeavour Energy for certification
 - Endeavour issue design /monopoly fees
 - Client pays Endeavour fees
 - Endeavour Energy issues Letter of Intent along with certified designs
- Construct the electrical works
- Submit a subdivision plan and an 88b instrument to Endeavour Energy along with an application for a Notice of Requirements
- Endeavour Energy will sign-off the electrical works, sign the 88b instrument and issue a Notice of Requirements.

2.3 Water Design and Section 73 Certificate

To obtain a Section 73 Certificate to satisfy the development consent issued by Council, the following process needs to be followed.

- Engage a Water Service Coordinator (WSC) to undertake the water design and submit the design to Sydney Water for approval.
- The design process involves:
 - WSC to submit a Section 73 Certificate application to Sydney Water
 - Sydney Water will issue a Notice of Requirements outlining the design requirements to adequately service the proposed subdivision
 - Developer enters into a Works Deed with Sydney Water
 - WSC prepares a design and submits the design to Sydney Water for approval
 - Sydney Water certifies the design
 - WSC prepares a constructors package and submits to Sydney Water
 - WSC issues the authority to undertake the works
- Construction of the water works
- WSC submits a completion package to Sydney Water
- Sydney Water issues a Section 73 Certificate

The detailed design process outlined above must be completed to in order to satisfactorily service the site.

3 PROVISION OF SERVICES

Information from Sydney Waters Hydra database and Endeavour Energy's Network Plans have been reviewed along with site inspections to identify what infrastructure existed around the site.

An overview of the supply zones was also undertaken.

This information along with the knowledge of the site supports the following opinions in determining the serviceability of the proposed development.

3.1 Electrical Supply

The Cranebrook area is serviced by the Endeavour Energy's Cranebrook Zoned Substation located on Andrews Road, Cranebrook. It is understood this substation has sufficient capacity to service the proposed subdivision.

According to Endeavour Energy's current records there is a 3 phase High Voltage and 3 phase Low Voltage service in Church Lane fronting the proposed subdivision, available to service the proposed development. The proposed subdivision would require an extension of Endeavour Energy's assets in accordance with their requirements and the requirements of the Penrith Council.

Existing properties are serviced by an overhead lead in power supply connected to the existing street power poles via private power poles in each lot. Each lot in the proposed subdivision would be serviced in a similar way.

Endeavour Energy's policy is to underground all new services. Considering the rural nature of Church Lane, the large lot sizes and the existing overhead service, an overhead connection to service the new lots will be acceptable to Endeavour Energy.

Attached are Endeavour Energy network plans confirming the existing electrical reticulation surrounding the site.

3.2 Water Supply

The Cranebrook area is serviced by Sydney Water's Cranebrook reservoirs located on The Northern Road at Cambridge Park.

A 150mm diameter watermain exists in Church Lane on the opposite side of the road. The proposed 9 lot subdivision can be serviced by this watermain. A standard main to meter connection would be used to service each lot. A road under-bore is necessary to construct the main to meter service across the road.

Attached is a copy of the Sydney Water Hydra information confirming the existing water service surrounding the site.

4 SUMMARY

The proposed 9 lot subdivision can be serviced by electricity and water.

4.1 Electrical

The site can be serviced by electricity:

- Construct overhead connections from private power poles within each lot to the existing electrical network fronting the site.
- Endeavour Energy need to confirm if overhead connections can be installed. There is a possibility the proposed subdivision may need to be serviced by underground electrical infrastructure to meet current infrastructure guidelines.

4.2 Water

The site can be serviced by water:

- Main to meter services via a road underbore connected to the existing watermain fronting the site on the opposite side of the street

Limitations

This report outlines the possible ways to service the proposed subdivision with electricity and water. The derived outcomes are based on the current and available information from the service Authorities and our knowledge of the area.

The servicing of the site should be verified with the service Authorities by submitting the relevant applications and completing the design processes outlined in this report.

Should Penrith Lakes Development Corporation require any further clarification or have any queries regarding the information enclosed please contact J. Wyndham Prince on 4720 3322.

Yours faithfully

J. WYNDHAM PRINCE



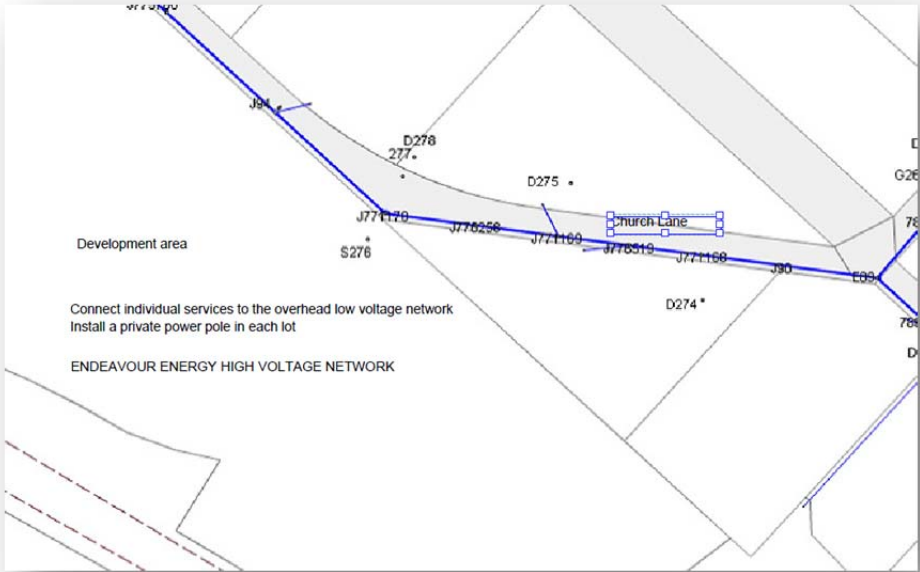
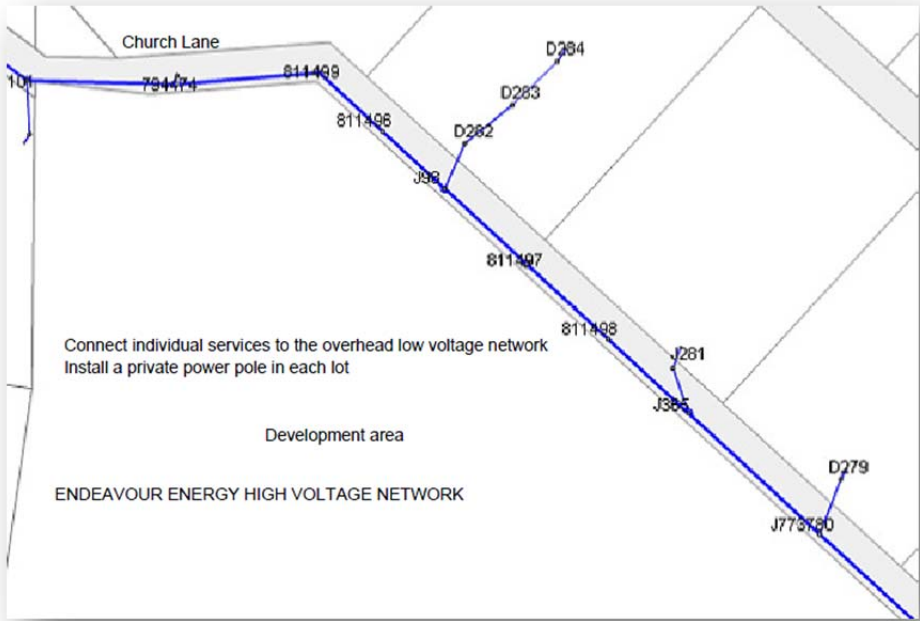
ANDREW TAYLOR
Project Manager

Appendix B

Electrical Plans

- Endeavour Energy Network Plans

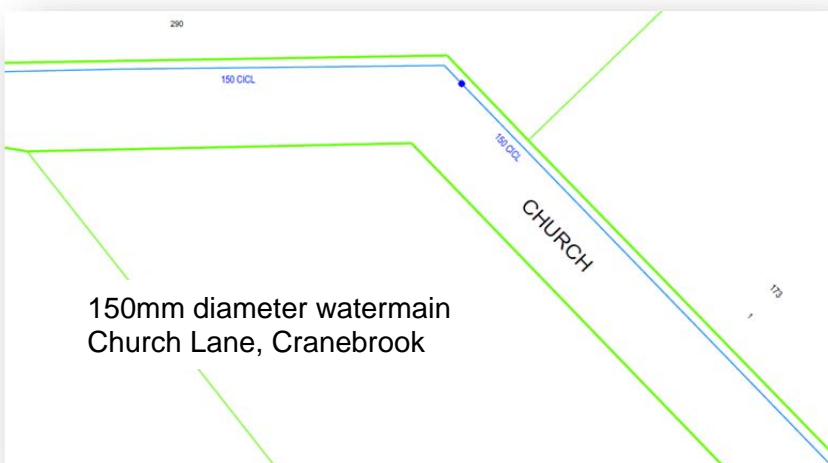




Appendix C

Water Plans

- Sydney water Hydra Plans – Church Lane



Appendix D

Site Photos taken 07/11/13



Photograph 1. Church Street frontage and existing electrical service



Photograph 2. Church Street frontage and existing watermain hydrant