



**PUTNEY HILL
VICTORIA ROAD, RYDE, NSW**

Electrical Infrastructure Report - Stage 1

Prepared for:

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1 INTRODUCTION

1.1 Objectives

The purpose of the report is to investigate the existing electrical services infrastructure and define the parameters and overall concept for the Electrical Services Infrastructure for Stage 1 of the proposed development.

The report provides preliminary recommendations for the provision of Electrical Services infrastructure to the site.

The report covers the following services infrastructure:

- Power Supply
- Telecommunications

1.2 Existing Services Location Disclaimer

The report is based on visual site inspections and drawings received from service providers and utilities searches. All authorities have a disclaimer on the accuracy of their drawings. Also, due to the nature of the services, replacement or new cabling may be carried out by the Authorities at any time.

During the course of the design work, extensive co-ordination will be required between the in-ground water and sewer services, gas, communications, electrical, and other service providers.

1.3 Project Background

Frasers Putney is located on the former Ryde Rehabilitation Centre Sydney, on Victoria Road Ryde which comprises a site area of around 17.8 hectares. The site has been in operation as a rehabilitation centre since 1899, and RRCS are proposing to relocate into new premises on a 2 hectare facility on the site near Morrison Road.

To date RRCS has undertaken extensive planning and consultation to conceptually plan the site into a residential community with mixed use of medical and community facilities. Concept Plan approval was obtained from the Minister for Planning on 23 March 2006 and the Part 3A project approval for the hospital / health facility on 16 December 2008.

Frasers Putney Pty. Ltd have purchased the remainder of the RRCS site which comprises 15.83 hectares of proposed residential development consisting of approximately 791 dwellings. The development of 15.8ha will be known as Frasers Putney and will include residential buildings and infrastructure works for associated future residential occupancy.

1.4 The Site

Frasers Putney is located within an area that is bounded by Charles Street, Morrison Road, Princess Street and Victoria Road as shown on the Site Plan shown in Appendix A. Table 2.1 indicates the main features of the site.

Table 2.1 Summary of general Site Characteristics

| Site Characteristics | Comment |
|----------------------|---------|
|----------------------|---------|

| | |
|-----------------------|---|
| Site Address | 600-642 Victoria Road, Ryde |
| Current Site Zoning | Various, as specified in Ryde LEP 2010 |
| Approximate Site Area | 15.8 hectares for the residential component |
| General Topography | The regional topographic setting is undulating typically with slopes in the order of approximately 2-5°. The site is also undulating, although typically falls to the central-east section at approximately 5-15°; however, cut and fill layers in the central, north-east and south-west sections fall at up to approximately 45°. |

1.5 The Development

The proposed development comprises residual land of 15.8 hectares which will be subdivided and developed into a residential development for up to 791 dwellings comprising apartments, townhouses, terraces and detached houses. Other works will include roads, central parkland and pond, community and recreation centre and infrastructure services.

The residential component will:

- Apartment buildings
- Townhouses
- Terraces
- Detached Houses

It is envisaged the development will be constructed in several stages with stage 1 being the eastern precinct located between Victoria Road and the central park. This stage will further then be developed in a number of phases.

POWER SUPPLY

1.6 Existing High Voltage Services

There are currently 2 substations located on the site.

One outdoor type substation, in a chain mesh enclosure, is located about 300m from Victoria Rd on the eastern boundary. This is fed via an overhead high voltage (HV) cable from Victoria Rd.

The other substation is a kiosk-type, which is located on Morrison Rd, opposite Boulton 51. This substation feeds the hospital site as well as providing street feeders which service the local area.

1.7 Estimated Maximum Demand

Based on calculations according to AS3000 "The Wiring Rules", the estimated maximum demand of the development will be approximately 3300kVA.

Outdoor kiosk-type substations will need to be established and located throughout the residential component of the development in order to service the estimated load.

1.8 HV Reticulation and Substations

Energy Australia has ceased all network consultancy / advice work, which now has to be carried out by a Level 3 Service Provider. Based on the above estimated demand, and current Energy Australia infrastructure, and subject to future discussions and negotiations with Energy Australia, the site will be supplied via a new HV network.

The preliminary HV cable route and kiosk substation locations are shown on the attached preliminary Services Coordination Plan.

1.9 Low Voltage Distribution

Low voltage cables will be reticulated from the substations to the various apartment building/townhouse complex main switch rooms or via turrets to the freestanding houses, in underground conduits.

Proposed LV cable routes are shown on the attached drawing - Electrical Services – Site Reticulation.

2 VOICE AND DATA COMMUNICATIONS

2.1 Existing Communications Infrastructure

Existing communications services to the site enter via Morrison Rd to a Campus Distributor.

2.2 Provisions For Communications Infrastructure

NBN Co. conduits will be provided throughout the proposed roadways within the development, as per the attached Preliminary Services Coordination Plan.

Conduits will also extend into the freestanding dwellings, apartment and townhouse complexes.

2.3 Developer's Commitments

- Conduits, pits and trenching within the site.

3 CONCLUSION

Electrical and Communications services are capable of being suitably provided to the development