

11 April 2011

NBRS + Partners
Level 3
4 Glen Street
MILSONS POINT NSW 2061

Attention: Graham Nicholas

RE: 76 BELMORE STREET, RYDE NSW 2112
ELECTRICAL SERVICES CONCEPT PLAN REPORT

Please find attached the Haron Robson Electrical Services Concept Plan Report for the above project.

Should you have any questions on this matter please do not hesitate to contact the undersigned at this office.

Yours faithfully
HARON ROBSON PTY LTD

Tom Russell
Group Director

trussell@haronrobson.com.au

Attachment (1) Haron Robson Electrical Services Concept Plan Report (Rev. D)

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WE UNDERSTAND AUDIO VISUAL, LIGHTING, ENERGY
AND ELECTRICAL SYSTEMS AND ADVISE
ON THESE ISSUES WORLDWIDE.

Electrical Services Concept Plan Report

For

**76 Belmore Street,
RYDE NSW 2112**

This report, dated 11 April 2011, has been prepared by Haron Robson Pty Ltd for NBRS + Partners Pty Ltd for the development at 76 Belmore Street, Ryde NSW 2112.

© Please direct enquires regarding this document to Mr Tom Russell at this office quoting our document reference no:
H:\1 - Projects\13300\13378 72 Belmore St, Ryde - Electrical Advice\A Briefing-Checklists\13378-ES DA Report_110220 Rev.D.doc

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**76 BELMORE STREET, RYDE NSW 2112
ELECTRICAL SERVICES CONCEPT PLAN REPORT**

INTRODUCTION

The development at 76 Belmore Street, Ryde NSW 2112 is a residential development consisting of Four Hundred and Seventy (470) Sole Occupancy Units. The development also consists of an outdoor podium/circulation area and Three (3) levels of residential carparking facilities below ground level.

Haron Robson have been engaged as Electrical Consulting Engineers by NBRS + Partners Pty. Ltd. to advise on the electrical services installation and overall master planning of the site services required for the development.

This document is a general description of the aims and inclusions of the electrical services installation.

ELECTRICAL SERVICES

The electrical services component of this development comprises many and varied electrical and electronic systems.

1 General

Electrical services will be provided to comply with all relevant mandatory Australian Standards and the requirements of Statutory Authorities having jurisdiction in the matter including the Building Code of Australia.

2 Building Services

The electrical services installation within the development shall be designed and installed to comply with the Building Code Of Australia (BCA), Australian Standards AS/NZS 3000, AS/NZS 3008, AS/NZS 2293 and AS 1670, Australian Communications and Media Authority (ACMA) Regulations and other relevant standards/authority requirements.

Electrical Supplies to Emergency and Essential Equipment shall be 2 Hour Fire Rated, as required by the Building Code Of Australia and Australian Standard AS/NZS 3000.

Automatic Smoke Detection System and Building Occupant Warning System (BOWS) in accordance with the Building Code Of Australia and Australian Standard AS 1670

Emergency and Exit Lighting shall be designed and installed throughout the development, complying with the Building Code Of Australia and Australian Standard AS 2293.

3 Electricity Supply

Electricity supply to the development is proposed with the establishment of three (3) New Padmount Kiosk Substations at the site boundary in accordance with Energy Australia's requirements for the locations of Kiosk Substations (NS141). We have received advice from Energy Australia that additional substations will be required and negotiations are currently underway, see attached email correspondence (Appendix 1). Based on our maximum demand calculations we have determined that three (3) new Kiosk Substations will be required. It is proposed that Stage 1 (Buildings B, C & D) be supplied from two (2) Kiosk Substations and Stage 2 (Buildings A, E & F) shall be supplied from the third Kiosk Substation. See Appendix 3 attached for details of proposed locations. The final confirmation will be subject to the submission of an application to Energy Australia for load and issue of a "Design Information Package" from Energy Australia.

Low Voltage Electrical Supplies (Service/Consumer Mains) from the Kiosk Substations to the development shall be installed via Underground Heavy Duty UPVC Conduits and/or Suspended Cable Ladders to the Main Switchboards of the development. Low Voltage Electrical Supply cables have a 2 Hour Fire Rated capacity to maintain Emergency and Essential Electrical Supply Provisions to the development for the Emergency and Essential Services Equipment.

4 Telecommunications Provisions

Incoming Lead-In Cable Entry Provisions will be provided for the Copper and Fibre Optic Networks of Telstra, Optus and One (1) additional future carrier.

Arrangements have been made for Telstra to provide a network supply to the buildings to cater for future communications needs. We have received advice from the Communications Authority that services will be made available to the premises, see attached Telstra correspondence (Appendix 2).

All work shall be carried out to comply with the Australian Communications and Media Authority's requirements and regulations. Spatial provisions shall be provided within the Main Communications Room to accommodate the Nominated Telecommunications Carrier's Active and Distribution Equipment.

Provisions shall be made within the installation of a Copper Network and Fibre Optic Network of Backbone (Vertical) Cabling to each of the Sole Occupancy Units within the development, to allow each resident access to their Nominated Telecommunications Carrier's Copper and Fibre Optic Communications and Data Networks.

5 Regulations and Authorities

The Electrical Services Installation will be carried out strictly in accordance with the following Standards, Code and Regulations:-

- Building Code Of Australia (BCA)
- New South Wales Service and Installation Rules
- EnergyAustralia Electrical Supply (ES) Standards and Network Standards (NS)
- Australian Standard AS/NZS 3000 – Wiring Rules
- Australian Standard AS/NZS 3008 – Electrical Installations – Selection Of Cables
- Australian Standard AS 1670 - Fire Detection, Warning, Control and Intercom Systems
- Australian Standard AS/NZS 1680 - Interior Lighting
- Australian Standard AS 2293 - Emergency Escape Lighting and Exit Signs For Buildings
- Australian Communications and Media Authority (ACMA) Regulations including ACA/ACIF 009
- Australian Standard AS 3080 – Telecomm. Installations - Generic Cabling for Commercial Premises
- Australian Standard AS 3084 – Telecomm. Installations – Telecomm. Pathways and Spaces for Commercial Buildings
- Australian Standard AS 3085 – Telecomm. Installations - Administration of Comms Cabling Systems - Basic Requirements
- All other requirements of all other Authorities having jurisdiction over the works.

6 General Lighting Services

The General Lighting Services installation involves both Interiors and Exteriors and will be designed to co-ordinate and enhance the architecture, interiors and landscape, whilst providing lighting for the safe movement of occupants throughout the development. ESD principles shall be applied.

The General Lighting Services shall be designed in accordance with Building Code Of Australia Section J6 and Australian Standard AS 1680 requirements.

General Lighting Services within each Sole Occupancy Unit shall be in accordance with the nominated BASIX requirements and the Project Manager's Design Brief.

7 Emergency Lighting and Illuminated Exit Sign Services

Emergency Lighting and Illuminated Exit Signs shall be installed to comply with the Building Code Of Australia and Australian Standard AS 2293 throughout the development.

Emergency Lighting Test Switches shall be supplied and installation in accordance with Australian Standard AS 2293 on all Distribution Boards supplying circuits with Emergency and Exit Sign Lighting incorporated.

8 General Power Services

The General Power Services installation will be provided in common areas for maintenance and servicing purposes (i.e. cleaning), and as nominated for ancillary equipment and building services equipment.

9 Automatic Smoke Detection and Smoke Alarm Systems

An Automatic Smoke Detection & Building Occupant Warning System (BOWS) shall be installed throughout the development as required by the Building Code Of Australia and the Fire Engineered Report (where applicable) for the development to the requirements of Australia Standard AS 1670

10 ESD Design Principles

The aim of our detailed design solutions will be to minimise the greenhouse gas emissions associated with building materials (embedded energy) and building operations as well as to minimise running and maintenance costs.

The new installation will be designed to effectively address the functional and safety requirements of the users and particular considerations will be:

- Energy Efficient Lighting Design (Efficient Light Source Distribution), High Efficiency Lamps and luminaires with Electronic Ballasts EEL=A2(Non-Dim) and EEL=A1(Dim), Efficiency Base Controls such as Dimming Devices, Area Occupancy Sensors, Photo-Electrical (PE) Cells and Time Clock (TC) Controls in accordance with Building Code Of Australia Section J6 requirements
- To provide Intelligent Controls on other Building Services Systems which seek to minimise the use of energy in other Building Services Systems Operations, (e.g. Mechanical Air-Conditioning and Ventilation System).



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APPENDIX 1 ENERGY AUSTRALIA CORRESPONDENCE



**Fw: 13378 - 76 Belmore St, Ryde - DA Submission Energy Authority
Letter**

Michael Seton to mseton

03/02/2011 01:41 PM

Michael,

Our reference: 1900023492

I refer to your email below dated 1 February 2011 concerning the proposed development for residential units at 76 Belmore St, Ryde. I wish to advise that there is insufficient capacity available on the network to sustain the load of this development. It is therefore likely that EnergyAustralia will require one or more substations to be installed on the development site. This is written on the assumption of a reasonable maximum demand for the development and is subject to a detailed load assessment as part of a formal application for supply. When you are ready, please ensure the relevant Application for Connection forms are submitted - these forms and other relevant information may be found in EnergyAustralia's publication ES 1. EnergyAustralia's policy's and standards are available at www.energy.com.au.

This notice is valid for a period of 12 months from this date and our full requirements are subject to change following a formal application for supply.

Regards,

JONATHAN HOPSON | MANAGER - PLANNING & SUPPLY NEGOTIATIONS
Distribution Operations & Reliability | EnergyAustralia
Ground Floor, Building 1, 51 - 59 Bridge Road, Hornsby NSW 2077 AUSTRALIA
(02) 9477 8282 (38282) | 7 (02) 9477 8220 (38220) | *
jhopson@energy.com.au

To: mseton@haronrobson.com.au
From: northda@energy.com.au
CC: tr@haronrobson.com.au
Date: 01/02/2011 02:51 PM
Subject: 13378 - 76 Belmore St, Ryde - DA Submission Energy Authority Letter

To Whom It May Concern,

As request was recently sent through from David Mitchell (Dated 25/01/10)
regarding a DA Submission Energy Authority Letter for a project at 76



76 BELMORE STREET, RYDE NSW 2112
ELECTRICAL SERVICES CONCEPT PLAN REPORT

APPENDIX 2 TELSTRA CORRESPONDENCE



Phone: 0297125544
Facsimile:
Email: msetone@haronrobson.com.au

Attention: Michael Seton

Phone: 1800226543
Facsimile: 02 49249212
E-mail: F0516090@team.telstra.com
Our ref: RYDE DA058
Your ref: "Tellaraga" Development
[8/2/2011]

Dear Sir/Madam

TELECOMMUNICATIONS NETWORK INFRASTRUCTURE NOTIFICATION

Telstra Corporation Limited (Telstra) has received a request for telecommunications network infrastructure for the following development:

LOT NUMBERS REQUESTED FOR NETWORK	PLAN NUMBER
Lots: 1, 11, 12, 13 & 14	DP: 51349, 4481, 776768, 921633, 1109537

NAME OF DEVELOPMENT & LOCATION
76 Belmore st, Ryde. Approximately 6 residential buildings (Educational) being constructed above the carpark with a total of 390 units (260 x 1 Bedroom Apartments) (110 x 2 Bedroom Apartments) (20 x 3 Bedroom Apartments)

The Government announced changes to its policies relating to the provision of infrastructure to new Developments on June 20. Details are available on http://www.dbcde.gov.au/broadband/national_broadband_network/policy_statements.

Telstra will work with NBN co and Government to assist in the implementation of these new policies.

In the interim and until further notice Telstra may provide pit and pipe infrastructure in shared trenches that are available. This arrangement will be reviewed and may change as changes to regulatory standards or further developments in the Government's plans for new developments and the NBN are released.

Additional works will still be required in order for telecommunications services to be provided in the development. At this time we advise that these works may be carried out by Telstra or other parties, and Telstra reserves the right to require a contribution from the proponent for the cost of those additional works that may be provided by Telstra.

To confirm whether Telstra has provisioned telecommunications network infrastructure at the proposed development, a Telecommunications Infrastructure Provisioning Confirmation Letter can be issued upon request.

Telstra is not responsible to any recipient of this notification or anyone else who relies upon this notification for any loss or damage suffered in connection with this notification and excludes, to the maximum extent permitted by law, any liability which may arise as a result of the issue of this notification or its content.

If you have any enquiries or require any further information, please contact me at the above address.

Yours sincerely,

Telstra Network Designer
AND NSW North
Access Network Design
Network & Construction Design

LETTER 2 NOTIFICATION

Letter 2



76 BELMORE STREET, RYDE NSW 2112
ELECTRICAL SERVICES CONCEPT PLAN REPORT

APPENDIX 3 PROPOSED RETICULATION SITE PLAN

