NORTHROP

Level 11, 345 George Street, Sydney NSW 2000
T (02) 9241 4188 F (02) 9241 4324
E sydney@northrop.com.au ABN 81 094 433 100

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SY191237

Starryland NSW Pty Ltd
Suite 26.04, Level 26, Bligh Street
Sydney NSW 2000

Dear Sir,

The Gran Central, 134-142 Parramatta Rd, 26-38 Good St & 59-61 Cowper St, Granville

This is to confirm that the indoor substation for the proposed development has been located on the concept plans complying to the requirements of Endeavour Energy, the local energy authority. Endeavour Energy's requirements for substations are set out in MDI 0028 Underground distribution network design Section 6.4 Indoor Substations and MCI 0006 Mains Construction Instruction Section 7 – Substations & Switching Stations
The following areas of compliance were considered before locating the proposed substation

- Substations must be located at the front property boundary with unrestricted 24 hour a day employee and vehicle access to the substation directly from a public street
- Substations are to be located such that the risk of flooding or stormwater damage is minimal.
- The design of the substation room will be carried out by a qualified; practising structural engineer and will comply with the requirements of the Building Code of Australia and AS2067.
- Indoor substation chamber, chamber access, ventilating shafts and cable ducts are for Endeavour Energy's exclusive use
- The indoor is located entirely at street level with personnel and plant access off same level
- All rooms containing transformers and/or switchgears have a minimum of two (2) access/exit doors spaced diagonally opposite and as far apart as possible
- The building design is such that each of the major equipment could be removed without dismantling/disturbing any other equipment.
- The full cable route is designed to allow for large radius bends (minimum two meters up to three metres radius) on all cables, cables are supported for their full length, and there are no sharp edges in contact with the cables
- The building shall be suitable to withstand an internal pressure of minimum 2.0 kPa.
- All necessary horizontal and vertical dampcourses shall be provided, and the chambers shall have dry wall, floor and ceiling conditions before acceptance for installation of substation equipment
- Thresholds to external doorways shall be provided with a suitable means of weather proofing, such as a 25mm step
- Wall anchors and/or pulling ring sockets shall be installed in the floor or walls, in the position shown to achieve any working load specified.
- Substations require special attention to ventilation in order to dissipate continuous transformer heat losses and any overpressure developed during faults from equipment.
- All louvres and louvred equipment access doors shall be two (2) stage constructions.
- All louvres shall be of sufficient strength to be vandal proof and corrosion resistant.
- The whole of the substation, entrance and exit passages shall be isolated from the remainder of the customer's building by a minimum 120/120/120 FRL construction in accordance with the Building Code of Australia and AS 2067.

Structural Civil Hydraulic Mechanical Electrical Sustainability Façades Environmental

Yours sincerely

Cathy Lean

Cathy Lean
Senior Design Engineer ASP3 Group Manager
Northrop Consulting Engineers Pty Ltd

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