

Ref: B23076CO01 KH/lw

21 December 2023

Clarence Valley Conservatorium
C/- DRA Architects Pty Ltd
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Dear Warren,

**Re: Clarence Valley Conservatorium
DA Input - Electrical**

This report summarises various items in the "Electrical" category to assist in planning and your DA submission of documents to Clarence Valley Council.

Documents issued by your firm have been used as the basis for this report, along with a site visit carried out by our firm on (1/11/23). Some of the items covered in the report, may not bear directly on the DA submission, but will be important during the Scheme Design and Detailed Design Phases of the Project.

Attachments to this report clarify some of the issues raised for consideration/incorporation.

Topics covered in this report include:-

- Land title
- Power Supply
- Service cupboard provisions
- NBN status
- EXIT and Emergency lighting
- Fire Detection
- DA conditions
- BCA report

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Land Title

By reference to SIXMaps – see attachment, the proposed development occupies a single land title (Lot 10/DP1047477), which is consistent with Essential Energy's requirements for a single land title for a single supply.

Power Supplies

Currently the site is supplied from Power Pole 31833 located in Villiers St. outside the residence (to be removed), via an underground supply to a Main Switchboard and metering point at the rear of the existing conservatorium building. This is a 3-phase supply. With proposed demolition of that rear portion of the building a new MSB location will be required and a proposed location for that board is shown on the attached sketches, with external access for both Essential Energy meter readers and fire brigade for isolation of the supply to the building. Currently the supply is limited to 80A, but it is anticipated the electrical load for the redeveloped building will exceed that and require CT metering to be installed in the new MSB, vs Whole Current Metering of the current installation. The existing PV system (15kW) will need to be re-connected to this new MSB, along with the existing sub-board in the auditorium and new submains for the proposed Distribution Boards on the Grd Floor (DB-G) and 1st Floor (DB-1), where indicated on annotated floor plans.

Service Cupboard Provisions

All switchboard locations are nominal at this time and will be confirmed during the scheme design phase of the project.

Risers for distribution of (in particular) communications and security cabling will be required to service the 1st floor and an indicative location is shown on the annotated plans.

NBN Status

The NBN Co. website nominates FTTC (Fibre-to-the-Curb) technology currently exists at this property. With the proposed location of the Communications equipment moving to the new Office location the existing external connection to the building, will require the Client to organise for NBN Co. to re-route the internal cabling to this new location. As with switchboards, the location of the Comms Cabinet is notional at this time.

EXIT and Emergency lighting

As this building development will exceed 300m² then in accordance with NCC – 2022, Section- E4D2 (b), EXIT and Emergency lighting will be required.

The attached annotated floor plans indicate the proposed 'Way-finding' which will guide the design for positioning of EXIT signage and Emergency lighting.

A standard SPU system (non-computer monitored), with test facility at the switchboards is proposed at this time.

The BCA consultant to confirm the egress paths prior to scheme design.



Fire Detection and Auto-Shutdown

Currently there is no fire detection in the Class – 9b building, but with the expectation that air-handling systems will be installed, then in accordance with NCC-2022 NSW E2D16 (a), a fire detection shutdown system is anticipated to be required.

Unlike a conventional AS 1670.1 system, smoke detectors are only required where the relevant air-handling systems are installed. Other elements such as OWS speakers, MCPs, WIPs, Sounders, Strobes and connection to Fire Brigade are not required.

Consequently the fire panel is not required to be installed in the Foyer of the building and can be located to suit the plant that is required to be isolated should detector(s) be activated.

DA Conditions

We have reviewed the Pre-DA Lodgement Meeting minutes (23/06/22) and acknowledge the 7.08 AHD for the (1:100) year flood and this will be observed with the placement of GPOs and MSB switchgear.

At the completion of the design, certification will be provided for the Lighting Design for compliance with the Energy requirements of Section – J7, Artificial Lighting and Power.

BCA Report

At this time a BCA report for this development has not been sighted, but any requirements identified in our discipline will be incorporated in the design.

Any queries on this report should be directed to the undersigned in the first instance.

Regards

Ken Heard
Senior Electrical Engineer

ENCL:
Annotated Floor Plans – (4) off
SIXMaps