

ST IGNATIUS COLLEGE, RIVERVIEW**ELECTRICAL AND MECHANICAL SERVICES MASTER PLAN**

1. ELECTRICAL SERVICES**1. Existing System**

Electricity supply to the College is provided by means of three (3) Ausgrid substations:

Kiosk Substation S7636

Location:	Adjacent to Senior Boarding House
Output Rating:	600 kVA
Existing Maximum Demand:	466 kVA
Connected Loads:	Regis Campus Riverview Street & College Street

Kiosk Substation S7289

Location:	Adjacent to Laundry
Output Rating:	500 kVA
Existing Maximum Demand:	356 kVA
Connected Loads:	Main Building Vaughan Building Therry Building Laundry

Pole Mounted Substation S1837

Location:	Adjacent to Wallace Wing
Output Rating:	400 kVA
Existing Maximum Demand:	350 kVA
Connected Loads:	Ramsay Hall Wallace Wing Gartlan Centre Music Centre Workshops Boatshed

2. Capacity to Serve Proposed New Works**General**

The existing Ausgrid high voltage network has adequate capacity to serve the proposed new buildings. However, works will be required to the existing electricity substations to meet the additional load.

Substation S7289

Substation S7289 is located at the south eastern corner of the College site. Supply from the substation is distributed through a Main Switchboard installed in the Basement of the Main Building, below the Kitchen. In this location, the switchboard is at the risk of water damage and reticulation of cabling from the switchboard is difficult and expensive.

The substation and main switchboard have capacity to serve minor additions to the load. However, the submain cabling installed to the Vaughan and Therry Wings are close to full capacity due to the length of run and the associated voltage drop.

We anticipate that the proposed redevelopment will include not only an increase in the area of the respective buildings but will also increase their electrical load due to the installation of additional technology and mechanical services.

Planning would therefore include the upgrading and relocation of the substation to a position closer to the centre of the connected load (Stages 1, 3 and 4) and the establishment of a new Main Switchboard in a position where new submains could be readily installed to the Vaughan and Therry Buildings.

Consideration would also be given to disconnecting St Johns House from the existing supply and installing a new supply from the Senior Boarding House.

Substation S1837

The pole mounted Substation S1837 is currently close to full capacity. The associated Main Switchboard is also fully loaded and at the end of its useful life. The substation would be replaced with a kiosk substation rated to suit the additional load resulting from the planned redevelopment of the Wallace Wing. The Main Switchboard would also be replaced with a new switchboard installed close to the existing.

2. MECHANICAL SERVICES

1. College Policy

It is the ambition of the College to develop the Campus facilities as passively ventilated buildings with limited mechanically assisted ventilation, if required. Air conditioning will be restricted to selected areas where the function of the respective area requires it.

Consideration will also be given to the installation of electrically powered space heating in selected areas.