

## TARONGA ZOO – SUMATRAN TIGER ADVENTURE

### EXTERNAL ELECTRICAL SERVICES

---

#### 1. ELECTRICITY SUPPLY WITHIN THE TARONGA ZOO SITE

Taronga Zoo is a high voltage customer of the Supply Authority. Supply is derived by means of an underground high voltage (11kV) service to Substation No. 1 at the top of the site and is then distributed by means of an underground high voltage ring main cabling system to seven (7) other substations located in strategic locations throughout the site. The substations are owned and maintained by the Zoo.

At each substation the voltage is stepped down from 11kV to 415 volts and distributed to the various buildings by means of a series of service pillars and switchboards.

#### 2. EFFECT ON EXISTING HIGH VOLTAGE CABLING

The section of the existing 11kV underground cabling system connecting Substation Nos. 2 and 3 is installed through the site of the new works and will be affected by those works. The cable is of an old paper insulated type and will be unable to withstand any displacement due to the construction works and it has been determined to replace the affected section as part of the contract works. The new section of cable will be installed along a route clear of the new buildings.

The new section of cable will originate at Substation No. 2 and will be joined to the existing cable adjacent to the Elephant Barn.

#### 3. NEW CONDUITS FOR LOW VOLTAGE AND COMMUNICATIONS CABLING

A system of conduits and pits will be installed in the same trench as the new HV cabling to enable the installation of low voltage and communications cabling to the new buildings and to provide a path for future cables through the site.

The cables will link existing cabling pits for the respective services on either side of the site.

#### 4. SUPPLY TO THE TIGER ADVENTURE

Subject to final loadings and agreement with the Zoo, supply to the Tiger Adventure will be derived from Substation No. 2 via existing Main Switchboard No. 2. Substation No. 2 has adequate capacity to serve the new buildings and is located close to the Tiger Adventure. Cabling from Substation No. 2 / Main Switchboard No. 2 to the Tiger Adventure will be installed via the new underground conduit system.

#### 5. COMMUNICATIONS CABLING

The origin of the new communications cabling to the Tiger Adventure is yet to be determined by the Zoo. However, all new cabling will be installed via the new underground conduit system.