



PROJECT	:	PROPOSED SHILOH RETREAT – EXT 4 OF PORTION 39 OF THE FARM NIETGEDACHT 535 JQ
INSTALLATION	:	ELECTRICAL SERVICES
SCHEDULE	:	EXTERNAL SERVICES REPORT
DATE	:	13th November 2025
REF	:	E0283

1. GENERAL

- 1.1 Proposed new Township located on Portion 39 of the farm Nietgedacht 535 JQ for the proposed Shiloh Retreat. The proposed development will comprise of the following zoning categories:
- 1.2
- Erf 1: Educational
 - Erf 2: Commercial 1
 - Erf 3: Special
 - Erf 4: Agricultural
 - Erf 5: Private Open Space (active)
- 1.3 The request for the investigative report was forwarded by Synchronicity Development Planning on the 22nd September 2025.
- 1.4 The purpose of the report is to highlight the pertinent information and provide technical details for the purpose of providing the required electrical services for the proposed development. This information is intended to be used to review and approve the technical, operational, and financial aspects in connection with the external electrical services.

2. SITE LOCALITY

- 2.1 The proposed developments are indicated on the site layout plans in section 8 Annexure 1 on 14,5870 hectares which forms part of Portion 39 of the farm Nietgedacht 535 JQ.
- 2.2 The Electricity Supply Authority for this area is Eskom.



3. DESIGN PARRAMETERS

- 3.1 The relevant standards and equipment specifications have been verified with the Supply Authority which including the guidelines below, will be complied with.
- a) All electrical services shall be designed in accordance with the standards and specifications of the Supply Authorities by a Professional Electrical Engineer.
 - b) The electrical infrastructure shall be designed to comply fully with the standards and requirements of the Supply Authority where applicable and in accordance with NRS 034:1:1999, Electricity Distribution – Guidelines for the provision of electrical distribution in residential areas, SANS 10142-1, The Wiring of Premises – Low Voltage Installations and SANS 10142-2 The Wiring of Premises – Medium Voltage Installations above 1kV but not exceeding 22kV.
 - c) The maximum demand will be calculated in accordance with SANS 204 Energy Efficiency in Buildings, SANS 10142-1 The wiring of Premises – Low Voltage Installations and SANS 10400 Part X & XA Application of the National Building Act – Energy Usage.
 - d) If required, the Developer shall provide street lighting designed to comply with the standards and requirements of the Supply Authority and in accordance with SANS 1098: Part 1-2: Public Lighting.

4. SUPPLY AUTHORITIES' REQUIREMENTS

The general requirements and acceptance procedures of the Supply Authority are detailed below as follows:

4.1 Approval

- a) Detail designs shall be submitted for review and approval by the Supply Authority prior to the commencement of construction.
- b) The Developer shall submit a “formal application” for the MV/LV electrical connection to Eskom’s Department of Infrastructure- Electricity.
- c) The developer shall accept the conditions as set out in the “Formal Application” and that all connection costs and any other costs with respect to any special arrangements, are paid in full.
- d) The Supply Authority reserves the right to only confirm the availability of the bulk supply capacity at final application thereof.
- e) All bulk services contribution charges are paid in full.
- f) A Services Agreement is drafted, reviewed, and signed between the Developer and Supply Authority.

4.2 Handing Over

- a) The electrical infrastructure shall be tested and approved in accordance with the conditions as laid down by the Supply Authority.
- b) The Supply Authority shall authorize the energizing of the electrical network once the final tests have been carried out, approved, and accepted.
- c) A provisional asset register will be submitted to the Supply Authority once the design documentation has been approved. The asset register shall be updated once the services have been installed and the network accepted by the Supply Authority.
- d) Ownership of the electrical services shall be transferred from the Developer to the Supply Authority upon the successful testing and commissioning of the services. The Supply Authority will thereafter be responsible for the maintenance of the electrical services.



4.3 Revenue Collection

- a) Ownership as well as responsibility for revenue collection for the Supply Authority ends at the "Point of Connection", defined as where the Supply Authorities meters are installed. After the meters, ownership including revenue collection rests with the Developer.
- b) The Supply Authority shall determine the type of "Point of Connection" and the position thereof will be confirmed at the detailed design stage. Either an individual Low Voltage connection or a Low Voltage Bulk Connection will be provided. Where a Bulk Meter Kiosk is to be provided or a Medium Voltage Bulk Connection, a Ring Main Unit including a Metering section shall be provided.

4.4 Maximum Demand Estimation

- a) The notified "Maximum Demand" for the proposed developments have been calculated in accordance with the requirements as set out in SANS 204 and SANS 10142-1
- b) Based on the guidelines as set out, the following calculated allowances would apply.

- Erf 1 – Educational (4722m²)

From the guidelines set out in SANS for "Educational" or similar zoning at 80VA/m², the estimated load requirement ADMD for Erf 1 amounts to 300 kVA or 450 A 3 phase + N.

- Erf 2 - Commercial ()

No Provision

- Erf 3 – Special ()

From the guidelines set out in SANS for "Special" or similar zoning at 75VA/M² the estimated load requirement for Erf 3 amounts to 56kVA or 80A 3phase + N.

- Erf 4 - Agricultural ()

From the guidelines set out in SANS for "Special" or similar zoning at 75VA/M² the estimated load requirement for Erf 4 amounts to 56kVA or 80A 3phase + N.

- Erf 5 – Private Open Space ()

No Provision

Total Estimated ADMD for Ext. 4 Portion 39: 325 kVA



4.5 Energy Efficiency Demand Estimation

- a) When energy efficiency measures are considered, the following “ Regulatory Standards” are to be adopted:
 - SANS 204 Energy Efficiency in buildings
 - SANS 10400 Part X & XA application of the National Building – Energy usage.
- b) From an energy usage point of design, the following should be considered:
 - Energy efficient electrical stoves or gas stoves.
 - Gas and/or solar geysers or heat pumps.
 - Energy efficient lighting, i.e., LED. Controlled via time switches and motion detectors.
 - Solar PV/UV systems.
 - Battery/Invertor system.

5. EXISTING INFRASTRUCTURE

5.1 General

- a) The existing network capacity and proposed future supply services have been discussed and verified with the Supply Authority and these factors taken into consideration. The available network electrical capacity for developments in the area is limited but sufficient for this project.
- b) There is an existing 11 000-volt Eskom overhead power line, “Chartwell Chris”, which has sufficient available capacity and is located within close proximity to the boundary of Erf. 1. Power will be supplied from this line to Erven 1, 3 & 4.

6. NEW MV/LV SUPPLY PROPOSAL

6.1 General

- a) The following new work would need to be carried out to provide the required electricity supplies to the proposed new erven at the above development. Application to Eskom will be required to establish 3 no. new LV service connections as follows:
- b) Erf. No. 1: 300kVA MV/LV pole mounted transformer and LV cabling down the consumers meter kiosk which the internal electricity supply to Erf. 1 will be connected.
- c) Erf. No. 3: 56kVA MV/LV pole mounted transformer and LV cabling down the consumers meter kiosk which the internal electricity supply to Erf. 3 will be connected.
- d) Erf. No. 4: 56kVA MV/LV pole mounted transformer and LV cabling down the consumers meter kiosk which the internal electricity supply to Erf. 4 will be connected. Additional overhead line work will be required in order to locate the transformer at the site boundary to Erf. No.4.



7. COST ESTIMATE

7.1 General

a) The following is a provisional cost estimate in connection with the establishment of the electrical services as detailed below.

a) Erf no. 1: Cost for the new 300kVA electricity connection Fee : R 1 250 000.00

b) Erf no. 3: Cost for the new 56kVA electricity connection Fee : R 345 000.00

c) Erf. No. 4: Cost for the new 56kVA electricity connection Fee: R 465 000.00

8. SITE LOCALITY PLAN

8.1 Annexure 1

