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## 1.1 SCOPE OF PROJECT

The detail specification covers the technical requirements for the lightning protection and earthing systems to be installed in the selected buildings that form part of the **Khandisa Primary School** site. The lightning protection and earthing installation shall be new throughout the school. Contractors are to read the Detail Specification in conjunction with the Bills of Quantities and drawings issued for this contract.

## 1.2 SPECIALIST CONTRACTORS

The Contractor shall note that only Specialists in Lightning and Earthing Protection may undertake this work and shall produce proof of previous work completed in the past.

## 1.3 DEFINITIONS

Where the following terms are used in this specification, they shall be taken to mean the following:

- (a) **Lightning Protection System:** The whole system of conductors used to protect a structure from the effects of lightning.
- (b) **Air Terminal:** The part of a lightning protection system that is intended to directly intercept lightning discharges (air terminals include metallic roofs, roof conductors and finials).
- (c) **Down-Conductor:** A conductor that connects the air terminal(s) to the earth terminal(s).
- (d) **Earth Terminal:** The part of a lightning protection system that is intended to discharge lightning currents into the general mass of the earth.
- (e) **Bond:** A conductor that provides electrical connection between the lightning protection system and the metal work of the structure to be protected (or between various parts of this metal work).
- (f) **Joint:** A mechanical junction between two conductors for the purpose of providing electrical continuity between two parts of the lightning protection system.
- (g) **Earthing Electrode:** The part of an earth terminal which makes direct electrical contact with the earth.
- (h) **Testing Joint:** A joint in a down-conductor or in a bond connecting two parts of the earth terminal so designed and situated as to enable measurements to be made of the resistance to earth or of continuity of parts of the lightning protection system.

## 1.4 TESTING

Each earth point shall be tested for resistance to earth readings. These readings shall be logged and the actual method of test shall be recorded in detail so that future test may be carried out under similar conditions. A copy of all logged readings shall be forwarded to the engineers for approval and record.

On completion the Contractor shall be required to carry out testing in accordance with SANS 10313: 1999, SANS IEC 62305: Parts 1-3.