

DIRECT LIGHTNING PROTECTION

System 1- Strapping System

The strapping system consists of a vertical air-termination (Lightning Rods) connected by a horizontal tape system.

Down-conductors are placed at intervals in accordance with AS 1768-2007 tied into either the footings of the building or their own earth pits, either of which can form all or part of the Terminal Earth Network (ETN). The most common conductor is 25 x 3 stainless steel tape, however Copper and galvanised steel are often used. This system is open to many different designs and variations and conforms fully with the standard AS 1768-2007. This method while very economical on materials is expensive on labour.

System 2 – PREVECTRON ESE System

This method uses the Prevectron ESE (early stream emission) Terminal. Mounted on a mast and used as a single down-conductor bonded into the re-enforcing steel in a selected column or the lift well of the building, and then bonded in turn to either the footings of the building or a dedicated earth pit as the ETN.

Standard Method

This method allows for the ESE terminal mounted on a main support mast at the appropriate height and conducts the energy to the earth points via the selected down-conductor, to the ETN. When using this method it is recommended to bond all the metal objects existing above the roof line into the down-conductor, using stainless steel tape as the bonding medium.

Conforming Method

This uses the Prevectron ESE mounted on an appropriate mast as the single air-terminal, this is then bonded to all metal existing above the roof line and a system of multi down-conductors that comply with the requirements set out in AS 1768-2007.

Both of these methods are installed with strike event counters, test points and connected to appropriate earth networks, with the usual QPP expertise and quality. Earth test reports and compliance certificates are issued upon the commissioning of the system. Earth test and system reports are also available separately.

Earth Termination Network (ETN)

The earth termination network is either the use of the footings of the building structure or a system of buried tape and earth pits with rods or a combination of the two. Fixing of the systems is usually done with mechanical fixings. The configuration of the ETN depends on the particular requirements of the site being earthed. QPP engineers are highly skilled in the design and installation of earth terminal networks.