

The entire installation shall be maintained from the date of handover to 18 months after that date when the certification shall be complete.

1.8.20 LIGHTNING PROTECTION SYSTEM

The contractor shall design supply and install a lightning protection system for the building with tapes on the roof not exceeding 20m x 10m with down conductors on each corner and rods in the ground. B bonds to be provided to each Photo voltaic panel system and to the roof lights.

The system shall be designed for medium risk and linked into the existing building lightning protection system and the design of the system shall entail all elements to meet this standard.

The installation shall be in accordance with BS EN 62305 standard covers various aspects of lightning protection, including risk assessment, system design, installation, and maintenance

In addition, surge protection shall be installed for the main building and the extension.

1.8.21 PHOTO VOLTAIC AND BATTERY SYSTEM

The Contractor shall employ the services of Smart Electrical services to supply and install a new PV installation on two separate areas of the roof with wiring back to invertors in the cupboard

The installation shall include the installation of brackets, supports from the roof frame, along with panels which are high efficiency with long term guarantees of 25 years and a minimum of 425W each finished in all black, then wiring back to invertors and meter located in the electrical switch cupboard. The installation shall include all supporting brackets.

The installation shall be installed on the building roof areas with the panels mounted on purpose made brackets connected to the roof seams or structure being provided, this shall be coordinated with the roof design so that the roofs new and existing can take the weight and wind loading of the PV installations.

The panels shall then be installed on purpose made brackets fixed down so totally wind resistant and then connected to the inverter and meter which shall then be wired into the new Distribution board. The installation shall include all wiring, supports and equipment to put the installation back into operation.

The PV panels shall be Jinko Black series 425W panels minimum and be wired at the top of the roof area allowing further Panels and systems to be installed later.

- In the contract PV panels on two roof areas to meet the requirements set on the thermal model based upon the angle of the roof, performance of the panels themselves.

The installation shall be designed supplied and installed by a MCS and NIC certified electrical contractor, who shall be employed to design supply and install the installation to this specification, they shall on completion of the project certify the installation and ensure all the paperwork is done to allow any future FIT monies. (FIT or Feed In tariff for PV) To be collected by the client

The installation shall be carried out by

Smart Electrical Services UK Ltd
18 Erleigh Court Drive
Earley
Reading
Berks

0118 96665544 or 07900693487

The Contractor shall be MCS and EIC with Professional design qualifications

The contractor shall be responsible for all certification paperwork, with the DNO to ensure the installation is fully approved and has already started on this process due to the risk of being turned down.

The system installation shall include

- PV panels shall be hard fixed to the structure
- Strings for the DC wiring
- Inverter panels
- Isolators for both the DC and AC systems each being double pole and rated accordingly
- Sub mains cabling
- Meters.
- Installation of the Sub meters and monitoring equipment
- Wiring certificates NIC/ECA paperwork completed by the PV contractor (no other allowed)
- Frames for the PV panels
- Connections to the roof upstands and permanent fixings. (To ensure wind proof)

The System shall be G99 Compliant and have the relevant approvals from the DNO in writing, this is already underway due to the length of time required to gain approval.

Two separate prices are required for the delivery of the project, firstly the 16 panels in the new extension and then the 32 panels in the roof of the existing building.

Refer to roof drawings for proposed locations of the PV panels, this is subject to where the structural supports are being provided for the brackets.

1.8.22 TESTING, COMMISSIONING AND SNAGGING

The Contractor shall carry out all testing in accordance with BS 7671 and the NICEIC. The Contractor shall notify the Engineers of testing dates, giving a minimum of 14 days' notice to allow the Client or his representative to attend and witness.

On completion of satisfactory testing, the Contractor shall allow a commissioning and handover of the systems to the various client representative. Handover shall include training and demonstration of all systems and equipment installed. The Contractor shall allow within the tender a two-day period for this training.

The main contractor shall offer over the building services for snagging only once they have themselves assured that the installation is complete to a very good standard and there are no defects. The client team shall then attend site snag and witness all systems being fully demonstrated and tested.