

Solar Roofing Specialists (SRS) Method statement

**For the installation of solar panels at Arun District IBC Nyewood
Lane, Bognor Regis, PO21 2TT**

02-08-2011

SRS takes health and safety very seriously and is knowledgeable on the following legal requirements.

The Work at Height Regulations 2005

Management of Health & Safety at Work Regulations 1999

The Workplace (Health, Safety & Welfare) Regulations 1992

The Construction (Health, Safety & Welfare) Regulations 1996

The Provision and Use of Work Equipment (PUWER) Regulations 1998

British and European Standards

For each job, as well as this method statement, a site specific risk assessment must be carried out prior to the start of work (please see attached). The risk assessment and method statement shall be signed by our health and safety representative and communicated to all those involved in the roof access/work.

Before commencing any roof work, it is absolutely essential that we determine whether a roof is fragile or non-fragile. This is done in accordance with ACR (CP) 001:2003. In this case a pre-inspection has determined that the roof is classed as a non-fragile roof, however, once the scaffolding has been erected a further detailed, inspection will be carried out to check for any defects that could compromise the fragility. There are no roof lights.

Scaffolding

Scaffolding will be erected to provide adequate edge protection and for the prevention of falling objects (along with other measure explained below). We always make checks that the scaffolding company chosen are suitably qualified (either through CISRS or an alternative industry approved body). If the land where the scaffolding is to be erected doesn't belong to the Club then the necessary permissions will be sought.

The scaffold ladder will either be moved or boarded to prevent unauthorised access.

At the start of each day a visual inspection of the scaffolding and scaffold platform must be carried for any signs of tampering.

Getting on and off the roof.

Getting on and off the roof is a major risk. A properly secured ladder is the minimum requirement for this type of activity.

As this building is only single storey (scaffold platform height will be under four meters) this is deemed a suitable method for getting on and off the roof. We utilise winching equipment (detailed below) to avoid the need to carry any objects while climbing the ladder. Two hands must always be used when climbing the ladder.

Edge protection

Wherever a person could fall from height and sustain personal injury, the first line of defence is to provide adequate edge protection.

The health and safety representative will check that this will meet the minimum legal standards or consist of:

A main guard rail at least 910mm above the edge;

A toe board at least 150mm high;

An intermediate guard rail or other barrier so that there is no gap greater than 470mm.

Transport

All company vehicles are regularly serviced and weekly checks are carried out to help ensure legal compliance. A vehicle checklist is kept in each company vehicle, to ensure that weekly monitoring of tyre pressure/ tread, checking bulbs, servicing is up to date, oil and water checks.

Staff Training.

All members of staff undertaking roof access/work have the appropriate knowledge, information, instruction, skills, training and experience to work safely, or will be under the supervision of a designated competent person.

Competence must be assured in the following areas:

Staff must be able to recognise the risks and necessary controls to complete the work safely;

Be fully conversant with the agreed safe system of working, including where necessary the installation/wearing of safety harnesses,

Requirements/installation of edge protection.

All such training is recorded and repeated as necessary.

Housekeeping is of paramount importance and can prevent material accumulating with the potential to fall and cause injury.

For each roofing team there must be at least one qualified first aider on site at all times. A HSE approved first aid kit is to be kept at site throughout the duration of the works.

Weather conditions

Adverse weather conditions need to be anticipated and suitable precautions planned.

The roof will always be inspected prior to access/work commencing to determine whether conditions have changed and to enable safe working. When deciding whether to continue or suspend work consideration should be given to:

Wind speed;

Controls already in place to prevent falls from the roof ;

The position/height of the roof in respect of any material being handled;

The work being undertaken.

It is the responsibility of the health and safety representative to ensure that excessive exposure to sunlight will be avoided by wearing appropriate clothing, using sun-creams and wearing sun glasses to avoid excessive reflective glare.

Manual handling and safe transportation of tools/ equipment to the work area

We will either use our scaffold winch to lift tools and equipment up to the roof level, or we will use our Geda Solar lift (a winch attached to a frame with a platform that can lift 250kg).

The area around the solar lift has an increased risk of falling objects due to the possibility of a load not being sufficiently stowed due to human error.

The area around the lift will be cordoned off. When items are being lifted and an increased risk of falling objects is present the lift operator will supervise the area to ensure the cordoned area is not compromised.

The lift operator will wear a safety helmet and steel toe cap footwear as a precaution and when operating the winch will stand sufficiently away from the lift, not only because of an increased risk of falling objects but also to ensure the winch has a clear passage at roof level.

Installation of the solar panel mounting kit

All staff will install the mounting kit as per manufacturer's and structural engineer's specifications.

Most tools will be battery operated, if any mains powered tools have to be used they will either be 110v or RCD protected. All of the appropriate PPE will be worn.

Strict housekeeping will be ensured at all times throughout installation, all fixings, accessories and tools will be kept neatly and organised in plastic trays. A storage container will be provided so all items can be kept neatly on the scaffold platform when not in use.

Installation of Solar Panels.

The pallets of solar panels will be moved by the lift operator, with a pallet truck, to directly next to the solar lift. This will ensure that minimum lifting is required. This will also prevent the need to twist while handling the panels. The packaging will be removed at floor level, avoiding the need to do this on the

roof. The panels will be sent up the solar panel lift, the lift operator will stand back away from the lift so visual confirmation that the lift is clear on the roof level. The solar panel lift has a knee joint at the level of the scaffold platform, meaning that the panels can be winched all the way up to the top of the roof, again avoiding the need to carry panels any more than necessary.

When the lift is next to the rails where the panels will be installed the panels will be loaded onto a solar panel platform that sits on the rails and can slide along the rails. This again ensures minimal manual handling. The panel platform is then pulled across the roof with a rope to where the panels are being installed, there will be 2, two man teams unloading the panels and placing them roughly where they are needed. The panel platform will then be sent back.

All solar panel plugs, and string cables will be securely fastened to the rails. All plugs will be secured to they are underneath the panels and protected from the elements (even though they are waterproof, avoiding exposure to the elements as much as possible is always preferable).

After each row of panels is installed a double check is carried out to ensure all solar panel clamps are securely fastened.

All the testing of the solar panels will be carried out by a qualified electrician.

The lift operator on the ground will be flat packing all the packaging so its kept neatly and weighted down to prevent it blowing away, this will either be placed in a skip or collection will be arranged (preferably so the cardboard will be recycled, depending on local availability).

The system in place for moving the panels ensures that all mechanical aids are utilised avoiding the unnecessary manual handling of equipment. Again, while installing panels all tools and fitting equipment will be kept in plastic trays, and will always be placed in such a manner that avoid any trip hazard.

Completion

Upon completion of the installation of the solar panels, all tools and left over equipment will be lowered to the ground using the winch; a visual check from all of the roof team is carried out to ensure all items are removed from the roof area. After everything is clear from the scaffold the ladder will be either moved or boarded and padlocked to prevent unauthorised access.

All rubbish will either be collected, or left neatly in the suitable container ready to be collected.

The solar lift will be dismantled and loaded into vehicle; all of the floor area will be checked to ensure that no packaging is left behind.