PV Panels – Insurance Note

**1.        The installing company and all equipment used is to be approved under the Microgeneration Certification Scheme (MCS). In addition, the installing company is to be approved by the National Inspection Council for Electrical Installation Contracting (NICEIC), the Electrical Contractors Association (ECA), a member of the Safety Assessment Federation (SAFed) or the National Association of Professional Inspectors and Testers (NAPIT) or SELECT (the Electrical Contractors' Association of Scotland) to ensure compliance with BS 7671:2008 (2011) Requirements for Electrical Installations (Institution of Engineering and Technology - IET Wiring Regulations).

2.        Careful consideration should be given to the location of the inverters and isolation equipment, this equipment should not be fitted to combustible surfaces and should be fitted in easily accessible positions to allow for maintenance, isolation etc. e.g. in existing plant rooms or electrical switchgear rooms. Ideally. electrical switchgear, inverters etc. need to be located in a secure area that is separated off by fire walls/doors providing at least 60 minutes fire resistance. Fitting equipment in loft spaces and roof voids is to be avoided as these areas are not visited continually/regularly during the day, access to these areas is often difficult, there is often large volumes of combustible materials including loft insulation materials, timber roof frame etc. and there is very often little or no automatic fire alarm protection provided. Any equipment fitted externally should be suitably protected/caged to prevent damage or interference.**

**3.        There needs to be provided an easily accessible AC and DC switch/circuit breaker or "fireman switch" to enable the current from the panels to be isolated remotely - often these switches are sited in lofts/roof spaces where the fire brigade cannot operate them in an emergency. The inability to isolate the supply of electricity from the panels inside the building may delay fire-fighting operations as the electrical system within the building can remain energised.**

**4.        Detailed calculations of the roof loading need to be completed to ensure that the installations will not overload the roof or increase significantly the likelihood of damage to the roof in high winds.**

**5.        The potential for "shadowing" also needs to be considered. When snow melts off the panels, the water can drip onto the roof that is in the shadow of the solar panel, where it can freeze again. There is a real concern that over a period of time the ice build-up can overload the roof. This needs to be factored into engineering calculations and may further affect the number of panels that can be safely installed.**

**6.        Automatic fire alarm protection coverage should be provided for the inverters, isolators and other electrical equipment.**

**7. Ensure that where installed, the roof - including insulation - is of a non-combustible nature.**

**In terms of when the development is completed, we advise the following housekeeping/local management practices:**

**1.        It is important that all electrical equipment is kept clear of combustible materials to prevent fire spread in the event of fault developing within the equipment. Therefore a minimum clearance of 1m is to be kept clear of all combustible materials around the inverters and isolators etc.**

**2.        The installation is to be maintained/serviced regularly in accordance with the manufacturer's recommendations under a service contract with an approved MCS company who are also approved by NICEIC, ECA, SAFed, NAPIT or SELECT.**

**3.        Suitable training is to be provided to on site staff including fire wardens/marshals, which is to include how and where to isolate the PV installation, the fire hazards involved with this equipment, the importance of keeping this equipment clear of combustibles, information about any local automatic fire alarms fitted to protect this equipment. Additional warning signs may be required for roof sited equipment to alert any staff working on roofs of the heat these PV panels emit etc.**

**September 2016**