

Installation of Solar and Photovoltaic mounted panels.

Introduction: With CO² emissions being a major concern in today's environment secondary means of providing energy to properties is seriously considered by many householders. Solar and Photovoltaic roof mounted panels are becoming increasingly popular with householders and it is important; therefore, to recognize that in most cases these will require approval under the Building Regulation. The main issues regarding the installation of these panels revolve around the structural stability of the existing roof structure, the connection of pipe work, electrical work to the existing installation and water tightness of the finished installation. Early discussions with Building Control are recommended to assess the need for a Building Regulation application to be deposited; it must also be remembered that Planning Permission may also be required for the installation of the panels.

Structural Stability: Many of these panels are not particularly heavy; however, the extra weight placed upon the existing roof structure could result in failure of the roof. Panels can also create negative pressures to roof structures through suction due to the wind.

It is important to discuss with the panel manufacturer and the installer to assess the loadings that may be placed on roof structures. A structural engineer's design may be required for the roof and installation as additional strengthening may be required to the roof; you may have to demonstrate that the roof is capable of taking the proposed additional loads.

Alterations or additions to heating and hot water systems: Any alteration or additions to heating or hot water systems are required to be carried out by competent persons and certification of this may be required. It is important that a competent person is approached for advice at an early stage. A list of competent persons is attached; column 1 describes the type of work or system that is being altered or added to and column 2 gives the corresponding competency that the person carrying out the work is required to have achieved.

Alteration or addition of electrical systems: If alterations or additions are carried out to existing electrical systems then you may require Building Regulation approval for this work and the work should be carried out by a competent person. It is important that a competent electrician is approached for advice at an early stage as they may be required to issue a certificate under BS 7671. A list of competent persons is attached; column 1 describes the type of work or system that is being altered or added to and column 2 gives the corresponding competency that the person carrying out the work is required to have achieved.

Water tightness: Any penetrations through roof structures for fixings, pipes or cables must be carried out in a manner to ensure the water tightness of the roof is maintained. Early discussions with the installer should be carried out to discuss methods of fixing and waterproofing.

Conclusion: Whereas the provision of Solar Hot Water and Photovoltaic roof mounted panels are becoming more popular and could be a definite asset to your home, it is

important to ensure that the existing structure of the building is not affected; early discussions with the manufacturer, installer, competent persons and Building Control is strongly recommended. Note Planning Permission may also be required for this type of installation.

Installation of Wind Turbines.

Introduction: With CO² emissions being a major concern in today's environment a secondary means of providing energy to properties is seriously considered by many householders. The provision of Wind Turbines is becoming increasingly popular with householders and it is important to recognize that in some cases these will require Building Regulation approval. The main issues regarding the installation of Wind Turbines revolve around structural stability and the safety of electrical work. Early discussions with Building Control are recommended to assess the need for a Building Regulation application to be deposited; it must also be remembered that Planning Permission may also be required for the installation of the turbines.

Structural Stability: The structural stability of all Wind Turbines must be assessed to ensure safety of persons and if Wind Turbines are attached to buildings then Building Regulation approval will most likely be required. Many turbines, if fixed to existing buildings, can place excessive loading to existing structures resulting in instability and a danger to persons using the building. It is important to discuss with the turbine manufacturer and the installer to assess the loadings that may be placed on a structure. A structural engineer's design may be required for the turbine and installation as additional strengthening may be required; you may have to demonstrate that the building or structure is capable of taking any additional loads. Even if Wind Turbines are not attached to buildings the adequacy of any supporting structure should be assessed with the manufacturer and the installer.

Alteration or addition of electrical systems: It would be expected that electrical connections will be required between the turbine and the existing electrical installation and therefore you may require Building Regulation approval for this work; therefore, the work should be carried out by a competent person. A competent person is defined in the schedule to this guide. It is important that a competent electrician is approached for advice at an early stage as they may be required to issue a certificate under BS 7671. A list of competent persons is attached; column 1 describes the type of work or system that is being altered or added to and column 2 gives the corresponding competency that the person carrying out the work is required to have achieved.

Conclusion: Whereas the installation of Wind Turbines are becoming more popular and could be a definite asset to your home, it is important to ensure that any existing structures and buildings are not affected; early discussions with the manufacturer, installer, competent persons and Building Control is strongly recommended. Note Planning Permission may also be required for the installation of Wind Turbines.

Column 1	Column 2
	<i>Person carrying out works</i>
1. Installation of a heat-producing gas appliance	A person, or an employee of a person, who is a member of a class of persons approved in accordance with regulation 3 of the Gas Safety (Installation and Use) Regulations 1998.
2. Installation of heating or hot water service system connected to a heat-producing gas appliance, or associated controls.	A person registered by Gas Safe in respect of that type of work.
3. Installation of: <ul style="list-style-type: none"> a) an oil-fired combustion appliance which has a rated heat output of 100 kilowatts or less and which is installed in a building with no more than 3 storeys (excluding any basement) or in a dwelling; b) oil storage tanks and the pipes connecting them to combustion appliances; or c) heating and hot water service systems connected to an oil combustion appliance. 	An individual registered by Oil Firing Technical Association Limited. NAPIT Certification Limited or Building Engineering Services Competence Accreditation Limited in respect of that type of work.
4. Installation of: <ul style="list-style-type: none"> a) a solid fuel burning combustion appliance which has a rated heat output of 50 kilowatts or less which is installed in a building with no more than 3 storeys (excluding any basement); or b) heating and hot water service systems connected to a solid fuel burning combustion appliance. 	A person registered by HETAS Limited, NAPIT Certification Limited or Building Engineering Services Competence Accreditation Limited in respect of the type of work.
5. Installation of a heating or hot water service system, or associated controls, in a dwelling.	A person registered by Building Engineering Services Competence Accreditation Limited in respect of that type of work.
6. Installation of a heating, hot water service, mechanical ventilation or air conditioning system, or associated controls, in a building other than a dwelling.	A person registered by Building Engineering Services Competence Accreditation Limited in respect of that type of work.
7. Installation of an air conditioning or ventilation system in an existing dwelling, which does not involve work on systems shared with other dwellings.	A person registered by Gas Safe or NAPIT Certification Limited in respect of that type of work.

<p>8. Installation of a commercial kitchen ventilation system which does not involve work on systems shared with parts of the building occupied separately.</p>	<p>A person registered by Gas Safe in respect of that type of work.</p>
<p>9. Installation of a lighting system or electric heating system, or associated electrical controls.</p>	<p>A person registered by The Electrical Contractors Association Limited in respect of that type of work.</p>
<p>10. Installation of fixed low or extra-low voltage electrical installations.</p>	<p>A person registered by BRE Certification Limited, British Standards Institution, ELECSA Limited, NICEIC Group Limited or NAPIT Certification Limited in respect of that type of work.</p>
<p>11. Installation of fixed low or extra-low voltage electrical installations as a necessary adjunct to or arising out of other work being carried out by the registered person.</p>	<p>A person registered by Gas Safe, ELECSA Limited, NAPIT Certification Limited NICEIC Group Limited or Oil Firing Technical Association Limited in respect of that type of work.</p>
<p>12. Installation, as a replacement, of a window, rooflight, roof window or door (being a door which together with its frame has more than 50 per cent of its internal face area glazed) in an existing building.</p>	<p>A person registered under the Fenestration Self-assessment Scheme by FENSA Ltd, or by CERTASS Limited or the British Standards Institution in respect of that type of work.</p>
<p>13. Installation of a sanitary convenience, washing facility or bathroom in a dwelling, which does not involve work on shared or underground drainage.</p>	<p>A person registered by Gas Safe or NAPIT Certification Limited in respect of that type of work.</p>
<p>14. – (1) Subject to paragraph (2), any building work, other than the provision of a masonry chimney, which is necessary to ensure that any appliance, service or fitting which is installed and which is described in the preceding entries in column 1 above, complies with the applicable requirements contained in Schedule 1.</p> <p>(2) Paragraph (1) does not apply to:</p> <p>c. Building work which is necessary to ensure that heat-producing gas appliance complies with the applicable requirements contained in Schedule 1 unless the appliance:</p> <ul style="list-style-type: none"> i. has a rated heat output of 100 kilowatts or less; and ii. is installed in a building with no more than 3 storeys (excluding any basement), or in a dwelling; <p>or</p> <p>d. the provision of a masonry chimney.</p>	<p>The person who installs the appliance, service or fitting to which the building work relates and who is described in the corresponding entry in column 2 above.</p>