

## I) Insulation:

### 1) Loft insulation:

#### Questions to ask suppliers

- **Does your product comply with the relevant BSI British Standards?**

Relevant BSI British Standards include (depending on the type of insulation):

- BS EN 13162:2001 Thermal insulation products for buildings. Factory made mineral wool (MW) products. Specification;
- BS 5803-2:1985 Thermal insulation for use in pitched roof spaces in dwellings. Specification for man-made mineral fibre thermal insulation in pelleted or granular form for application by blowing;
- BS 5803-3:1985 Thermal insulation for use in pitched roof spaces in dwellings. Specification for cellulose fibre thermal insulation for application by blowing;
- BS 5803-4:1985 Thermal insulation for use in pitched roof spaces in dwellings. Methods for determining flammability and resistance to smouldering;
- BS 5803-5:1985 Thermal insulation for use in pitched roof spaces in dwellings;
- BS4841: Part 5 Rigid polyisocyanurate (PIR) and polyurethane (PUR) products for building end-use applications: Specification;
- BS EN 13165 Thermal insulation products for buildings: Factory made rigid polyurethane foam (PUR). Specification.
- BS EN 13163 Thermal insulation products for buildings: Factory made products of expanded polystyrene (EPS). Specification.

- **What is the R-value of your product?**

The R-value is a measure of the resistance of a material to heat flow. The R-value depends on the type of insulation and includes its material, thickness, and density. The higher the R-value, the greater the insulation performance.

- **Is your product made from renewable or recycled materials?**

Using products made from recycled materials can help divert waste from landfill and conserve resources. Using products made from renewable materials can also help conserve finite resources.

- **Do they operate within an Environmental Management System such as ISO14001;** and do they have an understanding of the environmental impact of the products they supply? Ideally, products should be used that offer the best energy savings with the lowest environmental impact. This can be worked out by combining the R-Value (specific to the product) with indicative environmental rating for domestic insulation products, downloadable from [www.thegreenguide.org.uk](http://www.thegreenguide.org.uk).

#### Questions to ask installers

- If you are worried about employing a reliable installer, consult TrustMark [www.trustmark.org.uk](http://www.trustmark.org.uk), a Government supported scheme that helps you find a reliable tradesperson.

## 2) Cavity wall insulation:

### Questions to ask suppliers

- **Is your product certified by the British Board of Agrément (BBA) or BSI British Standards?**  
Relevant BSI British Standards include: BS 5617:1985 Specification for urea-formaldehyde (UF) foam systems suitable for thermal insulation of cavity walls with masonry or concrete inner and outer leaves; BS 7457:1994 Specification for polyurethane (PUR) foam systems suitable for stabilization and thermal insulation of cavity walls with masonry or concrete inner and outer leaves. To search for BBA certified products, visit their website: [www.bbacerts.co.uk/query3.html](http://www.bbacerts.co.uk/query3.html)
- **Is your product Energy Saving Recommended (ESR)?** ESR products carry the ESR logo, which is a guarantee that the product is the most energy efficient in its category. Only the top 20% of products on the market can carry the symbol. The scheme is run by the Energy Saving Trust - visit their website to search for ESR products and retailers:  
[www.energysavingtrust.org.uk/energy\\_saving\\_products/about\\_energy\\_saving\\_recommended\\_products](http://www.energysavingtrust.org.uk/energy_saving_products/about_energy_saving_recommended_products)
- **What is the R-value of your product?**  
The R-value is a measure of the resistance of a material to heat flow. The R-value depends on the type of insulation and includes its material, thickness, and density. The higher the R-value the greater the insulation. A guide to types of insulation can be found at  
[http://apps1.eere.energy.gov/consumer/your\\_home/insulation\\_airsealing/index.cfm/mytopic=11510](http://apps1.eere.energy.gov/consumer/your_home/insulation_airsealing/index.cfm/mytopic=11510).
- **Is your product made from renewable or recycled materials?**  
Using products made from recycled materials can help divert waste from landfill and conserve resources. Using products made from renewable materials can also help conserve finite resources.
- **Do they operate within an Environmental Management System such as ISO14001; and do they have an understanding of the environmental impact of the products they supply?** Ideally, products should be used that offer the best energy savings with the lowest environmental impact. This can be worked out by combining the R-Value (specific to the product) with indicative environmental rating for domestic insulation products, downloadable from [www.thegreenguide.org.uk](http://www.thegreenguide.org.uk).

### Questions to ask installers

- **Are you a member of the Cavity Insulation Guarantee Agency (CIGA) (or the BUFCA guarantee scheme for polyurethane systems)?**  
CIGA provides independent 25 year guarantees for cavity wall insulation fitted by registered installers. Visit CIGA's website to find a registered installer: [www.ciga.co.uk/installers.html](http://www.ciga.co.uk/installers.html)
- **Are you registered with the British Board of Agrément (BBA) and/or will you follow the appropriate BSI British Standard Code of Practice?**  
Relevant BSI British Standard Code of Practices include: BS 8208-1:1985 Guide to assessment of suitability of external cavity walls for filling with thermal insulants. Existing traditional cavity construction; BS 5618:1985 Code of practice for thermal insulation of cavity walls (with masonry or concrete inner and outer leaves) by filling with urea-formaldehyde (UF) foam systems; BS 7456:1991 Code of practice for stabilization and thermal insulation of cavity walls (with masonry or concrete inner and outer leaves) by filling with polyurethane (PUR) foam systems)  
To search for BBA certified installers, visit their website: [www.bbacerts.co.uk/approve/cwi.htm](http://www.bbacerts.co.uk/approve/cwi.htm)

### 3) Internal Wall Insulation:

#### Questions to ask suppliers

- **Is your product certified by British Board of Agrément (BBA) or BRE Certification or does it meet the appropriate BSI British Standards?**  
Applicable BSI British Standards include: BS 4841-2:2006 Rigid polyisocyanurate (PIR) and polyurethane (PUR) products for building end-use applications. Specification for laminated boards with auto-adhesively bonded facings for use as thermal insulation for internal wall linings and ceilings.
- **What is the R-value of your product?**  
The R-value is a measure of the resistance of a material to heat flow. The R-value depends on the type of insulation and includes its material, thickness, and density. The higher the R-value the greater the insulation.
- **Is your product HCFC and HFC free?**  
HCFC and HFCs are ozone-depleting substances.
- **Is your product a non-ozone depleting (ODP) material?**
- **Is your product made from renewable or recycled materials?**  
Renewable and recycled materials such as cork, recycled cellulose, flax or sheep's wool, foams blown using pentane or CO<sub>2</sub> and low density mineral wool or glass wool all have higher environmental ratings than mineral wool and expanded polystyrene, but have similar insulation properties. Lower density glass and mineral wools should be used in preference to denser ones where possible, as their environmental impact increases proportionally with their weight.

#### Questions to ask suppliers

- **Is your product certified by British Board of Agrément (BBA) or BRE Certification or does it meet the appropriate BSI British Standards?**  
Applicable BSI British Standards include: BS 4841-2:2006 Rigid polyisocyanurate (PIR) and polyurethane (PUR) products for building end-use applications. Specification for laminated boards with auto-adhesively bonded facings for use as thermal insulation for internal wall linings and ceilings.
- **What is the R-value of your product?**  
The R-value is a measure of the resistance of a material to heat flow. The R-value depends on the type of insulation and includes its material, thickness, and density. The higher the R-value the greater the insulation.
- **Is your product HCFC and HFC free?**  
HCFC and HFCs are ozone-depleting substances.
- **Is your product a non-ozone depleting (ODP) material?**
- **Is your product made from renewable or recycled materials?**  
Renewable and recycled materials such as cork, recycled cellulose, flax or sheep's wool, foams blown using pentane or CO<sub>2</sub> and low density mineral wool or glass wool all have higher environmental ratings than mineral wool and expanded polystyrene, but have similar insulation properties. Lower density glass and mineral wools should be used in preference to denser ones where possible, as their environmental impact increases proportionally with their weight.
- **Is your product Energy Saving Recommended (ESR)?**  
ESR products carry the ESR logo, which is a guarantee that the product is the most energy efficient in its category. Only the top 20% of products on the market can carry the symbol. The scheme is run by the Energy Saving Trust- visit their website to search for ESR products and retailers:  
[www.energysavingtrust.org.uk/energy\\_saving\\_products/about\\_energy\\_saving\\_recommended\\_products](http://www.energysavingtrust.org.uk/energy_saving_products/about_energy_saving_recommended_products)

## 4) External Wall insulation

### Questions to ask installers

- **Will you comply with all relevant BSI British Standard Code of Practices when assessing whether the wall is suitable for internal insulation and installing the insulation?**

Applicable BSI British Standards include: BS 5628-3:2005 Code of practice for the use of masonry. Materials and components, design and workmanship; BS 8211-1:1988 Energy efficiency in housing. Code of practice for energy efficient refurbishment of housing; BS 8212:1995 Code of practice for dry lining and partitioning using gypsum plasterboard; BS 7671:2008 Requirements for electrical installations. IEE Wiring Regulations. Seventeenth edition. BS EN 13165 Thermal insulation products for buildings: Factory made rigid polyurethane foam (PUR): Specification

- ESR products carry the ESR logo, which is a guarantee that the product is the most energy efficient in its category. Only the top 20% of products on the market can carry the symbol. The scheme is run by the Energy Saving Trust- visit their website to search for ESR products and retailers:

[www.energysavingtrust.org.uk/energy\\_saving\\_products/about\\_energy\\_saving\\_recommended\\_products](http://www.energysavingtrust.org.uk/energy_saving_products/about_energy_saving_recommended_products)

### Questions to ask installers

- **Will you comply with all relevant BSI British Standard Code of Practices when assessing whether the wall is suitable for internal insulation and installing the insulation?**

Applicable BSI British Standards include: BS 5628-3:2005 Code of practice for the use of masonry. Materials and components, design and workmanship; BS 8211-1:1988 Energy efficiency in housing. Code of practice for energy efficient refurbishment of housing; BS 8212:1995 Code of practice for dry lining and partitioning using gypsum plasterboard; BS 7671:2008 Requirements for electrical installations. IEE Wiring Regulations. Seventeenth edition. BS EN 13165 Thermal insulation products for buildings: Factory made rigid polyurethane foam (PUR): Specification

## 5) Insulating render:

### Questions to ask suppliers

- **Is your product certified by the British Board of Agrément (BBA) or BRE Certification?**
- **Does your product meet the requirements of BSI British Standard BS EN 13914-1:2005 Design, preparation and application of external rendering and internal plastering. External rendering?**
- **Is your product registered by the Insulated Render and Cladding Association (INCA)?** INCA represents system designers, specialist installers and key component suppliers to the external wall insulation industry. All system designers offer BBA or BRE tested systems, proven in UK climatic conditions. Visit INCA's website to find an INCA registered system: [www.inca-ltd.org.uk/register-systems.htm](http://www.inca-ltd.org.uk/register-systems.htm)
- The R-value is a measure of the resistance of a material to heat flow. The R-value depends on the type of insulation and includes its material, thickness, and density. The higher the R-value the greater the insulation.
- **Is your product made from renewable or recycled materials?** Using products made from recycled materials can help divert waste from landfill and conserve resources. Using products made from renewable materials can also help conserve finite resources.
- **Do they operate within an Environmental Management System such as ISO14001;** and do they have an understanding of the environmental impact of the products they supply? Ideally, products should be used that offer the best energy savings with the lowest environmental impact.

### Questions to ask installers

- **Will you adhere to the requirements of BSI British Standard BS EN 13914-1:2005 Design, preparation and application of external rendering and internal plastering. External rendering or are you registered with the Insulated Render and Cladding Association (INCA)?** INCA vetted installers have at least two years' experience in applying insulated render and cladding systems (except Provisional and Small Works members). Visit INCA's website to find an INCA registered installer: [www.inca-ltd.org.uk/register-members.htm](http://www.inca-ltd.org.uk/register-members.htm)

## 6) Flexible Insulated Lining

### Questions to ask suppliers

- Is your product Energy Saving Recommended (ESR)?  
ESR products carry the ESR logo, which is a guarantee that the product is the most energy efficient in its category. Only the top 20% of products on the market can carry the symbol. The scheme is run by the Energy Saving Trust- visit their website to search for ESR products and retailers:  
[www.energysavingtrust.org.uk/energy\\_saving\\_products/about\\_energy\\_saving\\_recommended\\_products](http://www.energysavingtrust.org.uk/energy_saving_products/about_energy_saving_recommended_products)
- What is the R-value of your product?  
The R-value is a measure of the resistance of a material to heat flow. The R-value depends on the type of insulation and includes its material, thickness, and density. The higher the R-value the greater the insulation.

### Questions to ask installers

There are no specific questions to ask installers but you are advised to source a tradesperson using the TrustMark Scheme, a government supported scheme to help you find a trustworthy tradesperson.  
[www.trustmark.org.uk](http://www.trustmark.org.uk)

## II) Glazing, Draught Proofing and Lighting:

### 1) Double glazed replacement Windows:

#### Questions to ask suppliers

- What is the Window Energy rating of the replacement window? If they have not had their product approved they will need to supply details of the U-value of the window or the centre pane value. The minimum U-value for replacement windows in an existing home is 2.0W/m<sup>2</sup>/K or window energy rating = Band E or centre-pane U-value = 1.2 0W/m<sup>2</sup>/K)
- Does the window have a low-emissivity (low-e) coating?  
The lower the emissivity, the less heat that is lost through the window and the better the insulation.
- Is the window argon-filled?  
Argon is an inert, non-toxic gas used in insulating glass units to reduce heat transfer.
- Is your product Energy Saving Recommended (ESR)?  
ESR products carry the ESR logo, which is a guarantee that the product is the most energy efficient in its category. Only the top 20% of products on the market can carry the symbol, and require the window to have a window energy rating Band C or greater. The scheme is run by the Energy Saving Trust- visit their website to search for ESR products and retailers:  
[www.energysavingtrust.org.uk/energy\\_saving\\_products/about\\_energy\\_saving\\_recommended\\_products](http://www.energysavingtrust.org.uk/energy_saving_products/about_energy_saving_recommended_products)
- For wooden frames, does the wood come from a Forest Stewardship Council (FSC) certified source, or equivalent?  
Forest Stewardship Council certification aims to improve the practice of forestry. The Timber Window Accreditation (TWA) Scheme and the Wood Window Alliance require manufacturing members to use only timber from independently certified sustainably managed sources.
- Are you a member of the Glass and Glazing Federation (GGF), British Woodworking Federation (BWF), British Plastics Federation (BPF), Council for Aluminium in Building (CAB), Steel Window Association, or Network VEKA?  
Ask for details on these organisational schemes to ensure quality of service. For example, all GGF members work to A Code of Good Practice and to the Technical Standards laid out in the GGF's Glazing Manual. See 'Further info - links' for contact details.
- Does your product comply with the BSI British Standard series BS EN 1279 Glass in building. Insulating glass units; plus BS7412 for PVC-U frame, BS 644 for timber frame, BS 4873 for aluminium frame, or BS 6510 for steel frame?

#### Questions to ask installers

- Are you registered with BSI or CERTASS or FENSA (Applicable in England & Wales)?  
If so, the installer will be able to self-certify that their work meets the Building Regulations and therefore you will not need to give notice to your Local Authority of the intention to carry out the work or pay the notification fee.
- Are you a member of the Glass and Glazing Federation (GGF), British Woodworking Federation (BWF), British Plastics Federation (BPF), Council for Aluminium in Building (CAB), Steel Window Association, or Network VEKA?  
Ask for details on these organisational schemes to ensure quality of service. For example, all GGF members work to A Code of Good Practice and to the Technical Standards laid out in the GGF's Glazing Manual. See 'Further info - links' for contact details.
- Will you comply with the relevant BSI British Standard series BS 6262 Glazing for Buildings?

## **2) Draught proofing:**

### **Questions to ask suppliers**

- Is your product certified by BSI British Standards (BS 7386:1997 Specification for draughtstrips for the draught control of existing doors and windows in housing (including test methods))?

### **Questions to ask installers**

- Will you follow the appropriate BSI British Standard Code of Practice (BS 7880:1997 Code of practice for draught control of existing doors and windows in housing using draughtstrips)?

## **3) Compact Fluorescent light:**

### **Questions to ask suppliers**

- Is your product Energy Saving Recommended (ESR)?  
ESR products carry the ESR logo, which is a guarantee that the product is the most energy efficient in its category. Only the top 20% of products on the market can carry the symbol:  
[www.energysavingtrust.org.uk/energy\\_saving\\_products/about\\_energy\\_saving\\_recommended\\_products](http://www.energysavingtrust.org.uk/energy_saving_products/about_energy_saving_recommended_products)

### **Questions to ask installers**

Installing CFLs is an easy DIY job

### III) Heating System:

#### 1) Gas combi-condensing Boiler

##### Questions to ask suppliers

- What is the efficiency of the boiler?  
The minimum efficiency for new gas boilers is 86%.
- What is the SEDBUK rating of the boiler?  
The SEDBUK rating should be A or B. A boiler with a C or D SEDBUK rating can only be installed if an assessment carried out by a Gas Safe registered installer shows that it is not viable to install an A or B rated boiler and as long as the C or D rated boiler meets the minimum efficiency of 86%. To check the SEDBUK rating of a boiler visit the SEDBUK database: [www.sedbuk.com/](http://www.sedbuk.com/)
- Does the boiler meet the requirements of BSI British Standards BS EN 677:1998 Gas-fired central heating boilers: Specific requirements for condensing boilers with a nominal heat input not exceeding 70 kW and BS EN 625:1996 Gas-fired central heating boilers: Specific requirements for the domestic hot water operation of combination boilers of nominal heat input not exceeding 70 kW?
- What heating controls does the boiler come with? Can I use my existing heating controls with the boiler?  
Ideally you want a time programmer and a room thermostat (or a combined programmable room thermostat), a cylinder thermostat and thermostatic radiator valves (TRVs) if you have radiators.
- Does the boiler have a load compensator or a weather compensator?  
A load compensator adjusts the temperature of your heating system according to the temperature inside your home. A weather compensator adjusts the temperature of your heating system according to the temperature outside your home.
- Does the boiler have an auto-ignition?
- Is the boiler Energy Saving Recommended (ESR)?  
ESR products carry the ESR logo, which is a guarantee that the product is the most energy efficient in its category. Only the top 20% of products on the market can carry the symbol. The scheme is run by the Energy Saving Trust- visit their website to search for ESR products and retailers:  
[www.energysavingtrust.org.uk/energy\\_saving\\_products/about\\_energy\\_saving\\_recommended\\_products](http://www.energysavingtrust.org.uk/energy_saving_products/about_energy_saving_recommended_products)

##### Questions to ask installers

- Are you Gas Safe registered?  
If so, the installer will be able to self-certify that their work meets the Building Regulations and therefore you will not need to give notice to your Local Authority of the intention to carry out the work or pay the notification fee.

## 2) Oil combi condensing boiler:

### Questions to ask suppliers

- What is the efficiency of the boiler?  
The minimum efficiency for new oil boilers is 85%.
- What is the SEDBUK rating of the boiler?  
The SEDBUK rating should be A or B. A boiler with a C or D SEDBUK rating can only be installed if an assessment carried out by a registered installer (see list above) shows that it is not viable to install an A or B rated boiler and as long as the C or D rated boiler meets the minimum efficiency of 85%. To check the SEDBUK rating of a boiler visit the SEDBUK database: [www.sedbuk.com/](http://www.sedbuk.com/)
- Does the boiler meet the BSI British Standard BS EN 15034:2006 Heating boilers. Condensing heating boilers for fuel oil?
- What heating controls does the boiler come with? Can I use my existing heating controls with the boiler?  
Ideally you want a time programmer and a room thermostat (or a combined programmable room thermostat), a cylinder thermostat and thermostatic radiator valves (TRVs) if you have radiators.
- Does the boiler have interlock?  
Boiler interlock allows the boiler control system to switch the boiler off when there is no demand for heat.
- Does the boiler have a load compensator or a weather compensator?  
A load compensator adjusts the temperature of your heating system according to the temperature inside your home. A weather compensator adjusts the temperature of your heating system according to the temperature outside your home.
- Is the boiler Energy Saving Recommended (ESR)?  
ESR products carry the ESR logo, which is a guarantee that the product is the most energy efficient in its category. Only the top 20% of products on the market can carry the symbol. The scheme is run by the Energy Saving Trust- visit their website to search for ESR products and retailers:  
[www.energysavingtrust.org.uk/energy\\_saving\\_products/about\\_energy\\_saving\\_recommended\\_products](http://www.energysavingtrust.org.uk/energy_saving_products/about_energy_saving_recommended_products)

### Questions to ask installers

- Are you APHC or BESCA or NAPIT or NICEIC or OFTEC registered?  
If so, the installer will be able to self-certify that their work meets the Building Regulations and therefore you will not need to give notice to your Local Authority of the intention to carry out the work or pay the notification fee.
- Will you install the boiler in accordance with the BSI British Standard BS 5410-1:1997 Code of practice for oil firing. Installations up to 45 kW output capacity for space heating and hot water supply purposes?

### 3) Biomass boiler:

#### Questions to ask suppliers

- What heating controls does the boiler come with? Can I use my existing heating controls with the boiler?  
Ideally you want a time programmer and a room thermostat (or a combined programmable room thermostat), a cylinder thermostat and thermostatic radiator valves (TRVs) if you have radiators.
- Does the boiler have interlock?  
Boiler interlock allows the boiler control system to switch the boiler off when there is no demand for heat.
- Does the boiler have an automatic feed mechanism?
- Is the boiler approved to burn wood products in smoke control areas?  
This is only applicable if you live in a smoke control area- to see if you do, look here: [www.uksmokecontrolareas.co.uk/locations.php](http://www.uksmokecontrolareas.co.uk/locations.php)
- Is the boiler certified under the Microgeneration Certification Scheme (MCS)?  
The MCS underpins the Low Carbon Buildings Programme, which provides grants for installing renewable energy technologies. MCS is designed to evaluate products and installers against robust criteria for microgeneration technologies. Visit this website to find an MCS approved product: [www.greenbooklive.com/page.jsp?id=131](http://www.greenbooklive.com/page.jsp?id=131)
- Is the boiler HETAS approved?  
HETAS is the official body recognised by government to approve solid fuel domestic heating appliances, fuels and services.
- Does the boiler meet the requirements of BSI British Standard BS EN 15270:2007 Pellet burners for small heating boilers. Definitions, requirements, testing, marking?

#### Questions to ask installers

- Are you APHC or BESCA or HETAS or NAPIT or NICEIC registered?  
If so, the installer will be able to self-certify that their work meets the Building Regulations and therefore you will not need to give notice to your Local Authority of the intention to carry out the work or pay the notification fee.
- Are you certified under the Microgeneration Certification Scheme (MCS)?  
The MCS underpins the Low Carbon Buildings Programme, which provides grants for installing renewable energy technologies. MCS is designed to evaluate products and installers against robust criteria for microgeneration technologies. Visit either of these websites to find an MCS approved installer: [www.greenbooklive.com/page.jsp?id=130](http://www.greenbooklive.com/page.jsp?id=130) or [www.lowcarbonbuildings.org.uk/info/installers/find/installerfind](http://www.lowcarbonbuildings.org.uk/info/installers/find/installerfind)
- Will you install the boiler in accordance with BSI British Standards BS 8303-1, 2 & 3:1994 Installation of domestic heating and cooking appliances burning solid mineral fuels and BS 6461-1:1984 Installation of chimneys and flues for domestic appliances burning solid fuel (including wood and peat). Code of practice for masonry chimneys and flue pipes?

## 4) Air source heat pump

### Questions to ask suppliers

- What is the coefficient of performance (COP) of the heat pump? The higher the COP the more efficient the heat pump. The COP for air source heat pumps range up to 3.5, but is finally dependant on the heating distribution. If comparing one unit to another, care must be taken that the COPs are quoted at the same ambient inlet temperature..
- What heating controls does the heat pump come with? Can I use my existing heating controls with the heat pump? Ideally you want a time programmer and a room thermostat (or a combined programmable room thermostat), a cylinder thermostat and thermostatic radiator valves (TRVs) if you have radiators or zone control for underfloor circuits.
- Does the heat pump have a load compensator or a weather compensator? A load compensator adjusts the temperature of your heating system according to the temperature inside your home. A weather compensator adjusts the temperature of your heating system according to the temperature outside your home.
- Is the heat pump an air-to-water system or an air-to-air system? Air-to-water systems heat water, which can be circulated through underfloor heating or radiators and used as hot water. Air-to-air systems produce warm air, which is circulated by fans to heat a building.
- Can the heat pump also provide water heating? This only applies to air-to-water systems. Generally all heat pumps can produce domestic hot water heating, however how well they can do this depends on a number of factors..
- Does the heat pump have an auxiliary heater? An auxiliary heater will result in higher energy costs and higher CO2 emissions.
- Does the heat pump meet the BSI British Standards BS EN 14511- 2, 3 & 4:2007 Air Conditioners, liquid chilling packages and heat pumps with electrically driven compressors for space heating and cooling; BS EN 15450:2007 Heating systems in buildings. Design of heat pump heating systems; BS EN 60335-2-40:2003 Household and similar electrical appliances. Safety. Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers?

### Questions to ask installers

- Are you certified under the Microgeneration Certification Scheme (MCS)? The MCS underpins the Low Carbon Buildings Programme, which provides grants for installing renewable energy technologies. MCS is designed to evaluate products and installers against robust criteria for microgeneration technologies. Visit either of these websites to find an MCS approved installer: [www.greenbooklive.com/page.jsp?id=130](http://www.greenbooklive.com/page.jsp?id=130) or [www.lowcarbonbuildings.org.uk/info/installers/find/installerfind](http://www.lowcarbonbuildings.org.uk/info/installers/find/installerfind)
- What experience do you have and can I talk to one of your customers?
- Does your heat pump provide 100% of the space heating load?
- Does your heat pump contain an auxiliary heater and how often does this cut in?
- What is your technical back up?

## 5) Ground source heat pump:

### Questions to ask suppliers

- What is the coefficient of performance (COP) of the heat pump? The higher the COP the more efficient the heat pump. The COP for ground source heat pumps range from 3-4, but is finally dependant on the heating distribution system.
- What heating controls does the heat pump come with? Can I use my existing heating controls with the heat pump? Ideally you want a time programmer and a room thermostat (or a combined programmable room thermostat), a cylinder thermostat and thermostatic radiator valves (TRVs) if you have radiators or zone control for underfloor circuits.
- Does the heat pump have a load compensator or a weather compensator? A load compensator adjusts the temperature of your heating system according to the temperature inside your home. A weather compensator adjusts the temperature of your heating system according to the temperature outside your home. (Depending on how the heat pumps are operated will determine whether these features are enabled and required)
- Can the heat pump also provide water heating? Generally all heat pumps can produce domestic hot water heating however how well they can do this depends on a number of factors..
- Does the heat pump have an auxiliary heater? An auxiliary heater will result in higher energy costs and higher CO2 emissions.
- Is your product certified under the Microgeneration Certification Scheme (MCS) The MCS underpins the Low Carbon Buildings Programme, which provides grants for installing renewable energy technologies. MCS is designed to evaluate products and installers against robust criteria for microgeneration technologies. Visit this website to find an MCS approved product: [www.greenbooklive.com/page.jsp?id=131](http://www.greenbooklive.com/page.jsp?id=131)
- Does the heat pump meet the BSI British Standards BS EN 14511- 2, 3 & 4:2007 Air conditioners, liquid chilling packages and heat pumps with electrically driven compressors for space heating and cooling; BS EN 15450:2007 Heating systems in buildings. Design of heat pump heating systems; BS EN 60335-2-40:2003 Household and similar electrical appliances. Safety. Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers?

### Questions to ask installers

- Are you certified under the Microgeneration Certification Scheme (MCS)? The MCS underpins the Low Carbon Buildings Programme, which provides grants for installing renewable energy technologies. MCS is designed to evaluate products and installers against robust criteria for microgeneration technologies. Visit either of these websites to find an MCS approved installer: [www.greenbooklive.com/page.jsp?id=130](http://www.greenbooklive.com/page.jsp?id=130) or [www.lowcarbonbuildings.org.uk/info/installers/find/installerfind](http://www.lowcarbonbuildings.org.uk/info/installers/find/installerfind)
- What experience do you have and can I talk to one of your customers?
- Does your heat pump provide 100% of the space heating load?
- Does your heat pump contain an auxiliary heater and how often does this cut in?
- What is your technical back up?

## 6) Gas condensing boiler:

### Questions to ask suppliers

- What is the efficiency of the boiler?  
The minimum efficiency for new gas boilers is 86%.
- What is the SEDBUK rating of the boiler?  
The SEDBUK rating should be A or B. A boiler with a C or D SEDBUK rating can only be installed if an assessment carried out by a Gas Safe registered installer shows that it is not viable to install an A or B rated boiler and as long as the C or D rated boiler meets the minimum efficiency of 86%. To check the SEDBUK rating of a boiler visit the SEDBUK database: [www.sedbuk.com/](http://www.sedbuk.com/)
- Does the boiler meet the requirements of BSI British Standards BS EN 677:1998 Gas-fired central heating boilers: Specific requirements for condensing boilers with a nominal heat input not exceeding 70 kW?
- What heating controls does the boiler come with? Can I use my existing heating controls with the boiler?  
Ideally you want a time programmer and a room thermostat (or a combined programmable room thermostat), a cylinder thermostat and thermostatic radiator valves (TRVs) if you have radiators.
- Does the boiler have a load compensator or a weather compensator?  
A load compensator adjusts the temperature of your heating system according to the temperature inside your home. A weather compensator adjusts the temperature of your heating system according to the temperature outside your home.
- Does the boiler have an auto-ignition?
- Is the boiler Energy Saving Recommended (ESR)?  
ESR products carry the ESR logo, which is a guarantee that the product is the most energy efficient in its category. Only the top 20% of products on the market can carry the symbol. The scheme is run by the Energy Saving Trust- visit their website to search for ESR products and retailers:  
[www.energysavingtrust.org.uk/energy\\_saving\\_products/about\\_energy\\_saving\\_recommended\\_products](http://www.energysavingtrust.org.uk/energy_saving_products/about_energy_saving_recommended_products)

### Questions to ask installers

- Are you Gas Safe registered?  
If so, the installer will be able to self-certify that their work meets the Building Regulations and therefore you will not need to give notice to your Local Authority of the intention to carry out the work or pay the notification fee.

## 7) Oil condensing boiler:

### Questions to ask suppliers

- What is the efficiency of the boiler?  
The minimum efficiency for new gas boilers is 86%.
- What is the SEDBUK rating of the boiler?  
The SEDBUK rating should be A or B. A boiler with a C or D SEDBUK rating can only be installed if an assessment carried out by a Gas Safe registered installer shows that it is not viable to install an A or B rated boiler and as long as the C or D rated boiler meets the minimum efficiency of 86%. To check the SEDBUK rating of a boiler visit the SEDBUK database: [www.sedbuk.com/](http://www.sedbuk.com/)
- Does the boiler meet the requirements of BSI British Standards BS EN 677:1998 Gas-fired central heating boilers: Specific requirements for condensing boilers with a nominal heat input not exceeding 70 kW?
- What heating controls does the boiler come with? Can I use my existing heating controls with the boiler?  
Ideally you want a time programmer and a room thermostat (or a combined programmable room thermostat), a cylinder thermostat and thermostatic radiator valves (TRVs) if you have radiators.
- Does the boiler have a load compensator or a weather compensator?  
A load compensator adjusts the temperature of your heating system according to the temperature inside your home. A weather compensator adjusts the temperature of your heating system according to the temperature outside your home.
- Does the boiler have an auto-ignition?
- Is the boiler Energy Saving Recommended (ESR)?  
ESR products carry the ESR logo, which is a guarantee that the product is the most energy efficient in its category. Only the top 20% of products on the market can carry the symbol. The scheme is run by the Energy Saving Trust- visit their website to search for ESR products and retailers:  
[www.energysavingtrust.org.uk/energy\\_saving\\_products/about\\_energy\\_saving\\_recommended\\_products](http://www.energysavingtrust.org.uk/energy_saving_products/about_energy_saving_recommended_products)

### Questions to ask installers

- Are you Gas Safe registered?  
If so, the installer will be able to self-certify that their work meets the Building Regulations and therefore you will not need to give notice to your Local Authority of the intention to carry out the work or pay the notification fee.

## 8) Log Burning Stove:

### Questions to ask suppliers

- Is the appliance approved by HETAS?  
HETAS is the official body recognised by government to approve solid fuel domestic heating appliances, fuels and services. A list of HETAS approved appliances can be found at [http://www.hetas.co.uk/public/hetas\\_guide.html](http://www.hetas.co.uk/public/hetas_guide.html)
- Does the appliance comply with the relevant BSi British Standards?  
For room heaters BS EN 13240; or when wood pellets fired to BS EN 14785.
- Ask your supplier of fuel if the wood is sourced from a sustainable source. A list of local wood fuel suppliers can be found on The Log Pile (a National Energy Foundation project) website <http://www.nef.org.uk/logpile/fuelsuppliers/index.htm>. Alternatively you can source wood from a local tree surgeon.

### Questions to ask installers

- Are you a HETAS approved installer? HETAS is the official body recognised by government to approve solid fuel domestic heating appliances, fuels and services. <http://www.hetas.co.uk/>

## IV) Renewable systems:

### 1) Solar photovoltaics:

#### Questions to ask suppliers

- Is the appliance approved by HETAS?  
HETAS is the official body recognised by government to approve solid fuel domestic heating appliances, fuels and services. A list of HETAS approved appliances can be found at [http://www.hetas.co.uk/public/hetas\\_guide.html](http://www.hetas.co.uk/public/hetas_guide.html)
- Does the appliance comply with the relevant BSi British Standards?  
For room heaters BS EN 13240; or when wood pellets fired to BS EN 14785.
- Ask your supplier of fuel if the wood is sourced from a sustainable source. A list of local wood fuel suppliers can be found on The Log Pile (a National Energy Foundation project) website <http://www.nef.org.uk/logpile/fuelsuppliers/index.htm>. Alternatively you can source wood from a local tree surgeon.

#### Questions to ask installers

- Are you a HETAS approved installer? HETAS is the official body recognised by government to approve solid fuel domestic heating appliances, fuels and services. <http://www.hetas.co.uk/>

## 2) Solar thermal:

### Questions to ask suppliers

- Is your product certified under the Microgeneration Certification Scheme (MCS)? The MCS underpins the Low Carbon Buildings Programme, which provides grants for installing renewable energy technologies. MCS is designed to evaluate products and installers against robust criteria for microgeneration technologies. Visit this website to find an MCS approved product: [www.greenbooklive.com/page.jsp?id=131](http://www.greenbooklive.com/page.jsp?id=131)
- Is your product a flat-plate system or an evacuated tube system? Evacuated tube systems are more efficient but also more expensive.
- Does your product comply with the relevant BSI British Standards? Relevant BSI British Standards may include (depending on whether your enquiry regards solar collectors only, factory made systems or custom made systems): BS EN 12975-1:2006 Thermal solar systems and components. Solar collectors. General requirements; BS EN 12975-2:2006 Thermal solar systems and components. Solar collectors. Test methods; BS EN 12976-1:2006 Thermal solar systems and components. Factory made systems. General requirements; BS EN 12976-2:2006 Thermal solar systems components. Factory made systems. Test methods; DD ENV 12977-1:2001 Thermal solar systems and components. Custom built systems. General requirements; DD ENV 12977-2:2001 Thermal solar systems and components. Custom built systems. Test methods.

### Questions to ask installers

- Are you certified under the Microgeneration Certification Scheme (MCS)? The MCS underpins the Low Carbon Buildings Programme, which provides grants for installing renewable energy technologies. MCS is designed to evaluate products and installers against robust criteria for microgeneration technologies. Visit either of these websites to find an MCS approved installer: [www.greenbooklive.com/page.jsp?id=130](http://www.greenbooklive.com/page.jsp?id=130) or [www.lowcarbonbuildings.org.uk/info/installers/find/installerfind](http://www.lowcarbonbuildings.org.uk/info/installers/find/installerfind)
- Will you install the system in accordance with the BSI British Standard BS 5918:1989 Code of practice for solar heating systems for domestic hot water?

### 3) Micro wind-turbines:

#### Questions to ask suppliers

- Is your product certified under the Microgeneration Certification Scheme (MCS)?  
The MCS underpins the Low Carbon Buildings Programme, which provides grants for installing renewable energy technologies. MCS is designed to evaluate products and installers against robust criteria for microgeneration technologies. Visit this website to find an MCS approved product: [www.greenbooklive.com/page.jsp?id=131](http://www.greenbooklive.com/page.jsp?id=131)
- Does your product work by charging batteries or does it deliver grid-connected mains voltage power via an inverter?
- Does your product meet the British Wind Energy Association Small Wind Turbine Performance and Safety Standard (29 Feb 2008)? Find information at: <http://www.bwea.com/small/standard.html>

#### Questions to ask installers

- Are you certified under the Microgeneration Certification Scheme (MCS)?  
The MCS underpins the Low Carbon Buildings Programme, which provides grants for installing renewable energy technologies. MCS is designed to evaluate products and installers against robust criteria for microgeneration technologies. Visit either of these websites to find an MCS approved installer: [www.greenbooklive.com/page.jsp?id=130](http://www.greenbooklive.com/page.jsp?id=130) or [www.lowcarbonbuildings.org.uk/info/installers/find/installerfind](http://www.lowcarbonbuildings.org.uk/info/installers/find/installerfind)