

Condition 3

Prior to the commencement of work of the site the details of energy efficiency measures shall be submitted and agreed with the local planning authority. Reason for the condition: To secure the energy efficiency measures in accordance with the requirements of policy 3 of the adopted Joint Core Strategy.

In terms of Condition 3 of the planning approval notice the details of the energy efficiency measures are

Sustainability Measures proposed no 1 PV panel

Energy efficiency measure to be introduced.... The introduction of PV panels to the property

- i) The applicant is looking to install a 13 array PV installation as part of a sustainable approach to managing the household based on the premise that (see attached details)
- ii) Solar Photovoltaic Energy are 100% renewable! During production of electricity, it does not release dangerous pollution and also does not emit greenhouse gases when used.
- iii) Solar Photovoltaic Energy offer sustainable electricity generation, as it relies on a natural resource (sunlight), and their operations don't create any noise or pollution ... The installer's predictions is that the system will generate 3984KW
- iv) The negative impact of solar power is down to the impact of their manufacture and transport. Large amounts of energy and water are needed to manufacture solar cells and the chemicals used can cause pollution... but it is generally accepted that this is offset by the benefits .Most modern solar panels are expected to last about 40 - 50 years ahead of recycling which aids in making them more sustainable.
- v) The PV system will export some electricity back to the grid providing a green renewable source of fuel

Sustainability Measures proposed no 2 Improvements to the built fabric

- i) A buildings ability to resist the passage of heat and energy through the fabric of the envelope is calculated and measured in u-values
- ii) The U value of an element (in $W/(m^2K)$) is calculated from sum of the thermal resistances of the layers that make up the element plus its inside and outside surface thermal resistances (R_i and R_o).
- iii) in this proposal in terms of the average fabric u-value for the whole building we are looking to take the current average u-value for all the fabric elements the floor, walls ,roof etc. currently from the current average fabric u value of 0.724 to 0.681 in line with current Building Control compliance ... The applicants proposal is to improve on this with some fabric elements having better u-values than required by current Building Regulations (gable wall insulation / new roof insulation) so as being able to reduce the fabric average further to bring that average u value down to 0.678.. (see calculation attached)