

Adams Planning &
Project Services Ltd

Renewable Energy Statement

For

**Proposed new dwelling on land at rear of Poachers,
Eastergate Lane, Chichester, West Sussex. PO20 3SJ**

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Prepared for Mr T Occleshaw

1. Introduction

This Statement has been prepared in response to conditions attached to the recently granted Planning Approval BN/46/20/PL by Arun District Council.

This statement deals specifically with Condition 5 which reads as follows:-

5) The development hereby permitted shall not be occupied until a schedule of works for the generation of renewable energy on site with the capacity to achieve energy neutrality for the dwelling has been submitted to and approved in writing by the local planning authority. The works, once approved, shall be installed prior to first occupation of the dwelling.

2. Planning Statement

As detailed in the original planning application, sustainable and environmental concern was a key design driver in the design of this development.

It was stated that the proposed new dwelling will exceed current building regulation energy performance requirements (in line with Local Policy requirements) and be sustainable and environmentally friendly by proposing the following:

1. An Air Source Heat Pump will be installed to provide heating and hot water for the new dwelling. This will remove the properties reliance of fossil fuels.
2. A photovoltaic array will be installed on the south facing elevation. Each of the 13 panels will provide 400w of power so the total array will generate 5.2Kw of electricity for the new house. Furthermore, a domestic energy store will be installed to capture excess energy created. A charging point for electric cars will also be provided in the carport.
3. As many large window/door sets have been provided in the south elevation to maximise solar gain.
4. The internal layouts have been designed to consider orientation with the main living spaces enjoying south- facing aspects.

5. High quality windows and doors will help to reduce heating and energy consumption and prevent the release of considerable emissions of CO₂.
6. The house is provided with large areas of opening windows and doors to allow good natural ventilation.
7. The proposed construction of the dwelling will be timber frame and will be highly insulated to provide minimal heat loss through the external envelope.
8. The large areas of glazing prevent the need for artificial lighting during the daytime.
9. Solid construction to ground floors will provide a good level of thermal mass to the building, absorbing heat during the day and releasing latent heat during the night.
10. The overall design and construction will incorporate performance and disabled needs, as per the current building regulations.

3. Renewable Energies

As detailed in within the recently published Arun Design Guide SPD, it is proposed that this development will be an example of an energy efficient, “Electric House”. It will achieve this as follows:-

- There will be no fossil fuel usage,
- There will be on-site generation & storage of energy,
- The propose property will include very high levels of insulation & airtightness.
- The orientation of the dwelling will to maximise solar gain,
- Highly energy effective services including MVHR & ASHP,

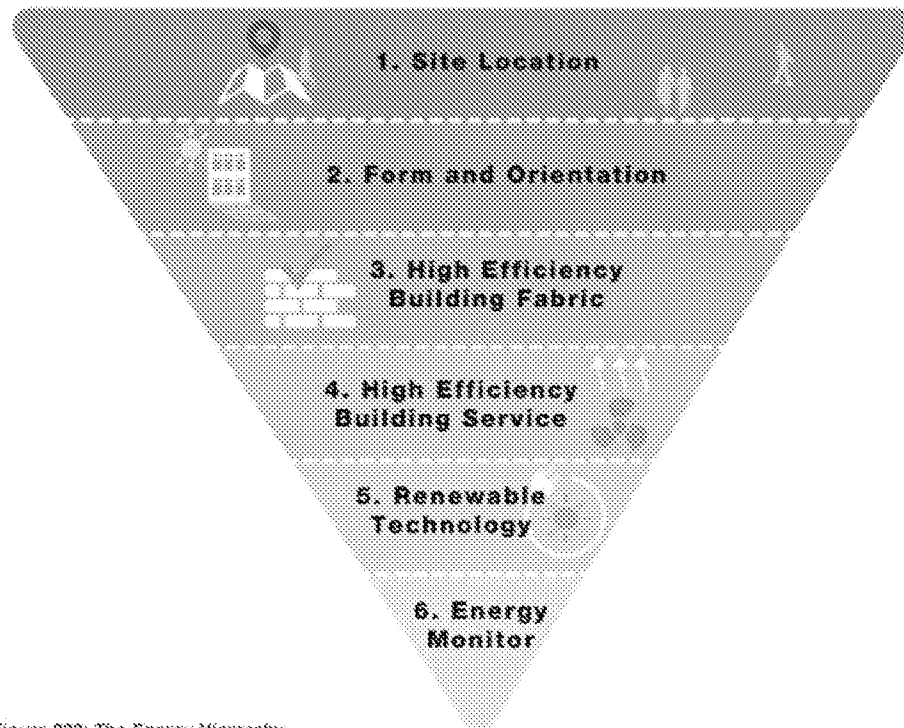


Figure 233: The Energy Hierarchy

The property is oriented directly to the South with large expanses of glass for solar gain. Shading will be incorporated into the design to avoid overheating.

The construction makes best use of highly insulated materials for all walls & roof (u-values of 0.12 - 0.13), triple glazing to all glazed doors and windows.

The construction will be highly airtight.

Air Source Heat Pumps are used as the primary source of heating, with MVHR to minimise the energy expenditure associated with traditional ventilation.

PV for electrical generation on site - approx 5KWp this is estimated to generate in excess of 80% of the needs of the average 4-bedroom property, that is without accounting for the levels of insulation or use of ASHPs and MVHR in this design.

Domestic battery storage to optimise the usage of the energy generated - store for use in property & for car charging, rather than sale to grid. The overall system comes with sophisticated monitoring on collection, usage and storage - we will plan for the possible addition of a second domestic battery to support the fine tuning of the energy efficiency of the dwelling.

The property will be designed to achieve an EPC rating of A.

Finally, the application should be considered for the overall site, with the dwelling plus grounds being carbon negative. The applicants have already been planting to increase the carbon absorption of the site as a further offset to carbon usage from the dwelling.