

Land East of Spitfire Road, Calne

Sustainable Energy Strategy

Proposal:

Residential development for up to 20 dwellings, associated works including infrastructure, ancillary facilities and landscaping. Construction of a new vehicular access off Spitfire Road.

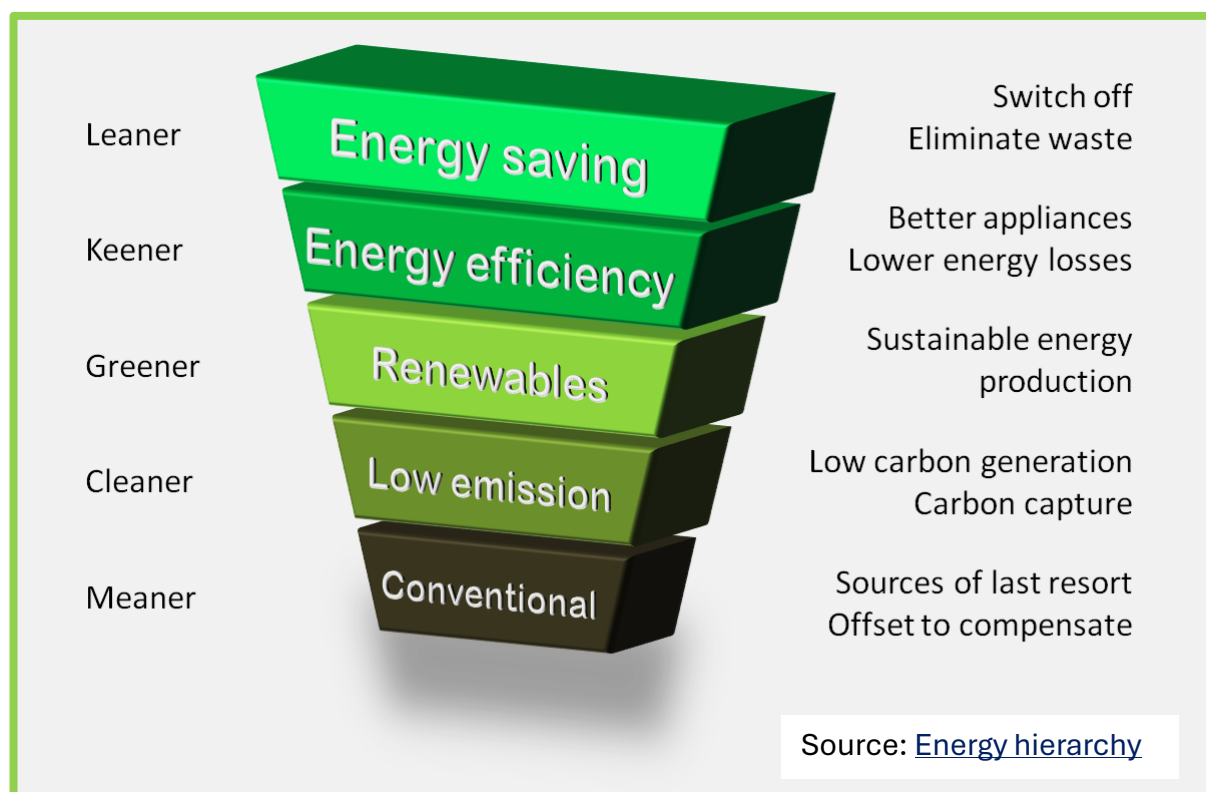
March 2025

1 Introduction

- 1.1 In accordance with Policy 41 of the adopted Wiltshire Core Strategy the following outlines the low-carbon strategy for the proposed development.
- 1.2 As this is an outline application for planning permission with all matters reserved the level of detail available necessitates a high-level approach is taken and further consideration will be given at subsequent stages of the planning process.

2 Energy Hierarchy

- 2.1 The strategy proposed is underpinned by the concept of Energy Hierarchy as illustrated in the diagram below. The most sustainable option at the top with the least at the bottom.



- 2.2 Thus, the strategy will be to prioritise a reduction in the demand for energy as far as possible including through thermally efficient, easily controlled, well designed and orientated buildings.
- 2.3 On the 15th of June 2022 changes to Part L of the Building Regulations came into force and will apply to the proposed development. The most significant change in the Part L Approved Document is the reduction in CO2 emissions required in new homes. Under the new regulations new homes will be required to produce 31% lower CO2 emissions than under the current standards.
- 2.4 The strategy discussed below is therefore to be considered in that context.

3 Sustainable Energy Strategy

Passive Design

- 3.1 The orientation of buildings, extent of overshadowing, together with the size and location of windows has an important role in terms of energy performance. Orientating buildings so main living spaces can benefit from the heat and light from the sun can reduce energy inputs.
- 3.2 This, together with other site specific and urban design considerations, will inform the proposed layout of the development.
- 3.3 The spaces around buildings within the proposed development increases the scope for achieving passive solar gain and ensuring good ventilation.

Fabric First

- 3.4 A 'fabric first' approach will be taken toward the design and detailing of the proposed development to ensure thermal efficiency.
- 3.5 Further energy savings will be achieved by maximising the efficiency of appliances, lighting, fixtures and fittings.

Renewable Energy

- 3.6 Subject to design considerations the installation of solar panels on appropriate facing roof slopes (including in the proposed local centre) for electricity generation and/or to heat domestic hot water systems to reduce the heating load on buildings will be investigated.
- 3.7 Greener technology will be utilised (subject to feasibility studies at the detailed design stage) to ensure that systems such as heating are efficient and 'green'. Ground / air source heat pumps as an alternative or in addition to solar panels can be utilised to heat the new dwellings and provide hot water.

4 Summary and Conclusions

- 4.1 This sustainable energy strategy has been prepared in support of an application for residential development on land East of Spitfire Road, Calne with all matters of detail reserved.
- 4.2 The strategy is founded on the energy hierarchy and considers a range of measures that will be further explored at detailed planning stage.