

## **ENERGY AND SUSTAINABILITY STATEMENT**

As is now universally accepted there is a need for us all to take a responsible attitude towards the environment not just for ourselves but also for future generations.

Mr Alex Farr, the applicant, shares this view and ethos.

Additionally, aware of soaring energy prices, there is a need to ensure that any new dwelling will be as energy efficient as practicable.

Whilst the aim will be to achieve as close to passive as possible, all reasonable means will be taken to exceed the prevailing Building Regulations and this will be covered in detail at the Building Regulation/working drawing stage.

Below is a schedule of relevant proposals:

- The overall construction will be insulated to a U-value level of lower than 0.18 for the external wall and lower than 0.15 for the roof.
- Windows are proposed to be Rationel or similar and fitted with Fineo 6.7 glazing system giving a U-value of c. 0.7.
- Air lightness target is of 0.6 air changes per hour at 50 Pascals pressure to reduce energy loss.
- Heating and ventilation will be provided by an air source heat pump ventilation system (HPV) which will provide heating and cooling and includes an HPV air to water heat pump with a 300 litre hot water storage.
- HPV 1 unit provides a ventilation requirement of 191m<sup>3</sup>/hr together with 3.2kW of heating and 2.2kW of cooling.
- The system will employ Mechanical Ventilation with Heat Recovery (MVHR) to enhance air quality and comfort for both heating and cooling.
- A detailed room-by-room heat loss appraisal will be carried out to optimise the design.
- The target is to achieve heat recovery of 80% or better.
- Low energy lighting throughout.
- Rainwater will be harvested in 210 litre water butts which will be used for garden irrigation
- Low water use WC cisterns, wash basins, baths/showers will be installed.

- An electric vehicle charging point will be provided, together with dedicated cycle storage.
- Biodiversity Net Gain (BNG) applies and is covered by Coyne Environmental's Preliminary Ecological Appraisal (PEA) and BNG Review including BNG Metric Calculation.
- The hedge fronting Caldecote Road will be retained as far as possible and where there is a need to realign to accommodate compliant visibility splays, a hedge of like species will be planted to ensure maintenance of visual amenity as well as encouraging wildlife habitats.
- All contract/subcontract works will, as far as possible, be sourced locally. Materials and product supplies will also be sourced locally, where possible, from known and trusted companies.