

File Note

Ivy Roost

Sustainability Statement

SUSTAINABILITY STATEMENT for Application 21/00171

Prepared by PAD studio (agent)

1. Making the most efficient use of land, buildings and natural resources including site layout and building design.

The clients require a studio in which to work from home and are utilising the domestic curtilage of their property to facilitate this. The proposed studio building utilises the solar path across the site whilst sitting subservient to the main cottage.

The offices benefit from constant north light and views over the enhanced garden space. It seeks to maximise beneficial solar gain during the winter months when the sun angle is lower. Natural & cross ventilation is facilitated across the open plan layout to reduce the need for mechanical interventions.

2. Energy Hierarchy

The proposed replacement building will be highly insulated with thermal U-Values that greatly exceed current Building Regulations. The architect's PAD studio are industry leaders in Sustainable Design and have signed up to the RIBA Climate Challenge and Architect's Declare.

Windows will be high quality composite double glazed from a leading window manufacturer (such as Futura or Internorm) with test certificates available. The proposed dwelling will be air-tight in its construction with a fully wrapped air-tight envelope – this has been our standard practice for at least five years. We expect an air-tightness level of well below 3 m³.h @50Pa. Passive ventilation will be adopted to ensure that fresh air changes are maintained, and a holistic internal environment is maintained at all times. In conjunction high levels of thermal mass will be used to mitigate diurnal temperature fluctuations.

3. Flood Risk

The proposed dwelling is not located within an area of Flood Risk.

4. Carbon Reductions

As far as possible the embodied carbon content of the materials used will be minimised. PAD studio utilises IES modelling and will be working with Mesh Energy to calculate the embodied carbon of this house and it is hoped that we will be implementing a Post Occupancy programme to evaluate the energy used and produced post construction. Our aim is to reduce not only the carbon content but to



implement a cradle-to-cradle philosophy in all our buildings. This means that the materials used will be able to be recycled and re-used in the future. Timber will be used for structural purposes; glues will be minimised, and high carbon solutions (such as steel) kept to a minimum.

5. Water Efficiency

Water restrictors', low flush toilets and eco-shower fittings are specified as standard across all our projects.

Externally, hard surfaces will be minimised, sustainable drainage measures and soakaways will be enhanced, and it will connect with the existing drainage structure.

Collette Raine

Architect - PAD studio

