

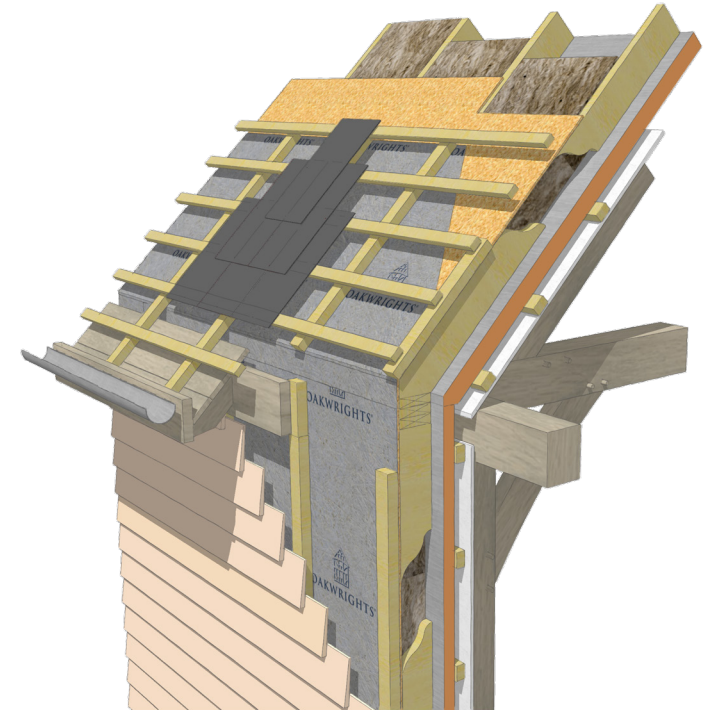
## Building Sustainably & The Climate Emergency

In accordance with the declared 'Climate Emergency', the applicant has been particularly mindful of the environmental impact of the dwelling for this site, both in terms of 'embodied' energy and the ongoing running of the house. The brief called for a highly sustainable approach, with minimal embodied carbon, focusing on renewable and sustainable materials.

Our 'post-and-beam' style green oak frame approach exceeds these ambitions i.e. the oak structure sits inside the building, wholly wrapped using our very energy efficient encapsulation system, achieving excellent U-values.

Green oak has one of the lowest embodied energy figures for a frame construction methodology. The oak is sustainably sourced and requires relatively little processing or machining in comparison to concrete and steel. It also has the benefit of 'locking' the carbon sequestered during the growth of the trees into the house for the foreseeable future.

Utilising the principles of "Fabric First", the proposed dwelling is to employ superior wall, floor, and roof systems, in conjunction with fenestration in excess of the efficiency.



### ADVANTAGES OF WRIGHTWALL AND ROOF PANELS

- Bespoke pre-insulated encapsulation system, resulting in further energy efficiency.
- Large format panels, manufactured off site to maintain high quality.
- Additional insulation upgrades available if required; made possible by bespoke design.
- Wall, floor, and roof panels are designed to fit smoothly together, creating a shell ready to be made air tight.

## Building Sustainably & The Climate Emergency

This is required for Building Regulations and will provide a highly insulated, well-detailed envelope that will give the dwelling a high level of energy efficiency and internal comfort. The majority of the systems proposed are to be manufactured off-site thus reducing the build time, processes, associated noises and heavy vehicle traffic of a construction site, in addition to minimising construction waste and losses through on-site damage.

Our sophisticated systems allow for all manner of traditional and high quality natural external finishes, including Cotswold Stone walling and roof slates.

WrightWall is designed to ensure a fully integrated process between frame and shell, using the same innovative software employed to design the oak frame. WrightWall is manufactured off site, reducing on-site build time and our dedicated site team who will assemble. This system ensures the highest level of quality control throughout the process. The WrightWall encapsulation system provides exceptional thermal performance, ensuring a warm and efficient home.

### ENERGY CONSERVATION AND SUSTAINABILITY

Using the principle of “Fabric First”, the proposed dwelling is to employ superior wall, floor, and roof systems in conjunction with fenestration in excess of the efficiency required for Building Regulations. This will provide a highly insulated, well-detailed envelope that will give the dwelling a high level of energy efficiency and internal comfort.

The majority of the systems are proposed to be manufactured off site, thus reducing the build time, processes, associated noises, and heavy vehicle traffic of a construction site.

All materials used in the construction are to be from sustainable sources.

## Oak Frame

The primary structure of the home will be a bespoke Green Oak Frame, designed and constructed in-house by Oakwrights, in Herefordshire. This robust and charming system will age with the property and produce unique character. We strive to produce a high build quality and that begins with the frame. All Oakwrights designers take shrinkage into account creating joints, pegs and holes accordingly; over time the shrinkage pulls the joints even tighter and strengthens the frame.

Oakwrights have built hundreds of individual private houses across the UK and are a leading oak-frame manufacturer; believing great detailing and understanding of the oak frame is key when creating a quality oak-framed build. We are happy to show the Council local precedents. We note there will be Planning conditions to adhere further to approval at the Full Planning application stage.

