

<p>Low Carbon Heat</p> <p>Will the building be fossil-fuel free with low-carbon heat source independent of the gas network?</p>	<p>A combination of solar PV and an air source heat pump are proposed with the ASHP discretely located to the south-west elevation.</p>
<p>Renewable Energy</p> <p>Has the design and shape of the roof been optimised for maximum output of a photovoltaic array?</p> <p>Does the building achieve a net zero-operational carbon balance and deliver 100% of its entire predicted energy consumption using renewables on-site?</p>	<p>The proposed house has a flat roof and is orientated to face within 40deg. of south; it is therefore suitable for the siting of solar panels if desired.</p> <p>Although the building is to be highly energy efficient, designed to limit heat loss and air leakage, and be fitted with low energy lighting and fittings, potentially incorporate technologies such as mechanical ventilation with heat recovery and waste water heat recovery; it is highly unlikely that it will be possible to achieve net zero operational carbon balance on this small, stand-alone property on a compact town-centre site.</p>
<p>Water</p> <p>For dwellings: have water-efficiency measures been incorporated and will fixtures and fittings be specified to achieve water consumption of less than 105l/p/d?</p>	<p>Yes. The house will be fitted with low water use fittings and appliances, including taps, baths, showers, and toilets. The washing machine and dishwasher will be low water use.</p>
<p>Transport & Travel</p> <p>Reduced travel: Have you made provision for home working in residential buildings?</p> <p>Is shared mobility encouraged within your transport plans for nondomestic buildings?</p> <p>Active travel: Have you enabled sustainable travel choices with connections for cycling, walking and public transport, providing cycle parking and facilities to levels that sufficiently meets the needs of building occupants irrespective of age or ability?</p> <p>Low-carbon transport infrastructure: Have you provided active charging infrastructure for electric vehicles, meeting standards and sufficient for the needs of building occupants?</p>	<p>Yes. The house has been designed to exceed the requirements of the Nationally Described Space Standards which provide adequate room sizes within dwellings. Each of the bedrooms exceeds the minimum requirements and allows room for a desk or table space.</p> <p>N/A</p> <p>The site is situated in a highly sustainable location with ease of access to a range of everyday services and facilities as well as the town centre itself. These are all readily accessible on foot or by cycle. A secure cycle storage area is proposed.</p> <p>A wall charging point will be installed to assist in the charging of electric vehicles, cycles, mopeds or other mobility aids without entering the building.</p>

<p>Prevention of Flooding</p> <p>Have you carried out a flood risk assessment to ensure your development avoids areas at high risk of flooding?</p> <p>Have measures to reduce flood risk been included in your proposals and are these designed using nature-based solutions and methods of sustainable urban drainage?</p>	<p>The application site is in Flood Zone 1 so there is no need for an FRA</p> <p>All hard surfaced areas will be permeable and rainwater collected wherever possible.</p>
<p>Ecology & Biodiversity</p> <p>Do you know what ecology and biodiversity are on your site and beyond it, and have you taken steps to both preserve what is already there and enhance ecological value in the future?</p>	<p>The site has limited value in terms of ecology and biodiversity. No protected species or habitats have been identified within or immediately adjacent to the site. There are no trees or significant planting within the site. Shrubs and hedging is proposed to be planted which will provide natural nesting opportunities for birds, and general ecological benefit.</p>
<p>Embodied Carbon</p> <p>Have you minimised embodied carbon in the design of the building and in the selection of materials for its construction?</p>	<p>The proposed dwelling has been carefully configured to provide a highly efficient built form with a small footprint limiting impact on the site and therefore the extent of concrete use in foundations. Accommodation within the limited footprint is provided over two floors similar to houses in the vicinity, all to maximise the gifa / footprint ratio.</p> <p>The majority of main structural and facing building materials are to be either category 1 Timber, or 2 Masonry.</p> <p>Masonry has a higher initial carbon input than timber, but has significant advantages in respect of</p> <ul style="list-style-type: none"> a/ thermal mass – providing thermal stability and limiting sudden heat losses or gains within the structure. b/ structural stability. c/ adaptability – easily adaptable in future to suit occupants changing needs. d/ longevity – provides a building shell that will be long lasting and easily maintainable. e/ high quality ground floor construction. <p>Significant elements of the building will be timber, including upper floors, partitions, roof structures, stairs and finishes. All timber elements will be from certified sources. Timber internal partitions allow a degree of flexibility internally to suit changing needs of occupants.</p> <p>Limited elements will be in steel including structural beams and lintels etc., and some external cladding.</p>

<p>Do your assessments of embodied carbon meet LETI targets and take full account of all construction elements including substructure, superstructure, mechanical, electrical and plumbing, products and finishes?</p>	<p>Clad elements are used for their strength and limited weight where projecting or in over-build locations.</p> <p>A high quality aluminium window system is proposed to limit heat loss, maximise glazed areas and light ingress through low profile sections, and reduce maintenance.</p> <p>For aesthetic and finishing reasons it is unlikely that internal surfaces will be self-finishing.</p> <p>The building is a bespoke structure and structural engineering will enable the design to be as efficient as possible.</p> <p>Materials chosen as above are readily recyclable at end of life cycle.</p> <p>This will be dealt with at the Building Regulations stage of this project.</p>
<p>Waste</p> <p>Do you provide adequate space, both inside and outside the building, for waste recycling and storage?</p> <p>Have you incorporated targets and site management processes to minimise water consumption through construction, and minimise and recycle waste, reducing waste going to landfill?</p>	<p>Yes. A dedicated area for refuse and recycling storage is provided to the side of the dwelling as indicated on submitted plans, all to accord with the Local Authority's requirements and collection regime; and, the requirements of the Building Regulations. There is level access to allow waste containers to be presented at the front of the property for collection.</p> <p>Internally dedicated waste and recycling storage will be incorporated within the kitchen design.</p> <p>This is to be discussed with the contractor when they have been appointed. The intention however is for separate storage containers to be available on site to aid the collection of recyclable and non-recyclable items.</p>