

Climate Change Checklist

Application Site: CUBS LAWN, ASHLEY ROAD, CHELTENHAM

Checklist	Comments
<p>Energy efficiency</p> <ul style="list-style-type: none"> • Have you maximised opportunities for natural solar gain and natural ventilation and minimised overheating risk through passive design and attention to building location, orientation, and form? • Have you designed the fabric of the building to be ultra-low in energy demand, achieving KPIs for space heating demand (kWh/m²/yr) and energy use intensity (kWh/m²/yr)? 	<ul style="list-style-type: none"> • The proposed development consists of the extension and refurbishment of an existing detached house, so there are limited opportunities for unitising the buildings location/orientation with regards to passive design. • The current intention is to improve the existing buildings thermal performance by providing additional insulation to the external walls either via an internal or external lining. The existing roof insulation is also to be upgraded to meet current standards.
<p>Low Carbon Heat</p> <ul style="list-style-type: none"> • Will the building be fossil-fuel free with low-carbon heat source independent of the gas network? 	<ul style="list-style-type: none"> • The house is already connected to the gas network.
<p>Renewable Energy</p> <ul style="list-style-type: none"> • Has the design and shape of the roof been optimised for maximum output of a photovoltaic array? • Does the building achieve a net zero-operational carbon balance and deliver 100% of its entire predicted energy consumption using renewables on-site? 	<ul style="list-style-type: none"> • The existing main roof pitch has a southerly aspect but adjacent is a large TPO'd tree which will significantly compromise the output of a photovoltaic array, so this is currently proposed. • No, as noted above the proposed development consists of the extension and refurbishment of an existing detached house, making net zero prohibitively expensive to achieve.
<p>Water</p> <ul style="list-style-type: none"> • For dwellings: have water-efficiency measures been incorporated and will fixtures and fittings be specified to achieve water consumption of <105 l/p/d? 	<ul style="list-style-type: none"> • Yes, the design target is <105 l/p/d

<p>Transport & Travel</p> <p>Reduced travel:</p> <ul style="list-style-type: none"> • Have you made provision for home working in residential buildings? • Is shared mobility encouraged within your transport plans for nondomestic buildings? <p>Active travel:</p> <ul style="list-style-type: none"> • 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>Low-carbon transport infrastructure:</p> <ul style="list-style-type: none"> • Have you provided active charging infrastructure for electric vehicles, meeting standards and sufficient for the needs of building occupants? 	<ul style="list-style-type: none"> • Yes, the intension is that one of the smaller bedrooms is a study. • N/A • Yes, there is cycle storage proposed in the garage. • The client is currently considering having an electric charger installed.
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<p>Prevention of Flooding</p> <ul style="list-style-type: none"> • Have you carried out a flood risk assessment to ensure your development avoids areas at high risk of flooding? • 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? 	<ul style="list-style-type: none"> • N/A as the house is existing, FYI, the site is not within a flood zone. • N/A as the house is existing.
<p>Ecology & Biodiversity</p> <ul style="list-style-type: none"> • 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? 	<ul style="list-style-type: none"> • An ecology survey has not been carried out, but the proposals have been sited to minimize their impact on existing trees, hedges etc. Much of the proposal utilises the buildings existing footprint.
<p>Embodied Carbon</p> <ul style="list-style-type: none"> • Have you minimised embodied carbon in the design of the building and in the selection of materials for its construction? • 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? 	<ul style="list-style-type: none"> • Yes, the first-floor extensions are to be formed using timber frame construction. • No, this is too early in the construction process.
<p>Waste</p> <ul style="list-style-type: none"> • Do you provide adequate space, both inside and outside the building, for waste recycling and storage? • Have you incorporated targets and site management processes to minimise water consumption through construction and minimise and recycle waste, reducing waste going to landfill? 	<ul style="list-style-type: none"> • Yes, as existing. • No, this is too early in the construction process.