

Climate Change SPD Checklist

Application site: Pound House, 1 Horsefair Street, Charlton Kings, Cheltenham GL53 8JF

Energy efficiency:

- Have you maximised opportunities for natural solar gain and natural ventilation and minimised overheating through passive design and attention to building location, orientation, and form? THE PROPOSED EXTENSION IS SITUATED TO THE NORTH WEST OF THE BUILDING ON THE FOOTPRINT OF THE EXISTING EXTENSION WITH THE PRIMARY ELEVATION FACING NORTH-WEST, SO THERE IS LIMITED POTENTIAL FOR USEFUL PASSIVE SOLAR GAIN, BUT WILL PROVIDE PLENTIFUL NATURAL LIGHT, REDUCING DEPENDENCE ON ARTIFICIAL LIGHT (ALL OF WHICH WILL BE LOW ENERGY LED FITTINGS). THE LARGER OPENINGS ON THE SOUTH WEST ELEVATION ARE SET BACK AND WILL BE SHADED TO MINIMISE OVERHEATING. PROPOSED EXTENSION INCLUDES SLIDING GLAZED DOORS ON THE GROUND FLOOR AND OPERABLE FIRST FLOOR WINDOWS TO ALLOW NATURAL VENTILATION THROUGHOUT THE BUILDING.*
- 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)? THE PROPOSED BUILDING FABRIC SHALL BE DESIGNED WHERE POSSIBLE [CONSTRAINTS OF WORKING ON EXISTING BUILDING] TO EXCEED THE MINIMUM STANDARDS STIPULATED IN THE LATEST VERSION OF PART L OF THE BUILDING REGULATIONS WHICH IS A STATUTORY OBLIGATION. PROPOSED DOUBLE GLAZING TO ACHIEVE A U-VALUE OF NO WORSE THAN 1.40w/m²K IN LINE WITH CURRENT BUILDING REGULATIONS.*

Low carbon heat:

- Will the building be fossil-fuel free with low-carbon heat source independent of the gas network? THE EXISTING DWELLING SHALL REMAIN ON THE CURRENT GAS NETWORK. AS ABOVE GLAZING TO AMPLIFY CONTROL PASSIVE SOLAR GAIN AND PROPOSED IMPROVEMENTS TO THE THERMAL PERFORMANCE OF THE BUILDING FABRIC TO MINIMISE ENERGY USE FOR HEATING, COOLING, LIGHTING.*

Renewable energy:

- Has the design and shape of the roof been optimised for maximum output of a photovoltaic array? THE ROOF FORM OF THE PROPOSED EXTENSION HAS BEEN DESIGNED TO ALLOW FOR FUTURE INSTALLATION OF SOLAR OR THERMAL PV.*
- Does the building achieve a net zero-operational carbon balance and deliver 100% of its entire predicted energy consumption using renewables on-site? THE EXISTING BUILDING WILL BE IMPROVED WHERE POSSIBLE. HOWEVER, IT IS ENVISAGED THAT THE EXISTING BUILDING WILL COMPROMISE A 'NET ZERO' CARBON BALANCE, WITHOUT WHOLE HOUSE RETROFIT APPROACH.*

Water:

- *For dwellings: have water-efficiency measures been incorporated and will fixtures and fittings be specified to achieve water consumption of <105 l/p/d? ALL NEW SANITARY FITTINGS SHALL BE INSTALLED WITH A 'LOW FLUSH' SETTING. NEW TAPS SHALL BE INSTALLED WITH AERATORS TO REASONABLY REDUC WATER CONSUMPTION.*

Transport & Travel

Reduced travel:

- *Have you made provision for home working in residential buildings? THE GARDEN STUDIO SP FUNCTION AS HOME WORKING SPACE.*
- *Is shared mobility encouraged within your transport plans for non-domestic buildings? N/A*

Active travel:

- *Have you enabled sustainable travel choices with connections for cycling, walking and public providing cycle parking and facilities to levels that sufficiently meets the needs of building occupants irrespective of age or ability? THE SITE OFFERS SPACE FOR CYCLE STORAGE AND IS LOCATED WITHIN AN EMINENTLY SUSTAINABLE LOCATION WITH LOCAL PUBLIC TRANSPORT CONNECTIONS INTO THE TOWN CENTRE.*

Low-carbon transport infrastructure:

- *Have you provided active charging infrastructure for electric vehicles, meeting standards and sufficient for the needs of building occupants? PROVISION FOR THE FUTURE INSTALLATION OF ELECTRIC CAR CHARGING POINTS WILL BE PROVIDED DURING THE WORKS FOR THE GARDEN STUDIO.*

Prevention 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? THE SITE IS LOCATED WITHIN FLOOD ZONE 1 AND THEREFORE RISK OF FLOODING IS MINIMAL. WHERE EXISTING HARD LANDSCAPING IS TO BE REMOVED AND REINSTATED, THIS WILL BE REPLACED WITH NEW PERMEABLE SURFACES TO AID STORMWATER DRAINAGE. THE PROPOSALS ALSO UTILISE RAINWATER COLLECTION AND A SEDL ROOF TO REDUCE SURFACE WATER RUN OFF.*

Ecology and biodiversity:

- *Do you know what ecology and biodiversity are on your site and beyond it, and have you taken steps to preserve what is already there and enhance ecological value in the future? THE SITE IS NOT LOCATED WITHIN AN ECOLOGICALLY SENSITIVE AREA. THE PROPOSALS WILL INCREASE THE PLANTING ON THE SITE AND INCLUDE THE ADDITION OF A SEDUM ROOF TO IMPROVE BIODIVERSITY ON THE SITE.*

Embodied carbon:

- *Have you minimised embodied carbon in the design of the building and in the selection of materials for its construction? THE PROPOSED EXTENSION AND GARDEN STUDIO SHALL LARGELY BE CONSTRUCTED OUT OF TIMBER WITH TIMBER CLADDING WHICH HAS SIGNIFICANTLY LOWER EMBODIED CARBON THAN STEEL, CONCRETE OR MASONRY.*
- *Do your assessments of embodied carbon meet LETI targets and take full account of all construction elements and plumbing, products and finishes? THE PROPOSALS SHALL BE CONSTRUCTED IN LINE WITH THE LATEST VERSION OF THE BUILDING REGULATIONS PART L 'CONSERVATION OF FUEL AND POWER' , THE STATUTORY STANDARD.*

Waste:

- *Do you provide adequate space, both inside and outside the building, for waste recycling and storage? THERE IS AMPLE SPACE BOTH WITHIN AND OUTSIDE THE DWELLING FOR THE STORAGE AND RECYCLING OF WASTE.*
- *Have you incorporated targets and site management processes to minimise water consumption through construction and minimise and recycle waste, reducing waste going to landfill? DUE TO THE NATURE OF CONSTRUCTION IT IS NOT ANTICIPATED LARGE QUANTITIES OF WATER SHALL BE REQUIRED. THERE IS NOT LARGE VOLUMES OF DEMOLITION WORK REQUIRED, HOWEVER, FOLLOWING ANY LOCALISED DEMOLITION WORK IT IS ANTICIPATED THAT MATERIALS SHALL BE SORTED AND GRADED FOR RE-USE AS hardcore. ONLY NON-RECYCLABLE MATERIAL OR MATERIAL UNFIT FOR RE-USE SHALL BE TAKEN TO LANDFILL.*