Climate Change Statement

Proposed Demolition of Existing Conservatory and Office Outbuilding and Construction of a Two-Storey Side and Rear Extension

Site: 33 Hadrians Close, Huddersfield HD3 3XZ

Q1. What measures have been/will be taken to reduce the energy demand associated with the proposed development beyond the minimum required in Building Regulations?

The proposed extension has been designed to significantly improve the thermal performance of the existing dwelling through the use of modern insulated construction techniques. The external walls, roof and ground floor will incorporate insulation levels that exceed those found within the existing property, reducing overall heat loss. High performance double or triple glazed windows and insulated external doors will be installed throughout the extension together with improved airtightness detailing around all junctions. The enlarged open-plan family accommodation allows improved natural daylight penetration, reducing reliance on artificial lighting during daylight hours. All new lighting will comprise low-energy LED fittings. Where heating systems are extended or replaced, new emitters and controls will be selected to maximise efficiency through programmable thermostatic zoning.

Q2. What measures have been/will be taken to limit the carbon consumed through implementation and construction?

The proposal retains the majority of the existing dwelling, thereby avoiding the significant embodied carbon associated with demolition and complete redevelopment. The existing conservatory and detached office/outbuilding will be carefully demolished with materials segregated wherever practical for recycling. Construction materials will be sourced locally where possible to minimise transport emissions, with preference given to UK-manufactured products and certified sustainable timber. The contractor will be encouraged to minimise waste through accurate material ordering, recycling of packaging, and use of reusable site materials wherever practical.

Q3. What measures have been/will be taken to utilise renewable or low carbon energy sources?

Although the proposal does not currently include renewable energy installations, the roof construction can readily accommodate future photovoltaic (PV) solar panels should the owner wish to install them. The improved thermal envelope substantially reduces heating demand and is compatible with future low-carbon heating technologies such as an air source heat pump. The electrical installation will also allow for future installation of battery storage and electric vehicle charging facilities if required.

Q4. What measures have been/will be taken to ensure the building design and layout has been optimised to energy efficiency beyond Part L?

The extension has been designed with a compact built form to minimise external surface area and reduce heat loss. The open-plan kitchen, dining and family room arrangement improves natural daylight and allows passive solar gain through the large glazed openings to the rear whilst maintaining appropriate insulation standards. Thermal bridging will be minimised through insulated cavity construction, continuous insulation at junctions and modern detailing in accordance with current Building Regulations. The replacement of older building elements with modern insulated construction will provide a considerable improvement in overall energy performance compared with the existing dwelling.

Q5. What measures have been/will be taken to reduce potential impacts of flooding?

The proposal does not significantly increase the developed footprint beyond the existing residential curtilage and replaces areas of existing built development. Surface water drainage will discharge in accordance with Building Regulations and Local Authority requirements. Ground levels will remain substantially unchanged and the proposal is not expected to increase flood risk either on or off site. Rainwater goods will discharge into suitable drainage infrastructure to ensure effective management of roof water.

Q6. What measures have been/will be taken to reduce water stress?

Water-efficient sanitary fittings will be installed throughout the new accommodation, including dual-flush WCs, low-flow taps and efficient shower fittings. Modern appliances will incorporate water-saving technologies where appropriate. The improved plumbing installation will minimise leakage risks compared with the older existing services. The owner will also be encouraged to install water butts to collect rainwater for garden irrigation.

Q7. What measures have been/will be taken to provide biodiversity net gains?

The proposal is located within an established residential garden and therefore has limited impact upon existing habitats. Existing landscaped areas surrounding the dwelling will largely be retained. Additional native planting can be incorporated around the completed extension to improve ecological value. Bird nesting boxes and bat roosting features may also be incorporated into the completed development to provide additional biodiversity enhancement.

Q8. What measures have been/will be taken to reduce air pollution associated with the proposed development?

The proposal is an extension to an existing dwelling and will not generate significant additional traffic movements. During construction, the contractor will implement good site management practices including dust suppression, covering of waste materials and controlled deliveries to minimise emissions. The improved thermal performance of the dwelling will reduce long-term energy consumption and associated carbon emissions. Provision can be made for future electric vehicle charging infrastructure to encourage lower-emission transport.

Summary

The proposed two-storey extension represents a sustainable enhancement to the existing dwelling by:

Retaining the majority of the existing building and reducing embodied carbon. Significantly improving thermal efficiency through modern insulated construction. Reducing operational energy demand through enhanced insulation, airtightness and efficient glazing. Incorporating low-energy lighting and efficient heating controls. Allowing future integration of renewable technologies such as photovoltaic panels and air source heat pumps. Promoting sustainable construction practices, waste reduction and local material sourcing. Improving water efficiency and providing opportunities for biodiversity enhancement. Reducing long-term carbon emissions while maintaining the character of the existing property.

This statement is consistent with the submitted drawings showing the demolition of the existing conservatory and office outbuilding and the construction of the proposed two-storey side and rear extensions.