

Sustainable Building and Biodiversity Net-Gain Statement

Proposal: Side and Rear Extensions to:

Location: 32 The Hawthorns, Sutton-in-Craven, BD20 8BP

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This Sustainable Design and Construction/ Biodiversity Net-Gain Statement report has been prepared to summarise how the proposed development at 32 The Hawthorns will minimise resource and energy consumption compared to the minimum under the current building regulations and how it is located and designed to withstand the longer term impacts of climate change in response to Policy Env3 of the Craven Local Plan 2019, and how it will improve the biodiversity on the site.

PLANNING POLICY

The Craven Local Plan was adopted on 12th November 2019. This document sets out the application response to Policy ENV3 Good Design, Specifically section 't' Sustainable design and Construction.

The development seeks to promote sustainable development in terms of the criteria which apply: Daylighting, ventilation, heating, materials, water use, waste, pollution and energy, and reduce the impact of its associated carbon emissions whilst working within the constraints of the Policy summarised below:

Sustainable Design and Construction

t) Sustainability should be designed in, so that development takes all reasonable opportunities to reduce energy use, water use and carbon emissions and to minimise waste, ensure future resilience to a changing climate and wherever possible to generate power through solar or other means, in accordance with Building Regulations. This should include residential, industrial and commercial developments.

SUMMARY OF SUSTAINABILITY AND CLIMATE CHANGE MITIGATION MEASURES

HEAT LOSS AND ENERGY USE

The proposed extensions includes the replacement of the existing un-insulated rear wall and gable wall with new, full-length/ width, insulated extensions - including the replacement of the old, inefficient windows with new bi-foldings doors and windows. Whilst the area of glass will increase the thermal efficiency of the glass will be a marked improvement of the existing glazing. In addition, the new glass will have a low-emissivity coating and a solar control layer to manage solar gain. Neither of which the existing glass has.

The extensions will be insulated to the current building regulations standard but will cover a large area of walling which is not insulated as well (approximately 55% of the current external envelope) - so there is a reasonable net benefit in insulation standards. In addition the replacement door will be a uPVC composite insulated door with greater thermal efficiency than the existing external door.

DRAINAGE AND FLOOD RISK

The site is within flood risk zone 3. See separate flood risk statement.

SUSTAINABLE SOURCING OF MATERIALS

All materials will be responsibly sourced by the Main Contractor, and will be specified to have as low an embodied impact as is possible/ available. Materials with a low embodied impact as defined within the BRE Green Guide to Specification will be selected for use in the building design and construction. The BRE Green Guide to Specification assesses each building element (such as walls, floors, roof and windows) and assigns an Environmental Impact Rating (from A+ to E). The following Green Guide Ratings should be targeted to ensure the development has a low embodied impact:

The stone walling will be reclaimed where available and locally sourced where new. The roofing is a mass-produced element with the embedded production and transport economies of mass-production.

WATER CONSERVATION

The new kitchen and bathroom will have water-use reduction fittings to the taps and low-flush WC cisterns.

BIODIVERSITY MITIGATION

The existing site is a well established domestic garden with a variety of planting. No additional planting is proposed and the scope of the extensions limits any opportunity to increase biodiversity. However, the house will accommodate Swift/ Sparrow nesting boxes. As the site has none at present all these additions will promote a net gain in bio-diversity.

Importantly, the extensions do not reduce current biodiversity due to the footprint currently being hardstanding.

CONCLUSION

The development has very limited scope for biodiversity net gain measures save for the addition of bird boxes but the house site is very well established gardens and the extensions do not subtract from the available biodiversity.

Otherwise the climate change measures are mainly restricted to the procurement of low-embodied energy materials, transportation and local labour. As such the Main Contractor will procure materials using the recognised sustainable sourcing of materials schemes and selecting products certified to BES6001 and ISO14001 as well as registering with the Considerate Constructors scheme.

Due to the restrictive nature and scale of the building type it is not a requirement to achieve the BREEAM 'Very Good' rating despite the applicable elements scoring highly and therefore this restriction should not apply. Notwithstanding the low BREEAM rating the development can be shown to have taken every opportunity to minimise energy use, water use, waste production and carbon emissions and therefore accords with Policy Env3 of the Craven Local Plan 2019.