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The Farmhouse
Great Trill Farm
Musbury, Axminster, Devon, EX13 8TU

Proposed reinstatement of front porch, 2 storey rear extension and minor interior alterations

Climate Change Strategy and Sustainability Document

Contents

1.0 Introduction

This document has been produced in order to explain how the proposed porch extension and two storey rear extension of the farmhouse at Great Trill Farm, will assist East Devon District Council in meeting the goals set down in the local authority's Climate Change Action Plan 2020-2025, adopted by the council on the 8th January 2020.

In The Climate Change Action Plan 2020-2025, the council committed to promoting and enabling a shift to more sustainable and low carbon operations.

The council recognises the importance of offering leadership in supporting and enabling the development and delivery of local solutions to help address the global problems of climate change and in so doing, its strategy sets out the council's commitment and ambition for delivering the transition to a low carbon and climate resilient East Devon District Council.

1.1 Devon Climate Change Declaration

East Devon District Council committed itself to the Devon Climate Change Declaration in July 2019.

This declaration has been prepared by a Devon wide consortium of public, private and voluntary organisations. It sets out an ambition to tackle climate change that covers the whole of Devon including those who live, work, and visit the county.

It understands the fact that global carbon emissions must reduce by at least 45% by 2030 from 2010 levels and reach net zero by 2050, to avoid the worst effects of climate change, by keeping warming below 1.5 degrees.

The county will lead in the global response to climate change through collective action, innovation, and influence.

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The local authority will engage with its residents, businesses, and visitors to develop and implement a plan to facilitate the reduction of Devon's production and consumption emissions to meet IPCC recommendations.

Its transformational change will include the following:

- Deployment of more renewable, decentralised, and smart energy systems.
- Retrofitting energy-efficient measures into its buildings.
- Constructing zero-carbon new buildings.
- Changing consumption to use less, re-use more and chooses low-carbon options.
- Empowering the people of Devon with the knowledge and skills to act collectively.

The local authority will work to understand the near term and future risks of climate change for Devon to plan for how its infrastructure, public services and communities will have to adapt for a 1.5-degree warmer world.

The local authority calls upon central government to prioritise decarbonisation and adaptation within decision making and to work with local authorities by using its powers to provide resources and funding necessary to accelerate the transition to a low-carbon and resilient economy and society.

It challenges every organisation, business, community, and individual to do the same.

2.0 The Proposals

The proposals forming the subject of this application for planning and listed building consent relate to the reinstatement of a porch to the principal elevation of the building, the provision of a two-storey extension and minor internal alterations.

3.0 Energy Strategy and Carbon Emissions

3.1 It is recognised that the generation of energy to heat, light and cool buildings is responsible for approximately half of the total CO2 emissions of the UK. Part L of the Building Regulations requires a minimum standard of energy efficiency in all new and refurbishment development; however, it is the intention with this development to go beyond this.

3.2 As a first step in dealing with carbon emissions arising from energy use within buildings it is important to consider designing in, energy efficiency measures as part of the construction/refurbishment of the buildings as these will be difficult to retrofit in the future and this will also reduce the amount of energy required by a building.

3.3 Reduction of heat loss is a key element of an energy strategy and reduction in carbon emissions, and it is proposed that insulation within floors, roofs and walls will meet or exceed the minimum standards required under Part L1B (Conservation of Fuel and Power) of the Building Regulations, as will the U-values for glazing and doors.

3.4 It is proposed that the following U-values will be achieved in the extension.

- Ground floors – 0.155-0.168.
- External walls – 0.28
- Roofs – 0.177 (this improvement will be delivered through the installation of multiple layers of Rockwool insulation within the roof void, laid over the ceiling). This will include enhancing the levels of insulation which exist across the first-floor ceiling of the main farmhouse.
- Windows – 1.6 (Part L1B minimum compliance is 1.6); It is proposed that the windows will be double glazed using slimline double-glazed units. This will allow a significantly better thermal performance of the windows above single glazing, whilst also maintaining the proportions of glazing bars and window frames etc which are an important part in the character of the listed building.
- Glazed and solid doors – 1.8 (Part L1B minimum compliance is 1.8)

3.5 An electric vehicle charging point will be installed at the west end of the farmhouse. The electricity being generated by the solar panels located elsewhere at Great Trill Farm and so, a sustainable form of charging electric vehicles.

3.6 The extensions will be heated via an extension of the farmhouse central heating system.

4.0 Waste & Recycling

4.1 Waste arising from the construction process has been an area of focus for some years now, with the industry making good strides in re-use and reduction of materials, which not only helps the environment, it also engenders significant cost savings to developers.

4.2 With this in mind, the appointed contractor for the scheme will be required to develop a site waste management plan (SWMP) prior to the start of the scheme reflecting the recognition that reduction of waste begins in the design and ordering stage of a project and carries on through to the sign-off of the building. This SWMP will set targets and procedures for the sorting, reusing, and recycling of construction waste into defined waste groups, either on site or through a licensed contractor.

4.3 As the proposed scheme involves an existing structure, the SWMP will also include a refurbishment audit, to see if any of the materials being removed can be recycled for use on this or other building projects in the area or the materials recycled for use by others.

4.4 The generation of waste does not stop at the end of the construction process and adequate provision will be supplied to the proposed dwellings, both internally and externally, to allow for the sorting of general waste from recyclable materials.

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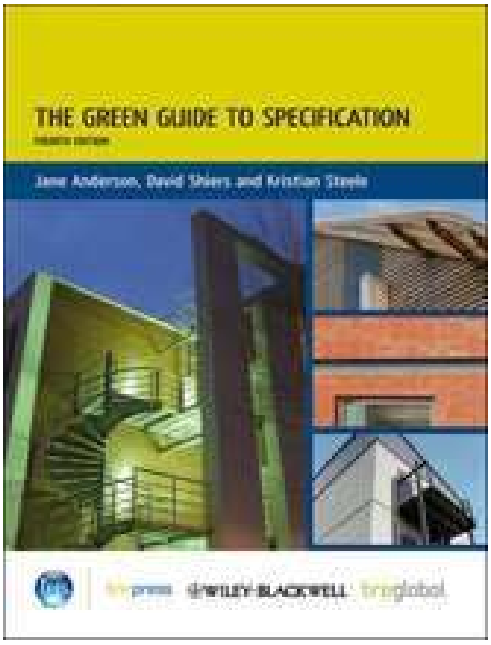
5.0 Materials Selection and Sustainable Construction Methods

5.1 Much of the material in place will be retained, with the main focus for new materials being internal, however, the developer is committed to ensuring that all new materials used score as highly as possible in the Building Research Establishment's Green Guide to specification – see Figure 9 to right.



5.2 In addition, wherever possible all building and finishing materials will be sought from local suppliers and manufacturers registered to an environmental management scheme such as FSC, BES6001, ISO14001 or EMAS. This will ensure that the materials have been sourced from suppliers certified as ethical and responsible as far into the supply chain as possible.

Where possible, much of the timber involved in the construction process will sourced directly from the Great Trill Farm estate

In a similar manner, the stone involved in the construction will be hand picked from the fields when they are cultivated.

5.3 All insulation materials selected for these buildings will have a Global Warming Potential of below 5 and where possible be made from natural products.

5.4 Finally, attention will also be paid to materials specified for the internal environment with a focus on materials/finishes containing low/no volatile organic compounds (VoCs) in an effort to improve the internal environment for occupants as internal air pollution is increasingly recognised as having negative impacts on health.