



Biodiversity Enhancement Strategy

63 Heol Cae-Gurwen,
Gwaun Cae-Gurwen,
Ammanford,
SA18 1HG

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1 Introduction

- 1.1 DKEcology was commissioned to produce a Biodiversity Enhancement Strategy in relation to the planning application for proposed refurbishment works for 63 Heol Cae-Gurwen, Gwaun Cae-Gurwen, Ammanford, SA18 1HG.

2 Ecological Measures

The biodiversity enhancement strategy includes the incorporation of the following ecological measures:-

- 2 x woodcrete bird nesting boxes
- 1 x crevice roost bat box
- Living wall

See ecological measures plan, implementation timetable and section 2.1 to 2.3 for further details.

2.1 Bird nesting boxes

2 x woodcrete swift nesting boxes to be erected at the apex of the north elevation of the property, see fig 1 and ecological measures plan.

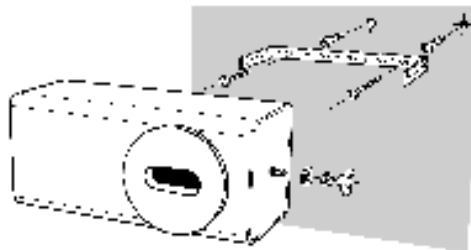
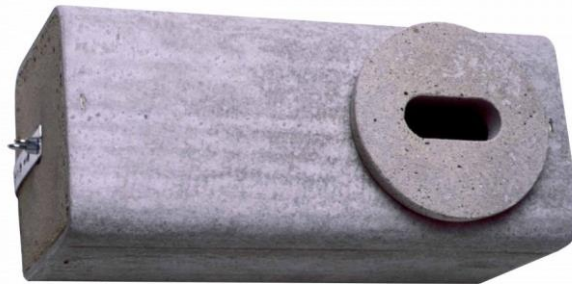


Fig 1 Swift nesting box

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2.2 Crevice bat roost box

1 x woodcrete crevice bat box such as a schwegler 1WQ or a suitable equivalent to be mounted on the south elevation of the existing building, see fig 2 and ecological measures plan.



Fig 2

2.3 Living Wall

2.3.1 A living wall will be created on the north facing gable wall of the property using living wall panels or modules with an irrigation system. These will be planted up in spring using plant plugs of a variety of suitable species and ideally predominantly native species (see some recommended species listed below) and then secured to the wall. All plant plugs must be thoroughly watered before they are attached to the wall. Once established the Living Wall requires a low level of maintenance i.e. pruning and occasional feeding as and when required. See the ecological measures plan for the suggested location.

2.3.2 The proposed location of the Living Wall is north facing and so will be in partial shade therefore plant species most suited to these conditions must be chosen. Ideally the plants used should be predominantly native species. Herbs can also be used. A list of some recommended species are shown below (non-native species are shown in red):-

- English stonecrop (*Sedum anglicum*)
- Biting stonecrop (*Sedum acre*)

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- Hart's tongue fern (*Asplenium scolopendrium*)
- Maidenhair spleenwort (*Asplenium trichomanoides*),
Soft shield fern *Polystichum setiferum*)
- Common polypody (*Polypodium vulgare*)
- Common bistort (*Bistorta officinalis*)
- Bugle (*Ajuga reptans*)
- English ivy (*Hedera helix*)
- Lavender (*Lavandula angustifolia*)
- Thymus species thyme
- Rosemary (*Rosmarinus officinalis*) * prostrate variety
- Chives (*Allium schoenoprasum*)
- Parsley (*Petroselinum crispum*)
- Stinking iris (*Iris foetidissima*)

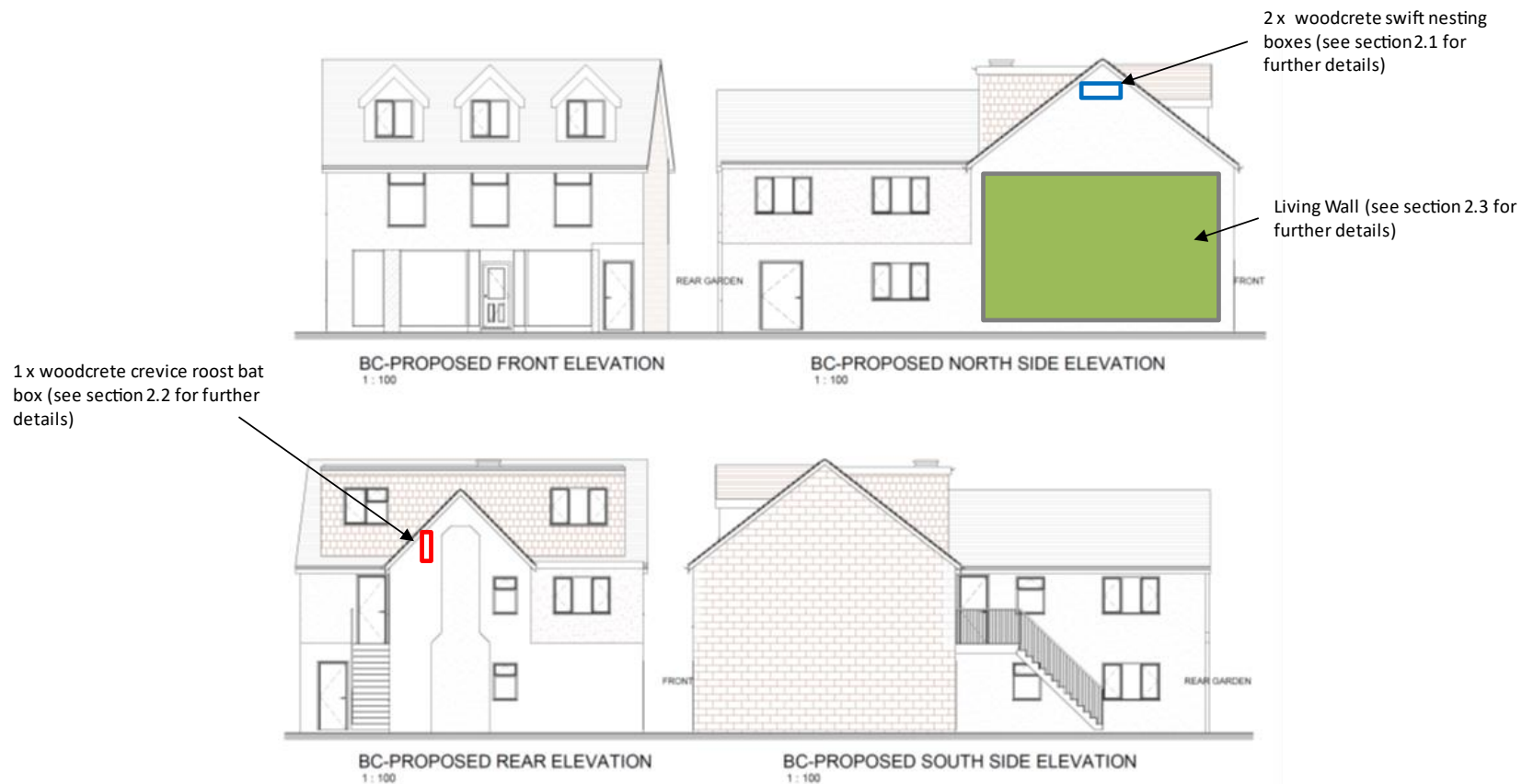
2.3.3 It is important that expert advice regarding the construction of the Living Wall is sought in order to ensure that the most suitable system for the building is chosen.

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Ecological measures plan

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Implementation timetable

Ecological Measure	<u>Timings</u>
Crevice roost bat box	Within 3 months of the completion of the development
Construction of the living wall	Construction/planting to be completed within the first spring following the completion of the development
Erection of the bird nesting boxes	Within 3 months of the completion of the development

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Clients supporting statement

The set recommendations will enhance the developments ecology and biodiversity in line with local policy EN6, SP15 and the technical advice note 5 (Nature conservation and planning 2009). This recommendation will enhance the ecological networks and green infrastructure in the area and will encourage others to do the same. The benefits of recommended enhancements to the biodiversity and the resilience of the ecosystems and protected species habitats. This will create a local environment for local species and promote pollination by a nature-based approach in line with the national planning policy 9 (Resilient Ecological Networks and green infrastructure).

The benefits and presence of the green living wall will create clean oxygen in an urban environment as plants are scarce within and out of the development area, as green walls improve the air quality as the busy road generates a by-product of toxins being proven co-carcinogens from vehicle engines passing on the A474, this natural solution will filter the toxins in the air and convert the carbon dioxide to oxygen. This proposed green infrastructure will improve the air quality as the plants will capture toxins, gases and aerosols and particle matter. This also includes dust particles, improving air around the development and the busy road as just 1m² of a living wall extracts 2.3kg of CO₂ per annum from the air and produces 1.7kg of oxygen, while studies have shown that plants and microbes found in their soil absorb harmful VOC's and convert them into compounds which plants feed on. This aligns with the benefits of Policy SP1 climate change, SP2 Health, SP21 built environment and historic heritage, N7 important natural features.

On balance with the rest of the development, the inactive design and use of PV array (Solar panels) to maximise the use of sustainable energy has the potential to zero out the buildings emissions and carbon footprint and enhance the local commitments to climate change in line with Policy SP1 climate change, BE1 Design, EN7 important natural features SP3 Sustainable communities.

The implantation of this green living wall will be visible from the roadside and has the potential to inspire others to enhance their properties and raise awareness of natural solutions to improve air quality, enhance ecology measures and enhance the beauty of the area.

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