Landscape plan – New outbuilding at Pepperboxes

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Location	Soilscape	Proposed development:
SP 8669 0218	7: Freely draining slightly acid but base-rich soils	Householder application for demolition of existing detached garage, relocation of existing greenhouse, reprovision of existing chalet and construction of detached ancillary outbuilding with subterranean link to existing dwelling (alternative scheme to [20/07079/FUL].

Scope of the plan

- Planning condition

This report has been written to satisfy conditions of the planning application [20/1646], as outlined below:

- Condition 7

A fully detailed landscaping scheme for the site shall be submitted to and approved in writing by the Local Planning Authority before any development, above damp-proof course, takes place. The scheme shall include provision for:

- *a detailed plan showing the full restoration of the garden area, following excavation works*
- *provision for the enhancement of biodiversity and green infrastructure features*

PEFULZ 20/07079/FUL The development shall be implemented in accordance with the approved details unless otherwise agreed in writing by the Local Planning Authority. Reason: In the interests of amenity and to ensure a satisfactory standard of landscaping.

Proposed landscape features

In order to satisfy the condition, the redline development boundary garden immediately around the new building on site will be subject to post-construction lawn restoration, and newly graded areas planted with perennial, nectar rich shrubs to improve habitat for pollinating insects and for visual amenity. The restored lawn area will measure 18m^2 and the combined graded areas 13m^2.

- **Restored lawn area**
  - The small lawn area can be thoroughly weeded and destoned/cleared from construction artefacts before being seeded over the entire 18m^2 and watered well.

- **Perennial plants**
  - An area of perennial shrubs will be created within the new graded areas of the site to provide nectar interest to pollinating invertebrates. Climbers and ground covering plants would also be beneficial to cover the graded slopes.
  - This will include a mixture of the following species to cover the 13m^2:

Ajuga reptans bugle
Campanula poscharskyana trailing bellflower
Geranium species cranesbill
Lavandula angustifolia English lavender
Mahonia species Oregon grape
Phlox paniculata perennial phlox
Rosmarinus officinalis rosemary
Rudbeckia species coneflower
Scabiosa spp**.** scabious
Solidago species goldenrod

Viburnum opulus guelder rose

Planting considerations on slopes

- All weeds should be removed, and compost added to help poor soils.
- Coarse matting e.g., coir or coconut, etc can be used to cover the ground and affixed with pegs so that soil is less likely to be affected by rainfall and potentially washed off. Plants can be added though the covering, which will rot as the new roots grow and establish.
- Plants should be brought as mature plugs where possible and planted directly into position, with mulch around the base and across the ornamental area to supress weed growth.
- The plants should be continually deeply watered to encourage rooting through the matting.

Proposed ecological enhancement features

- **Herptile hibernacula**

To add habitat value for herptiles, one hibernaculum of earth, logs and stones will be created on site in the southern boundary (See schematic in figure 4 below and map in figure 3). This will provide a refuge and hibernation site.

Points to consider when creating a hibernaculum include:

- a sunny position
- a well-drained site, not prone to flooding,
- orientation so that one of the long banks faces south,
- access to reptiles through openings of some sort,
- location in a patch of habitat favourable for dispersal, such as tussocky grassland,
- minimal public disturbance,
- size at least 4 m long, by 2 m wide, by 1 m high and ideally much larger.

New logs can be added to the hibernaculum if they should arise.

- **Habitat Boxes:**

Install the following habitat boxes:

- 2 x 25mm hole woodcrete nest boxes and 1x 32mm woodcrete nest box will be mounted on retained trees, out of direct sunlight which can overheat chicks.
- 1x woodcrete crevice-suitable bat box.

Bird boxes should be installed, 3-5m in height, away from direct sunlight (avoid south facing) and with clear flight paths to the entrances. Bat boxes can be installed south-west facing as they require more sunlight to warm before flight. Check annually and replace any boxes that are broken or fall down e.g., during storms.

- **Stag beetle loggery**

1x beetle “loggery” will be installed in a wooded corner of the site. Designs of these vary but all consist of several small logs of varying sizes, semi-buried vertically into the ground to provide sustenance for growing beetle grubs.

- **Insect bank**

A bank of bare earth can be used as habitat by many invertebrates including beetles and mining bees.

- Outline an area around 1m long and 0.5m wide.
- Spread topsoil inside the markings, compacting down after each 10-15cm.
- Build the bank until it is at least 30cm high. The top can be flat or rounded.
- Sow native wildflower meadow seed across the mound and firm with the bank of a rake. Wildflower turf can also be laid.
- Let the grass grow throughout the summer, cut once in early spring to remove previous years growth.

- **Hedgehogs**

Habitat Boxes:
1x hedgehog house will be installed on site, in quiet corners. This can be bought or made. The following is some advice from hedgehogstreet.org, a collaboration of the People’s Trust for Endangered Species (PTES) and the British Hedgehog Preservation Society (BHPS).

- *When siting the box choose a shady, quiet area of your garden.*
- *If the box lacks a tunnel entrance, try to include an interior tunnel or dividing wall to prevent predators such as badgers or foxes from getting to the hedgehog with their paws.*
- *We recommend using untreated wood for hedgehog homes. Wood from certain softwood tree species grown in the UK, such as larch, Douglas-fir and red cedar have excellent durability as exterior timbers. Pre-treated wood can contain chromated copper arsenate (CCA) compounds that are hazardous to many species. PTES promote the use of locally grown timber which encourages good woodland management practices. (hedgehogstreet.org)*

Ecological mitigation measures during the construction works

- **Birds**

Vegetation (trees and hedges) and building removal should be undertaken outside the period 1st March to 31st August to avoid impacting nesting birds. If this timeframe cannot be avoided, a close inspection of the building/trees and scrub to be removed should be undertaken immediately prior to clearance. All active nests will need to be retained until the young have fledged.

- **Badgers/hedgehogs**

The following recommendations are given in order to mitigate against potential harm to badgers/hedgehogs during the development works.

- Any trenches dug should either be covered at night or have a rough sawn plank placed in them to act as a ramp for any wildlife which may fall in.
- Security lighting to be directed away from the undergrowth.
- Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations.

- **Lighting**

Lighting will be controlled across the developed site. Research into the effects of artificial lighting on bats has shown that it can impact upon bat emergence times and lead to a reduced foraging time. As bats are faithful to their roost sites and commuting routes, often returning to the same site for many years, the impact of lighting on emergence times and in turn reduced foraging times can ultimately result in the roosts/foraging habitat being abandoned with impacts on survival and fecundity.

- Key areas of the site which are sensitive to artificial lighting are the site boundaries which consists of trees - providing foraging and commuting routes for bats.
- The lighting on the developed site will be limited to the extended new buildings and hard standing only. No lighting will be installed within or shining into the boundary trees or thereby maintaining the existing dark areas within the developed site for bats.
- Low impact lighting strategies will be adopted from the guidance outlined in the Bat Conservation Trust “Bats and Lighting” publications: https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/

The lighting on the site will:

- Use narrow spectrum light sources to lower the range of species affected by lighting
- Use light sources that emit minimal ultra-violet light
- Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm / neutral colour temperature <4,200 kelvin.
- Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal.
- Light spill will be reduced via the use of low-level lighting used in conjunction with hoods, cowls, louvers and shields. Lights will also be directional to ensure that light is directed to the intended areas only.
- External lighting will be positioned below the eaves, be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on.
- Wall lights and security lights will be ‘dimmable’ and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available.

Landscaping and ecological enhancement plan