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Ecological Enhancement Statement

Land to rear of 59 & 61 London Road, Little Clacton, Essex

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Client	Fosse Group
Site address	Land to rear of 59 & 61 London Road, Little Clacton, Essex, CO16 9RB
Report scope	Ecological Enhancement Statement
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Declaration of Compliance

This report has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct and British Standard Institution's (BSI) BS 42020:2013 Biodiversity – Code of practice for planning and development. We confirm that the opinions expressed within this document are our bona fide professional opinions.

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1. Introduction

1.1. Background to the scheme

Planning permission has been granted for the development of 30 detached bungalows on land to rear of 59 & 61 London Road, Little Clacton, Essex (reference 17/00790/FUL, dated 14/02/2019).

NWS has been requested to prepare this Ecological Enhancement Statement document in response to condition 18 of the above planning permission, which reads:

> *"Before any development commences a detailed ecological enhancement scheme (including the provision of bird and bat boxes within the site) shall be submitted to and approved in writing by the Local Planning Authority. The scheme, which shall include a timetable for its implementation, shall be implemented in accordance with the approved works before occupation of the hereby approved development.*
>
> *Reason – to preserve and enhance the biodiversity of the site."*

1.2. Site location

The development area (1.4ha) is located to the east of London Road in the south of Little Clacton village (TM 16767 18265). It comprises undeveloped land and areas containing redundant barns and piggeries.

1.3. Scope and purpose of this statement

The scope of this document is the development area only, located at land to rear of 59 & 61 London Road, Little Clacton, Essex, as shown in Figure 1.

The purpose of this Ecological Enhancement Statement (EES) document is to:

1. Describe the aims and ecological objectives of the Ecological Enhancement Statement (Section 1).
2. Provide the details of the persons responsible for implementation of the EES (Section 1).
3. Provide an overview of the baseline ecological conditions, site biodiversity potential and constraints (Section 2).
4. Describe detailed designs and working methods to achieve the stated objectives, including lighting design principles (Section 3).
5. Set out the dimensions, location and construction methodology for: bat and bird boxes, native species tree and shrub planting, and attenuation area seeding (Section 3).
6. Provide a timetable for the implementation of the works to demonstrate they are aligned with the proposed development phasing (Section 4).
7. Set out appropriate monitoring and management prescriptions to achieve the aims and objectives prescribed for their long-term retention (Section 4).

1.4. Aim and objectives

Management of the development site landscape aims to provide ecological benefits to the site and surrounding landscape in a safe and sustainable manner. To achieve these aims, the EES has the following objectives:

1. Detail a strategy of enhancements measures for bats, birds, reptiles and many other species that will benefit from the attenuation area and native trees and shrubs.
2. Provide details of monitoring and management prescriptions over a five-year period (rolling).

1.5. Roles and responsibilities

It is the sole responsibility of the developer/principal contractor, Fosse Group, to secure the legal and funding mechanisms by which the implementation of this strategy will be secured.

The developer/principal contractor, Fosse Group, is responsible for ensuring the monitoring and management prescriptions are undertaken according to those set out within this strategy.

It is the responsibility of the project ecologist, Norfolk Wildlife Services, to provide sound ecological advice to the developer/site owner in relation to the implementation of the strategy.

2. Baseline Ecological Conditions

2.1. Baseline ecological conditions

The baseline ecological conditions were established by Geosphere Environmental Ltd on 29 September 2016. The presence of at least transient common lizard (one adult observed during surveys) was established by Geosphere Environmental Ltd in June 2017.

The site is relatively flat with a gradual gradient towards the south and east (c. 1.5m over 150m). The site was in agricultural use and contains the remains of buildings such as barns, piggeries and areas of hard standing associated with agricultural use. Much of the site could be considered as previously developed. The remainder of the site consists of neutral grassland in poor condition, with many areas now dominated by tall ruderal vegetation and scrub. Native hedgerows border the eastern and southern boundaries and some scattered trees are present.

2.2. Site biodiversity constraints and potential

The development site has been allocated for housing (Tendring District Councils Preferred Options Document 2016). The site offers some limited potential for foraging bats, breeding birds, foraging and resting reptiles and possibly badgers. Within the approved site layout plan (AMENDED_BLOCK_PLAN-963762-4) there are opportunities to create features suitable for these species, but which will largely be limited to bat and bird boxes, and the small area of greenspace in the southeast allocated for attenuation.

3. Scheme for Ecological Enhancements

3.1. Creation of new roosting opportunities for bats

3.1.1. Bat boxes

As shown on Figure 1 and 2, seven bat roost boxes (targeting pipistrelle species) are to be provided on the garages of Plots 2 and 14 (two boxes on each garage) as well as 13, 18 and 22 (one box on each garage). The advised box model is the 'Beaumaris Woodstone Bat Box' or a justifiably equivalent model constructed from durable materials and from a reputable source. Some flexibility in the model of bat box is necessary, given the uncertainty in availability that has occurred with popular bat box models over the past couple years.

Bat boxes should be mounted at height (under the eaves) away from window, doors and external lights, and preferably on the west or south elevations. Locations provided in Figure 2 should be adapted as necessary to comply with these conditions.

Bat boxes will be installed prior to occupation but following completion of the construction of the plot, to minimize disturbance and the chances of the boxes being damaged.

3.2. Creation of new nesting opportunities for breeding birds

3.2.1. Bird boxes

Four bird nest boxes for small species (e.g. house sparrow) are to be provided on the garages of Plots 6, 7 and 15 (shown in Figure 1 and Figure 3). The advised nest box model is the 'Eco Sparrow Tower' or a justifiable equivalent. Given the prevailing unavailability of the Schwegler woodcrete sparrow terraces, the plastic clad Eco Sparrow Tower appears to be the best option for a long-lasting box.

Nest boxes on buildings should be mounted at height away from window, doors and external lights. Locations provided in Figure 3 should be adapted as necessary to comply with these conditions.

Bird nest boxes will be installed prior to occupation but following completion of the construction of the plot to minimize disturbance and the chances of the boxes being damaged.

3.3. Lighting design principles

Lighting will be unobtrusive and downcast/directional to prevent direct illumination of bat flight paths and roost access points, as per recent Institution of Lighting Professionals and Bat Conservation Trust guidance (Ferguson et al. 2018[1]). Exterior lighting will be PIR activated and on short timers (< 1 minute, particularly important for the garage). Lighting on site will avoid blue-white short wavelength and lights with high UV contents; these can have a negative impact on insects and so over the long term are predicted to reduce foraging resources for bats (Stone, 2013[2]). Typical LED lighting is suitable with this proscription.

3.4. Creation of habitat suitable for bats and a wide range of other native species

3.4.1. Attenuation area

The attenuation area will be used for native habitat creation (Figure 1). To provide areas of high quality and diverse flowering species, the dry area will be sown with 'EM3 – SPECIAL GENERAL PURPOSE MEADOW MIXTURE' (Emorsgate Seeds), and the wetland area sown with 'EM8 – MEADOW MIXTURE FOR WETLANDS' (Emorsgate Seeds) or with a justifiable alternative seed mix containing a similar mixture of native species.

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[1] Ferguson, J., Fox, H. & Smith, N. (2018) Bats and artificial lighting in the UK. Bats and the Built Environment series, Guidance Note 08/18. Institution of Lighting Professionals and Bat Conservation Trust.

[2] Stone, E.L. (2013) Bats and lighting: Overview of current evidence and mitigation

The following guidance will be followed for sowing seed, along with the seed manufacturer's specification for the sowing and establishment of the wildflower areas.

- Preparation of the ground will involve removing all weeds and existing grass using repeated cultivation.
- The soil should then be harrowed or raked to produce a medium tilth.
- Sowing will take place during autumn or spring.
- The seed must be surface sown and can be applied by machine or broadcast by hand.
- To aid consistent seed sowing, it is recommended to mix the seed with sand or sawdust.
- The ground should be firmed down after sowing with a roll or by treading to give good soil/seed contact.
- Mow regularly to a height of 40-60mm throughout year 1 (and year 0 if spring sown).
- Ideally collect and remove cutting arisings, or mow frequently enough to disperse the cuttings thinly.

3.4.2. Planting specification

At least 50% of tree and shrub species to be planted (locations as shown in Figure 1) are to be native varieties listed in Table 1 or justifiable alternatives if local stock is low. All plants are to be supplied in accordance with BS4428/JCLI/CPSE Code of Practice for Handling and Establishing Landscape Plants and BS8545.

Table 1: Planting specification, locations shown on Figure 1

Tree species	**Size (cm)**	**Supply**
Filed maple *Acer campestre*	150-180	Sapling
Hawthorn *Crataegus monogyna*	60-90	Sapling
Hornbeam *Carpinus betulus*	60-90	Sapling
Oak *Quercus robur*	60-90	Sapling
Shrub Species	**Size (cm)**	**Supply**
Holly *Ilex aquifolium*	40-80	Sapling
Elder *Sambucus nigra*	40-80	Sapling
Hawthorn *Crataegus monogyna*	40-80	Sapling
Grassland mixtures	**Sowing rate**	**Area**
Meadow grass mixture (Emorsgate Seeds EM3 or similar)	4g/m^2	Southeast of site
Wetland grass mixture (Emorsgate Seeds EM8 or similar)	4g/m^2	Southeast of site

3.4.3. Planting method

Unloading and temporary storage

- The site must be ready to receive stock, with an appropriate holding site giving shelter and protection away from possible contamination.
- Off-loading will be safe, logical and efficient. Trees will not be rolled or dropped.
- The time that trees/shrubs are left on lorries during loading, transit, and unloading should be kept to a minimum.
- A quality check should be undertaken as the stock is being unloaded.
- All trees should be labelled indicating species, size, suppliers name and customer's name.
- Any unsuitable plant material should be rejected and reported to the dispatching nursery immediately.
- The length of time held in temporary storage will be kept to a minimum.

Planting

- The existing top vegetation on the planting site will be removed.
- The preparation of planting pits, bed or trenches shall comply with the appropriate British Standards, namely BS4043, BS4428, BS5837 and BS8545.
- All trees/shrubs shall be planted with the plants put into the ground at the same depth at which they had been previously grown in the nursery or container.
- The planting hole for trees is to be dug with the base of the pit being undisturbed (unless waterlogging is likely). The planting hole will be excavated approximately 150mm wider than the root ball.
- A layer of planting mixture will line the planting hole approximately 70mm deep and fill the space between the root ball and sides of the hole.
- Planting separation distance will be calculated by adding the predicted mature height of the shrub with the adjacent shrub's mature height and divided by three.
- Planting will take place during the dormant season for bare-root plants, or else can be carried out all year round for container-grown plants.
- A mulch layer, extending 1m across to a depth of 100mm and leaving the root flare free, is to be applied to retain moisture and control weed competition.

3.4.4. Protection and support systems

Trees

- A spiral tree guard (600x38mm) will be wrapped around the lower stem of each tree to protect against browsing animals such as rabbits and deer.
- Double short softwood stakes (75mm Ø x 1500mm) will be driven approximately 750mm deep, avoiding the root ball and not causing damage to the root system.
- A brace will be fitted using the stakes, with adjustable rubber ties and spacer blocks firmly fixed on the windward side. The stem will be securely fitted and immobile. Monitoring and adjustment will be necessary until establishment is achieved.

Shrubs

- Tube mesh guards will be used to protect against bark stripping and leaf-bud damage for a minimum period of 3-5 years and until the plants are well established.

3.4.5. Plantings management

A management plan (see Section 4, Management action prescriptions) is to be in place for 5+ years, as it is necessary for the success of the planting scheme. The plan will ensure that the plantings remain healthy and will restock any plants that have failed.

4. Timetables for Implementation and Management of Ecological Enhancement Features

The implementation of enhancement measures are set out in the following Table based on an intended start date of autumn 2021. The timetable should be used as a guide for the correct phasing of the measures, with exact timings to be adapted as necessary.

Table 2: Timetable for the implementation of enhancements

Ecological feature	Phase of development	Controls & measures	Predicted timing
Bat and bird boxes	Bat and bird boxes will be installed prior to occupation of plots but following completion of the construction of the plot to minimize disturbance and chances of the boxes being damaged.	Boxes to be pre-purchased/ordered in advance and stored on site ready for use.	Summer - autumn 2022
Tree and shrub planting	During landscaping, once the ground has been prepared to receive stock	Trees and shrubs to be planted during the dormant period between November and March.	Winter 2022
Grass seeding	During landscaping, once the ground has been prepared to receive seed	Preparation of the ground will involve removing all weeds and existing grass using repeated cultivation. The soil should then be harrowed or raked to produce a medium tilth. Sowing will take place during autumn or spring. The seed must be surface sown and can be applied by machine or broadcast by hand. The ground should be firmed down after sowing with a roll or by treading to give good soil/seed contact.	Spring 2023

Management actions have been set out in the following Table and are prescribed for five years to ensure plants become established (this schedule can be rolled-over indefinitely). A site inspection each year during the growing season will enable the identification of plants that require replacing or protection and support replacement / alteration.

Table 3: Management action prescriptions

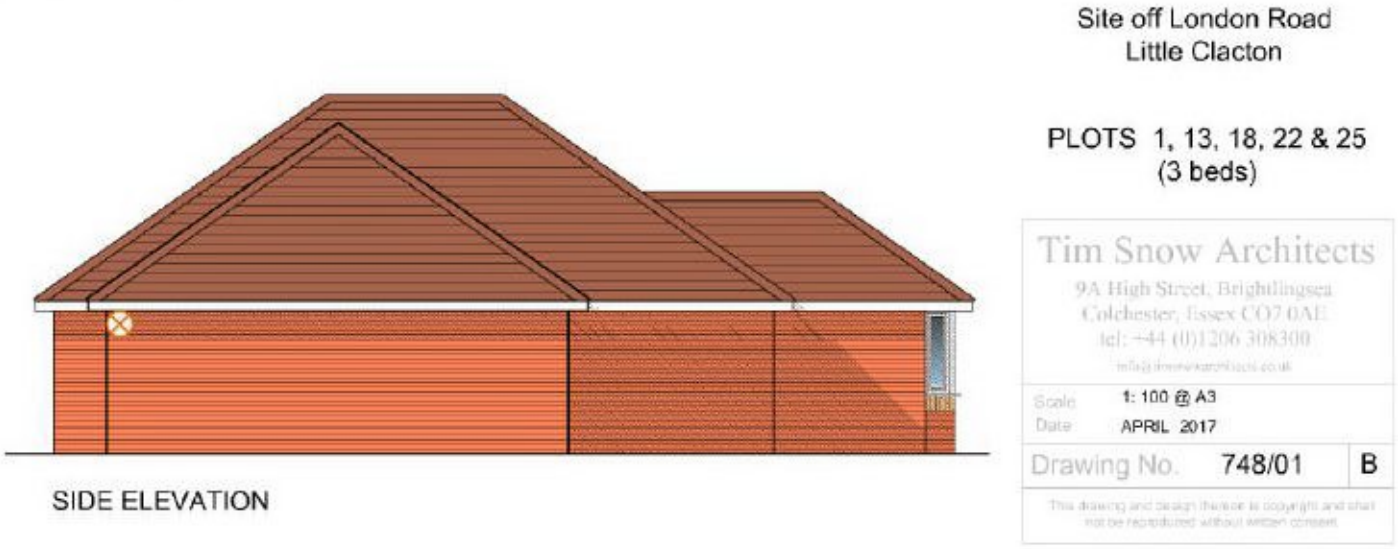
Ecological feature	Action	Implementation year (post development)	Timing	Details
Trees and shrubs	Watering	As required through the growing season until established	April - September	The timing and frequency will be determined according to local weather conditions, but watering frequently during the growing season is strongly advised until plants are established.
	Further weed control	As required through the growing season until established	April - September	Competition for nutrients and water should be eliminated. Weed control can be carried out by manual or chemical methods in accordance with the manufacturer's guidelines.
	Mulching	Year 0 and Year 2 until established	January - March	Mulching will minimize weed growth and help retain moisture. A 100mm layer of bark mulch will be applied once at the beginning of the planting stage, again after 2.5 years, and again at the end of the 5 year management plan.
	Trimming	Year 3 or 4 (depending on growth)	January or February	Trim in January or February to avoid the destruction of birds' nests and to allow berries to be eaten by wintering birds. Pruning or removal of trees as required for the purposes of health and safety, and tree health.
	Replace losses	As required	October - February	Plant new trees and shrubs for any losses within first 5 years.
	Management review	Year 5	April - September	Assessment of the trees to ensure they are growing as expected. Review of management actions required if not growing as expected.
Attenuation area	Watering	As required through the growing season until established	April - September	The timing and frequency will be determined according to local weather conditions, but watering frequently during the growing season is strongly advised until plants are established
	Further weed control	As required through the growing season until established	April - September	Competition for nutrients and water should be eliminated. Weed control can be carried out by manual or chemical methods in accordance with the manufacturer's guidelines
	Cutting	Year 2 or 3 (depending on growth)	October - February	To control scrub and bramble development, cutting may be required. For wildlife this cutting is best done on a rotational basis so that no more than half the area is cut in any one year leaving part as an undisturbed refuge

Ecological feature	Action	Implementation year (post development)	Timing	Details
Bat boxes	Roost boxes checked for damage or obstruction	Biennially	No timing restrictions	Visual inspection from ground only. Should repair or replacement of the bat box be necessary, contact should be made with a licensed bat surveyor to check for the presence of bats prior to any works being carried out
Bird boxes	Bird nest boxes checked for damage or obstruction	Biennially	October - February	Check for occupation. Clean out with water and washing up liquid/mild vinegar solution and repair/replace as required

5. Figure 1: Development site location plan, locations of habitat measures and bat and bird box provision

6. Figure 2: Elevation plans showing locations of bat box provisions

Planning drawings: *AMENDED_PROPOSED_FLOOR_PLAN__ELEVATIONS_PLOTS_1_13_18_22_25-963748,* 17_00790_FUL-PROPOSED_FLOOR_PLANS_AND_ELEVATIONS_-_GARAGES-860974



7. Figure 3: Elevation plans showing locations of bird box provisions

Planning drawing: 17_00790_FUL-PROPOSED_FLOOR_PLANS_AND_ELEVATIONS_-_GARAGES-860974

REAR ELEVATION

SIDE ELEVATION

Site off London Road
Little Clacton

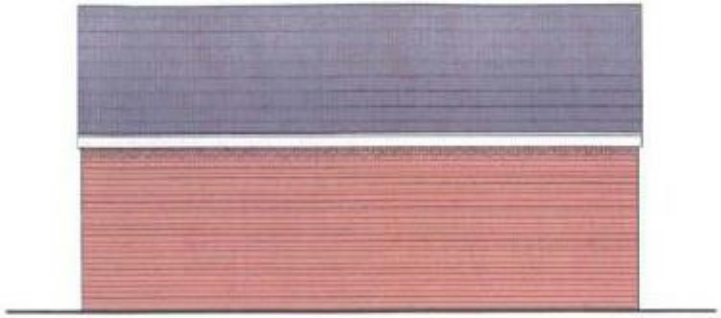
GARAGES

Tim Snow Architects
9A High Street, Brightlingsea
Colchester, Essex CO7 0AS
[redacted]

Scale 1: 100 @ A3
Date APRIL 2017
Drawing No 748/13

Plots
6 & 7

REAR ELEVATION



SIDE ELEVATION

SCALE (1:100)