Land South of South Side, Steeple Aston, Oxfordshire

Biodiversity Enhancement Strategy

October 2021

on behalf of **Rectory Homes Ltd**

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Amendments		Robbie Birkett *MSci*	Senior Ecologist	21/10/21

Report Contents

1 Introduction

1.1 Site Description & Background

The Land South of South Side (referred to as 'the site' for the purposes of this report) is located on the south-western edge of the village Steeple Aston in Oxfordshire. South Side is the southmost of two primary roads which bisect the village on an east-west axis, joining with the Oxford Road (A4260) to the west. The Ordnance Survey grid reference for the centre of the site is SP 4697 2583. Please refer to Appendix 1 for a site location plan.

The site covers a roughly 1 hectare area of land that comprises an area of semi-improved grassland with scattered young scrub and pockets of tall ruderal vegetation. On two earth mounds positioned centrally within the site are areas of established scattered scrub and further tall ruderal vegetation. In the north-west is an area of hard-standing with ephemeral vegetation and a dilapidated single-storey building. The site is bound by hedgerows to the north, east and west (with the latter running along the far side of a steel fence. A further hedgerow runs roughly parallel with the southern site boundary, between 1m and 9m to the south.

South Side borders the site to the north, beyond which is residential development and to the north-west, agricultural land. Further residential properties extend along South Side to the east, while there is a commercial property to the immediate west. Arable farmland is present to beyond the hedgerow to the south. The wider landscape beyond the confines of the village is agricultural in nature comprising a patchwork of arable and improved grassland fields, set within a network of hedgerows and interspersed with occasional areas of woodland.

The majority of habitats within the site are considered to be of ecological value at the site level, with boundary hedgerows considered to be of moderate ecological value, being of importance at the local level.

1.2 Background

A full ecological assessment of the site, informed by detailed ecological surveys including an Extended Phase 1 habitat survey, reptile survey and bat surveys (ground level tree assessment; emergence/re-entry survey of building), was undertaken during 2019 (Southern Ecological Solutions, 2019).

A walkover survey was undertaken on the 16th April 2021 by Robbie Birkett of Windrush Ecology Ltd. Habitats were noted to be in a comparable condition to that recorded during the 2019 surveys, with some modest expansion of tall ruderal, ephemeral and scattered scrub habitats.

1.3 Aims

Planning permission has been sought to develop the site for residential purposes, to include the erection of 10 dwellings with access off South Side including a new pedestrian footway, parking and garaging, landscaping and all enabling and ancillary works. The proposed site plan is provided in Appendix 2.

This Biodiversity Enhancement Strategy has been prepared to support the discharge of a pre-commencement ecology condition which states that:

'Notwithstanding the information submitted, no development shall commence, including any demolition, and any works of site clearance, until a method statement for enhancing biodiversity on site, to include measures for swift, has been submitted to and approved in writing by the Local Planning Authority. The biodiversity enhancement measures shall be carried out in accordance with the approved details prior to the first occupation of the development and shall be retained as such thereafter.'

2 Biodiversity Enhancement Strategy

2.1 Habitat Creation

2.1.1 Hedgerow Retention & Enhancement

Existing hedgerows are present along the site's northern, eastern and western boundaries. The northern boundary hedgerow is species rich and contains a number of standard trees. There is a sizable gap in the eastern half of the hedgerow length where no woody vegetation is present. The eastern hedgerow extends along only the southern portion of the eastern boundary and is species poor, containing only one native woody species. The western hedgerow extends along the far side of a steel fence which marks the boundary with a neighbouring commercial property and is defunct.

Existing hedgerow length is to be retained within proposals, with the exception of short sections within the northern hedgerow that are to be removed to accommodate a new access visibility splay and pedestrian footpath.

The northern boundary hedgerow will be enhanced through supplementary mixed native hedgerow planting. This will be used to infill existing gaps in the hedgerow, in order to create a continuous boundary feature. New lengths of mixed native hedgerow will also be planted along the entire length of the eastern and western boundaries, running inside of the existing hedgerows/fence lines along these boundaries (where present). Ten heavy standard trees will be planted within the new sections of hedgerow.

Native woody species to be incorporated within the hedgerow planting include:

- Hawthorn *Crataegus monogyna*
- Field maple *Acer campestre*
- Hazel *Corylus avellane*
- Blackthorn *Prunus spinosa*
- Pedunculate oak *Quercus robur*
- Holly *Ilex aquifolium*
- Dog rose *Rosa canina*

Tree species to be planted as standards within the new sections of hedgerow include:

- Rowan *Sorbus aucuparia*
- Pedunculate oak *Quercus robur*
- Silver birch *Betula pendula*
- European beech *Fagus sylvatica*

New hedgerow lengths will be planted from bareroot stock in a double staggered row, with an even distribution of species throughout.

Hedgerow management will aim to produce bushy hedgerows, with occasional standard trees. Cutting will take place on a staggered, three-year rotation, with no more than one third of the hedgerow habitat trimmed each year. Cutting will be undertaken in winter (December-February) to minimise impacts on breeding birds and maximise the habitat's value as a foraging resource.

2.1.2 Native Scrub Buffer

A native scrub buffer with trees will be created along the currently unmarked southern site boundary, measuring between 3-6m in depth. Native species to be incorporated into the scrub buffer include:

- Hawthorn *Crataegus monogyna*
- Elder *Sambucus nigra*
- Hazel *Corylus avellana*

- Crab apple *Malus sylvestris*
- Blackthorn *Prunus spinosa*
- Guelder Rose *Viburnum opulus*
- Dogwood *Cornus sanguinea*

Over 20 standard trees will be planted within the buffer, with species to include:

- Rowan *Sorbus aucuparia*
- Pedunculate oak *Quercus robur*
- Silver Birch *Betula pendula*

The native buffer will be subject to minimal management in order to allow for a varied vegetative structure to develop, thereby providing a valuable foraging and sheltering resource for native wildlife such as invertebrates, small mammals and birds. Trees planted within the buffer will likewise provide a habitat resource as well as providing a screen against light spill into the open countryside to the south. The aim will be to create a strong ecological corridor along the southern fringe of the site, linking with the existing local hedgerow network.

2.1.3 Amenity Grassland

Areas of amenity grassland within the residential gardens and area of open space in the north of the site will be laid with good quality grass turf. It is anticipated that these areas grassland will be managed through mowing.

2.1.4 Tree & Shrub Planting

A variety of tree and shrub planting will be provisioned as part of the landscaping of the northern sector of the site and the new gardens. Planting will comprise a mixture of native and non-native species and will include a variety of flowers and fruits throughout the year in order to provide forage for insects and birds, with trees and shrubs also providing potential nest sites for breeding birds.

Native tree species to be planted within the interior of the site include:

- Bird cherry *Prunus avium*
- Field maple *Acer campestre*
- European beech *Fagus sylvatica*

2.2 Faunal Enhancement Measures

2.2.1 Bats

Four 1FR Schwegler Bat Tubes (Figure 1) will be integrated into the walls of the new dwellings. The bat tubes will be incorporated within the southern and south-eastern elevations of the buildings to ensure they receive maximum warmth from direct sunlight, increasing the likelihood of their adoption.

The Schwegler 1FR bat tube is a self-contained unit which can be concealed behind the external finish of a building, leaving only the bat entrance slot exposed. The bats access the tube via the slot at the base of the unit, and can roost within a narrow cavity that runs up the tube. Please refer to Appendix 3 for positioning of the roost features.

The bat tubes will be integrated during the construction of the buildings, under the supervision of an ecologist to ensure appropriate placement and installation.

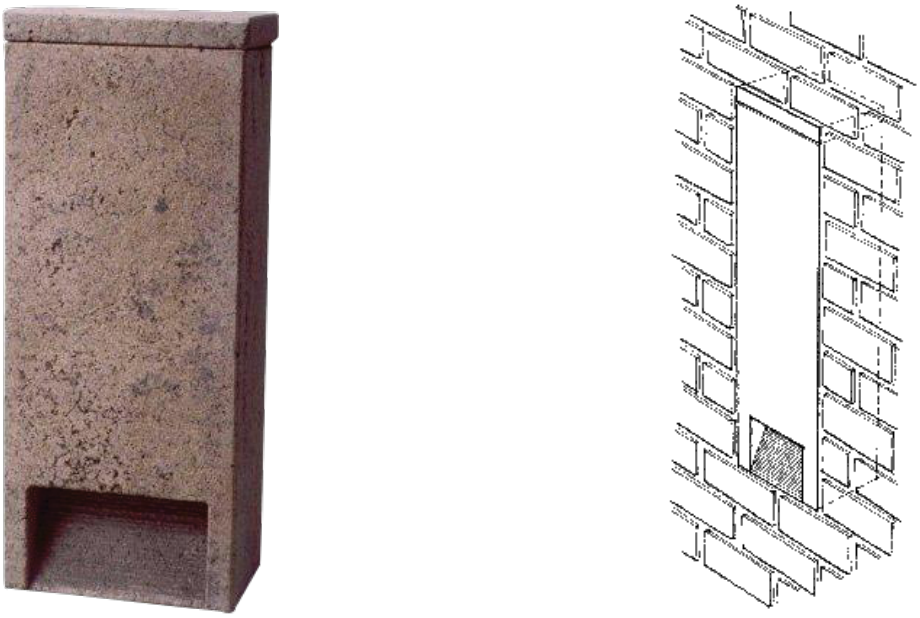


Figure 1. A Schwegler 1FR Bat Tube (left) and a Schwegler 1FR Bat Tube integrated within a wall face (right).

2.2.2 Birds

Four Schwegler Lightweight Swift Boxes 'Type A' (Figure 2) will be integrated into the walls of new dwellings within the developed site. The boxes will be installed at the eaves of the dwellings' northern elevations so as to avoid birds overheating in direct sunlight from the south (Appendix 3).

The incorporation of swift boxes within the design of the proposed development will create a biodiversity enhancement within the site through the provision of nesting opportunities for swifts *Apus apus*.

The swift boxes will be integrated during the construction of the buildings, under the supervision of an ecologist to ensure appropriate placement and installation.

Figure 2. A Schwegler Lightweight Swift Box Type A.

Four Schwegler 1SP House Sparrow Terraces (Figure 3) will be installed on the northern elevations of dwellings within the development (Appendix 3). These locations are preferable so as to avoid birds overheating in direct sunlight from the south as well as providing a degree of shelter from the strongest and wettest winds from the west. House sparrows nest communally so the terraces will be located in proximity to each other.

The sparrow terraces will be installed under the eaves of the buildings, at least 2.5m above the ground. The incorporation of sparrow terraces within the design of the proposed development will

create a biodiversity enhancement within the site through the provision of nesting opportunities for house sparrows *Passer domesticus*.

The sparrow terraces will be integrated during the construction of the buildings, under the supervision of an ecologist to ensure appropriate placement and installation.

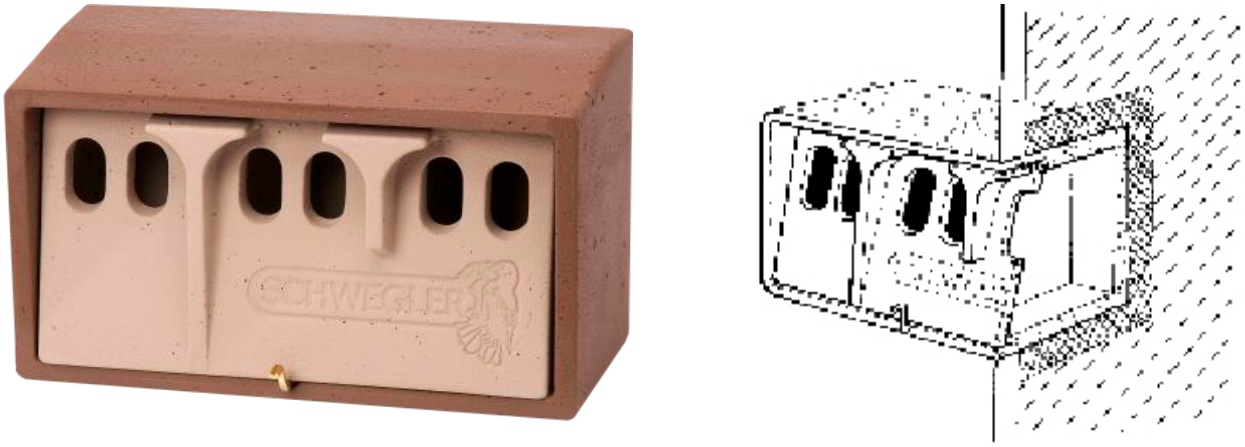


Figure 3. A Schwegler 1SP House Sparrow Terrace (left) and a picture to show the box integrated within a wall (right).

2.2.3 Hedgehogs

Movement by hedgehogs *Erinaceus europaeus*, into the site and between new properties will be facilitated for through the provision of 'hedgehog highways' within closeboard fences. These highways will take the form of 13cm x 13cm (minimum) holes cut at the base of fence panels (see Figure 4). Each highway will be adorned with an appropriate sign signalling its purpose (see Figure 5).

In order to allow free access to all of the new gardens, at least 1 suitable hole will be provided within each row of fence panelling. Further holes will be provisioned along the garden's southern boundaries to accommodate free movement in and out of the native scrub buffer.

Hedgehog highway will be created during post-construction landscaping.

Figure 4. A hole within a garden fence to allow movement by hedgehogs.

Figure 5. Example of sign signalling 'Hedgehog Highway'.

2.2.4 Invertebrates

Four large log piles will be created within the new native scrub buffer. Log piles will provide suitable habitat for a variety of invertebrate species including stag beetles *Lucanus cervus*, as well as providing potential hibernation sites for hedgehogs. Please refer to Appendix 3 for positioning of log piles within the developed site.

Additionally, a Schwegler Clay and Reed Insect Nest (Figure 6) will be erected on a retained tree in the north of the site, facing south at a height of 1.5m. The insect nest feature will provide suitable nesting and refuge habitat for variety of invertebrate species including solitary bees, lacewings and ladybirds.

Log piles and insect nest feature will be installed/erected during post-construction landscaping.

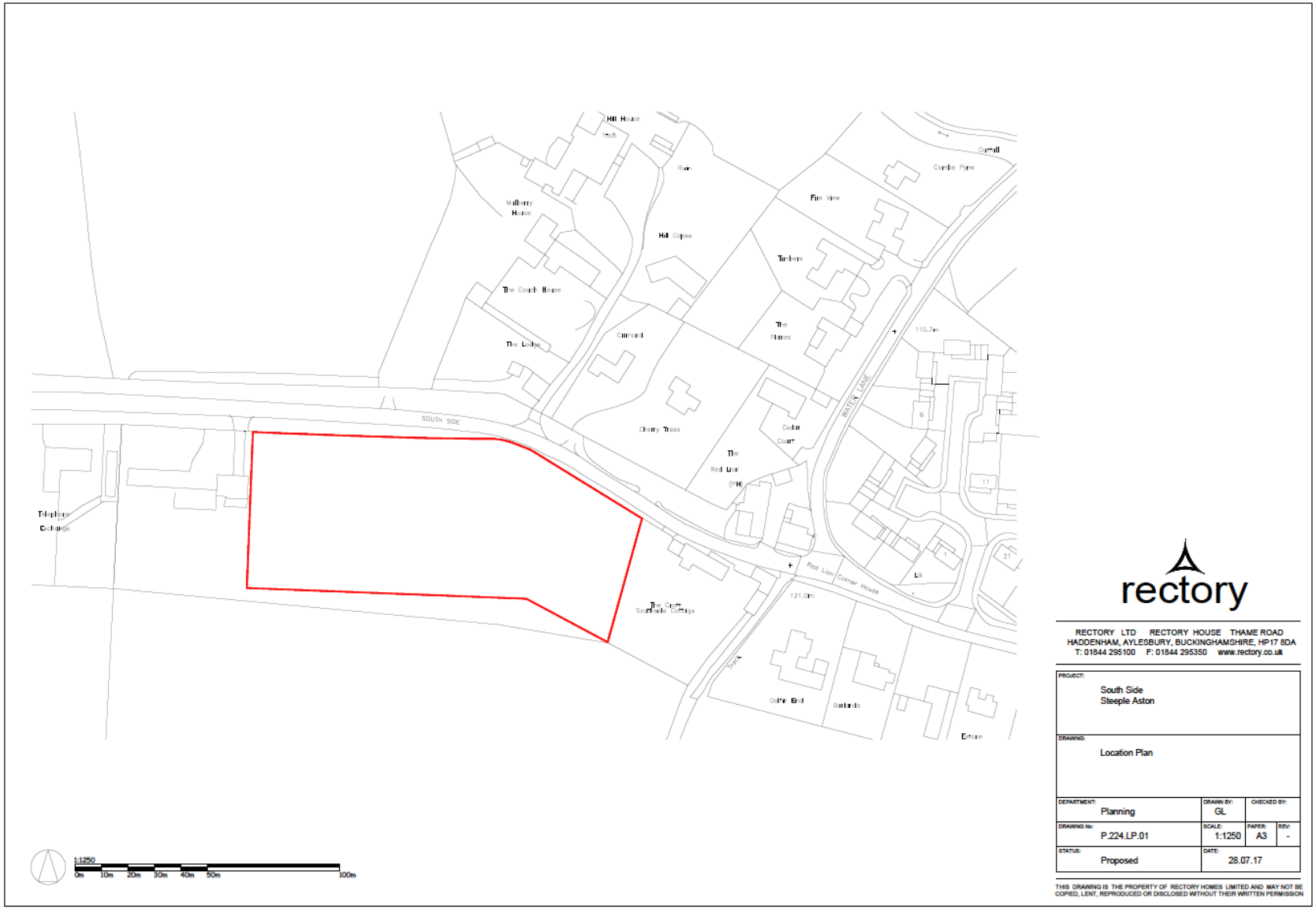
Figure 6. A Schwegler Clay and Reed Insect Nest.

3 References

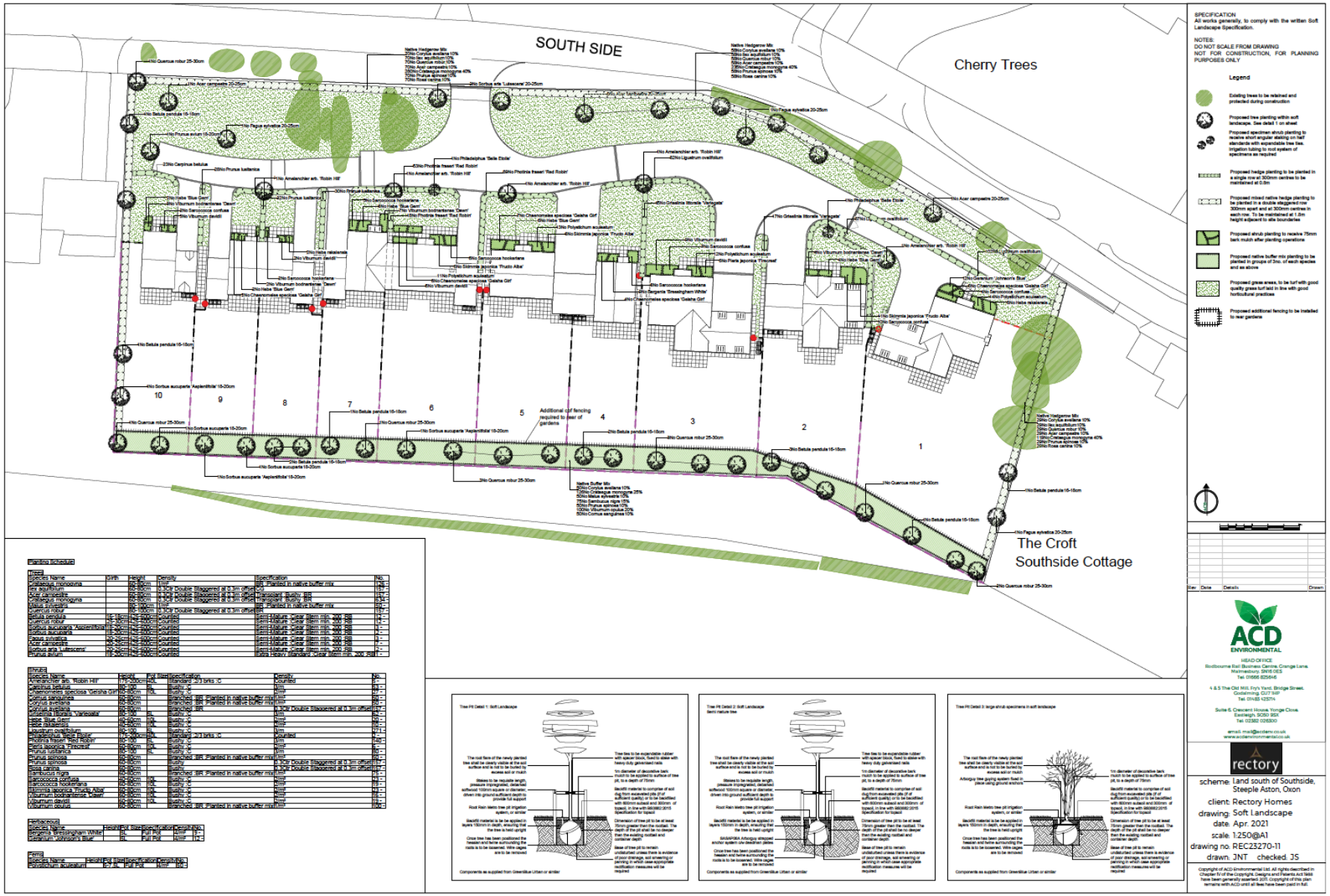
ACD Environmental Ltd, 2021. *Land south of South Side, Steeple Aston, Oxon – Soft Landscape.*

Southern Ecological Solutions (SES), 2019. *Ecological Assessment - Steeple Aston.*

4 Appendix 1. Site Location Plan



5 Appendix 2. Soft Landscaping Plan



6 Appendix 3. Faunal Enhancement Features Plan

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Legend

- Schwegler Lightweight Swift Box
- 1SP Schwegler Sparrow Terrace
- 1FR Schwegler Bat Tube
- Log Pile
- Insect Nest Feature
- Hedgehog Movement Corridor (facilitated through provision of 'hedgehog highways' at base of closeboard fencing panels)