

WILD FRONTIER ECOLOGY

Land Off Penny Hill Road, Holbeach



Ecology Management Scheme

March 2023

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The data which we have prepared and provided is accurate and has been prepared and provided in accordance with the CIEEM's Code of Professional Conduct. We confirm that any opinions expressed are our best and professional bona fide opinions.



This report conforms to the British Standard 42020:2013 Biodiversity - Code of practice for planning and development.

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1. Background & Objectives

1.1 Background

Wild Frontier Ecology Ltd. (WFE) was commissioned by GGC Ltd. to provide an Ecology Management Scheme (EMS) for a proposed residential development at land off Penny Hill Road, Holbeach, Spalding, Lincolnshire (centred on National Grid Reference TF 36146 25702). The proposal is for the development of five detached residential dwellings with associated infrastructure including an access road, detached garages and gardens. The location is shown in Figure 1 and an aerial image of the existing site is shown in Figure 2. The proposed development plan, elevation plans and landscaping plan are shown in Figures 3-6.

The proposal was granted planning permission by South Holland District Council on 14th May 2021 (reference H09-0284-21) with the following wildlife condition imposed:

“10. Before the commencement of the development hereby permitted beyond oversite, full details of an ecology management scheme shall be submitted to and approved in writing by the Local Planning Authority. The measures shall be constructed and retained in accordance with the details so approved.”

Reason: To ensure that the development is able to deliver a net gain in biodiversity. This Condition is imposed in accordance with Policy 28 of the South East Lincolnshire Local Plan, 2019 and national guidance contained in the National Planning Policy Framework, 2019.”

1.2 Objectives

The objective of this document is to meet the above condition. The Ecology Management Scheme (EMS) covers the habitat enhancement measures that will need to be installed and managed on the completed site. The purpose of the EMS is to ensure the successful establishment and long-term continuance and safeguarding of native biodiversity at the site, with a particular focus on species of conservation concern. The enhancements will aim to increase the quantity, quality and connectivity of ecological features at the site, taking into consideration (and ideally contributing to) its ecological context within the wider area.

1.3 Basis for Assessment

This assessment is based on plans (Figures 3-5) provided by the client on 4th January 2022 and a UK Habitat survey conducted by WFE on 23rd February 2023.

Figure 1. Site location in relation to the wider area

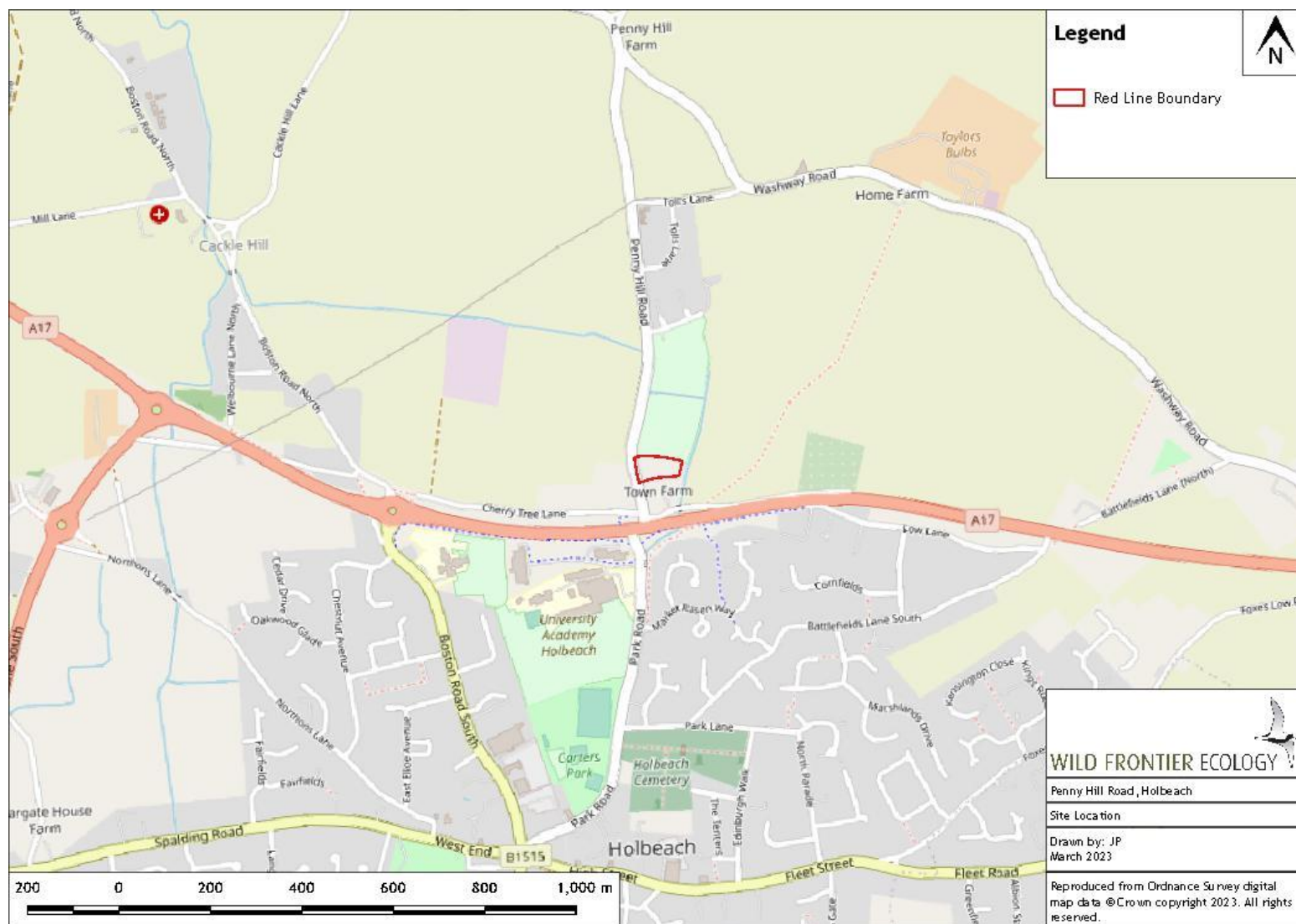


Figure 2. Aerial image of proposed development site

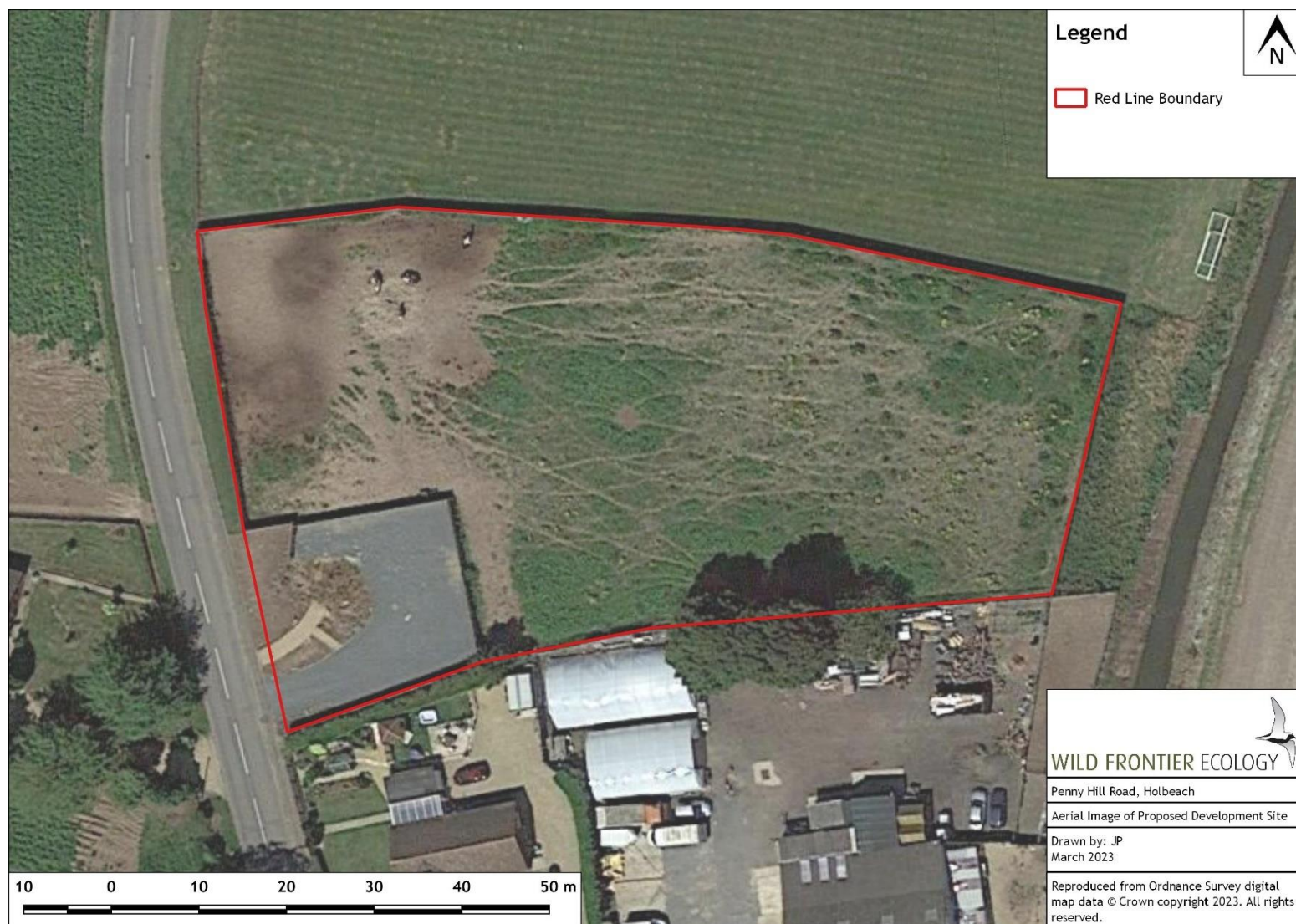




Figure 3. Proposed site plan (as provided by the client)



The architectural drawings for the three-story house are as follows:

- Floor Plans:**
 - GROUND FLOOR PLAN:** Shows a lounge, dining area, kitchen, and a rear porch.
 - FIRST FLOOR PLAN:** Shows four bedrooms, a bathroom, a central hallway, and a rear porch.
 - SECOND FLOOR PLAN:** Shows a master bedroom with an en-suite, a bathroom, and two other bedrooms.
 - ROOF PLAN:** Shows the layout of the roof, including dormer windows and roof pitches.
- Elevations:**
 - FRONT ELEVATION:** Shows the main entrance and the front facade.
 - SIDE ELEVATION:** Shows the side profile of the house.
 - REAR ELEVATION:** Shows the rear facade and the rear porch.
 - SIDE ELEVATION:** Shows the side profile of the house from the opposite side.



Figure 5. Proposed garage elevation plan (as provided by the client)

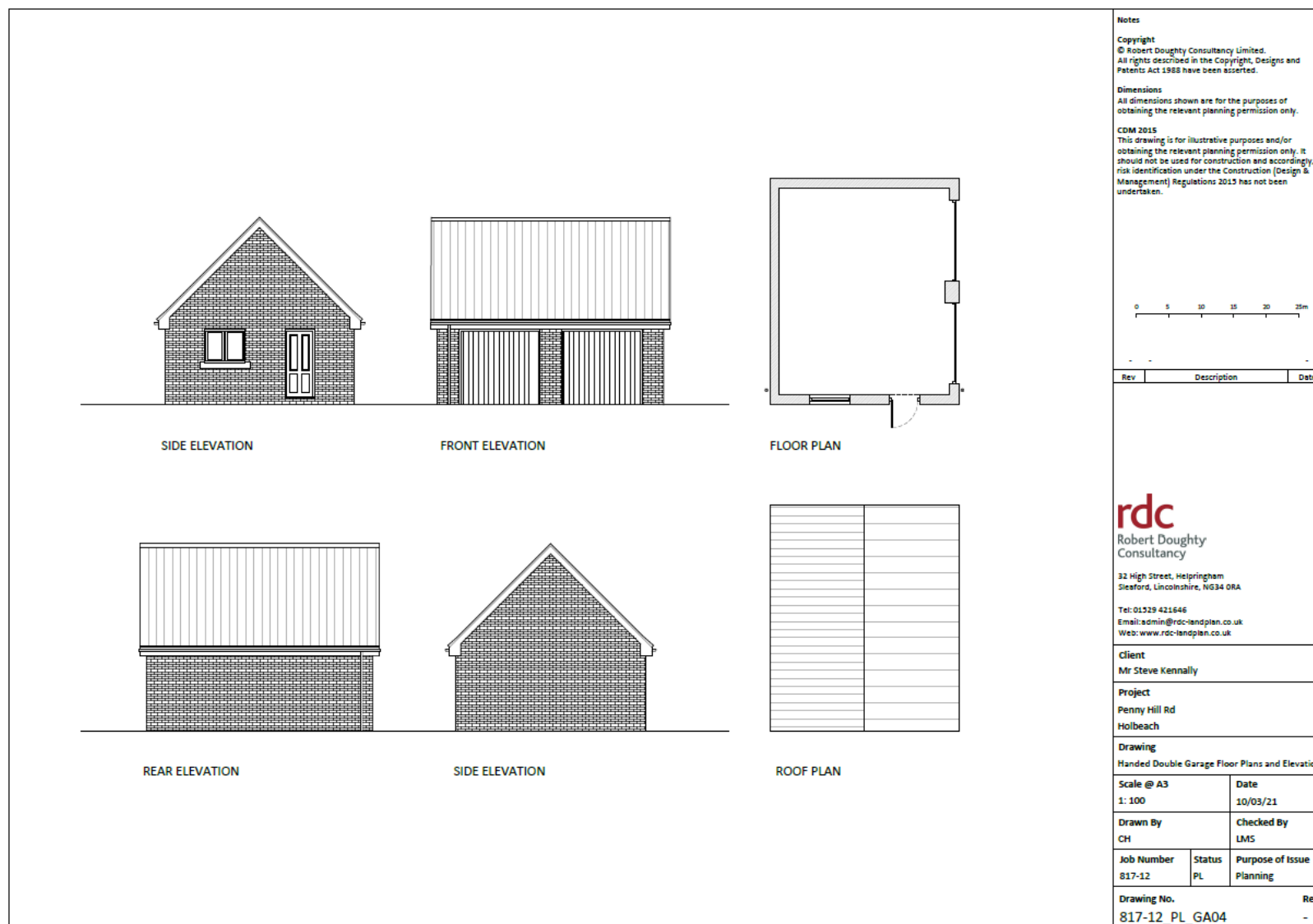
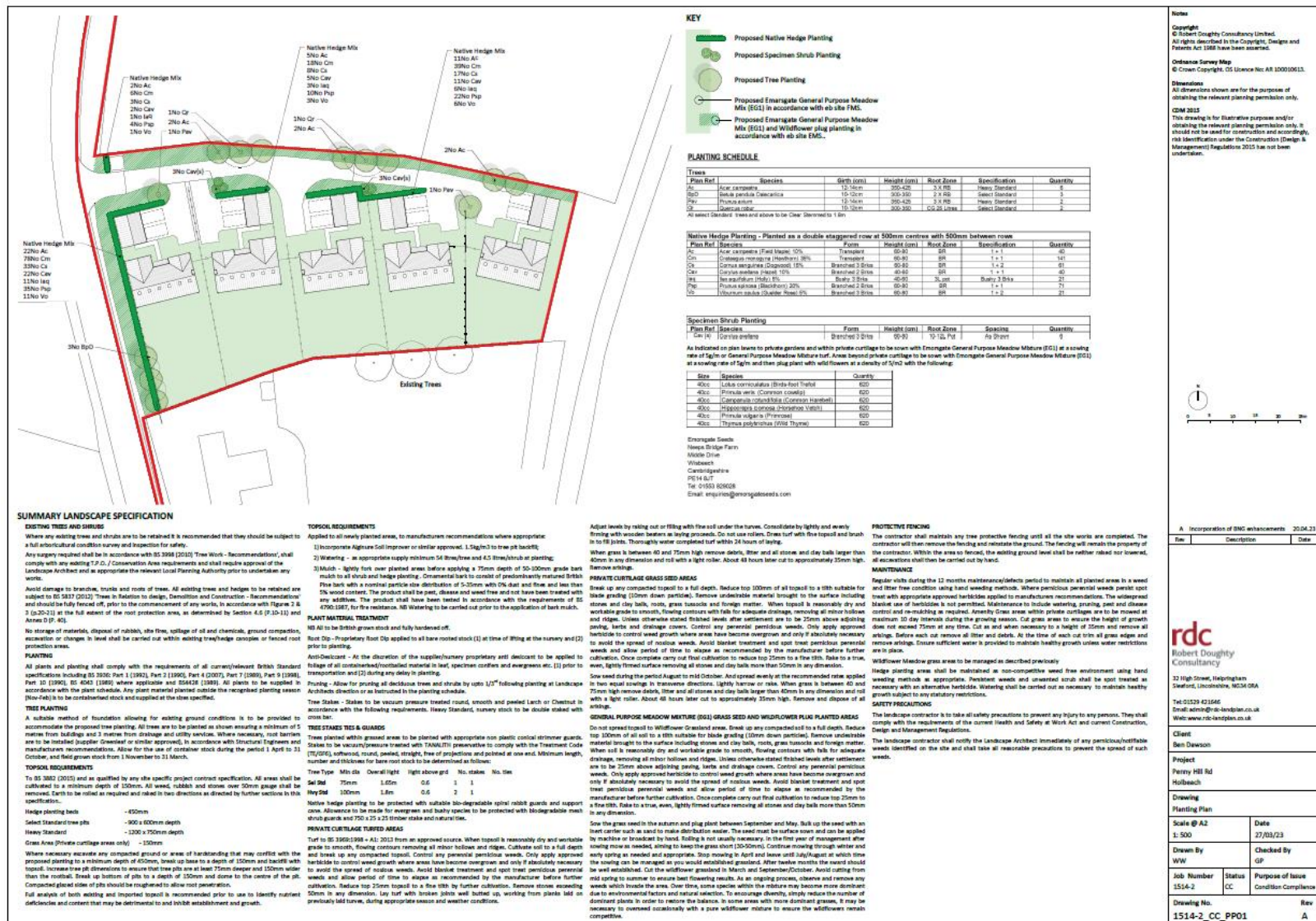




Figure 6. Proposed landscaping plan



2. Survey Methods

An Extended Habitat survey of the site was undertaken on 23rd February 2023 by Justin Parry BSc (Hons). The survey was undertaken in dry conditions with an air temperature of 6°C, 100% cloud cover and winds estimated at 1 on the Beaufort Wind Force Scale. Habitats were classified using the UK Habitat (UKhab) methodology¹, with the methods 'extended' to include a general evaluation of potential habitats for any protected or valued species. Photographs were taken to record key features/views.

Only habitats on the landholding were available to survey. Habitats outside of the landholding were appraised as far as possible by viewing from the landholding, public footpaths and roads, as well as by using publicly accessible aerial photographs.

¹ <https://ukhab.org/>

3. Description of Ecological Baseline

3.1 Extended UK Habitats

A UKHab map is provided in Figure 7, below. Photos are provided in Appendix A.

The proposed development site is an approximately 0.4 hectare (ha) modified grassland field currently grazed by horses (Photos 1-3). The ground is heavily poached and the grass sward consists of commonly sown grasses such as perennial rye-grass *Lolium perenne*, cock's-foot *Dactylis glomerata*, annual meadow-grass *Poa annua* and a low diversity of forbs including common nettle *Urtica dioica*, creeping buttercup *Ranunculus repens*, common mouse-ear *Cerastium fontanum* and dandelion *Taraxacum* agg. The site is enclosed by close-board fencing except for the southern boundary which consists of a metal paling fence. There are three broadleaved trees situated in the adjacent property near to this fence.

In the south-west, there is an unenclosed area comprising laid gravel (UKHab classification: *Artificial unvegetated, unsealed surface*) with a pile of additional gravel/asphalt on top (Photo 4-6). There is a smaller area of *ruderal/ephemeral* habitat with a sand pathway here as well. Species recorded within the *ruderal/ephemeral* habitat include annual meadow-grass, common nettle, broadleaved dock *Rumex obtusifolius*, red dead-nettle *Lamium purpureum*, bittercress *Cardamine* sp. and common whitlowgrass *Erophila verna* agg. (Photo 7).

No signs of protected or valued species were recorded during the survey.

3.2 Protected & Valued Species Potential

The site is suboptimal for most protected and valued species including roosting bats, great crested newts, badgers, reptiles, hedgehogs and common toads due to the overall lack of suitable habitat, the on-site disturbance from livestock and because of the site's ecological isolation (e.g. there are no hedgerows connecting the site to important habitats in the wider landscape). It is likely that low numbers of common species of birds and bats will pass over the site whilst foraging or commuting. There is a large drain to the east of the site, but this is situated approximately 15m away from the proposed development boundary and therefore there is limited potential for riparian mammals, such as water vole, to occur on site.

3.3 Survey Constraints

The Extended UKHab survey experienced no significant constraints.

Figure 7. UK Habitats on site



4. Ecology Management Scheme

4.1 Ecological Constraints & Opportunities

4.1.1 Ecological Constraints

In terms of baseline constraints to the existing ecological value of the site, the levels of nutrient enrichment and livestock disturbance - as evidenced by the existing poached modified grassland - and the site's low ecological connectivity are the two main factors which limit what can be achieved on site for biodiversity. Additionally, human disturbance is likely to intensify post-development. With the proposed plans as they stand, intra-habitat connectivity may increase in some areas from the baseline though inter-habitat connectivity will remain relatively low due to the site's location.

There are considered to be no baseline constraints which would constrain the design of future ecological enhancements, such as trees or hedgerows to retain.

4.1.2 Ecological Opportunities

Given the site is ecologically uniform, there is scope to increase the diversity of habitats on site and to enhance the value of some areas of the modified grassland as a resource for pollinators. Furthermore, the new dwellings offer an opportunity to enhance the site for specific species groups such as birds and bats which can use the built environment for nesting and roosting.

4.2 Sensitive Working Practices During Construction

4.2.1 Bats and Other Nocturnal Animals

To prevent unnecessary disturbance to foraging bats, invertebrates and other nocturnal animals during the construction phase of the proposed development, night-lighting of the site will be avoided wherever possible, or sensitively designed if essential.

The use of movement sensors such as Passive Infra-Red (PIR) sensors installed on lights will ensure that they come on only when needed and avoid unnecessary constant illumination. PIR sensors should be set for a maximum illumination period of one minute. Positioning lights at angles of not greater than 90° to the ground (i.e. facing directly downwards) can reduce overspill of light and sky glow, which can disrupt the nocturnal behaviours of bats and insects². Lights should be Light Emitting Diodes (LEDs) and use a warm white light (>2,700K) with peak wavelengths <550nm, to avoid the component of light most disruptive to bats (light at the blue end of the spectrum)³.

The areas proposed for hedgerow and tree planting will be kept as 'dark zones'.

4.2.2 Best Practice Measures

Avoidance measures are advised for effects which, although often not predicted to be significant, may affect valued ecological receptors in a way that would be preventable and/or a legal offence. The measures that will be applied to mitigate for potential ecological impacts are as follows:

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

³ Bats and Artificial Lighting in the UK, Guidance Note 08/18 - Institution of Lighting Professionals and Bat Conservation Trust (2018).

- Were the modified grassland left unmanaged, vegetation would begin to establish at the site which would in turn attract wildlife and increase ecological impact risks once the site came to be cleared. Therefore, the grassland will be maintained in its current condition in the period prior to construction works commencing, as this will limit its attractiveness for most wildlife.
- All building materials and waste materials will be stored above the ground, such as on pallets or in skips respectively. This measure will ensure that such materials do not provide a sheltering opportunity, attractive to invertebrates, amphibians and small mammals.
- Excavations will not be left open overnight, or else will be fitted with egress boards sloped at a shallow angle (<40°) or have shallow battered/sloped edges (also <40°) to allow any animals which fall in to climb out. Preferably all excavations will be backfilled at the end of each working day or covered overnight to prevent animals from falling in.
- In the unlikely event that a protected species is encountered at any time during the works, activities must cease and a suitably qualified ecologist contacted immediately for advice.

4.3 Habitat Enhancements

All planting will use native species as described below and set out in the landscaping plan (Figure 6). Non-native species such as Leyland cypress *Cupressus x leylandii* and cherry laurel *Prunus laurocerasus* are not to be used anywhere on site because they are of relatively low ecological value and can cause detrimental impacts such as soil acidification and excessive shading of native plants.

4.3.1 Tree Planting

The proposed landscaping plan shows a total of 13 trees will be planted across the site, mainly along the western and northern boundary. The plans show the following native/flowering species will be used:

- 6 x field maple *Acer campestre*
- 2 x pedunculate oak *Quercus robur*
- 3 x silver birch *Betula pendula* 'Dalecarlica'
- 2 x wild cherry *Prunus avium*

Root-balled or container grown trees will be sourced from a reputable bio-secure nursery, and be ready for planting between November and March, inclusive, but not when the ground is frozen. Square tree pits should be dug to twice the diameter of the roots and 1.5 times as deep as the roots, ensuring there is dug over soil at the base of the tree pit for drainage. Each tree must be given enough above ground space to reach its mature size.

Trees should be carefully lowered into the pits and the remainder of the pit filled in with fresh topsoil that is then 'heeled-in'. Care will be taken not to bury the stem under additional soil. Suitable tree guards and stakes will be installed to support the tree for 3-4 years while it establishes, as set out in the landscaping plans. A 1m diameter circle around the tree should be mulched to a depth of 50-100mm to keep out competing weeds and grasses. Immediately after planting, a generous watering is advised. Trees will then be watered daily at a rate of 50 litres per week during hot dry periods for the first five summers to reduce the risk of tree mortality.

Whilst the use of a small amount of peat free compost is acceptable to ensure tree planting is successful in the long term, at no point will industrial fertilisers be applied to the soil surrounding the planted trees. Herbicide will be used sparingly, and where hand weeding is not practicable, using a 'spot treatment' method.

Any formative pruning of trees that is required (which may be necessary to promote a strong growth form and advised by an arborist) will take place in winter, between December and early February. Any dead or dying trees or shrubs, or those in structurally unstable condition, will be removed and replaced on a like-for-like basis. **Any tree or shrub removal will take place between September and February inclusive, so as to avoid the main bird nesting season**, barring urgent removal due to health and safety reasons (i.e. if it is not possible to fence off an unsafe tree until September). Arisings will be composted in a designated area or appropriately removed off site.

4.3.2 Hedgerow

The landscaping plans show the planting of a hedgerow along the western boundary of the site as well as some shorter lengths of hedgerow along the proposed new access road further within the main site. As stated in the landscaping plan these hedgerows will have the following native species mix:

- 35% Hawthorn *Crataegus monogyna*
- 20% Blackthorn *Prunus spinosa*
- 15% Dogwood *Cornus sanguinea*
- 10% Field maple *Acer campestre*
- 10% Hazel *Corylus avellana*
- 5% Guelder rose *Viburnum opulus*
- 5% Holly *Ilex aquifolium*

Hedgerow saplings will be planted in double staggered rows with 4-6 plants per metre. Individual specimens will be at least 60cm tall at the time of planting. Bio-degradable spiral rabbit guards and a bamboo cane will be used for protection and support and will be removed once shrubs are established. Planting will take place between November and March when the ground is not frozen. The first spring after planting, the hedgerow saplings will be cut down to a height of 45-60cm to encourage a bushy growth form. Plants will also be watered regularly in the first summer.

Once established, the hedgerow will be maintained in an 'A' shape with a thicker base (at least 3m wide) and a narrower top, to improve the habitat for small mammals and birds. It will be cut at a maximum frequency of once every three years to allow berries to form on second year wood. Rotational cutting is encouraged whereby only certain sections or only one side of the hedge is cut every 2-3 years to increase structural diversity for a range of bird species. Each rotational cut will be at least 10cm wider than the last to avoid a scar knuckle forming from cutting in the same place. The hedge will be maintained at a minimum height of 3m. **Hedgerow cutting must always take place outside the main nesting bird season, which runs from 1st March to 31st August inclusive.**

4.3.3 Grassland

Garden Lawns

The lawns within the proposed private gardens, as shown in the proposed plan (Figure 3), will be sown with Emorsgate's 'General Purpose Meadow Grass Mixture EG1'⁴ or similar **native** grass seed mix. Establishment of the lawns is set out in the landscaping plans will be as follows:

- **Ground preparation:** if any vegetation is present then this will be removed or ploughed/dug into the soil so that it is buried. **The soil will not be pre-fertilised in any way as a nutrient-poor substrate is advantageous for floristic diversity.**
- **Sowing:** the seed mix will be surface sown (not buried/covered) in autumn or spring and firmed in by rolling or treading.
- **First year management (prior to occupation):** there will often be a flush of annual weeds in the first growing season; this will be controlled by regularly mowing plant growth to 40-60 millimetres (mm) and not by using herbicides. Cuttings will be appropriately removed from site or placed in a designated compost heap.

Once the dwellings are occupied, management of the lawns will pass to the private owners.

Open Green Spaces

The proposed plan shows several areas of open green space/amenity areas, for example along the verge of Penny Hill Road and along the northern boundary of the site. These areas are relatively constrained, so the sowing of a specialised wildflower meadow mixture is likely to be unsuitable. Instead, the swards will be sown with a native grass-only mixture such as Emorsgate's EG1 mix, as stated above for the private lawns, and then sown with a variety of the below native plugs/bulbs suitable for short grass (cultivars of native species will not be used):

- Bird's-foot trefoil *Lotus corniculatus*
- Common cowslip *Primula veris*
- Common harebell *Campanula rotundifolia*
- Horseshoe vetch *Hippocrepis comosa*
- Primrose *Primula vulgaris*
- Wild thyme *Thymus polytrichus*

The landscaping plans show 620 plugs for each of the above species will be planted in the designated 'wildflower areas'.

Sowing and first-year management will follow the guidelines provided for the private lawns. After the first year these amenity areas will be managed as follows:

- **Aftercare - once established:** best results will be achieved using traditional meadow management. The swards will be left unmown from late-March until August to allow species to flower. After flowering, a 'hay cut' using a strimmer or petrol mower will be taken to cut the swards to approximately 50mm. Arisings

⁴ Emorsgate (2023), 'Flowering Lawn Seed Mix'. Available at <https://wildseed.co.uk/product/mixtures/complete-mixtures/general-purpose-meadow-mixtures/basic-general-purpose-meadow-mixture/>

will be left in situ for 5-7 days to allow seed to shed and then removed from site or placed in a designated compost heap. Mowing will then continue through to late autumn/winter and again in spring, as required. Ideally, patches of uncut grass will be retained to provide a varied structure and a continuous shelter for small animals. These areas of uncut grassland will be rotated on an annual basis.

At no stage will fertilisers be applied to the open amenity grassland areas. Herbicide will be used sparingly, and where hand weeding is not practicable, using a 'spot treatment' method.

4.3.4 Shrub Planting

Six common hazel shrubs will be planted across the site as set out in the landscaping plans. Any shrub management that is necessary (e.g. formative pruning) will be done outside of the main bird nesting season which runs from 1st March - 31st August. Within the first five years, any dead or dying hazel shrubs will be removed and replaced on a like-for-like basis.

4.4 Provision & Management of Species Enhancements

4.4.1 Roosting Bats

Three '1FE Schwegler Bat Access Panel' bat boxes and two 'Integrated Eco Bat Box with Crevice Roosting Chamber' bat boxes will be installed within the fabric of the new dwellings/detached garages (one box per plot). The boxes will be integrated into the external walls of the buildings as per the manufacturer's guidelines (Figures 8-9) and will be installed in the locations shown in Figures 11-13 below.

In general, bat boxes are more likely to be used by bats if installed on the warmer aspects of buildings, such as the south, west or east sides. Additionally, installing boxes on a variety of different aspects provides a range of thermal conditions for bats to use throughout the year. Bat roost boxes will provide superior roosting opportunities if installed in close proximity to gardens and other green spaces, and away from sources of disturbance such as busy roads, parking spaces and exterior lighting.

4.4.2 Nesting Birds

Five 'Schwegler Lightweight Swift Box Type 1A' nest boxes will be installed within the fabric of the new dwellings/detached garages. This model is advised for installation as boxes intended for swifts are well used by other species of conservation concern and can be considered as an appropriate 'universal' nest chamber^{5,6}. The nest boxes will be integrated into the external walls of the new buildings as per the manufacturer's guidelines (Figure 10). The nest boxes will be installed at a minimum of 3m above ground in the locations shown in Figures 11-13 below.

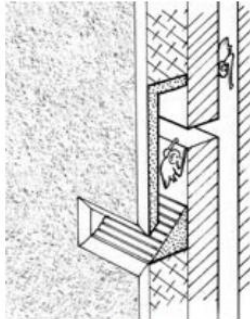
In general, nest boxes should be overlooking green spaces, and with an unobstructed flight line for easier access and egress. Boxes will not be sited directly above pathways or near exterior lighting. Bird boxes may not be used immediately after installation, and it may take several years for the birds to become habituated to the boxes and for the habitat in the immediate area to become suitable for use by the target species. For

⁵ Martins, T (2021). Duchy Report on the Big Duchy Bird Box Survey 2021.
<https://nansledan.com/duchy-nest-brick-project-boosts-endangered-wild-birds/>.

⁶ Barlow, C., Prialux, M. et al (2020). Swift Bricks - the "universal" nest brick.
<https://actionforswifts.blogspot.com/p/sln.html>.

example, house sparrows *Passer domesticus* will require nearby shrubs of a certain size and density for foraging and social behaviour.

Figure 8. '1FE Schwegler Bat Access Panel' manufacturer's specifications and installation guidelines⁷.

▲ Installation within wall

This is a maintenance-free access panel for installing in the surface of exterior walls. The open rear enables Bats to continue to use existing nesting sites in walls. Bats prefer to remain in familiar nesting places and their survival can be supported by retaining their sites within walls. The 1FE is especially suitable for use during conversions, renovations or insulation work on older types of buildings and historic buildings. Installation of multiple units is recommended.

Positioning: Its depth of just 8 cm allows easy integration into insulation or masonry. If necessary it can also be attached to the underlying structure using screws and plugs and two eyes. Install at least 3 m above the ground, ensuring unobstructed access for Bats. Suitable for: Bat species that inhabit buildings.

Attachment height: 3 m and higher. Please ensure unobstructed approach and departure.

Occupants: Building-inhabiting Bat species.

Material: SCHWEGLER wood-concrete.

External dimensions: W 30 x H 30 x D 8 cm.

Weight: approx. 5.1 kg.

Includes: Entry cover without fixing material.

Order No. 00 747/6

» OPTIONAL BACK PLATE FOR 1FE

If access to an existing nesting site is not required, the 1FE can be fitted with an optional Back Plate, which includes an attached wooden panel to create a cavity wall inside the box. The roughened surfaces of the plate, and the inside of the 1FE itself, are very attractive to Bats.

Installation of the complete box is easy: For example, it can be screwed to a wall or fixed within insulation.

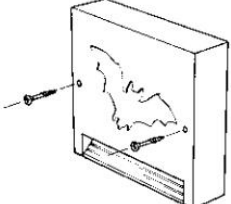
External dimensions: 1FE with Back Plate: W 30 x H 30 x D 10 cm.

Weight: 2.9 kg (Back Plate only).

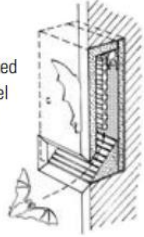
Order No. 00 748/3 Back Plate for 1FE



▲ 1FE without Back Plate



▲ Optional mounting on wall with screws



▲ Sectional view: 1FE with Back Plate



▲ Optional Back Plate for 1FE

⁷ <https://www.schwegler-natur.de/wp-content/uploads/2022/09/gbr-80-product-catalog.pdf>



Figure 9. 'Integrated Eco Bat Box with Crevice Roosting Chamber' manufacturer's specifications and installation guidelines⁸.

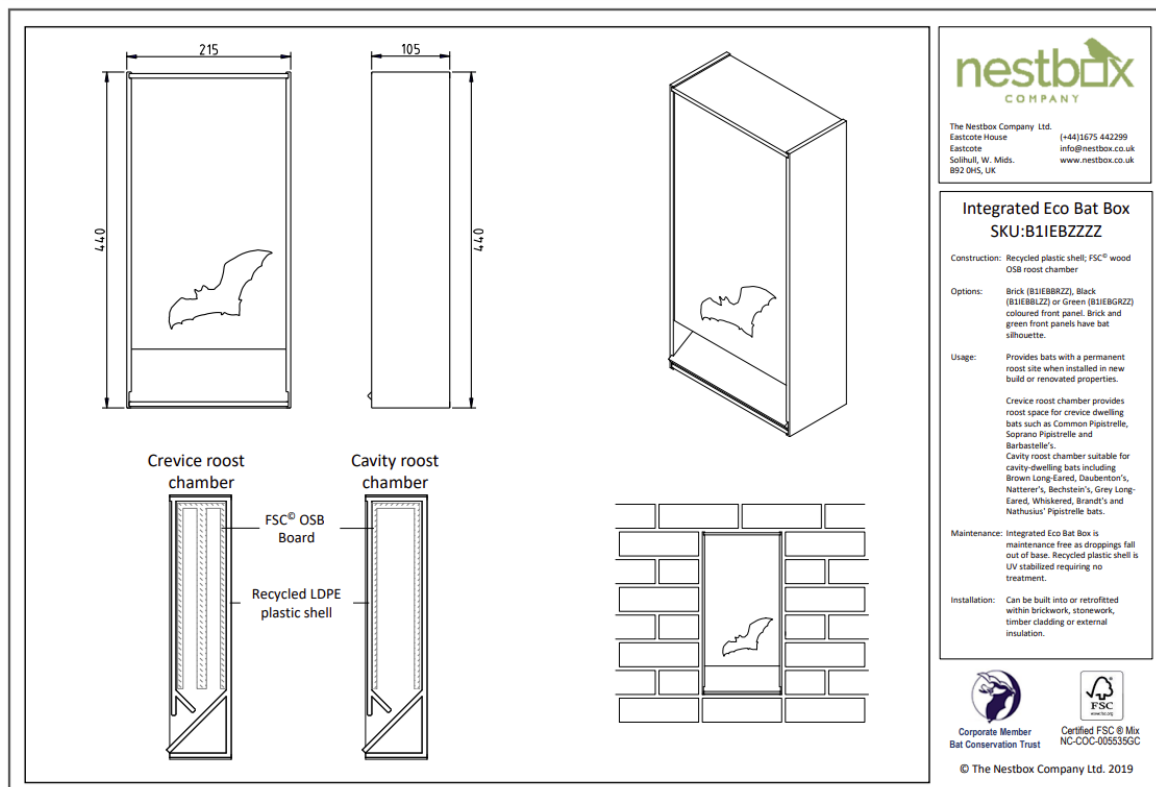
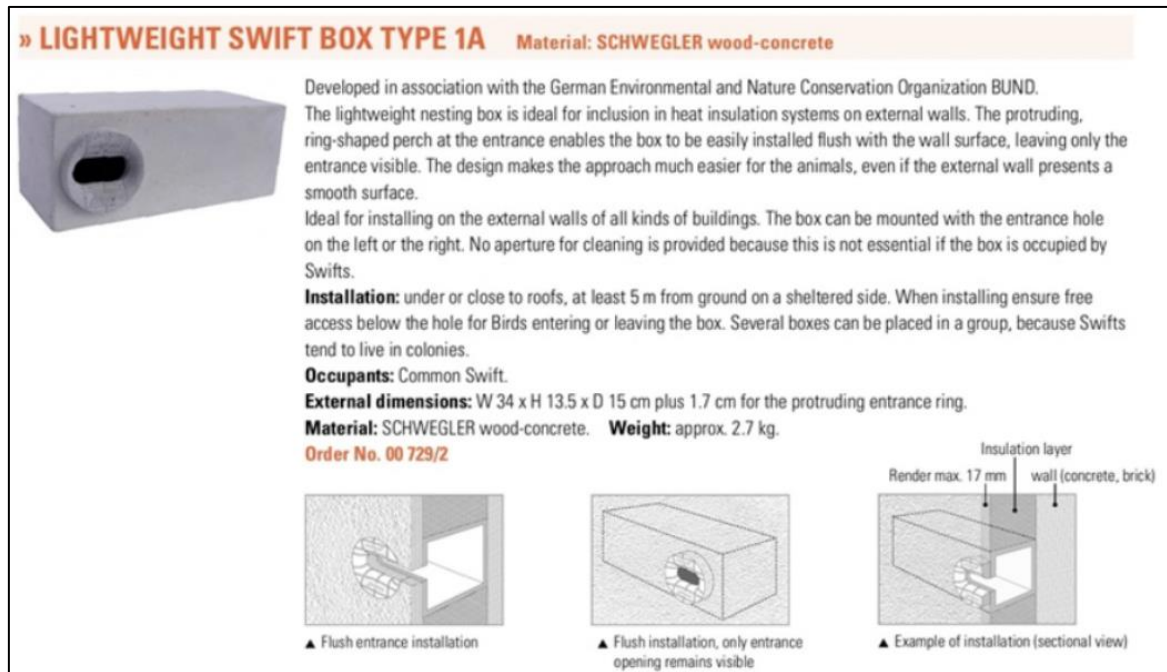


Figure 10. Schwegler Lightweight Swift Box Type 1A nest box manufacturer specifications⁹.



4.4.3 Small Terrestrial Wildlife

All internal and perimeter fences will be permeable to small terrestrial wildlife by installing suitable gaps (measuring at least 13cm x 13cm) in close-board fencing to allow animals such as hedgehogs to venture onto and around the developed site. Indicative locations for these 'hedgehog gaps' are provided in Figure 10.

⁹ <https://view.pagetiger.com/SchweglerCatalogue/issue1/page47.htm>



Figure 11. Location plan for installation of enhancement measures



Figure 12. Locations for installation of bat boxes for Plots 1, 2 and 3 and bird boxes for all plots (elevation view)

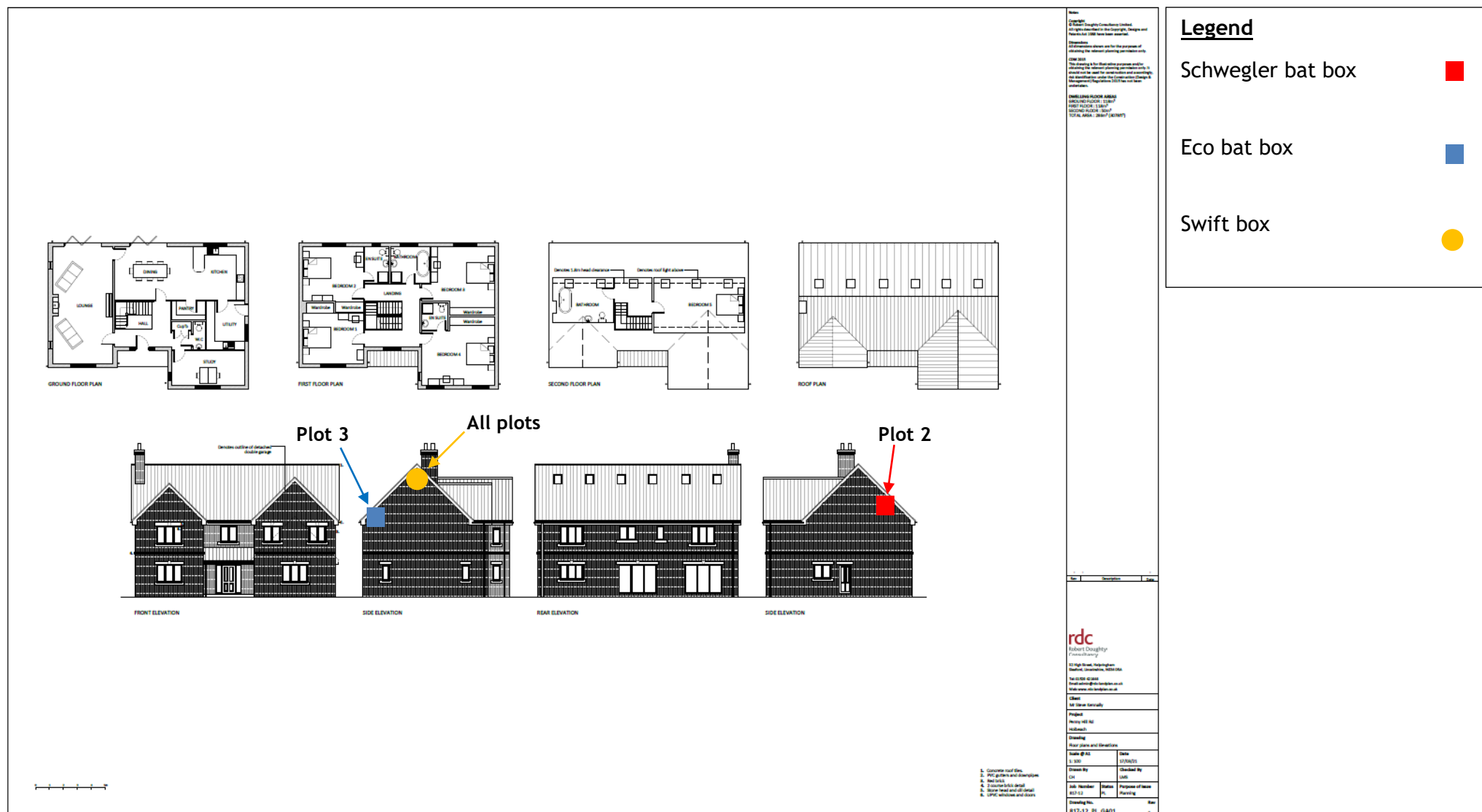
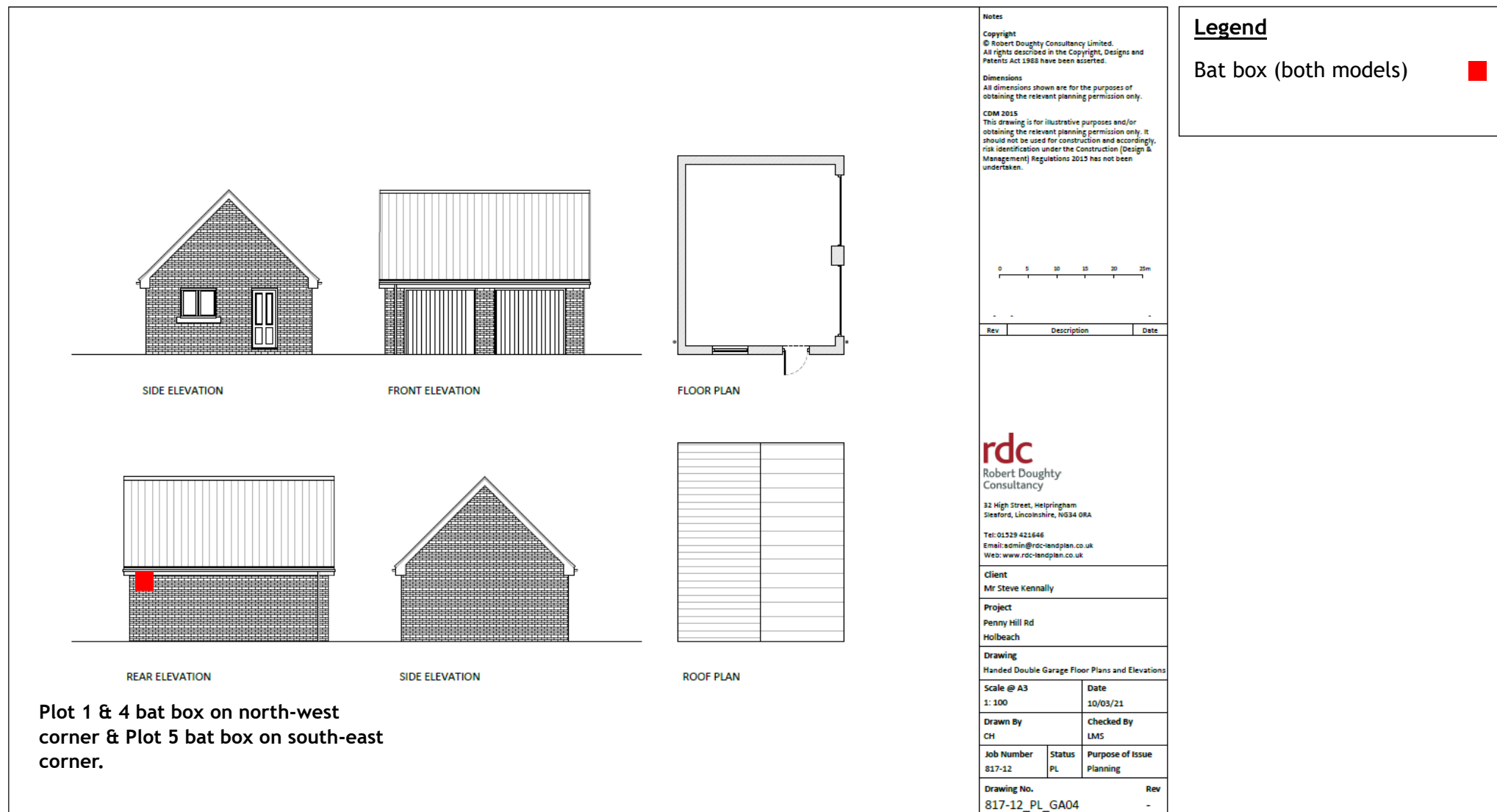




Figure 13. Locations for installation of bat boxes for Plots 1, 4 and 5 (elevation view)



4.5 Indicative 5-Year Work Schedule

The below work schedule (Table 1) covers maintenance works of relevant parts of the site which will be managed by the site owners.

4.6 Ongoing Monitoring & Remedial Measures

It is advised that the site is visited by a suitably qualified ecologist in the second and fifth year after the enhancements have been installed, to confirm they have been installed in accordance with this report. The ecologist will provide a brief report or letter following their site visit, outlining how (if at all) the ecological enhancements could be improved, or remedied (if any have not been installed correctly).

The management actions outlined above will be sufficient in ensuring the successful long-term maintenance and continuity of the ecological features on the site. Remedial measures are difficult to outline at this stage because it is not known which issues might need to be remedied. Likely issues, such as poor health or death of trees, and non-use of nest/roost boxes, are addressed above.

4.7 Legal & Funding Mechanisms

The long-term implementation of the plan will be the responsibility of the site owners.

Table 1. Five-year ecological management schedule

Habitat	Management action	Year 0 (installation)	Year 1	Year 2	Year 3	Year 4	Year 5
Trees	Planting, watering trees, adjusting supports and maintaining mulch layer.	Planting between November and March when the ground is not frozen.	Water new trees weekly during dry summer periods, where necessary.	Water trees weekly during dry summer periods, where necessary. Replenish mulch around trees to keep down weeds.	Water trees weekly during dry summer periods where necessary. Formative prune crossing/rubbing branches between December and February. Prune out any codominant leading shoots. Check ties and supports for rubbing against stem - adjust where necessary.	Water trees weekly during dry summer periods where necessary. Remove stakes and supports where trees are established.	Water trees weekly during dry summer periods where necessary. Replenish mulch around trees to keep down weeds.
Hedgerows	Planting, cutting of hedgerow to maintain 'bushiness' and correct profile and removing guards/supports when established.	Planting between November and March when the ground is not frozen.	Water hedge in hot, dry summer spells. Replace any diseased, dead, dying or badly damaged shrubs.	February - cut newly planted hedgerow down to a height of 45-60cm to encourage a bushy growth form. Replace any diseased, dead,	May be necessary - between December and early February. Cut hedge on a rotation and no more than once in every three years.	Between December and early February. Cut hedge on a rotation and no more than once in every three years.	Between December and early February. Cut hedge on a rotation and no more than once in every three years. Remove any canes

Habitat	Management action	Year 0 (installation)	Year 1	Year 2	Year 3	Year 4	Year 5
				dying or badly damaged shrubs.	Replace any diseased, dead, dying or badly damaged shrubs.		and guards. Replace any diseased, dead, dying or badly damaged shrubs.
Grasslands (Private gardens)	Sowing and management of native flowering lawns.	Ground preparation and sowing in autumn or spring. Regular mowing to 40-60mm to control annual weeds. Dig out any residual perennial weeds. Remove arisings to compost heap.	Prior to purchase: Regular mowing to 40-60mm to control annual weeds. Dig out any residual perennial weeds. Remove arisings to compost heap. No further action required upon change of ownership.	No action outlined as likely gardens will be under private management .	No action outlined as likely gardens will be under private management .	No action outlined as likely gardens will be under private management .	No action outlined as likely gardens will be under private management .
Grassland (Amenity areas)	Sowing and management of wildflower areas.	Ground preparation and sowing in autumn or spring.	No mowing in summer. First cut to be done to 50mm in August or once flowering is complete.	No mowing in summer. First cut to be done to 50mm in August or once flowering is complete.	No mowing in summer. First cut to be done to 50mm in August or once flowering is complete.	No mowing in summer. First cut to be done to 50mm in August or once flowering is complete.	No mowing in summer. First cut to be done to 50mm in August or once flowering is complete.

Habitat	Management action	Year 0 (installation)	Year 1	Year 2	Year 3	Year 4	Year 5
		Mow once in mid to late summer to 40-60mm to control annual weeds. Dig out any residual perennial weeds. Subsequent regular mowing to 40-60mm until March. Remove arisings to compost heap.	Arisings left in situ for 1-7 days and then removed to compost heap. Swards to then be kept short until Spring. Remove arisings to compost heap.	Arisings left in situ for 1-7 days and then removed to compost heap. Swards to then be kept short until Spring. Remove arisings to compost heap.	Arisings left in situ for 1-7 days and then removed to compost heap. Swards to then be kept short until Spring. Remove arisings to compost heap.	Arisings left in situ for 1-7 days and then removed to compost heap. Swards to then be kept short until Spring. Remove arisings to compost heap.	Arisings left in situ for 1-7 days and then removed to compost heap. Swards to then be kept short until Spring. Remove arisings to compost heap.
Bird & bat boxes	Check by a Suitably Qualified Ecologist (SQE) ecologist to confirm whether boxes are being used and provide suggestions on possible improvement.	Integrated bird/bat boxes installed in suitable locations on buildings.	Not necessary.	Visit by SQE between May and July.	Not necessary.	Not necessary.	Visit by SQE between May and July.
All habitats	Monitoring to be completed by a Suitably Qualified Ecologist (SQE) to confirm suitability	Not necessary.	Not necessary.	Visit by SQE between May and September.	Not necessary.	Not necessary.	Visit by SQE between May and September.

Habitat	Management action	Year 0 (installation)	Year 1	Year 2	Year 3	Year 4	Year 5
	of installed enhancements and management actions.						

Appendix A. Site Photographs

Photo 1. View of the proposed development site showing the modified grassland and the majority of the boundary features, looking east.



Photo 2. View of the metal paling fence along the southern boundary of the site.



Photo 3. View of one of the horses which is currently grazing on the site



Photo 4. View of the gravel area in the south-west of the site, looking on to Penny Hill Road.



Photo 5. View of the ‘ruderal/ephemeral’ area in the south-west of the site



Photo 6. View of the asphalt/gravel pile in the south-west of the site



Photo 7. Close-up view of the ‘ruderal/ephemeral’ habitat in the south-west

