

HOGWOOD FARM, FINCHAMPSTEAD

DETAILED ECOLOGICAL PERMEABILITY SCHEME – LAND SOUTH OF PARCEL 15 (SPORTS HUB LAND)

Prepared for CALA Homes Thames Ltd

by

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1 INTRODUCTION

1.1 Site location and summary description

1.1.1 This report describes a Detailed Ecological Permeability Scheme in relation to the Land South of Parcel 15 (Sports Hub Land) area of the development of approximately 110ha of land at Hogwood Farm, Finchampstead. The Land South of Parcel 15 (Sports Hub Land) development area comprises approximately 7.12ha of land, hereinafter referred to as 'the site'. The site centre is located by National Grid Reference SU 775 639. The study was commissioned by CALA Homes Thames Ltd in May 2024.

1.1.2 The Land South of Parcel 15 (Sports Hub Land) development parcel is located to the north-west of the village of Finchampstead, Berkshire. In general terms, it comprises part of two modified grassland fields with small areas of scrub, intersected by a track and ditch with associated scrub and scattered trees. In addition, the site includes a line of scrub and trees with a dry ditch bordering Park Lane. The Land South of Parcel 15 (Sports Hub Land) site is bordered to the south by Park Lane with fields beyond; to the east by Park Lane, industrial units, grassland fields and woodland; to the north by a construction site associated with Parcels 14 and 15; and to the west by ancient woodland and a grassland field associated with a Suitable Alternative Natural Greenspace (SANG) and farmland. The location and boundary of the site is shown in *Appendix A*.

1.1.3 The Land South of Parcel 15 (Sports Hub Land) site is part of a larger area covering a total of 110ha, hereinafter referred to as the 'wider site'. The wider site includes residential properties associated with Parcel 1 and a construction site associated with Parcel 2 in the north-west and a SANG in the south which comprises a mix of wetland, species-rich grassland, scrub and woodland habitats. In general terms, the western area of the wider site is comprised of three fields of disturbed ground dominated by short ruderal vegetation with scattered areas of tall ruderal vegetation and large spoil heaps bordered by mature trees and woodland with scrub field margins. The central and eastern areas of the wider site are comprised of areas of hardstanding and construction/disturbed ground bordered by mature treelines and woodland. Woodland shaws and copses are located in the northern, western and central areas of the wider site, including mixed, broadleaved and broadleaved plantation woodland types, some of which are included on Natural England's Inventory of Ancient Woodland. Wetland habitats within the wider site include drainage ditches and small streams associated with the field boundaries and several ponds in poor condition are located across the wider site. The wider site is bordered to the north by a construction site, the Bohunt School and the Hogwood Industrial Estate; to the east by Park Lane beyond which lie residential dwellings and park homes; to the south by Park Lane and farmland; and to the west by A327 Reading Road and Sheerlands Road beyond which lie farmland and woodland. The wider area is dominated by agricultural land interspersed with woodland and residential properties.

- 1.1.4 Further information on the extent and composition of habitats across the Land South of Parcel 15 (Sports Hub Land) site and the wider site is provided in the Phase 1 Habitat Survey and Target Notes (HDA, 2024a).

1.2 Development proposals and context

- 1.2.1 Planning permission (O/2014/2179 and 140764) was granted in January 2017 for a hybrid application. This comprises:

- Outline permission for demolition of all existing buildings on site; up to 1,500 new dwellings; employment floor space; a Neighbourhood Centre; a primary school; sports pitches and associated pavilion building; highways infrastructure; associated landscaping, public realm, open/green space and sustainable urban drainage systems; and
- Full permission for a 29.7ha Suitable Alternative Natural Greenspace (SANG) in the south of the site.

The hybrid planning permission was subsequently amended by a Section 73 application (181194) which was approved in November 2018.

- 1.2.2 Condition 28 of the planning permission states that:

“Prior to submission of any Reserved Matters application other than pertaining to the Nine Mile Ride Extension South an outline scheme to maintain or enhance the ecological permeability of the site (especially with regard to reptiles, amphibians and hedgehogs) shall be submitted to and approved in writing by the local planning authority. The mitigation and contingency measures contained within the plan shall be implemented in accordance with the approved plan unless otherwise approved in writing by the local planning authority. All Reserved Matters applications for any sub phase of the development shall include a detailed ecological permeability scheme that demonstrates how the relevant sub phases have been designed to incorporate the provisions of the outline ecological permeability scheme and the detailed mitigation strategies shall be implemented in accordance with the approved details unless otherwise approved in writing by the local planning authority.”

- 1.2.3 In accordance with the requirements of Condition 28, this document provides a Detailed Ecological Permeability Scheme for the Land South of Parcel 15 (Sports Hub Land) site. This has been produced to ensure measures to maintain the ecological permeability for wildlife are implemented within the development scheme. The measures identified are in keeping with the ‘Outline Site-wide Ecological Permeability Scheme’ prepared for the wider site and the Land South of Parcel 15 (Sports Hub Land) site in its entirety (HDA, 2018a).

2 BASELINE CONDITIONS

Designated areas

- 2.1 No statutory or non-statutory designated areas are located within the Land South of Parcel 15 (Sports Hub Land) site. An area of woodland located at its closest point approximately

15m beyond the eastern boundary of the proposed bridleway, is listed as Shepperlands Copse Local Wildlife Site (LWS) (which is also Shepperlands Farm BBOWT reserve). This 9.42ha LWS comprises mixed woodland, a heathland restoration area and two unimproved wet meadows. In addition, part of Shepperlands Copse LWS is also listed on Natural England's Inventory of Ancient Woodland. This area of ancient woodland is also located approximately 15m beyond the eastern boundary of the proposed bridleway and is called Sandpit Copse. Ancient woodland is defined as any wooded area that has been continuously wooded since at least 1600AD. Although ancient woodland is not subject to legal protection in its own right, ancient woodland habitats are regarded as irreplaceable under the 2023 National Planning Policy Framework (NPPF) and Natural England and the Forestry Commission have provided Standing Advice for ancient woodland (a material consideration in the planning process). Lowland Mixed Broadleaved Woodland is also identified as a Habitat of Principal Importance under Section 40 of the 2006 NERC Act and is therefore a material consideration in the planning process.

Habitats and existing habitat corridors

- 2.2 In general terms, the Land South of Parcel 15 (Sports Hub Land) site currently comprises part of two modified grassland fields with small areas of scrub, intersected by a track and ditch with associated scrub and scattered trees. In addition, the site includes a line of scrub and trees with a dry ditch bordering Park Lane.
- 2.3 Habitat corridors associated with the Land South of Parcel 15 (Sports Hub Land) site comprise:
- An outgrown, defunct species-rich hedgerow with trees is situated along the southern site boundary and continuing along part of the eastern site boundary, beyond which is Park Lane. Approximately 5m north of this hedgerow is a line of Pedunculate Oak trees.
 - A dry ditch with scattered scrub and trees is situated north-west to south-east through the centre of the site along the access track leading from Park Lane to agricultural buildings located with Parcels 14 and 15 within the wider site.
 - A fence line overgrown with tall grasses and ruderal vegetation. To the east of the hedgerow and fence line is an off-site industrial estate and area of grassland.
 - A fence line with scattered dense scrub. To the west of the fence line is an area of grassland with mature trees associated with the West Court SANG.
- 2.4 In general, the habitat corridors are well-connected east to west across the site, but the north to south corridors generally have poor connectivity and are limited to fence and ditch lines with some scattered scrub and trees. Further information on the extent and composition of these features is provided in the Land South of Parcel 15 (Sports Hub Land) Habitat Survey and Target Notes included as *Appendix A*.

Existing lighting

- 2.5 A lighting strategy for the Land South of Parcel 15 (Sports Hub Land) site and wider site was prepared to assess the likely effects of the proposed development on external artificial lighting levels, and includes information on the baseline lighting conditions within the site (MMA Lighting Consultancy, 2018).
- 2.6 The lighting strategy identifies that the environment surrounding the Land South of Parcel 15 (Sports Hub Land) site has 'low district brightness', categorised as an E2 Environmental Zone in accordance with the ILP Guidance (See *Table 1* below).

Table 1: Environmental Zone table

Zone	Surrounding	Lighting Environment	Examples
E0	Protected	Dark	UNESCO Starlight Reserves, IDA Dark Sky Parks
E1	Natural	Intrinsically dark	National Parks, Areas of Outstanding Natural Beauty etc.
E2	Rural	Low district brightness	Village or relatively dark outer suburban locations
E3	Suburban	Medium district brightness	Small town centres or suburban locations
E4	Urban	High district brightness	Town/city centres

Hard landscaping

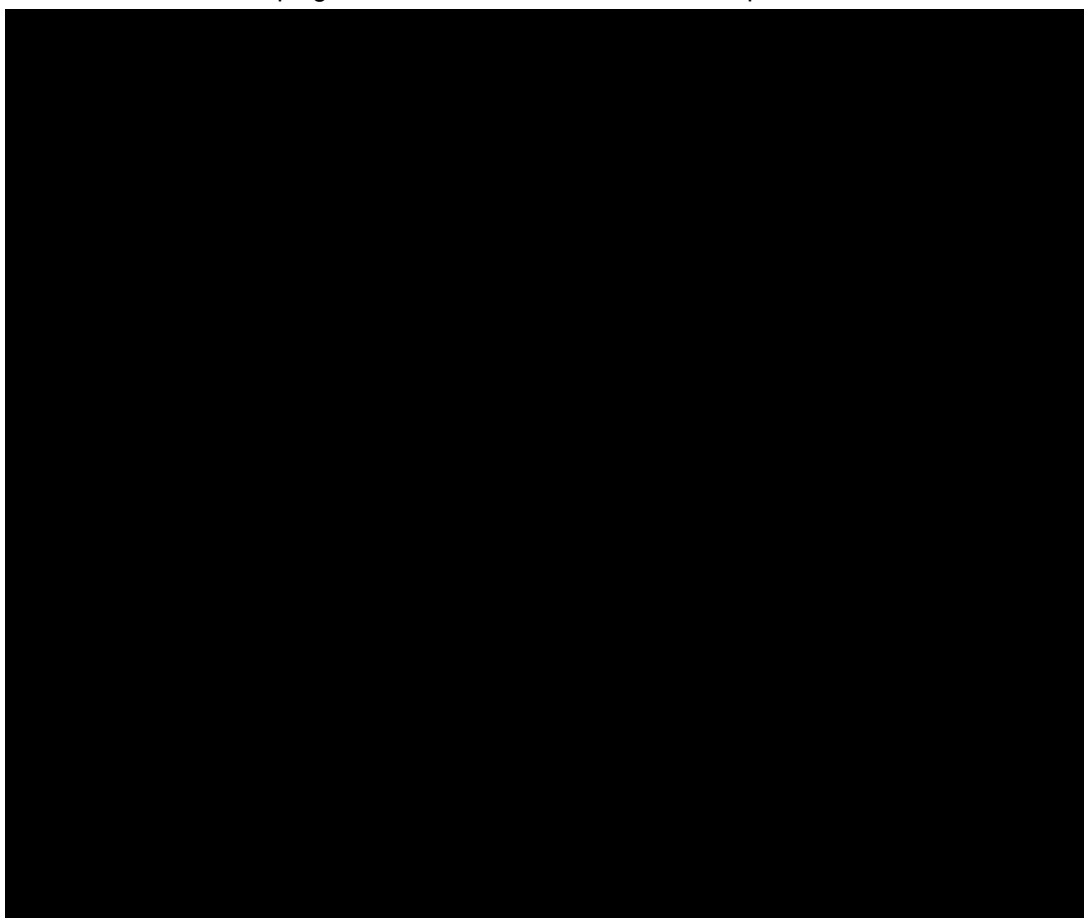
- 2.7 Hard landscaping within the site is limited to a track which runs north to south through the centre of the site from two barns located within the wider site to Park Lane. This area of hardstanding does not have kerbs or gulley pots and is subsequently unlikely to have a significant effect on the existing ecological permeability of the Land South of Parcel 15 (Sports Hub Land) site or wider site.

3 ECOLOGICAL CONTEXT

- 3.1 The proposals for the development of the Land South of Parcel 15 (Sports Hub Land) site have been informed by a number of detailed studies including an Environmental Statement (Royal Haskoning, 2014), updated field surveys in relation to protected and notable habitats and species and the lighting strategy. This work has been used to inform a scheme for the avoidance and mitigation of potential effects of development on features of nature conservation interest.
- 3.2 With regard to the ecological permeability of the proposed development, the following receptors have been identified as being potentially sensitive and form the focus of this report:
- **Foraging and commuting bats:** Although bat foraging and commuting activity has generally been found to be low, it will be necessary to maintain foraging

opportunities and commuting corridors across the Land South of Parcel 15 (Sports Hub Land) development site. This is considered in this report in addition to the Detailed Bat Mitigation Strategy (HDA, 2024b) produced for the Land South of Parcel 15 (Sports Hub Land) site in relation to Condition 24.

- **Roosting bats:** A number of trees with potential to support roosting bats are located within the site, most of which will be retained within the scheme. The Detailed Bat Mitigation Strategy produced for the Land South of Parcel 15 (Sports Hub Land) site includes the specific provision of retained, replacement and additional bat roosting features within the development phase (HDA, 2024b). These are in keeping with the measures set out in this report.



- **Reptiles:** Very low populations of Grass Snake, Slow-worm and Common Lizard have been recorded across the wider site (HDA, 2024d). However, no reptiles were recorded within the Land South of Parcel 15 (Sports Hub Land) site during the 2023 reptile survey. In addition to the measures detailed in this document, a Detailed Reptile Mitigation Strategy has been produced for the Land South of

¹ Following approval of a Natural England licence application to temporarily close four setts in the north-west of the wider site due to the proximity of the NMRE works (a main sett, the annex sett and two of the outlying setts), Stantec carried out temporary sett closures in 2020. As part of these works two replacement setts were constructed, one within the Green Corridor associated with Parcel 2 in the north-west of the wider site and one within the SANG (Stantec, 2020).

Parcel 15 (Sports Hub Land) site as required under Condition 26 of the planning consent (HDA, 2024e).

- **Amphibians:** No evidence of Great Crested Newts has been recorded at the site or its surrounds, however it is likely that other species of amphibian such as Common Frog and Common Toad are present.
- **Hedgehogs:** Hedgehogs are a generalist species, found in a wide range of rural and urban habitats in the UK and as such are likely to be present within the Land South of Parcel 15 (Sports Hub Land) site and wider site. In addition, they are a Species of Principal Importance identified under Section 41 of the 2006 NERC Act and are in decline in the UK (Wilson & Wembridge, 2018).

4 ECOLOGICAL PERMEABILITY OBJECTIVES

4.1 With regard to the baseline conditions and potentially sensitive ecological receptors described above, the following objectives for this ecological permeability scheme for the Land South of Parcel 15 (Sports Hub Land) site have been identified:

- Provide and maintain a series of habitat corridors around the site;
- Ensure the functionality of proposed habitat corridors, through sensitive lighting design; and
- Include features within areas of hard and soft landscaping to facilitate the movement of wildlife within/across the proposed development.

5 HABITAT CORRIDORS

5.1 Habitat corridors associated with the Land South of Parcel 15 (Sports Hub Land) site currently comprise a species-rich hedgerow with trees along the southern and south-eastern site boundaries and ditches/fence lines with scattered scrub and trees along the western and eastern site boundaries. Habitat corridors are generally well-connected east to west across the site, however the north to south corridors generally have poor connectivity and are limited to fence and ditch lines with some scattered scrub and trees (see *Appendix A*).

5.2 The majority of these features will be retained within the Land South of Parcel 15 (Sports Hub Land) development scheme with additional planting where appropriate as demonstrated in the Sports Hub Land Masterplan (CSA, 2024a) and the Detailed Landscape and Ecological Management Plan for Land South of Parcel 15 (Sports Hub Land) (HDA, 2024f). Key habitat corridors to be secured within the Land South of Parcel 15 (Sports Hub Land) development scheme will focus on the existing features and are shown on the plan provided in *Appendix B*. Key corridors will comprise:

- The outgrown, defunct species-rich hedgerow and Pedunculate Oak treeline associated with the southern site boundary and continuing along part of the eastern site boundary adjacent to Park Lane will be retained and enhanced

through infill planting and management. However, to construct the bridleway faceback/pruning of approximately 65m of scrub from the northern edge of the hedgerow will be required² (RPS, 2024).

- The fence line with scattered scrub associated with the western site boundary will be strengthened with approximately 260m of native species-rich scrub and woodland shrub planting which will improve the connectivity along the western site boundary.
- The dry ditch with scattered scrub and trees situated north-west to south-east through the centre of the site along the access track leading from Park Lane to the agricultural buildings (located within the wider site) will be retained and enhanced through infill planting and complemented by adjacent landscape planting including scrub, hedgerow and tree planting.

5.3 In addition to the proposed works associated with the existing habitat corridors described above, as shown on the Sport Hub Land Masterplan (CSA, 2024a) habitat connectivity will be further enhanced through hedgerow and orchard planting around the boundaries of the allotments. These works will improve habitat connectivity both east to west and north to south through the site and result in 1km of additional scrub, woodland and hedgerow planting.

5.4 The above habitat corridors will maintain and improve connections to other corridors within the wider site and wider area including hedgerows and woodland within the wider site which connect to areas of proposed public open space and the SANG.

5.5 Lighting proposals in the vicinity of habitat corridors will be subject to the sensitive design measures described in *Section 6* and where it is unavoidable that habitat corridors are crossed by access roads, measures to minimise effects on the movement of wildlife are identified in *Section 7* below.

5.6 In addition to the key habitat corridors around the Land South of Parcel 15 (Sports Hub Land) site, 'stepping stone' habitats will be provided across the Land South of Parcel 15 (Sports Hub Land) development area and within its wider green infrastructure as shown on the Sport Hub Land Masterplan (CSA, 2024a). These include:

- The creation of two SuDS basins along the southern site boundary sown with species-rich grassland mixes and bordered by hedgerow and scrub planting.
- Small pockets of open space within the development area complimented by standard tree planting along roads/footpaths.

² Identified as G100, G101 and G108 in the Tree Survey and Arboricultural Impact Assessment (RPS, 2024).

- The allotments of the proposed development are also likely to maintain connectivity across the site for some mobile species including birds and invertebrates. This is likely to be encouraged through use of the proposed orchard and Hazel tree planting along the boundaries of the allotments which includes fruiting and nut producing species benefitting groups such as birds and invertebrates.

6 LIGHTING

6.1 This section describes the strategy that the external lighting design of the Land South of Parcel 15 (Sports Hub Land) development will employ, unless otherwise agreed with Local Planning Authority, in order to achieve the objectives set out in *Section 4* above.

6.2 In accordance with the lighting design and light spill plans set out in the MMA lighting report (MMA Lighting Consultancy, 2018), a Illustrative Lighting Parameters Plan (HDA, 2018c) has been prepared that identifies Lighting Exclusion Zones and Lighting Restriction Zones. It should be noted however that at the time of preparation of the Illustrative Lighting Parameters Plan, it was understood that the Land South of Parcel 15 (Sports Hub Land) site would be designed by the council/others and subsequently lighting zones were not specified. It is proposed that the woodland/hedgerows/treelines/scrub lines along the western, southern and northern site boundaries and the scrub/treeline which bisects the site are located within Lighting Restriction Zones, with the remainder of the Land South of Parcel 15 (Sports Hub Land) site to be sensitively designed.

6.3 Lighting Restriction Zones

6.3.1 Unless otherwise agreed with the local planning authority, Lighting Restriction Zones identify areas where:

- Lighting will be avoided and lighting will be at the lowest level required for public safety; and
- Lighting Restriction Zones adjacent to retained native hedgerows will be at least 5m.

6.3.2 It is proposed that lighting in the Lighting Restriction Zones will comprise low-level bollard luminaries along footpaths/cycleway/bridleway routes. These will be approximately 1.2m in height, and will use LED bulbs with full cut-off optics to contain light on the footpath/cycleway/bridleway with negligible horizontal or vertical luminance on the opposite side of the roadway³.

³ It should be noted that on some roadways additional lighting will be required for public safety.

6.3.3 In the event that lighting is required outside of the above parameters in relation to the Land South of Parcel 15 (Sports Hub Land) development scheme, any such deviation will first be agreed with the local planning authority, and measures to minimise effects of lighting will be incorporated into the lighting design in accordance with the measures set out below.

6.4 **Lighting design**

6.4.1 Within the remainder of the Land South of Parcel 15 (Sports Hub Land) site measures to achieve a minimum level of lighting required for public amenity and safety whilst restricting horizontal or vertical light spill into non-target areas will include:

- LED lighting with a correlated 'warm' colour temperature of 4000 Kelvin, which will be lowered to 2700 Kelvin (where practical). LED light sources contain no UV wavelengths and the warmer colour temperatures reduce the light emitted beyond the 550 nanometer wavelengths. These requirements are consistent with the current research on the impact of artificial lighting on bats as published by the Bat Conservation Trust and Institution of Lighting Professionals (BCT & ILP, 2023)⁴;
- Rear spill guards will be attached to luminaires to focus light onto target areas and away from habitat corridors;
- LED luminaires are suitable for dimming. A Remote Monitoring System will be considered for lighting in sensitive locations to allow luminaires to be dimmed to an appropriate level and then dimmed back further after a late night curfew (c. 23:00) (or alternatively the luminaires will be switched off entirely when not in use); and
- Pedestrian only footpaths/cycleways/bridleways will be unlit with the exception of bollard lighting at nodal points, fitted with LED luminaires and rear spill guards/louvres/cowls, as appropriate.

6.5 **Ecological receptors**

Bats

6.5.1 The retained trees which include suitable features for roosting bats will be located in areas proposed as Lighting Restriction Zones. The five proposed tree-mounted bat boxes will also be installed in these zones (see *Section 7.3.3* below) and the remaining bat box proposed on the new pavilion will be located within an area subject to the sensitive lighting measures described in *Section 6.4.1* above.

6.5.2 Key areas of existing foraging habitats and corridors for the movement of bats will be maintained by the Lighting Restriction Zones and incorporated into the design of the Land South of Parcel 15 (Sports Hub Land) development scheme. Sensitive lighting proposals

⁴ Bats and Artificial Lighting in the UK. Available from: <https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>

within the Land South of Parcel 15 (Sports Hub Land) development area would also be expected to maintain opportunities for foraging and commuting bats in this area, and maintain connectivity between roost sites in buildings and foraging habitat in the wider site and its surrounds.

Other species

- 6.5.3 The above measures would be expected to maintain opportunities around the Land South of Parcel 15 (Sports Hub Land) development site for a variety of other nocturnal species, together with limiting effects of lighting on diurnal species associated with the retained network of semi-natural habitats provided by the site.

7 HARD AND SOFT LANDSCAPING

- 7.1 This section describes features to be included in the hard and soft landscaping proposals for the Land South of Parcel 15 (Sports Hub Land) site in order to allow small animals such as reptiles, amphibians and Hedgehogs, to safely cross the site and use all areas of the site of benefit to them. In addition, measures to be provided to increase opportunities for roosting bats and nesting birds are detailed.

7.2 Road crossing points

- 7.2.1 Facilitating the movement of wildlife across roads will involve measures to prevent animals becoming trapped in the carriageway and/or being run-over by vehicles. A number of measures will be included within the road system to: (i) reduce the likelihood of small animals entering the carriageway (avoidance measures); and (ii) if in the event that small animals do enter the road system, that they can safely exit the carriageway (protection measures). It should however be noted that the amount of carriageway within this area of the site is limited to the car park and connecting road to the pavilion (the bridleway has no proposed kerbs).

Avoidance measures

- 7.2.2 *Number of crossing points:*

The number of points at which roads and bridleways cross the habitat corridors described in *Section 5* has been kept to the minimum level required to allow effective movement of people and vehicles around the site.

- 7.2.3 *Location of crossing points:*

Where possible, the positions of roads and bridleways crossing the habitat corridors focus on locations where the habitat is of lowest ecological interest and that where possible existing pinch points and/or gaps in the existing habitats are already present. Examples of this include avoiding trees with moderate or higher potential to support roosting bats

located along the habitat corridor situated north to south through the centre of the site which will be crossed by a road.

7.2.4 *Orientation of crossing points:*

Where possible crossing points across habitat corridors described in *Section 5* approach the habitat corridor perpendicularly. This is shown in the design for the access point from the car park to the pavilion in the centre of the site. This has limited the extent of existing habitat to be lost and the extent of road within the habitat corridor.

Protection measures

7.2.5 The design of the road system includes the provision of kerbs for the car park and connecting road to the pavilion to discourage drivers from parking/driving on footpaths and adjacent landscaping. Where the provision of kerbs is required in the vicinity of habitat corridors, the following measures will be included to allow small animals to safely exit the carriageway.

7.2.6 *Dropped kerbs:*

Dropped kerbs will be provided to assist pedestrians to cross roads safely and these will also be available to allow small animals to easily exit the carriageway. In view of the limited area of the road/car park network within the Land South of Parcel 15 (Sports Hub Land) it is considered that the dropped kerbs proposed for pedestrians will also be sufficient to allow small animals to easily exit the carriageway.

7.2.7 *Wildlife kerbs and off-set gulley pots:*

Small animals, in particular amphibians, naturally follow the line of the kerb when trying to exit the carriage way until a feature such as a dropped kerb is encountered. Subsequently if a gulley pot is installed immediately adjacent to the kerb, when they reach a gully pot the animal may fall through into the gulley and be unable to escape. Wildlife kerbs (e.g. www.aco.co.uk/products/wildlife-kerb or similar) have a bypass recess in the front face allowing amphibians to safely bypass the gully pot.



(Image sourced from www.aco.co.uk)

An alternative to wildlife kerbs is locating gully pots further into the road, rather than immediately adjacent to the kerb.

In view of the proposed green spaces bordering the car park and pavilion (including the allotments and hedgerows along the bridleway), in addition to the dropped kerbs described above, wildlife kerbs, offset gully pots and gully pot ladders within gully pots (see below) will be provided across the whole of the Land South of Parcel 15 (Sports Hub Land) carriageway network to avoid entrapment in the site drainage system.

7.2.8 *Gully pot ladders:*

Amphibian gully pot ladders (e.g. www.thebhs.org/shop/the-bhs-amphibian-gully-pot-ladder or similar) will be installed within gully pots across the drainage network. These provide amphibians and small mammals with a means of escape if they become trapped within a gully pot.

7.3 **Allotment permeability**

7.3.1 To ensure the allotments are of benefit to a range of wildlife, in addition to the planting proposals described in *Section 5.5* above and shown on the Sports Hub Allotments, Landscape Proposals (CSA, 2024b), a number of measures will be included in the Land South of Parcel 15 (Sports Hub Land) development scheme to provide permeability and opportunities for roosting and nesting.

7.3.2 *Hedgehog highways:*

Hedgehogs travel around 1 mile every night through a range of habitats, including gardens and allotments. Fences and walls inhibit the movement of Hedgehogs within their territory, reducing the amount of land available to them (www.hedgehogstreet.org). The provision of fences is proposed around the allotments and sports pitches. Where possible hedgerows will be provided as these provide habitat for a range of species and do not inhibit the movement of Hedgehogs and other terrestrial animals. Where fences are proposed, holes in these potential barriers will be provided to allow the movements of Hedgehogs between the allotments (e.g. jacksons-fencing.co.uk/product/sc_667610/hedgehog-gravel-board-for-use-with-slotted-posts-1.83m-x-150-x-28mm-incl.1-x-end-packer-1-x-length-packer-jakcured or similar). These holes can be as small as 13x13cm, which are sufficient for Hedgehogs to pass through but too small for the majority of pets. The locations of the proposed Hedgehog highway holes in the Land South of Parcel 15 (Sports Hub Land) site are indicated in *Appendix B*. In order to ensure these holes are not blocked by allotment users and to raise awareness of the issue, holes will be marked with signs to inform allotment users on the reason for their presence:



(Images sourced from www.hedgehogstreet.org)

7.3.3 *Bird and bat boxes:*

The inclusion of bat and bird roosting opportunities on new buildings and mature trees will enhance roosting/nesting opportunities for bats and birds within the Land South of Parcel 15 (Sports Hub Land) site and improve the permeability of the site for these species. CALA Homes Thames Ltd have an 'Urban Wildlife Strategy' in place for all their new developments. As part of this strategy CALA Homes Thames Ltd will incorporate at least one bat roosting feature and one Swift nesting features within each house and apartment block. Although no houses or apartment blocks are proposed as part of the Sports Pitches and Allotments development, bat roosting features and bird nesting features will be provided on the proposed pavilion and retained trees. The location of these features is shown in *Appendix B*.

Bird boxes:

A total of 6 bird nesting features will be included within the Land South of Parcel 15 (Sports Hub Land) site located within a range of habitats, using different types of boxes suitable for a range of bird species. These will comprise:

One bird box will be attached/ incorporated to the wall of the new pavilion. This will comprise either:	
Manthorpe Swift nesting brick: Designed for Swifts, which inhabit cracks and crevices. Swift boxes have been selected as they are considered to support nesting features for a wide range of bird species. 	Woodstone Swift nesting box: Designed for Swifts, which inhabit cracks and crevices. Swift boxes have been selected as they are considered to support nesting features for a wide range of bird species. 
A total of 5 bird boxes will be attached to existing retained trees:	
2x Vivara Pro Seville WoodStone Nest Box with 32mm Oval Hole (or similar): Favoured by Blue Tits, Tree Sparrows, Great Tits, Crested Tits, Nuthatches, Coal Tits and Pied Flycatchers. 	3x Vivara Pro Barcelona WoodStone Open Nest Box (or similar): Favoured by Wrens, Robins, Spotted Flycatchers, Pied Wagtails, Grey Wagtails, Song Thrushes and Blackbirds as well as offering protection from woodpeckers, squirrels and cats. 

(Images sourced from nhbs.com, www.manthorpebp.co.uk).

Bat boxes:

A total of 6 bat roosting features will be included within the Land South of Parcel 15 (Sports Hub Land) site located within a range of habitats, using different types of boxes suitable for a range of bat species. These will comprise:

One bat roosting feature will be included on the new pavilion. Bat roosting features have been selected that require no maintenance or cleaning. These will comprise either:	
Ibstock bat box type B: Designed specifically for Pipistrelle bats with several roosting zones being present within the box. Maintenance free with entrance at the base. 	Wildcare soffit bat box: Designed with two roost chambers with different properties, providing hanging areas which differ spatially and climatically: 

Ibstock bat box type C: Designed specifically for Pipistrelle bats with several roosting zones being present within the box. Maintenance free with entrance at the base. 	Beaumaris Woodstone Bat Box: Designed with a single narrow cavity, which makes it suitable for crevice roosting bats such as the Common Pipistrelle, Soprano Pipistrelle, Nathusius' Pipistrelle, Brandt's bat and Whiskered Bat. The interior of the box has a rough surface for bats to cling to. 
A total of 5 bat roosting features will be included on mature trees:	
3 x Greenwood's Ecohabitats Two Crevice Bat Boxes (or similar): Designed for small groups of crevice dwelling bat species, such as Common and Soprano Pipistrelles. 	2 x Greenwood's Ecohabitats Medium Hollow Bat Boxes (or similar): Designed for larger groups of bats who prefer a wider cavity, such as Brown Long-eared bat, Noctule and <i>Myotis</i> sp. 

(Images sourced from ibstockbrick.co.uk, wildcare.co.uk, vivarapro.co.uk and greenwoodsecohabitats.co.uk).

8 CONCLUSION

8.1 Through implementation of these safeguarding measures and the prescriptions detailed above, it is considered that the ecological permeability objectives for the Land South of Parcel 15 (Sports Hub Land) site will be achieved and secured in the long-term, thereby maintaining opportunities for wildlife to move around and within the site, the wider site and the surrounding countryside throughout the operational phase of the proposed development.

9 REFERENCES

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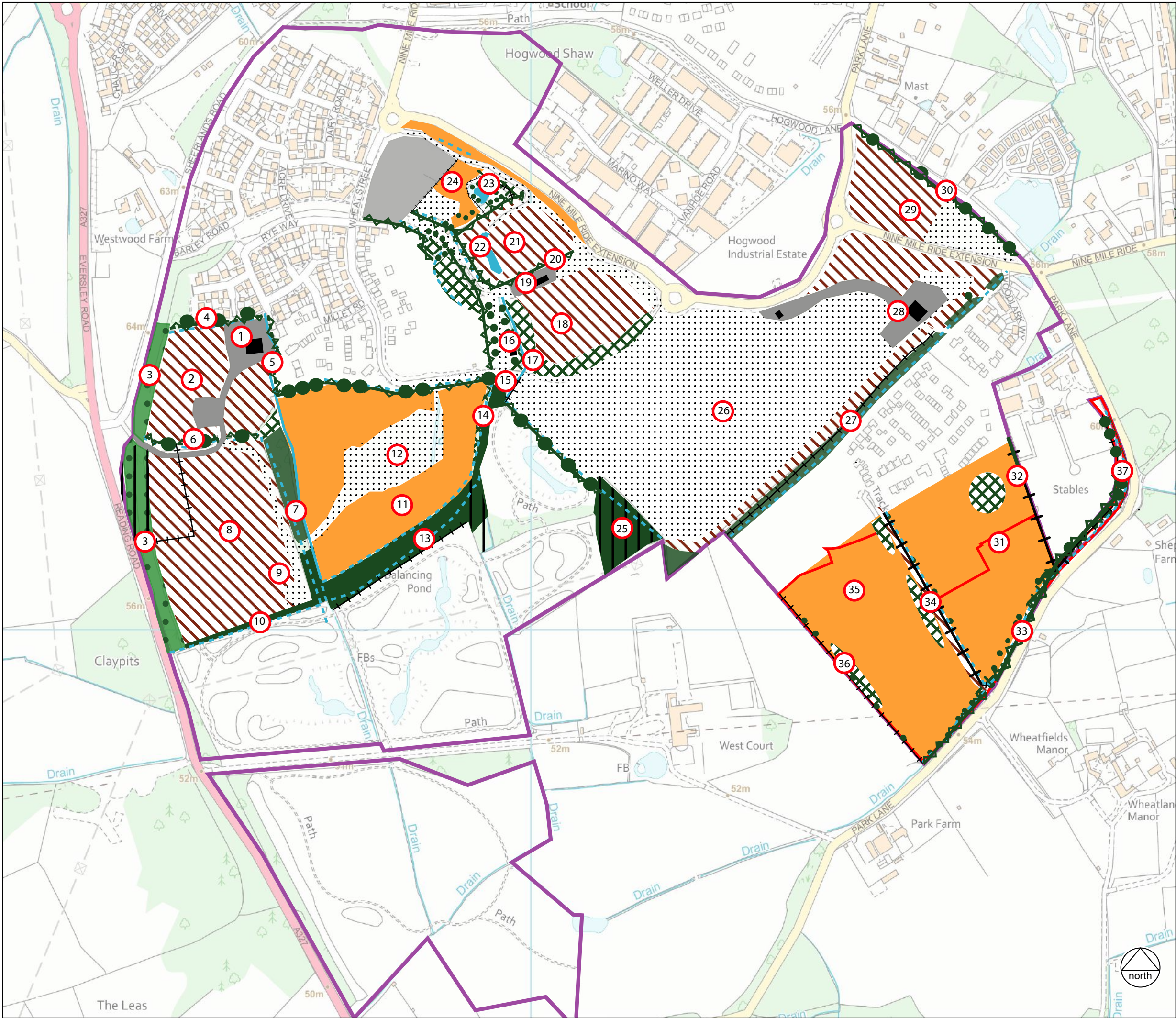
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APPENDIX A

Existing Habitat Connectivity



- KEY**
- Land South of Parcel 15 (Sports Hub Land) site boundary
 - Wider site boundary
 - Lowland mixed deciduous woodland (w1f)
 - Other woodland - mixed - mainly broadleaved (w1h5)
 - Other woodland - mixed - mainly broadleaved (w1h5)
 - Scattered trees
 - Native hedgerow (h2a)
 - Non-native and ornamental hedgerow (h3b)
 - Mixed scrub (h3h)
 - Ruderal (81)
 - Modified grassland (g4)
 - Standing open water (r1)
 - Wet ditch / dry ditch (50)
 - Fence
 - Building
 - Developed land - sealed surface (u1b)
 - Target Notes

CLIENT:
CALA Homes (Thames) Ltd
PROJECT:
Hogwood Farm, Finchampstead
TITLE:
Phase 1 Habitat Survey Plan - Land South of Parcel 15 (Sports Hub Land)
SCALE AT A3:
NTS
DATE:
November 2024
868.1/103

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Target Notes – Arborfield

1. Site yard comprised a hardstanding area with mobile cabins.
2. Relatively sparse ruderal vegetation dominated by Common Nettle *Urtica dioica*, Spear Thistle *Cirsium vulgare*, Common Ragwort *Senecio jacobaea*, Bristly Oxtongue *Helminthotheca echinoides* and Common Dandelion *Taraxacum officinale*. Small areas of scattered bare ground/ recently disturbed ground are present. Field margins vary between 1 – 5m and are more densely vegetation with the above species with the inclusion of Annual Meadow Grass *Poa annua*, Red Fescue *Festuca rubra*, Cleavers *Galium aparine*, Broad-leaved Dock *Rumex obtusifolius*, Cut Leaved Cranes Bill *Geranium dissectum*, Field Forget-me-not *Geranium dissectum* and Scarlett Pimpernel *Anagallis arvensis*.
3. Mixed woodland along the western boundary with species including Ash *Fraxinus excelsior*, Larch *Larix decidua*, Scots Pine *Pinus sylvestris*, Beech *Fagus sylvatica*, Pedunculate Oak *Quercus robur* and Black Poplar *Populus nigra*. Some of the trees are mature and have suitable bat roosting features. The understorey is comprised of Elder *Sambucus nigra*, Hawthorn *Crataegus monogyna*, Holly *Ilex aquifolium*, Willow *Salix* Sp. and Hazel *Corylus avellana*. The ground layer is dominated by Bramble *Rubus fruticosus* and Common Nettle with Bracken *Pteridium aquilinum*, Ground Ivy *Glechoma hederacea*, Cleavers, Wood Avens *Geum urbanum*, Herb Robert *Geranium robertianum*, White Bryony *Bryonia dioica* and Black Bindweed *Fallopia convolvulus*. Part of the southern area of this woodland is listed on Natural England's Ancient Woodland Inventory; this area is especially dominated by Larch and other introduced coniferous species.
4. Native defunct hedgerow with trees comprising a hedgerow of Field Maple *Acer campestre*, Hazel, Blackthorn *Prunus spinosa* and Ash, with Ash and Oak mature trees and a dry ditch below.
5. Newly created culvert with a small area of standing water.
6. Treeline of mature Ash and Pedunculate Oak trees with relic species rich hedgerow of Hazel, Holly, Field Maple, Hawthorn and Blackthorn. Some of the mature trees have the potential to support roosting bats. The ground layer vegetation is sparse and mostly comprised of Bramble with occasional Cowslip *Primula veris* and Creeping Thistle *Cirsium arvense*.
7. Lowland mixed deciduous woodland comprised of Pedunculate Oak and coppiced Ash with Wild Cherry *Prunus avium*, Field Maple, Hazel, Hawthorn and Blackthorn. Mature trees are present, some of which have features of bat roosting potential. The ground layer includes Bramble, Cow Parsley *Anthriscus sylvestris*, Ground Ivy, Germander Speedwell *Anthriscus sylvestris*, Common Sorrel *Rumex acetosa* and Lords-and-ladies *Arum maculatum*. A dry ditch is present along the western boundary of the parcel and a ditch that was wet at the time of the survey along the eastern boundary.
8. A field of ruderal vegetation of varying height from 10cm to 50cm in height dominated by Spear Thistle, Common Nettle and Perennial Ryegrass and White Clover *Trifolium repens* with the occasional Creeping Buttercup *Ranunculus repens*, Common

Hogweed *Heracleum sphondylium*, Ragwort and Broad Leaved Dock and Cleavers. Small areas within the parcel are sparsely vegetated with areas of bare ground with occasional ruderal species mentioned above but include Scarlett Pimpernel and Bird Foot Trefoil *Lotus corniculatus*.

9. A small depression of bare ground that had standing water at the time of the survey with occasional Yellow Flag Iris present.
10. Plantation lowland mixed deciduous woodland comprised of White Poplar, Pedunculate Oak, Ash and Field Maple. Mature trees are present, some of which have features of bat roosting potential. Understorey comprised of Holly, Dog Rose *Rosa canina*, Common Nettle, Cow Parsley, Cleavers, Curled Dock *Rumex crispus*, Bramble and Ground Ivy. A dry ditch is present along the boundary along the southern boundary of the wooded strip.
11. Species poor modified grassland of varying sward length between 5cm – 40cm comprised of Perennial Ryegrass, Cocksfoot *Dactylis glomerata*, White Clover, Oxeye Daisy *Leucanthemum vulgare*, Creeping Buttercup with occasional Broad Leaved Dock, Dandelion and Scarlett Pimpernel. Field margins are approximately 4-6m wide and are comprised of Common Nettle, Spear Thistle, Common Vetch *Vicia sativa* and Cow Parsley.
12. Area of bare ground used for storage of construction materials.
13. Lowland mixed deciduous woodland comprised of Pedunculate Oak standards and coppiced Ash with Wild Cherry *Prunus avium*, White Poplar, Field Maple, Hazel, Willow, English Elm *Ulmus procera*, Holly, Hawthorn and Blackthorn. Mature trees are present, some of which have features of bat roosting potential. The ground layer includes Bramble, Wood Avens *Geum urbanum*, Herb Robert, Common Ivy, Wood Spurge *Euphorbia amygdaloides*, Violet *Viola* sp., Greater Stitchwort *Stellaria holostea*, Common Nettle, Remote Sedge *Carex remota*, False Brome *Brachypodium sylvaticum* and Butcher's Broom *Ruscus aculeatus* present. Standing and fallen dead wood is present throughout the woodland area. The woodland becomes increasingly wet to the west where Willow becomes dominant and dry ditches border most of the woodland edges, a further dry ditch running centrally through the southern area of woodland is also present. The eastern area of this woodland is listed on Natural England's Ancient Woodland Inventory; here the dominant tree species is White Poplar in the south and Pedunculate Oak in the north. This area is demarcated in its western boundary by a small woodbank.
14. Mixed Scrub comprised of Bramble, Blackthorn, Dog Rose and Pendulate Oak samplings over a dry ditch.
-
16. A wooden bat barn set between treelines of Pendulate Oak, Ash and Hazel.
17. Mixed scrub comprised of Bramble, Elder and Holly with large amounts of deadwood above a steep-sided wet ditch. Towards the eastern end of the scrub parcel, Elder becomes the dominant species with the inclusion of ruderals in the ground layer including Common Nettle, Spear Thistle, Cleaver and Broad Leaved Dock.

18. Ruderal vegetation comprised of Perennial Rye Grass, Spear Thistle, Common poppy *Papaver rhoeas*, Cocks Foot, Rosebay Willowherb *Chamerion angustifolium*, Annual Sow Thistle *Sonchus oleraceus*, Common Nettle, and Curled Dock.
19. Listed building with multiple features with bat roost potential including lifted roof tiles and cracks in the brickwork. Situated on an area of concrete hardstanding. Surrounded by scaffolding at the time of the survey.
20. Species-rich native hedgerow comprised of Hawthorn, Hazel, Blackthorn, English Elm and Ash.
21. Ruderal vegetation similar to TN 20 with the inclusion of Oxeye Daisy at high densities and occasional Red Campion *Silene dioica*.
22. A SUDS pond within a parcel of ruderal vegetation described in TN21. Sloping earth banks with occasional Pendulous Sedge *Carex pendula*.
23. A shaded pond approximately 30cm in depth. Tussocks of Pendulous Sedge and patches of encroaching Bramble, Willow, Pedunculate Oak and Alder, border the edge of the pond. The pond area is enclosed by a chicken-wire fence.
24. Modified grassland with a short sward length of approximately 20cm in length comprised of Perennial Rye Grass, Cocks Foot, Red Fescue, Meadow Buttercup, Broadleaved Dock and Dandelion.
25. Lowland mixed deciduous woodland. Dominant species within the woodland include Ash, Pedunculate Oak and Alder with a Hawthorn and Field Maple understorey. The ground layer includes Bramble, Wood Aven, Herb Robert, Ground Ivy, and Hairy Brome *Bromopsis ramosa*. There are fallen wood and dead-wood piles throughout the woodland area and multiple trees with possible bat roosting potential. The woodland, in part, is listed on Natural England's Ancient Woodland Inventory.
26. Large parcel of bare ground with large spoil heaps. During the time of the survey, excavators were topping soil within the parcel. Field margins were sparsely vegetated with ruderal species including Bramble, Curly Dock, Spear Thistle, Ragwort and Common Nettle.
27. Lowland mixed deciduous woodland. A thin strip of broadleaved woodland plantation behind this comprised of Ash, Lombardy Poplar, Field Maple, White Willow, Grey Willow, Dogwood, Hazel, Hawthorn, Blackthorn and Bramble with Common Ivy and Cleavers dominating the ground layer. Some of the trees have features of possible bat roosting potential. A ditch that had small pools of standing water is present along the southern side of the wooded strip.
28. Site compound on hardstanding area.
29. Short ruderal vegetation within the northern end of the parcel similar in species composition to TN18 with the inclusion of Ribwort Plantain *Plantago lanceolata*, Timothy *Phleum pratense*, Musk Mallow *Malva moschata* and Bristly Oxtongue. Bare ground is present across the southern area of the parcel with small field margins

approximately 1m in width comprised of similar short ruderal species as the northern area.

30. A dense, intact, species-rich native hedgerow with trees comprising Pedunculate Oak, Beech, Ash, Goat Willow *Salix caprea*, Black Poplar *Populus nigra*, Field Maple, Dogwood, Hazel, Holly, Bramble and Common Broom *Sarothamnus scoparius*. The hedgerow is approximately 15 years old and tree guards are present on some individual plantings with some mature trees present along the roadside, especially within the southern section of the hedgerow.
31. Modified grassland with species including Yorkshire Fog, Perennial Rye-grass, False Oat-grass *Arrhenatherum elatius*, Cock's Foot, Red Fescue, Common Bent, Creeping Buttercup, White Clover, Doves-foot Cranesbill *Geranium molle*, Common Vetch, Common Mouse-ear *Cerastium fontanum*, Scentless Mayweed *Tripleurospermum inodorum*, Creeping Thistle, Spear Thistle, Common Sorrel, Ragwort, Greater Willowherb *Epilobium hirsutum*, Cleavers, Broad-leaved Dock, Common Knapweed *Centaurea nigra*, Meadow Vetchling *Lathyrus pratensis*, Forget-me-not sp., Fleabane *Pulicaria dysenterica* and Self-Heal *Prunella vulgaris*. Along the treeline to the south, Hemp Nettle *Galeopsis tetrahit*, Lady's Thumb *Persicaria maculosa*, Scentless Mayweed, Prickly Sow-Thistle and Clustered Dock with wet flushes of Sedge and Soft Rush. There are two soil bunds/soil storage piles with tall ruderals dominated by Spear Thistle, Common Nettle, Broadleaved Dock and Smooth Hawksbeard *Crepis capillaris* with large patches of scrub within the grassland with species including Bramble, Elder, Silver Birch and Dog-rose with Common Nettle. There are also piles of deadwood near and within the scrub.
32. Non-native and ornamental species-poor hedgerow comprising Cherry Laurel *Prunus laurocerasus*, Leylandii Cypress *Cupressus x leylandii* and Elder, broken by Bramble scrub on the north-eastern edge of the grassland field (TN 31). To the south of the hedgerow, continuing along the field boundary is a wooden post and electric wire fence which is overgrown with tall grasses and ruderal vegetation.
33. An outgrown, defunct native species-rich hedgerow with trees adjacent to Park Lane, with a dry ditch below. Species within the hedgerow include Pedunculate Oak, Black Poplar, Gorse (*Ulex europaeus*), Holly, Grey Willow, Blackthorn, Bracken and Bramble. A treeline of Pedunculate Oak is present approximately 5m into the field from the hedgerow.
34. A ditch that was dry at the time of survey with scattered Bramble scrub and trees including Willow and Pedunculate Oak, some of which have possible bat roosting potential. Behind the ditch is a fence and a dirt track, used as an access route into the site. A scrub line is present along the eastern side of the track and is 1-2m wide comprised of Grey Willow, Dog Rose, Oak and Bramble scrub. Track supports ephemeral vegetation including Scentless Mayweed, Cocks Foot, Smooth Hawksbeard, Common Yarrow, Hawthorn saplings, Common Bent and Spear Thistle.
35. Modified grassland field with a similar species composition to Target Note 31, with more Bent dominant in the north and False Oatgrass and Fescue sp. dominated to the south. Occasional species include Greater Plantain, Ribwort Plantain, Greater Birds-foot Trefoil, Common Hogweed, Cleavers, Meadow Vetchling, Mouse-ear, Common Vetch, Common Fleabane, Creeping Buttercup, Red Fescue and Soft Rush.

Bramble scrub is present along many of the field boundaries, with Common Nettle also present. A wet flush is present within the west of the field and contains Common Horsetail, Common Nettle, Sow Thistle, Soft Rush and occasional Hemp Nettle.

36. Scattered semi-mature trees and scattered areas of dense scrub along fence line. Species present include Oak, Ash, Blackthorn, Dog Rose, Bramble and Common Nettle.
37. A line of scrub and trees with a dry ditch bordering Park Lane.

APPENDIX B

Species Enhancement Plan

