

ARBORFIELD GREEN, PARCEL S – PHASE 2

ECOLOGICAL STRATEGY AND MANAGEMENT PLAN

Prepared for Hicks Developments Ltd

by

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1 INTRODUCTION

1.1 Site location and summary description

1.1.1 This report describes an Ecological Strategy and Management Plan for Phase 2 of the development of approximately 0.2ha of land at Arborfield Green – Parcel S, Arborfield, Berkshire, hereinafter referred to as ‘the site’ and ‘the management area’. The site centre is located by National Grid Reference SU 76998 65743. The study was commissioned by Hicks Developments Ltd in June 2025.

1.1.2 The site is located within the wider Arborfield Green development site and comprises a previously developed area of land including demolished buildings. The north of the site is dominated by rubble and hardcore which has been colonised by ruderal species and Bramble and the south of the site is dominated by a mosaic of grassland, Bramble scrub and mature trees. The site is bordered to the west by Moat House, with Buttenshaw Avenue beyond; to the south and east by residential houses and associated gardens, with Buttenshaw Avenue beyond; and to the north by residential houses and associated gardens and Biggs Lane. The site is surrounded by the wider Arborfield Green development, beyond which lies arable fields and woodland. The location and boundary of the site are shown in *Appendix A*.

1.2 Development proposals and context

1.2.1 Planning permission (O/2014/2280) was granted in April 2015 for a hybrid application. This comprises:

- Outline permission for demolition of buildings and the phased redevelopment of Arborfield Garrison and adjoining land for: up to 2,000 new dwellings; a District centre and transport interchange; village square; Neighbourhood Centre; secondary school; primary school; public open space and sustainable urban drainage systems.
- Full permission for phased development: creation of two new areas of Suitable Alternative Natural Greenspace (SANGS); re-use of existing MoD gymnasium for sports/community uses/centre; and road improvements.

1.2.2 This Ecological Strategy and Management Plan has been prepared for Parcel S in response to Conditions 18 to 23 of the planning consent which state:

Condition 18 - Landscape and Ecological Management Plan (LEMP)

“The reserved matters for any phase of the development shall include a detailed Landscape and Ecological Management Plan. Each detailed Landscape and Ecological Management Plan shall be in accordance with the mitigation, contingency and enhancement measures contained within table 13.23 of the submitted Environmental Statement Reference AGLC/HPA/DOC/5 (AECOM, October 2014) and the submitted Arborfield Garrison – BAP (AECOM, October 2014). The detailed Landscape and Ecological Management Plans shall include all the mitigation, compensation and enhancement measures contained within table

13.23 of the submitted Environmental Statement Reference AGLC/HPA/DOC/5 (AECOM, October 2014) and shall be implemented in accordance with the approved plan unless otherwise approved in writing by the local planning authority.”

Condition 19 - Hedgerows

“The reserved matters for any phase of the development shall include a detailed hedgerow mitigation and compensation strategy. Each detailed hedgerow mitigation and compensation strategy shall be in accordance with the submitted Arborfield Garrison – Hedgerow Survey Report and Strategy (AECOM Environment, Sept 2014) and shall include.

- a. Details of any buffer zones required to protect the retained important and/or species rich hedgerows, such buffer zones to be a minimum of 5m from the Root Protection Area unless otherwise agreed in writing by the Local Planning Authority.
- b. The buffer zones required to protect the retained hedgerows should be free from any development including residential gardens.
- c. Details of measures to ensure that removal of any hedgerow does not adversely affect the ecological permeability of the site.
- d. A detailed method statement for the translocation of any important and/or species rich hedgerows to be removed as a result of the sub phase of the development, unless mitigation could be better achieved in ecological terms through new hedgerow creation.
- e. A detailed hedgerow compensation strategy to address all other significant negative impacts on the local hedgerow network as a result of the sub phase of the development.
- f. Management arrangements for the receptor site that will secure the long term future of the translocated habitats and species.

The mitigation and compensation strategy shall be implemented in accordance with the approved plan unless otherwise approved in writing by the local planning authority.”

Condition 20 - Bats

“The reserved matters for any sub phase of the development shall include a detailed bat mitigation strategy. Each detailed bat mitigation strategy shall include an appropriate detailed lighting scheme that maintains the dark corridors as set out in Figure B: Key Bat Mitigation Areas (Replacement Roosts and Retained/Enhanced Foraging and Commuting Corridors of the suitable bat foraging and commuting, of the submitted Arborfield Garrison – Bat Mitigation Strategy (AECOM Environment, Sept 2014) and should be in accordance with the submitted Arborfield Garrison – Bat Mitigation Strategy (AECOM Environment, Sept 2014). The mitigation, contingency and enhancement measures contained within the submitted Arborfield Garrison – Bat Mitigation Strategy (AECOM Environment, Sept 2014) shall be implemented in accordance with the approved plan unless otherwise approved in writing by the local planning authority.”

Condition 21 - Reptiles

“The reserved matters for any phase of the development shall include a detailed reptile mitigation strategy. Each detailed reptile mitigation strategy shall be in accordance with the reptile mitigation and contingency measures contained within the submitted Arborfield Garrison – Reptile Mitigation Strategy (AECOM Environment, Oct 2014). The mitigation strategy shall be implemented in accordance with the approved plan unless otherwise approved in writing by the local planning authority.”

Condition 22 – UK BAP Species

“The reserved matters for any phase of the development shall include a detailed scheme to maintain or enhance the ecological permeability of the site (especially with regard to reptiles, amphibians and hedgehogs). 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."

Condition 23 – Non-native Invasive Species

"The reserved matters for any phase of the development shall include a detailed non-native invasive species management plan. The detailed non-native invasive species management plan shall be in accordance with the mitigation, contingency and enhancement measures contained within the submitted Arborfield Garrison – Non-Native Invasive Species Strategy (AECOM Environment, Sept 2014). The detailed non-native invasive species management plan shall be implemented in accordance with the approved plan unless otherwise approved in writing by the local planning authority."

1.2.3 In accordance with Conditions 18 to 23, and in consideration of the limited extent and character of the Parcel S development site, this report provides a combined document to address the relevant conditions. In summary:

- *Condition 18* – This document provides a Detailed Landscape and Ecological Management Plan to maintain and enhance the habitat resource of the site, and to ensure that retained and newly created habitats are managed to maximise their value for wildlife in the long-term. These measures reflect the recommendations included in *Table 13.23* of the *Environmental Statement* (AECOM, 2014a) and the *Arborfield Garrison – BAP* (AECOM, 2014b). The extent of the site management area subject of this strategy is shown on the plan in *Appendix A*. The strategy does not cover land within private residential curtilages which will be subject to management by individual householders.
- *Condition 19* – This document provides a Hedgerow Mitigation and Compensation Strategy to ensure that opportunities currently provided by hedgerows within the site are maintained following development. These measures reflect the recommendations included in the *Arborfield Garrison – Hedgerow Survey Report and Strategy* (AECOM, 2014c).
- *Condition 20* - This document provides a Detailed Bat Mitigation Strategy to maintain and, where possible, enhance the value of the site for the local bat population. These measures reflect the recommendations included in the *Arborfield Garrison – Bat Mitigation Strategy* (AECOM, 2014d).
- *Condition 21* – This document provides a Detailed Reptile Mitigation Strategy for the site that has been produced to ensure impact avoidance, minimisation and mitigation measures for reptiles are implemented within the scheme. The measures identified are in keeping with the *Reptile Mitigation Strategy* prepared for the wider site and site in its entirety (AECOM, 2014e).
- *Condition 22* - This document provides a Detailed Ecological Permeability Scheme for the site to ensure measures to maintain the ecological permeability for wildlife are implemented within the development scheme.
- *Condition 23* – This document provides a Detailed Non-native Invasive Species Management Plan is to identify, reduce and minimise the risk of spreading invasive,

non-native plant species within the site, the wider site and the wider environment. The measures identified are in keeping with the *Non-native Invasive Species Strategy* prepared for the wider site and site in its entirety (AECOM, 2014f).

- 1.2.4 The measures described in this Ecological Strategy and Management Plan shall be implemented in full unless otherwise agreed in writing by the local planning authority.

2 BACKGROUND

Designated sites

- 2.1 No statutory or non-statutory nature conservation designations pertain to the site or adjacent land. One Oak tree (Tree 185) located beyond the western site boundary, is however included on the Woodland Trusts Ancient Tree Inventory and has been assessed as being a 'veteran' tree (SJA, 2025). Although ancient and veteran trees are not subject to legal protection in their own right, ancient and veteran trees are regarded as irreplaceable under the 2024 National Planning Policy Framework (NPPF) and Natural England, and the Forestry Commission have provided Standing Advice for ancient and veteran trees (a material consideration in the planning process).

Habitats

- 2.2 In general terms, the site currently comprises an area of rubble and hardcore in the north of the site which has been colonised by ruderal species and Bramble and the south of the site is dominated by a mosaic of grassland, Bramble scrub and mature trees. The site is bordered to the west by a future development phase which currently comprises Moat House and grassland and scattered trees, with Buttenshaw Avenue beyond; to the north by a previous development parcel now comprising residential houses and associated gardens and Biggs Lane; and to the south and east by residential houses and associated gardens, with Buttenshaw Avenue beyond. The location and boundary of the site are shown in *Appendix A*.

Species

- 2.3 In addition to an updated ecological desk study, UK Habitat Classification survey, Phase 2 Bat Roost survey, Badger survey and reptile survey undertaken by HDA in 2025 to inform this assessment, the findings of previous ecological survey work undertaken in support of the outline application for Parcel S and the wider development have been considered in preparation of this report¹.
- 2.4 A summary of key considerations for this report arising from the previous and updated protected species survey work is given below:

¹ Including the Environmental Statement *Chapter 13: Biodiversity* (AECOM, 2014a) and supplementary surveys undertaken by AECOM in 2021 and 2024 (AECOM, 2022; AECOM, 2024).

- **Bats:** The 2025 updated bat survey work identified one tree (T61) situated along the north-western site boundary, as supporting a low status, non-breeding bat roost for an individual Soprano Pipistrelle which will be lost to the proposed development². The location of this tree is shown in *Appendix B*.
- **Badgers:** During the 2025 updated Badger survey, no Badger setts or evidence of Badger activity were recorded within or adjacent to the site³. Although a previous ecology survey by AECOM of the Moat House land to the west of the Parcel S site in 2024 identified a potential Badger sett at the base of a tree, within 30m of the Parcel S site boundary (AECOM, 2024), this potential sett was re-assessed by HDA in 2025 and concluded to be in use by Rabbit and potentially Fox and not in active use by Badgers.
- **Breeding birds:** Breeding bird surveys of the site and wider site have recorded notable bird species including Swift, Red Kite, Barn Owl, Kingfisher, Cuckoo, Dunnock, Song Thrush, House Sparrow, Starling, Linnet, Reed Bunting, Bullfinch, Mallard, Kestrel, Sparrowhawk, Buzzard, Tawny Owl, Little Owl, Green Woodpecker, Great Spotted Woodpecker, Mistle Thrush, Sedge Warbler and Willow Warbler.
- **Reptiles:** Historic surveys have identified low populations of Common Lizard, Slow-worm and Grass Snake across the wider site, with the closest area subject to survey located approximately 100m to the north-east of the site undertaken by ENTEC in 2008 (AECOM, 2014e). The site-specific reptile survey undertaken by HDA in 2025 recorded no reptiles across the site (*Appendix D*).
- **Invertebrates:** No surveys for invertebrates have been undertaken of the site. In view of the small size of the site and the recently established nature of many of the habitat's present including areas of ruderal habitats, rough grassland and scrub, it is considered that the site provides limited opportunities for a range of invertebrate species, with similar and higher quality habitats widespread in the surrounding area. It is therefore highly unlikely that the site supports a notable assemblage of invertebrates in a local context.
- **Plants:** The management area is currently dominated by hardstanding, bare ground, ruderal vegetation, species-poor grassland, scrub and scattered mature trees and notable plant species or plant assemblages are unlikely to be present. Several invasive species included on Schedule 9 of the 1981 Wildlife and Countryside Act (as amended) have been recorded from the wider site and its surrounds. These include Rhododendron and Japanese Knotweed. It is an offence to release, plant or cause to grow in the wild any plant included on this schedule of

² AECOM undertook surveys of the buildings within the site for bats in 2021, which identified a Common Pipistrelle roost in a building within the site (Building 44). It is understood that the building has subsequently been demolished under licence (AECOM, 2022).

³ It should be noted that the south-eastern area of the site was inaccessible for survey in 2025 due to the presence of Heras fencing (inaccessible area shown in *Appendix C*). Measures to overcome this limitation are detailed below.

the Act. In addition, the non-native Cherry Laurel and Buddleia were noted within the wider site.

- **Other species:** The findings of the survey work carried out indicates that the site is unlikely to support Dormice, Otter, Water Voles or Great Crested Newts.

3 WILDLIFE PROTECTION

3.1 This section describes the measures to protect retained habitats and protected and notable species associated with the site during construction. Reference is also made to habitat enhancement works where appropriate, with further information provided in *Section 4: Habitat Management*.

3.2 Bats

3.2.1 A detailed bat mitigation strategy is provided below in keeping with the requirements of Condition 20. The strategy has been informed by the suite of bat surveys undertaken between 2006 to 2014 as part of the hybrid planning application, bat surveys of the Moat House to the west of the site in 2021 and bat surveys of the site undertaken by HDA in 2025 (AECOM, 2014d; AECOM, 2022; HDA, 2025).

Bats: Roosting

3.2.2 The findings of updated bat roost surveys of the site undertaken by HDA in 2025 are provided in *Appendix B* and the results are summarised below⁴:

- A low status, day roost for an individual Soprano Pipistrelle has been recorded from T61;
- Three trees (T75, T181 and T1756) have been identified as having moderate or higher potential to support roosting bats (PRF-M); and
- Four trees (Trees T78, T184, T187 and TA) have been identified as having low potential to support roosting bats (PRF-I).

3.2.3 An *Arboricultural Implication Report* (SJA, 2025) has been carried out for the site which identified several trees, hedgerows and tree groups that will require works to facilitate the proposed development. Of those features with confirmed roosts/potential to support roosting bats, the *Arboricultural Implication Report* concludes the following works are required:

- Felling of T61 with a confirmed low-status bat roost for an individual Soprano Pipistrelle; and
- Felling of TA (situated with G74) which has been identified as having low bat roost potential (PRF-I).

⁴ It is understood that the building within the site (Building 44) which supported a Common Pipistrelle bat roost has subsequently been demolished under licence (AECOM, 2022).

3.2.4 If it is not possible to retain T61, a European Protected Species (EPS) licence will be obtained from Natural England prior to the commencement of any works affecting the roost. The methodology that will be followed is summarised below with further detail provided in Section 5 of the *Bat Survey Report* included in *Appendix B*.

- To provide replacement opportunities for the individual Soprano Pipistrelle bat recorded roosting within T61, prior to felling a Greenwood's Ecohabitats 'two crevice bat box' (or similar) bat box will be installed on Tree 59 at more than 3m elevation on the western or southern aspect of the tree. The bat box will subsequently be retained on completion of development. The location of this bat box is shown in *Figure 1*.
- T61 would be felled under supervision from a licenced bat ecologist between March-May or September–October, unless works are immediately preceded by a survey to confirm absence of breeding or hibernating bats.
- Suitable features will be inspected by the licenced bat ecologist prior to felling and a cautious approach employed, particularly in the vicinity of the known roost, with key features removed by hand where appropriate.
- If any bat is encountered during these works, it would be moved by the licensed bat worker to the pre-installed bat box.

3.2.5 For works to other trees (including the felling of TA which was identified as having 'low' (PRF-I) roost potential, felling/trimming works will be carried out in accordance with the following procedure in accordance with BCT best practice guidelines (BCT, 2023):

1. In the event that future pruning or felling works are required (e.g. for reasons of health and safety) to trees with moderate or higher potential to support roosting bats (PRF– M), these will first be subject to three aerial inspection surveys between May to September, with at least two of the surveys conducted from May to August by a licensed bat worker to inspect potential roost sites for bats.
2. Trees with moderate or higher potential to support roosting bats (PRF–M), for which an exhaustive climbed inspection is not possible or practical, will instead be subject to three emergence surveys to confirm the absence of roosting bats prior to any works affecting the tree commencing.
3. Trees that are classified as having 'low' potential (PRF–I) to support roosting bats, including TA which will be lost to the proposed construction works, will be subject to a climbed inspection immediately in advance of works to confirm the absence of roosting bats prior to any works affecting the tree commencing. Trees that are unsuitable for aerial inspections and/or have not been subject to an emergence survey immediately in advance of works will be 'soft felled' under the supervision of a suitably qualified ecologist. Soft felling involves progressive removal of the tree, using ropes to gently lower sections of tree potentially supporting roosting bats to the ground for inspection by a suitably qualified ecologist. Where appropriate,

features should be left on the ground overnight before clearing to allow any bats present to escape.

- 3.2.6 In the event that a roosting bat is discovered during any of the above works to a tree not covered under an EPS licence, trimming/felling works will cease and Natural England contacted to agree an appropriate course of action. A licence may need to be applied for, and approved, before works can continue.
- 3.2.7 The integrity of retained roosting opportunities within and adjacent to the site will be conserved through the maintenance of connections to commuting and foraging habitat and sensitive use of lighting throughout the construction and operational phases (see *Section 3.2.14* below). In addition, trees not supporting roosting bats at the time of survey have potential to support bats in the future and therefore, where possible, these trees will be retained and their ability to support roosting bats maintained.
- 3.2.8 Development of the site will provide opportunities to enhance its current value for roosting bats in accordance with planning policy and the 2006 NERC Act through the provision of a range of new bat roosting features. The *Bat Mitigation Strategy* (AECOM, 2014d) specifies bat bricks to be installed on newly built buildings at a minimum density of 1 per 20 new buildings. As the development proposals comprise only 4 new dwellings, the site falls well below this requirement however to provide enhancement of roosting opportunities for bats within the site two additional bat boxes to that proposed for the loss of T61 are proposed on existing trees. These will consist of (or similar):
- 1 x Greenwoods Ecohabitats Two Crevice Bat Box (favoured by crevice dwelling species such as Common Pipistrelle, Soprano Pipistrelle); and
 - 1 x Greenwoods Ecohabitats Medium Hollow Bat Box (favoured by species preferring a wider cavity such as Brown Long-eared bats, Noctule)⁵.
- 3.2.9 The locations of these bat boxes are shown in *Figure 1*. By providing a variety of roosting opportunities, a range of roost spaces with varied microclimates will be provided by the new development, which would offer roosting opportunities for bats throughout the year and maintain and enhance the future long-term potential of the site (and wider site) to support roosting bats.

Bats: Foraging and commuting

- 3.2.10 Bat activity and foraging surveys were undertaken of the site and wider site to inform the planning application. Species/species groups recorded include Common Pipistrelle, Soprano Pipistrelle, Nathusius' Pipistrelle, Noctule, Leisler's bat, Serotine, Brown Long-

⁵ It should be noted that the bat boxes recommended require no maintenance and therefore it is not proposed that the monitoring detailed in *Section 9.3.3* of the *Bat Mitigation Strategy* (AECOM, 2014d) is undertaken.

eared bat, Natterer's bat, Daubenton's bat and *Myotis* sp. bat. Common and Soprano Pipistrelle were the most frequent species recorded, with other species/species groups recorded on an occasional/individual basis. Further to this, the only species recorded during transect surveys of the site (Transect 3) were Common Pipistrelle, Soprano Pipistrelle, Brown Long-eared bat and *Myotis* sp. bat, with regular foraging and commuting activity recorded for Common and Soprano Pipistrelle and single passes recorded for Brown Long-eared bat and *Myotis* sp. bat (AECOM, 2014d; AECOM, 2014g). Furthermore, bat emergence/re-entry surveys of the site and adjacent Moat House were undertaken in 2021, which recorded regular foraging/commuting activity by Common Pipistrelle and Soprano Pipistrelle and occasional passes by Noctule, Brown Long-eared bat, Leisler's bat and *Myotis* sp. bat (AECOM, 2022).

- 3.2.11 Several of the bat species identified foraging within the Parcel S site and wider site (Soprano Pipistrelle, Noctule and Brown Long-eared bat) are listed as Species of Principal Importance under Section 41 of the 2006 NERC Act and therefore the effects of development on foraging and commuting habitat are a material consideration in the planning process.

- 3.2.12 The development proposals indicated in *Appendix E* show the retention of the majority of trees and treelines within and bordering the site. In addition, proposals include new native hedgerow planting along parts of the northern, western and southern site boundaries. These habitat corridors connect to habitats within the wider area. The development of the site will however result in the minor loss of small areas of foraging habitat where buildings and hardstanding take the place of areas currently dominated by Bramble scrub, non-native treelines, species-poor hedgerows and grassland. It is expected however that the proposed gardens and areas of open space will provide new opportunities for roosting bats as these mature and that, in combination with retained and other newly created habitats, these will maintain opportunities for foraging and commuting bats within the Parcel S site.

- 3.2.13 The *Bat Mitigation Strategy* (AECOM, 2014d) produced for the Parcel S site and wider site includes lighting recommendations. The recommendations detail 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. External lighting will be limited to the road network and will be designed to accord with WBC specifications to ensure public safety. Within the necessary safety requirements, a plan titled *Key Bat Mitigation Areas (Replacement Roosts and Retained and Enhanced Foraging and Commuting Corridors)* (AECOM, 2014d) has been prepared that identifies 'Dark Corridors (Primary)', 'Dark Corridors (Secondary)' and 'New Potential Corridors (Tertiary)'. The site is predominantly located within a wider *Dark*

Corridor (Secondary)⁶ with the remainder of the site falling outside of any specific lighting zone⁷.

3.2.14 A lighting design has been prepared for the Parcel S site which shows that external lighting columns will be limited to the road network within the site (*Non Adoptable Street Lighting* plan [it does Lighting Ltd, 2025]). It should however be noted that the proposed road network, which will be subject to street lighting, extends into the identified Dark Corridors (Secondary) in the southern and western areas of the site. It is therefore not possible for the lighting design to fully align with the targets of the Dark Corridors (Secondary) of having Lux levels below 1 Lux and maintain the minimum level of lighting required for public amenity and safety along the road, however the measures will be implemented to reduce light levels as much as safely possible. A total of 5 lighting columns comprising AXIA 2.1 street lights are proposed. In order avoid and mitigate potential effects of lighting on bats, the lighting will be installed to the following specification:

- Luminaires will be restricted to the internal road network;
- The specified lighting will be 'Dark Sky' certified. This means that the light sources will have a maximum correlated colour temperature of 3000K which minimises disruption to nocturnal wildlife. All the external lighting proposed will use LED light sources at a maximum of 3000 Kelvin to reduce blue light component. LED light sources contain no UV wavelengths and the warmer colour temperatures reduce the light emitted beyond the 550 nanometer wavelengths;
- The light emittance will be directed down at the ground; and
- Rear louvres will be added to the optics to reduce light spill into non-target areas.

These measures 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).

⁶ The Dark Corridors (Secondary) are identified as '*commuting and foraging habitats within generally more lit and urbanised areas but still with numbers of light sensitive bats commuting through. To be maintained at low light levels but with acceptance of some appropriate urban lighting*'. Within these areas:

- Target lux levels of below 1 Lux.
- Target bat usage as commuting and foraging habitat primarily by *Pipistrellus* sp. bat and light tolerant bats but also to accommodate pre-existing use by Brown Long-eared bats within urban areas.
- Potential key constraints - Some light spill from existing and new road and adjacent buildings likely. Light modelling and design in conjunction with a suitably qualified ecologist should minimise this as far as reasonably possible.

⁷ Outside of the Dark Corridor network, lighting should be minimised wherever possible, with light spill into adjacent dark corridors avoided. Within these areas:

- Target lux levels of 14 Lux or less.
- Target bat usage as commuting, foraging roosting habitat by urban and light tolerant species such as *Pipistrellus* sp. bats. Lighting to avoid bat bricks and known roost/mitigation locations. Detailed design should avoid light spill upon adjacent dark corridors and the surrounding landscape.
- Potential key constraints - General lighting should be minimised as far as possible to encourage site use by bats. Expected minimum lighting requirements for road network, public buildings, sports pitches etc. Avoidance of light spill from these areas wherever possible.

Bats: Summary

- 3.2.15 Subject to the implementation of the measures described above, it is considered that the favourable conservation status of the local bat population would be maintained and, through long-term provision of higher quality roosting and foraging habitats, potentially enhanced. This would ensure compliance with the nature conservation objectives of the 2017 Conservation of Habitats and Species Regulations (as amended), the 2006 NERC Act and the guidance underpinning the 2024 National Planning Policy Framework.

3.3 **Badgers**

Protection measures

- 3.3.1 No Badger setts or evidence of Badger activity were recorded within or adjacent to the site. However, Badgers are known to be present in the wider area. In addition, it should be noted that it was not possible to access the south-eastern area of the site due to the presence of Heras fencing (as shown in *Appendix C*). Although no evidence of Badgers was recorded accessing the restricted area, and no evidence of Badgers was recorded within the accessible area of the site, prior to works commencing the fencing will be removed and the Parcel S site (in its entirety) will be subject to an updated Badger survey to confirm the absence of Badger setts.

- 3.3.2 As it is possible that the development area may be utilised by foraging Badgers on at least an occasional basis, any steep sided holes left open overnight during the course of construction works will be equipped with a mammal ladder (a reinforced plywood board >60cm wide set at an angle of no greater than 30° to the base of the pit) to prevent entrapment of Badgers and other wildlife, and any temporarily open pipes with a diameter over 150mm will be plugged.

Enhancement measures

- 3.3.3 Foraging opportunities for Badger will be maintained within the Parcel S site following development through retention and creation of grassland habitats and provision of native fruiting and nut-producing shrubs and trees such as Field Maple, Small Leaved-lime and Rowan within the development area. In addition, lighting will be of the minimum required for public safety and directed away from Badger foraging habitat (see *Section 3.2.14*).

3.4 **Birds**

Protection measures

- 3.4.1 Where trees, scrub and hedgerows require removal for the development this work will only be carried out outside the bird breeding season (March to August inclusive). In the event that this is not possible, these works would be supervised by a suitably qualified ecologist who will check for nesting birds prior to and during works. In the event that nesting birds

are found to be present, it will be necessary to delay works or maintain a suitable buffer around the nest until nesting is completed.

3.4.2 In addition, in order to avoid temporary effects of construction phase lighting and noise on areas of retained habitat used by breeding birds (even if they are to be lost following the bird breeding season), the following measures will be implemented:

- Clearance or construction works within and immediately adjacent to retained areas of bird nesting habitat will avoid the nesting season as far as possible; and
- Night-time illumination of retained bird nesting habitats will be avoided throughout the construction and operational phases through implementation of the measures outlined in *Section 3.2.14* above.

Enhancement measures

3.4.3 To provide new opportunities for nesting birds, a minimum of two bird boxes will be installed on retained trees within the development area. Bird boxes will be installed at more than 3m elevation on the northern or eastern aspects of retained trees. Specifically, newly installed features comprise (or similar):

- 1 x Schwegler 1B Woodcrete Nest Box (32mm hole); and
- 1 x Schwegler 2H Open Fronted Nest Box.

The locations of these bird boxes are shown in *Figure 1*.

3.4.4 In addition, management measures to enhance bird nesting and foraging opportunities, and to protect birds using the development area will include:

- Tree, scrub and hedgerow management will only be carried out outside of the bird breeding season (usually taken as March to August inclusive) unless under the supervision of a suitably qualified ecologist to check for nesting birds.
- The creation of meadow grassland, tree planting, and hedgerow habitats will provide new and enhanced nesting and foraging opportunities for a range of bird species.
- Standing deadwood will be retained wherever possible to maximise opportunities for hole nesting birds.

3.5 **Reptiles**

3.5.1 This section describes the methodology that will be employed to ensure that the development scheme accords with planning condition 21 and complements the *Arborfield Garrison – Reptile Mitigation Strategy* (AECOM, 2014e) thereby maintaining compliance with nature conservation legislation afforded to reptiles and the favourable conservation status of the local reptile population. This methodology will be employed during construction of the site unless otherwise agreed with the Local Planning Authority.

3.5.2 Although no reptiles were recorded at the Parcel S site during the updated 2025 reptile survey (see *Appendix D*), previously low numbers of low populations of Grass Snake, Slow-

worm and Common Lizard have been recorded within the wider site. On this basis it is conceivable that very low numbers of Slow-worm, Grass Snake and/or Common Lizard may be present at the site on an occasional basis.

- 3.5.3 In accordance with the *Arborfield Garrison – Reptile Mitigation Strategy* (AECOM, 2014e), as (at most) only very low numbers of Grass Snake, Slow-worm and Common Lizard are likely to be associated with the site and the small size of the site, a full translocation exercise is not proposed for development of the Parcel S site. Instead, a cautious approach to site clearance will be employed where suitable reptile habitat is to be lost, including sections of hedgerow and treelines and areas of scrub and ruderal vegetation and refuge opportunities such as rubble piles located around the site boundaries. This will involve manipulation of habitats to displace reptiles present into areas of contiguous and improved habitats, following the stages set out below:

Stage 1: Habitat enhancement works

- 3.5.4 In accordance with the outline reptile mitigation strategy for the site and wider site (AECOM, 2014e), the creation/enhancement of reptile receptor habitat focuses on the Northern SANG, West Court SANG and other areas of public open space including the Linear Park and Green Grid. Further areas of suitable reptile habitat will however be created in areas of public open space within the site. The prescriptions for creation/enhancement of reptile habitats within the Parcel S site and the management of these areas are and summarised below and described further in *Section 4: Habitat Management*:

- An area of meadow grassland with a species-rich native sward will be established along the western site boundary.
- New native hedgerows will be planted within and bordering the public open space.
- A minimum of 1 log and brash pile will be created using arisings from construction clearance works. This will be maintained by adding the arisings from ongoing site maintenance, and piles of grass clippings from the mowing regime will provide further opportunities for egg laying Grass Snakes. The location of the proposed log and brash pile is shown in *Figure 1*.

- 3.5.5 The development proposals have been designed to maintain a network of habitats suitable for the movement of wildlife, including reptiles, around the Parcel S site. As indicated in the *Landscape Masterplan (Appendix E)* this includes the maintenance of corridors of semi-natural habitat around the site boundaries. The number of crossing points across hedgerows and treelines has been minimised.

- 3.5.6 The habitat creation works within the SANG has already been carried out. Due to the very limited extent of suitable reptile habitat affected by the development works and the very low number of reptiles (if any) expected to be present, it is not considered necessary that further

habitat creation and enhancement works within the Parcel S site are implemented prior to the Stage 2 habitat manipulation works described below being commenced. Notwithstanding this, habitat enhancement works within Parcel S should be undertaken as early as possible within the development programme.

Stage 2: Habitat manipulation

3.5.7 Prior to development affecting areas of suitable reptile habitat within the site, the following habitat manipulation measures will be undertaken under an ecological watching brief by a suitably experienced ecologist in order to encourage the movement of reptiles from the site into suitable habitats in the surrounding area:

- Firstly, vegetation cover will be reduced to minimum height of 150mm. This will take place at a time of year avoiding the bird breeding season (typically between March and September inclusive) or otherwise be preceded by a check of suitable habitat for active nests immediately prior to commencement of works by a suitably qualified ecologist or appropriate other.
- Where potential for reptiles to be present remains, a minimum period of 5 days with daytime temperatures of >12°C will then be allowed to elapse prior to the second stage of vegetation clearance (see below).
- The second stage will involve clearance of all suitable vegetation to ground level (i.e. <75mm) by hand during mild temperatures (>14°C) at a suitable time of year when reptiles are likely to be active (mid-March to early October inclusive). At this time any potential hibernacula or refugia encountered will be carefully dismantled by hand. This stage of clearance will be undertaken under the supervision of a suitably qualified ecologist who will capture and relocate any reptiles encountered to areas of retained habitat on the margins of the site or pre-established habitat in the wider site (e.g. in the SANG).
- Where potential for reptiles to be present remains, a further 5 days with daytime temperatures of >12°C will then be allowed to elapse to enable any remaining reptiles to disperse from the area of works, prior to the destructive search.
- Following clearance of vegetation to ground level and removal of any refugia by hand, no suitable reptile habitat would remain and it is expected that any remaining reptiles would disperse from the area of works into adjacent habitat on their own accord.
- In order to be certain that no reptiles are present within the area of works, topsoil will then be progressively stripped from the area of works under the supervision of a suitably qualified ecologist, if required.
- In the event that the destructive search is delayed, the vegetation will be maintained at ground level until the destructive search is carried out. Similarly, following the destructive search, the land will be maintained as unsuitable for the recolonisation of reptiles prior to and throughout the proposed works.

- 3.5.8 The ongoing maintenance of the areas of public open space, including retained and newly created reptile habitat, are detailed in *Section 4* below. These will be implemented to ensure the long-term integrity of the newly created and enhanced areas of habitat for reptiles in the long-term and includes monitoring to ensure the successful establishment and continuity of habitat for reptiles.
- 3.6 **Non-native plant species**
- 3.6.1 This section details measures for the control, and avoidance of spread, of non-native invasive species in accordance with Condition 23 of planning consent.
- 3.6.2 In view of the identified presence of Cherry Laurel within the Parcel S site (*Appendix A*) and the historic presence of Rhododendron (or Cherry Laurel) and Japanese Knotweed within the wider site (AECOM, 2014f), precautionary measures are also given to prevent their spread within Parcel S and the wider site. Consideration is also given to other common and widespread invasive species commonly encountered in the wider area. A guide to the identification of key non-native invasive plant species known to be present in the site, wider site and its surrounds is provided in *Appendix G*.
- 3.6.3 The approach to works with regards to invasive species set out below has been based on current knowledge of the extent of non-native invasive plant species present within the Parcel S development site and its surrounds. Prior to development commencing however, an updated survey of the site will be undertaken at an optimal time of year (between May and August) to identify the presence, location and area covered by any non-native invasive species listed on Schedule 9 of the 1981 Wildlife and Countryside Act (as amended), not previously identified on site. If any plant species listed on Schedule 9 are identified during the update survey, the approach to works identified below will be updated if appropriate and submitted to the local planning authority.

Table 1. Biosecurity Risk Assessment

Species	Potential contamination route	Likelihood of risk	Operational Procedure
Rhododendron <i>Rhododendron ponticum</i>	Species present within wider site. Spread of species via construction machinery/movement of soil. Introduction of seed material via contaminated soil.	<i>Export/spread risk:</i> Moderate. Species is known to be present in wider site. <i>Import risk:</i> Low. If possible soil will not be imported.	Ensure contractors know what Rhododendron looks like and its identified presence in the wider site (see www.nonnativespecies.org) (see <i>Appendix G</i>). If any suspected plants are identified within the site, contact the project ecologist (HDA: 01491 838175). Plants should be hand pulled and burnt on site and/or managed by application of a glyphosate-based herbicide to the foliage during the spring or summer. If there is a requirement to import soil, the soil will be to the BS 3882:2015 standards. All construction machinery tyres/wheels and soil/vegetation carrying equipment will be cleaned prior to entering and leaving the site.
Japanese Knotweed <i>Fallopia japonica</i>	Species present within wider site. Spread of species via construction machinery/movement of soil. Introduction of seed material via contaminated soil.	<i>Export/spread risk:</i> Moderate. Species is known to be present in wider site. <i>Import risk:</i> Low. If possible soil will not be imported.	Ensure contractors know what Japanese Knotweed looks like and its identified presence in the wider area (see www.nonnativespecies.org) (see <i>Appendix G</i>). If any suspected plants are identified inform the project ecologist (HDA: 01491 838175) and refer to the Environment Agency's Japanese Knotweed Code of Practice ⁸ . If there is a requirement to import soil, the soil will be to the BS 3882:2015 standards. All construction machinery tyres/wheels and soil/vegetation carrying equipment will be cleaned prior to entering and leaving the site.
Cherry Laurel* <i>Prunus laurocerasus</i> * Note: Cherry Laurel is not currently a Schedule 9 species in England. It is however invasive and can displace native vegetation.	Species present within site. Spread of species via construction machinery/movement of soil. Introduction of seed material via contaminated soil.	<i>Export/spread risk:</i> High. Species is known to be present within the site. <i>Import risk:</i> Low. If possible soil will not be imported.	Ensure contractors know what Cherry Laurel looks like (see www.nonnativespecies.org) (see <i>Appendix G</i>). If any suspected plants are identified, contact the project ecologist (HDA: 01491 838175). These seedling plants should be hand pulled and burnt on site and/or managed by application of a glyphosate-based herbicide to the foliage during the spring or summer. If there is a requirement to import soil, the soil will be to the BS 3882:2015 standards. All construction machinery tyres/wheels and soil/vegetation carrying equipment will be cleaned prior to entering and leaving the site.

⁸ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/296930/LIT_2695_df1209.pdf

Species	Potential contamination route	Likelihood of risk	Operational Procedure
Cotoneaster sp. (Wall Cotoneaster <i>Cotoneaster horizontalis</i>, Entire-leaved Cotoneaster <i>Cotoneaster integrifolius</i>, Himalayan Cotoneaster <i>Cotoneaster simonsii</i>, Hollyberry Cotoneaster <i>Cotoneaster bullatus</i> and Small-leaved Cotoneaster <i>Cotoneaster microphyllus</i>)	Spread of species via construction machinery/movement of soil. Introduction of seed material via contaminated soil.	<i>Export/spread risk:</i> Low. Not recorded as present on site or in vicinity of site. Albeit likely to occur in the wider area. <i>Import risk:</i> Low. If possible soil will not be imported.	Ensure contractors know what the non-native invasive Cotoneasters looks like and its identified presence in the wider site (see www.nonnativespecies.org) (see <i>Appendix G</i>). If any further suspected plants are identified within the site, contact the project ecologist (HDA: 01491 838175). These seedling plants should be hand pulled and burnt on site. If there is a requirement to import soil, the soil will be to the BS 3882:2015 standards. All construction machinery tyres/wheels and soil/vegetation carrying equipment will be cleaned prior to entering and leaving the site.
Variegated Yellow Archangel <i>Lamium galeobdolon</i>	Spread of species via construction machinery/movement of soil. Introduction of seed material via contaminated soil.	<i>Export/spread risk:</i> Low. Not recorded as present on site or in vicinity of site. Albeit likely to occur in the wider area. <i>Import risk:</i> Low. If possible soil will not be imported.	Ensure contractors know what Variegated Yellow Archangel looks like and its identified presence in the wider area (see www.nonnativespecies.org). If any suspected plants are identified inform the project ecologist (HDA: 01491 838175). These should be pulled up and left to dry before the seeds set (July/August) and/or managed by application of a glyphosate-based herbicide to the foliage during the spring or summer. If there is a requirement to import soil, the soil will be to the BS 3882:2015 standards. All construction machinery tyres/wheels and soil/vegetation carrying equipment will be cleaned prior to entering and leaving the site.
Himalayan Balsam <i>Impatiens glandulifera</i>	Spread of species via construction machinery/movement of soil. Introduction of seed material via contaminated soil.	<i>Export/spread risk:</i> Low. Not recorded as present on site or in vicinity of site. Albeit likely to occur in the wider area. <i>Import risk:</i> Low. If possible soil will not be imported.	Ensure contractors know what Himalayan Balsam looks like (see www.nonnativespecies.org). If any suspected plants are identified inform the project ecologist (HDA: 01491 838175). These should be pulled up and left to dry before the seeds set (July/August) and/or managed by application of a glyphosate-based herbicide to the foliage during the spring or summer. If there is a requirement to import soil, the soil will be to the BS 3882:2015 standards. All construction machinery tyres/wheels and soil/vegetation carrying equipment will be cleaned prior to entering and leaving the site.

Species	Potential contamination route	Likelihood of risk	Operational Procedure
Virginia Creeper <i>Parthenocissus quinquefolia</i>	Spread of species via construction machinery/movement of soil. Introduction of seed material via contaminated soil.	<i>Export/spread risk:</i> Low. Not recorded as present on site or in vicinity of site. <i>Import risk:</i> Low. If possible soil will not be imported.	Ensure contractors know what Virginia Creeper looks like (see www.nonnativespecies.org). If any suspected plants are identified, contact the project ecologist (HDA: 01491 838175). These should be pulled up (using gloves as the sap in the plant can cause irritation to skin) and burnt on site and/or managed by application of a glyphosate-based herbicide to the foliage during the spring or summer. If there is a requirement to import soil, the soil will be to the BS 3882:2015 standards. All construction machinery tyres/wheels and soil/vegetation carrying equipment will be cleaned prior to entering and leaving the site.
False Acacia* <i>Robinia pseudoacacia</i> * Note: False Acacia is not currently a Schedule 9 species in England. It is however invasive and can displace native vegetation.	Spread of species via construction machinery/movement of soil. Introduction of seed material via contaminated soil.	<i>Export/spread risk:</i> Low. Not recorded as present on site or in vicinity of site. <i>Import risk:</i> Low. If possible soil will not be imported.	Ensure contractors know what False Acacia looks like (see www.nonnativespecies.org). If any suspected plants are identified, contact the project ecologist (HDA: 01491 838175). It should be noted that this plant 'suckers' from the roots and may arise some distance from the trunk of a tree. Any suckers or saplings should be managed by applications of glyphosate based herbicides to the foliage during the spring or summer. If there is a requirement to import soil, the soil will be to the BS 3882:2015 standards. All construction machinery tyres/wheels and soil/vegetation carrying equipment will be cleaned prior to entering and leaving the site.
Buddleia* <i>Buddleja davidii</i> * Note: Buddleia is not currently a Schedule 9 species in England. It is however invasive and can displace native vegetation.	Species present within wider site. Spread of species via construction machinery/movement of soil. Introduction of seed material via contaminated soil.	<i>Export/spread risk:</i> Moderate. Species is known to be present in wider site. <i>Import risk:</i> Low. If possible soil will not be imported.	Ensure contractors know what Buddleia looks like (see www.nonnativespecies.org). If any suspected plants are identified, contact the project ecologist (HDA: 01491 838175). These seedling plants should be hand pulled and burnt on site and/or managed by application of a glyphosate-based herbicide to the foliage during the spring or summer. If there is a requirement to import soil, the soil will be to the BS 3882:2015 standards. All construction machinery tyres/wheels and soil/vegetation carrying equipment will be cleaned prior to entering and leaving the site.

Species	Potential contamination route	Likelihood of risk	Operational Procedure
Garden escapes (e.g. Crocosmia and Spanish Bluebell)	Spread of species via construction machinery/movement of soil. Introduction of seed material via contaminated soil.	<i>Export/spread risk:</i> Low. None of these species are known to be present on site or in the vicinity of the site. <i>Import risk:</i> Low. If possible soil will not be imported.	If there is a requirement to import soil, the soil will be to the BS 3882:2015 standards. All construction machinery tyres/wheels and soil/vegetation carrying equipment will be cleaned prior to entering and leaving the site.

3.7 **Ecological permeability**

3.7.1 Planning Condition 22 requires the production of a detailed scheme to maintain or enhance the ecological permeability of the site. To achieve this the following measures 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.

The measures incorporated into the Parcel S scheme to achieve these measures are discussed in turn further below.

Habitat corridors (including hedgerow mitigation and compensation strategy)

3.7.2 The development proposals provided in *Appendix E* show the retention of the majority of trees and treelines within and bordering the site. In addition, proposals include new native hedgerow planting along parts of the northern, western and southern site boundaries. These habitat corridors connect to habitats within the wider site. Furthermore, the gardens of the proposed development are also likely to maintain connectivity across the site for some mobile species including birds and invertebrates.

3.7.3 Planning Condition 19 requires the preparation of a detailed hedgerow mitigation and compensation strategy. A summary is therefore given below of the extent of hedgerow loss and creation with respect to the Parcel S scheme:

Hedgerow losses:

- In total, approximately 57m of species-poor hedgerow and 22m of non-native treeline will be lost to the proposed development. This will arise from the following:
 - Treeline through central northern area of site (Target Note 3 in *Appendix A*) – Comprising an approximately 22m line of Leylandii and Sycamore (G77 in the Arboricultural Implication Report (SJA, 2025)) with an understorey of Cherry Laurel, which will be lost to proposed development.
 - Treeline through central southern area of site (Target Note 10 in *Appendix A*) – Comprising an approximately 57m outgrown defunct species-poor hedgerow (H8 in the Arboricultural Implication Report (SJA, 2025)) approximately 4m tall and 1.5m wide. Species include Hawthorn, Ash, Elm, Sycamore and Bramble, which will be lost to proposed development.

Hedgerow gains:

- In order to compensate for the loss of these sections of hedgerow and treelines from the site, planting has been included within the soft landscape proposals for the development area as described above.
- This will result in approximately 160m of native hedgerow planting within areas of public open space.
- Additional hedgerow planting (along with other linear habitats such as treelines, woodland and scrub) have been incorporated into the SANGs and have/will be incorporated into previous/future phases of the development.

3.7.4 This is in keeping with the BAP targets produced for the wider site (AECOM, 2014b), delivering the following targets/actions/aspirations:

- *Plant additional lengths of hedgerow.*
- *Eradication of all non-native woody species from hedgerows across the site.*

3.7.5 The development scheme will result in a net gain in hedgerow habitat associated with the site and aligns with the BAP hedgerow recommendations for the site and wider site. The above proposals, in combination with tree planting described below, will maintain habitat corridors across the management area and wider site.

Lighting

3.7.6 The *Bat Mitigation Strategy* (AECOM, 2014d) produced for the site and wider site includes lighting recommendations, including detailed 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. External lighting will be limited to the road network and will be designed to accord with WBC specifications to ensure public safety, whilst minimising effects on wildlife. The proposed measures to avoid adverse effects of lighting on wildlife are detailed in *Section 3.2.14* above.

Garden and residential property permeability

3.7.7 To ensure private dwellings and their gardens are of benefit to a range of wildlife, in addition to the planting proposals described above, a number of measures will be included in the development scheme to provide permeability and opportunities for roosting and nesting.

3.7.8 Hedgehogs travel around 1 mile every night through a range of habitats, including gardens. Fences and walls inhibit the movement of Hedgehogs within their territory, reducing the amount of land available to them (www.hedgehogstreet.org). In order to separate the gardens of private properties, the provision of hedgerows, fences and walls is proposed. 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 gardens (e.g. <https://www.jacksons-fencing.co.uk/hedgehog-fencing> 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. These holes will be provided at a rate of at least one per garden fence/wall to ensure multiple routes through the residential gardens are accessible to Hedgehogs. The locations of the proposed Hedgehog highway holes are indicated in *Figure 1*. In order to ensure these holes are not blocked by householders and to raise awareness of the issue, holes will be marked with signs to inform householders on the reason for their presence:



(Images sourced from www.hedgehogstreet.org)

- 3.7.9 Further to the above measures, the inclusion of bat and bird roosting opportunities on retained mature trees will enhance roosting/nesting opportunities for bats and birds within the site and improve the permeability of the site for these species. Proposed bat boxes are detailed in *Section 3.2* and proposed bird boxes are detailed in *Section 3.4.3*. The locations of these features are shown in *Figure 1*.

3.8 **Other**

- 3.8.1 In addition to the measures to protect the ecology of the site and its surrounds, the following further measures will be implemented during construction:

Retained trees, hedgerows and scrub

- 3.8.2 Where trees, scrub and hedgerows are retained, these will be protected during development works through implementation of the following measures:

- All retained trees, scrub and hedgerows in the vicinity of construction works will be protected in accordance with BS5837 'Trees in Relation to Construction', unless otherwise agreed with a suitably qualified arboriculturist and where necessary subject to an approved Arboricultural Method Statement. Protection measures will be put in place prior to the commencement of any development activities and maintained until completion of works in any given area. Detailed proposals regarding the retention and protection of the current tree, hedgerow and scrub resource within the site are detailed within the *Arboricultural Implications Report* (SJA, 2025).

- Ground clearance, excavation works, and any construction works in the vicinity of retained trees, hedgerows and scrub will avoid effects of dust smothering on vegetation through the following measures where appropriate:
 - o No bonfires or unauthorised burning of material anywhere on-site;
 - o Minimisation of dust generating activities;
 - o Location of dusty activities and stockpiles away from sensitive receptors such as trees, hedgerows and scrub. Consideration will be given to seeding or covering of long-term stock piles;
 - o Vehicular use of designated haul routes only;
 - o Damping down and regular cleaning of haul routes during periods of dry weather;
 - o Vehicle washing and wheel cleaning at appropriate intervals;
 - o Maintenance of construction traffic and plant in good working order and switched off when not in use;
 - o Covering of all loads entering and leaving the site;
 - o Imposition of an appropriate site speed limit; and
 - o Use of appropriately designed vehicles for materials handling.
- Measures to avoid adverse effects of noise on wildlife associated with retained areas of trees, scrub and hedgerow vegetation during the site clearance and construction phase will include a selection of:
 - o Fitting of silencers to vehicle exhausts;
 - o Restrictions on working hours (proposed to be 08:00-18:00 Monday to Friday and 08:00-13:00 on a Saturday, with no on-site working on Sundays and bank holidays);
 - o Use of mufflers or silencers on pneumatic percussive tools;
 - o Use of rotary drills and busters actuated by hydraulic or electrical power for excavating hard material where practicable;
 - o Careful unloading/loading of vehicles, movement of material or dismantling of scaffolding;
 - o Shutting/throttling down of machinery not in use; and
 - o Use of quiet methods of piling where practicable.
- Construction phase lighting will generally be avoided outside of working hours. Where limited lighting is required this should be limited to that required for health and safety/ security purposes. All detailed external lighting proposals will be reviewed at appropriate design stages by a suitably qualified ecologist.

Working zones and storage of materials

- 3.8.3 All storage areas for construction materials will be located at least 5m from retained trees, scrub and hedgerows (or outside the root protection area if greater) and within areas with short vegetation or bare ground. Wherever possible, all materials will be stored on pallets

and waste removed from the site or stored in skips to discourage animals, such as amphibians, reptiles and small mammals, from taking refuge within them.

Roles and responsibilities

- 3.8.4 This document will be appended to the contractor's Construction Method Statement for use on site for construction of the development.
- 3.8.5 The overall responsibility of coordinating the project to ensure that all works are carried out in accordance with this Ecological Strategy and Management Plan lies with Hicks Developments Ltd. The appointed contractor will be responsible for ensuring all site staff and sub-contractors are aware of any ecological constraints at the site and will distribute this document accordingly. As required, Hicks Developments Ltd will appoint a Suitably Qualified Ecologist (SQE), Ecological Clerk of Works (ECoW) and/or specialist contractors to carry out, supervise or provide advice on carrying out works that could affect protected species or other ecologically valuable features present at the site.
- 3.8.6 Once appointed, the construction Site Manager will work with the SQE to ensure that site staff and contractors are aware of ecological constraints and carry out works in accordance with this document. The Site Manager will be responsible for identifying when assistance is required by a SQE, ECoW or specialist contractors and informing the SQE if issues arise. The Site Manager will also be responsible for ensuring the implementation of general avoidance measures in accordance with this document.
- 3.8.7 An SQE, ECoW or specialist contractor will be appointed by Hicks Developments Ltd or appointed future site managers to provide advice, supervise works and/or carry out specialist work in accordance with this document. In order to ensure best working practices are followed during construction works, the SQE/ ECoW will provide relevant site workers with information and training on how to best avoid potential adverse effects on protected species and existing and newly created features of ecological interest within the application area, in the form of a 'Toolbox Talk' with supplementary information sheets provided where necessary and/ or provision of a copy of this document.

4 MANAGEMENT PLAN

- 4.1 This section identifies the habitat mitigation, creation and enhancement measures proposed within the Parcel S site, and provides prescriptions for how habitats will be implemented and managed in the long-term. Where prescriptions relate to the creation, enhancement and management of habitats, prescriptions are divided, where appropriate, into those to be undertaken for their creation and management (generally the first one to three years) followed by measures for ongoing management. The location and extent of newly created and enhanced habitats proposed within the Parcel S site are summarised

on the *Landscape Masterplan* provided in *Appendix E*. Management schedules are given in *Appendix F* which set out the timings of prescribed activities.

4.2 Grassland

4.2.1 The grassland within the landscape scheme for the Parcel S site falls into two main categories, depending on location and ground conditions. These are:

- Meadow grassland
- Amenity grassland

4.2.2 Each of these grassland types and measures for creation, enhancement and management are described below. The general distribution of meadow and amenity grassland are shown on the *Landscape Masterplan* provided in *Appendix E*.

Meadow grassland (described as 'areas of long grass and wildflowers' in the Landscape Masterplan)

4.2.3 Meadow grassland with a diverse herb-rich sward will be established below the buffer zone of an off-site veteran tree (Tree 185) on the western site boundary. Although only a small area of species-rich grassland is proposed, this will be created using a native meadow mix selected for wildflowers and grasses that are tolerant of partial shade (Emorsgate Hedgerow Mixture [EH1] or similar).

4.2.4 The prescriptions for creation of meadow habitat within the management area is given below:

- A fine, firm and level seedbed will then be created prior to sowing with a species-rich meadow grassland seed mix (Emorsgate Hedgerow Mixture [EH1] or similar).
- Wildflower seeding is to be undertaken preferably in spring (early March to late June) or alternatively in autumn (mid-August to October). Sowing is to be undertaken by hand broad-casting on a calm day with no wind, the contractor should mix the seed evenly with a fine, dry sand to bulk up the sowing mix.
- Following seeding the area will be hand raked, lightly rolled and watered to the full cultivation depth.
- Contractors will take the necessary precautions to ensure all grass areas are protected throughout the establishment period, with the use of fencing where appropriate.
- During the first year after sowing, from mid-summer onwards the meadow grassland will be regularly cut (every 6-8 weeks to a height of 10cm) to encourage strong root growth. All cuttings will be removed from the grassland and where appropriate, suitable amounts used to create 'habitat piles' or disposed of appropriately.

- The newly established meadow grassland will be mown to no less than 10cm in height once a year, at the end of August, and the cuttings removed. This will allow flowering and seed set of most species over the summer. Over time this should further reduce the fertility of the soil favouring increased dominance of flowering herbs.
- If required, injurious weed species (e.g. Creeping Thistle, Broad-leaved Dock, Common Ragwort) will be controlled, particularly whilst the grassland is becoming established. This will be achieved either through topping before flowering or using spot treatment with herbicide.
- No fertilisers, lime or farmyard manure will be added to the newly created areas of meadow grassland.

Amenity grassland (described as 'regularly mown grass' in the Landscape Masterplan)

4.2.5 Areas of amenity grassland will be created and managed along roadside verges and within the open space associated with the western site boundary. These will be seeded using a flowering lawn mix (Emorsgate EL1 or similar).

4.2.6 The prescriptions for creation of amenity grassland habitats are outlined below:

- The creation of the amenity grassland sown from seed will follow the same methodology outlined for the meadow grassland above, with the addition of an application of a pre-seeding slow-release granular fertiliser (7:10:10 NPK) applied at a rate of 250kg/ha approximately 7 days prior to seeding and raked into the top surface.
- Once established, new areas of amenity grassland sown with seed will be incorporated into the long-term management regime as described below.

4.2.7 The following long-term mowing and maintenance regime will be applied to the amenity grassland within the management area:

- Areas of amenity grass, once established for twelve months, are to be cut on a monthly basis during each growing season (i.e. between March and October) to allow time between cuts for plants in lawn to flower. However, it will be weather permitting and should be reviewed to suit extreme weather i.e. extremely dry arid conditions it may be necessary to reduce the cut leaving the grass slightly longer.
- The height of flowering lawn shall not exceed 80mm before cutting, topped to a height of 50mm. In periods of drought, some dieback of grass is likely. Watering is a solution to this but is often unsustainable. In some years it may be necessary to reseed badly affected areas at the end of the season.
- Growth of mosses will be accepted, but will be kept in check by raking, which is best done in spring when the grass is growing well so that the grass can quickly recover and grow into the gaps created by moss collection.

- Swathes of arisings will be collected up and composted or removed from the site.
- Any damage to the sward caused by animals (Moles, Rabbits, Badgers etc.) or by vehicles or general wear and tear, will be reinstated by top dressing, re-cultivation, re-seeding and watering, at the correct season, as necessary. Any reinstated areas to be protected and subject to establishment maintenance as itemised above. If grass growth is poor it may be necessary to apply a spring and / or autumn fertilizer to the sward, to encourage vigour. Similarly, turf aeration and scarification may also be necessary, to alleviate compaction and control the development of thatch.

4.3 Native Hedgerows

4.3.1 Existing linear features within the site are limited to a line of Leylandii, Sycamore and Cherry Laurel and a defunct species-poor hedgerow both located within the centre of the site, which will be lost to the proposed development (G77 and H8 in the *Arboricultural Implications Report* [SJA, 2025]). It should be noted that neither of these features were identified as 'important' hedgerows (or identified as hedgerows) in the *Hedgerow Survey Report and Strategy* (AECOM, 2014c).

4.3.2 In accordance with Conditions 19 and 22, the hedgerow network within and bordering the site will be maintained through appropriate habitat creation works to ensure the proposed hedgerow removals do not adversely affect the ecological permeability of the site. This will contribute to maintaining habitat connectivity across the site, the wider site and the wider countryside, and will be achieved through the following measures:

New native hedgerows:

- New native hedgerows will be created along the northern and western site boundaries (bordering Plot 1) (described as '*mixed native hedge planting*' in the *Landscape Masterplan*), and bordering the public open space in the south-west of the site (described as '*native hedge planting*' in the *Landscape Masterplan*). Species within the mixed native hedgerow and native hedgerow planting will align with the recommended hedgerow planting mix (AECOM, 2014c) to comprise a mix of Hazel, Hawthorn, Field Maple, Blackthorn, Spindle, Guelder-rose, Holly, Dogwood and Wild Service Tree.
- Newly planted hedgerows within the management area will be trimmed annually for the first 3 years in order to train them into a good shape. Following which, the hedgerows will be trimmed no more frequently than once every 2-3 years on a rotational cutting scheme. This will encourage bushier hedges and fruiting of hedgerow plants in addition to reducing maintenance costs.
- All native hedgerows will be trimmed between January and February, allowing the majority of hedgerow fruits to be eaten by birds and other wildlife prior to cutting.

- No more than one third of hedgerows within the management area will be trimmed within the same 12 months.
- A possible exception to this is where new native hedgerows are proposed as part of the formal landscape associated with development areas; these hedges will be managed by cutting up to 3 times per year with all arisings removed.
- New hedgerow plants will be protected against pest damage using spiral guards (or biodegradable equivalent), maintained for no less than 3 years after planting. A one-metre weed-free zone will be maintained around new hedgerow plants using translocated herbicide (e.g. glyphosate) or mulch as required.

4.4 Tree planting and management

4.4.1 The majority of existing trees within the site will be retained, with a total of 12 trees (Trees 61, 63, 183, 193-200 and 1752) and one tree group (G74⁹) proposed for removal to facilitate the development (SJA, 2025). In addition, the veteran tree (Tree 185) located beyond the western site boundary will be retained and the Arboricultural Implication Report concludes *'there will be no loss or deterioration of irreplaceable habitat, and the maintenance and planting of the buffer zone will enhance and maintain the landscape character of the area.'*¹⁰

4.4.2 New individual trees are proposed within the management area comprising Field Maple, Small Leaved-lime and Rowan. In combination with proposed grassland and hedgerows this will create a varied mosaic of habitats, benefitting a range of species and maintaining habitat connectivity around the site.

Establishment Phase

4.4.3 The following works will be carried out to ensure establishment of new trees:

- Planting will be restricted to between late October and March, unless additional provision for watering during dry periods is made.
- Newly planted trees will be protected against pest damage using suitable biodegradable spiral guards.
- Trees will be kept free of weeds for up to five years after planting (or less if closed canopy is achieved earlier) to enhance growth rates, by the application of a translocated herbicide at a minimum frequency of 3 applications per annum generally in May, July and September. Any failed trees within the first five years after planting will be replaced (and maintained for a subsequent five years).
- Any trees that are staked will have their ties checked 3 times per year (or as herbicide spraying takes place) and replaced as necessary if too tight/loose or broken. Stakes shall remain in position until trees are self-supporting.

⁹ Tree group G77 has been identified in the UK Habitat Classification survey as a treeline and its loss has subsequently been assessed in *Section 3.7.3* above.

¹⁰ Measures to protect retained trees, including the off-site veteran tree (Tree 185) are given in the *Arboricultural Implications Report* (SJA, 2025).

- Trees will be pruned to remove dieback or broken/vandalised branches as they arise.
- Newly planted trees will be watered regularly in the first year after planting to prevent plant loss. Watering of trees in the first growing season is dependent on size and should follow the guidelines below:
 - Feathered – 36 litres per month;
 - Standard – 45 litres per month.

Watering should be reduced/stopped in periods of wet weather. Water trees in second growing season during dry spells in weather.

Maintenance Phase

4.4.4 Newly established and existing trees will be managed in the long-term to enhance the biodiversity of the management area, protect public safety, ensure their long-term health and viability, and to maintain the visual landscape character of the area. This will involve the following:

- Annual inspections of all trees will be carried out by a suitably qualified arboriculturist in order to identify dangerous trees and branches requiring removal.
- Standing dead or decaying timber and fallen deadwood will be retained where safe to do so to provide wildlife habitat.
- Fallen, dying and dead mature trees will only be replaced with young trees where appropriate. Any replacement trees will be protected from pest damage and weeds as outlined in the establishment section above.

4.4.5 It is expected that the above proposals would maintain the tree resource and habitat connectivity across and around Parcel S and wider site.

4.5 Deadwood habitats

4.5.1 Where safe to do so any standing and fallen deadwood arising from trees within the site will be retained *in situ*. Where this is not possible, these arisings will contribute to log and brash piles that would be constructed at appropriate locations along hedgerow bases using additional arisings from other tree and hedgerow management works. The approximate location of the proposed log and brash pile is shown on *Figure 1*.

4.6 Ornamental planting

4.6.1 In addition to provision of new native species planting in areas of open space, the landscape proposals also include formal ornamental shrub planting (described as '*shrub planting*' in the *Landscape Masterplan*). These will be planted with a range of nectar-/pollen-rich flowers and fruit bearing shrubs which benefit native wildlife such as invertebrates, bats and birds. In addition, native tree and hedgerow planting is proposed within the residential curtilages of the development.

- 4.6.2 The extent of proposed ornamental planting is shown in *Appendix E*. Measures for the establishment of ornamental shrubs within the site are given below along with maintenance of such planting within communal areas of the residential development. The maintenance of planting within curtilages of residential properties will be the responsibility of the new householders.
- 4.6.3 Ornamental tree, hedgerow, shrub and herbaceous planting works will be carried out during the construction phase of the development:
- Planting will be restricted, where possible, to between late October and April where possible to reduce need for supplementary watering.
 - Where necessary newly planted trees will be protected against pest damage using guards around individual trees. Pests are likely to be restricted to rabbits, but it may be necessary to replace guards with taller ones if, following the annual inspection, it is found that deer damage is an issue.
 - Newly planted shrubs will be watered regularly in the first year after planting to prevent plant loss. Watering would be reduced/stopped in periods of wet weather.
- 4.7 Implementation of Management
- 4.7.1 It is expected that the habitat creation and establishment works would be led by the developer after which either the local planning authority, a management company or an appropriate other would take on the long-term management. Management would be secured and, if necessary appropriately funded, through a legal obligation.
- 4.7.2 The management activities for the implementation phase (during the construction phase of the proposed development), the establishment phase (expected to last up to three years following construction), and during a typical year, are summarised below. These could form the basis for 'milestones' to facilitate monitoring of the habitat restoration and management works. Management Schedules detailing the timing of works are provided in *Appendix F*.
- 4.7.3 Implementation Phase:
- Carry out vegetation clearance works including removal of unretained hedgerow, scrub, trees and ruderal/grassland habitats to allow for construction and landscaping works.
 - Preparation of soil and sow meadow and amenity grassland seed mixes on newly cleared areas of land and commence cutting regime as appropriate.
 - Carry out new hedgerow planting and commence rotational cutting regimes.
 - Plant new trees, scrub and shrubs in formal and informal areas as specified and commence management.
 - Protect plantings with tree guards.

- Maintain bases of new tree, shrub and hedgerow planting free of weeds.
- Manage retained trees within the management area for safety.
- Create habitat piles using arisings from hedgerow and tree management.
- Install bird and bat boxes where appropriate.
- Implement measures for the control of invasive species.

4.7.4 Establishment Phase:

- Manage trees and other management items for safety.
- Manage meadow and amenity grassland.
- Maintain habitat piles/deadwood habitats.
- Continue management of hedgerows, scrub and treeline habitats.
- Maintain bases of new tree, shrub and hedgerow planting free of weeds and remove any protective guards after 3 years if appropriate. Loosen tree ties as required.
- Replace failed plantings as necessary.
- Maintain management area free of litter.
- Monitor the management area and carry out control of non-native invasive species as necessary.
- Monitor success of management activities and revise management plan as appropriate.

4.7.5 Typical year:

- Manage trees and other management items for safety.
- Continue the cutting regime of meadow and amenity grassland.
- Maintain and create new habitat piles/deadwood habitats.
- Continue management of hedgerows, scrub and treeline habitats.
- Maintain management area free of litter.
- Monitor the management area and carry out control of non-native invasive species as necessary.
- Monitor success of management activities and revise management plan as appropriate.

4.8 Monitoring

4.8.1 The outcome of the management works prescribed above would be subject to review on at least an annual basis (but more frequently during establishment) to assess the success of these works in achieving the desired objectives. If necessary, the prescriptions will be revised to improve outcomes. Any amendments to the prescriptions provided in this Ecological Strategy and Management Plan would be subject to the approval of the local planning authority.

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HDA Document Control and Quality Assurance Record

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Project Reference: 1215.1
Document Title: Ecological Strategy and Management Plan
Commissioning Party: Hicks Developments Ltd

Issue	Description	Date of Issue	Signed
1	Ecological Strategy and Management Plan	December 2025	AM

	Personnel	Position
Author	Clare Bird MCIEEM	Associate Ecologist
Approved for issue	Adrian Meurer MCIEEM	Director

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FIGURE 1

Ecological Mitigation and Enhancement Plan

Legend

- Existing trees and vegetation
- Proposed trees
- Shrub planting
- Native hedge planting
- Mixed native hedge planting
- Regularly mown grass
- Areas of long grass and wildflowers
- Bitumen macadam
- Block paving
- PC slab paving

Scale
1:250
0 5 10 15m

Landscape Images



Metal estate railings



Cleft chestnut post and rail fencing



KEY

- Site boundary
- Log and brush pile (indicative)
- Bat roosting opportunities on retained tree (both for enhancement and mitigation) (indicative)
- Bird nesting opportunities on retained trees (indicative)
- Proposed Hedgehog access point (indicative)
- Metal estate railing 1.2m high (no requirement for Hedgehog access point)
- Timber close boarded fence 1.8m high
- Cleft chestnut post and rail fencing 1.2m high (no requirement for Hedgehog access point)

* All kerbing types remain subject to detailed design and approval with Wokingham Borough Council

CLIENT:
Hicks Developments Ltd
PROJECT:
Arborfield Green, Parcel S - Phase 2
TITLE:
Ecological Mitigation and Enhancement Plan
SCALE AT A3:
See scale bar
DATE:
December 2025

1215.1 / 04

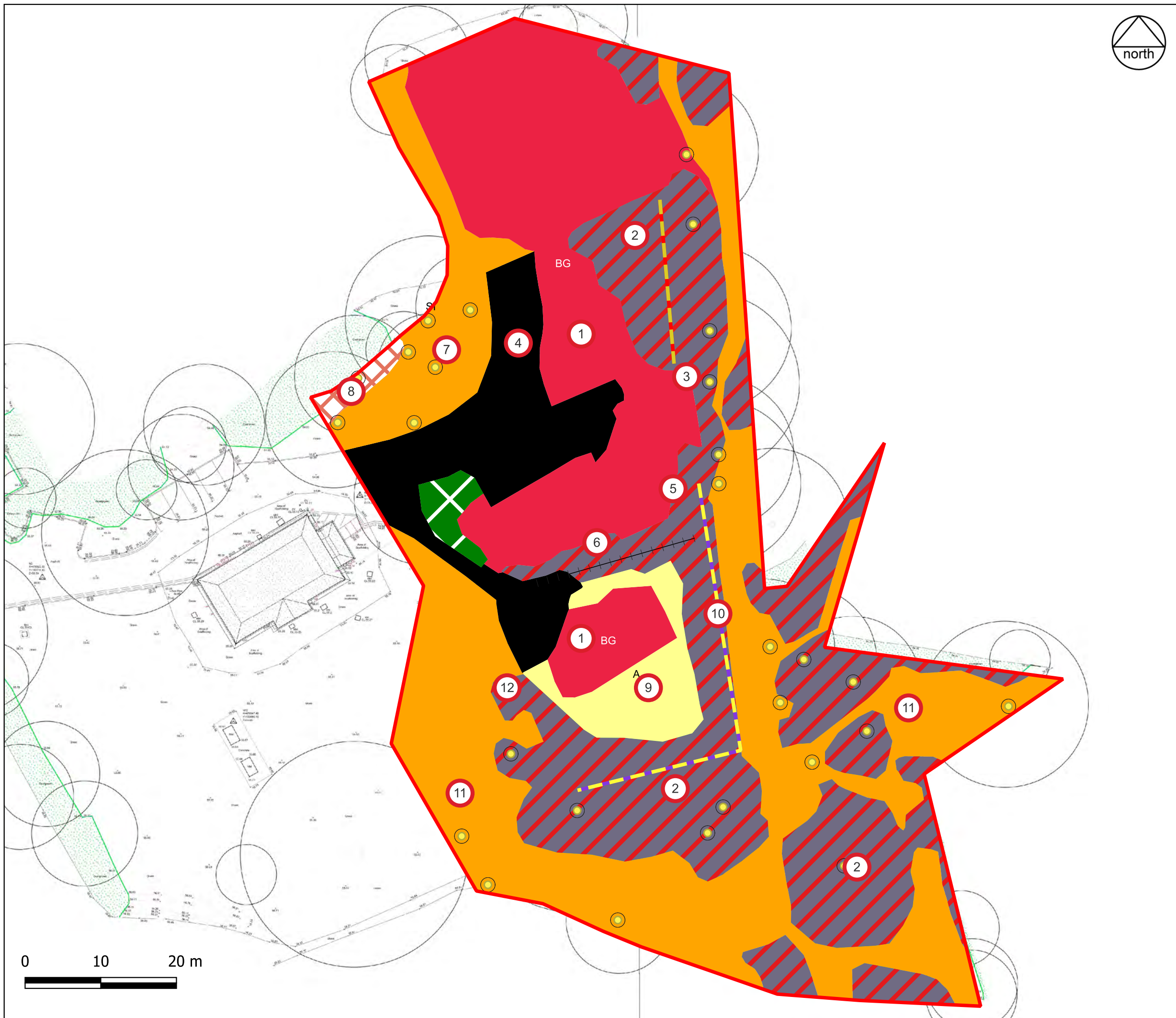
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APPENDIX A

UK Habitat Classification Survey Plan and Target Notes



KEY

- Site boundary
- Target Note
- Bramble scrub
- Developed land; sealed surface
- Introduced shrub
- Mixed scrub
- Modified grassland
- Other neutral grassland
- Bare ground
- Non-native and ornamental hedgerow
- Native hedgerow
- Fence
- Existing tree

CLIENT:
Hicks Developments Ltd

PROJECT:
Arborfield Green, Parcel S - Phase 2

TITLE:
UK Habitat Classification Survey Plan

SCALE AT A3:
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DATE:
November 2025

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Arborfield Green, Parcel S

Hicks Developments Ltd

12th November 2025

UK HABITAT CLASSIFICATION SURVEY: TARGET NOTES

1. Gravel and rubble bare ground colonised with ruderal species. Species include Curled Dock (*Rumex crispus*), Yorkshire Fog (*Holcus lanatus*), Ragwort (*Jacobaea vulgaris*), Yellow Oat Grass (*Trisetum flavescens*), Hairy Willowherb (*Epilobium hirsutum*), Smooth Meadow-grass (*Poa pratensis*), Red Clover (*Trifolium pratense*), Cow Parsley (*Anthriscus sylvestris*), Purple-topped Vervain (*Verbena bonariensis*), Spear Thistle (*Cirsium vulgare*), Black Horehound (*Ballota nigra*), Herb Robert (*Geranium robertianum*), Canadian Fleabane (*Erigeron canadensis* [syn. *Conyza canadensis*]), Yarrow (*Achillea millefolium*), Ox-eye Daisy (*Leucanthemum vulgare*), Herb Robert (*Geranium robertianum*), Cleavers (*Galium aparine*), Rabbit-foot Grass (*Polypogon monspeliensis*), Creeping Thistle (*Cirsium arvense*) and Timothy Grass (*Phleum pratense*).
2. Bramble (*Rubus fruticosus* agg.) scrub.
3. Line of Leylandii (*Cupressus x leylandii*) and Sycamore (*Acer pseudoplatanus*) with an understorey of Cherry Laurel (*Prunus laurocerasus*).
4. Hardstanding tarmac.
5. Earthy log pile.
6. Chainlink fence with Bramble (*Rubus fruticosus* agg.) and Hawthorn (*Crataegus monogyna*) growing alongside.
7. False Oat-grass (*Arrhenatherum elatius*) and Perennial Rye-grass (*Lolium perenne*) dominated grassland with other species including Annual Meadow-grass (*Poa annua*), Yorkshire Fog (*Holcus lanatus*), Cock's-foot (*Dactylis glomerata*), Ox-eye Daisy (*Leucanthemum vulgare*), Cow Parsley (*Anthriscus sylvestris*). Scattered trees are also present including Sweet Chestnut (*Castanea sativa*) and Ash (*Fraxinus excelsior*). Grassland is unmanaged with a contiguous sward height.
8. Cherry Laurel (*Prunus laurocerasus*) scrub.
9. Perennial Rye-grass (*Lolium perenne*) and Creeping Bent (*Agrostis stolonifera*) dominated grassland once forming a vegetated garden. Grassland is unmanaged with a contiguous sward height.
10. Outgrown defunct species-poor hedgerow approximately 4m tall and 1.5m wide. Species include Hawthorn (*Crataegus monogyna*), Ash (*Fraxinus excelsior*), Elm (*Ulmus* spp.), Sycamore (*Acer pseudoplatanus*), and Bramble (*Rubus fruticosus* agg.).
11. Species-poor other neutral grassland with a contiguous sward height. Species include False Oat-grass (*Arrhenatherum elatius*), Yorkshire Fog (*Holcus lanatus*), Yellow Oat-grass (*Trisetum*

flavescens), Field Bindweed (*Convolvulus arvensis*), Black Knapweed (*Centaurea nigra*), Soft Rush (*Juncus effusus*), Sweet Vernal Grass (*Anthoxanthum odoratum*), Common Bird's-foot Trefoil (*Lotus corniculatus*), Creeping Thistle (*Cirsium arvense*), Broad-leaved Dock (*Rumex obtusifolius*), Red Fescue (*Festuca rubra*), Stinking Iris (*Iris foetidissima*), and Oak Saplings (*Quercus robur* / *Q. petraea*).

12. Outgrown Willow scrub with very sparse ruderal ground flora.

APPENDIX B

Bat Roost Survey Report (HDA, 2025)

ARBORFIELD GREEN, PARCEL S – PHASE 2
BAT ROOST SURVEY REPORT

Prepared for Hicks Developments Ltd

by

Hankinson Duckett Associates

HDA ref: 1215.1

November 2025

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HDA Document Control and Quality Assurance Record

APPENDICES

- A Bat roost survey summary plan
- B Photographs

1 INTRODUCTION

1.1 Site location and summary description

1.1.1 This report describes bat roost surveys of approximately 0.2ha of land at Arborfield Green – Parcel S, Arborfield, Berkshire hereinafter referred to as ‘the site’. The site centre is located by National Grid Reference SU 76998 65743. The study was commissioned by Hicks Developments Ltd in phases in July and August 2025.

1.1.2 The site is located within Arborfield Green and comprises a previously developed site which has been demolished. The north of the site is dominated by rubble and hardcore which has been colonised by ruderal species and Bramble and the south of the site is dominated by a mosaic of grassland, Bramble scrub and mature trees. The site is bordered to the west by Moat House, with Buttenshaw Avenue beyond; to the south and east by residential houses and associated gardens, with Buttenshaw Avenue beyond; and to the north by residential houses and associated gardens and Biggs Lane. The site is surrounded by the Arborfield Green development, beyond which lies arable fields and woodland. The location and boundary of the site are shown in *Appendix A*.

1.2 Legislative context

1.2.1 All UK bat species are protected as ‘European Protected Species’ (EPS) under the 2017 Conservation of Habitats and Species Regulations (as amended). In relation to an EPS, the 2017 Regulations make it an offence to:

- Deliberately capture, injure or kill any wild animal of an EPS;
- Deliberately disturb wild animals of any such species, in particular any disturbance which is likely to: (i) impair their ability to survive, to breed or reproduce, or to rear or nurture their young; or to hibernate or migrate; (ii) affect significantly the local distribution or abundance of the species to which they belong;
- Damage or destroy a breeding site or resting place of such an animal; and/or
- To (a) be in possession of, or to control; (b) to transport any live or dead animal or any part of an animal; (c) to sell or exchange or (d) offer for sale or exchange any live or dead animal or part of an animal of an EPS.

1.2.2 In addition, all UK bat species are protected under the 1981 Wildlife and Countryside Act (as amended). All species are listed on Schedule 5 of the Act and are subject to the provisions of Sections 9.4b and 9.4c, which make it an offence to:

- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection; and/or
- Intentionally or recklessly obstruct access to any structure or place used for shelter or protection by a bat.

1.2.3 If works are planned that are likely to constitute an offence under the current legislation, an application for an appropriate licence should be made to Natural England.

1.2.4 Seven species of bat (Barbastelle, Bechstein's, Noctule, Soprano Pipistrelle, Brown Long-eared, Greater Horseshoe and Lesser Horseshoe) are listed as Species of Principal Importance under Section 41 of the 2006 Natural Environment and Rural Communities (NERC) Act. Section 40 of the act requires planning authorities to regard these species as a material consideration in the planning process.

1.3 Development proposals

1.3.1 Planning permission (O/2014/2280) was granted in April 2015 for a hybrid application. This comprises:

- Outline permission for demolition of buildings and the phased redevelopment of Arborfield Garrison and adjoining land for: up to 2,000 new dwellings; a District centre and transport interchange; village square; Neighbourhood Centre; secondary school; primary school; public open space and sustainable urban drainage systems.
- Full permission for phased development of: creation of two new areas of Suitable Alternative Natural Greenspace (SANGS); re-use of existing MoD gymnasium for sports/community uses/centre; and road improvements.

1.4 Scope and purpose of the report

1.4.1 As part of the hybrid planning application, a suite of bat surveys of the site and wider site were conducted by GVA Grimley/WSP Environmental in 2006, ENTEC in 2008, Amec in 2012 and AECOM in 2014 and 2021. These identified several roosts within the site and wider site, including the presence of Common Pipistrelle roosts in a building within the site (Building 44) and the Moat House (Building 42) to the west of the site. It is understood that the building within the site (Building 44) has subsequently been demolished under licence, but the Moat House (Building 42) is still present and in a state of disrepair (AECOM, 2014; AECOM 2022).

1.4.2 In view of the proposed redevelopment of the site, the age of the bat survey data and within the legislative context set out in *Section 1.2*, the suite of bat surveys was subsequently undertaken to confirm use of the site by roosting bats, and to determine the need for any licensing or mitigation in relation to bats. Specifically, the aims of the study are:

1. To identify potential bat roosts in structures and trees within the site, where potentially affected by the proposed development;
2. To determine any further survey, mitigation and/or licensing requirements relating to bats; and
3. To provide outline recommendations for any mitigation and/or enhancement required to ensure that the development avoids adverse impacts on bats and,

where possible, provides enhancements to support the long-term favourable conservation status of bats in accordance with nature conservation legislation, planning policy and the 2006 NERC Act.

2 METHODOLOGY

2.1 Introduction

2.1.1 The methodology followed in relation to all bat survey work undertaken at the site is consistent with current legislation and good practice guidelines, as set out by the Bat Conservation Trust at the time of survey (BCT, 2023). The following sections detail the suite of bat surveys undertaken to inform the potential development of the site.

2.2 Phase 1 bat roost scoping survey

2.2.1 A updated Phase 1 bat scoping survey was undertaken by Filippo Faraone of HDA on the 18th July 2025. The trees within and immediately adjacent to the site were assessed for their potential to support roosting bats and classified according to their potential. The methodology for each has been outlined below. No buildings were present on site.

Phase 1 tree survey

2.2.2 All trees within and immediately adjacent to the site were inspected from ground level with the aid of binoculars and a powerful torch to identify potential features suitable for use by roosting bats. Potential Roost Features (PRFs) include splits, cracks and cavities, peeling bark, woodpecker holes, broken branches and a covering of Ivy where this is of sufficient age to provide a suitable microclimate between the tree and Ivy stem(s).

2.2.3 In accordance with current best practice guidelines (BCT, 2023), trees were placed into one of the following four categories based on the nature, size, location and quality of features present in each tree and surrounding habitat:

- *Negligible suitability* – Trees with no or negligible features for roosting bats;
- *Low suitability (PRF – I)* – Trees supporting features only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitat;
- *Moderate or higher suitability (PRF-M)* - Trees supporting features suitable for multiple bats and may therefore be used by a maternity colony; or
- *Known or confirmed bat roost.*

2.3 Phase 2 bat roost surveys

2.3.1 The results of the Phase 1 bat scoping survey of the trees were used to determine the need for Phase 2 survey work of features understood to have potential to be affected by the emerging development proposals, at the time of survey. Phase 2 bat roost surveys, comprising aerial inspection surveys, were conducted to determine presence/probable absence of roosting bats and, where present, identify species and numbers.

Climbing roost inspections

- 2.3.2 Where possible, trees identified as supporting features suitable for multiple bats (PRF-M) were subject to three climbed inspections, using an endoscope to inspect identified features, to record any evidence of occupancy by bats and, where necessary, re-assess their potential to support roosting bats. The climbed inspections were carried out by Filippo Faraone of HDA, under the supervision of Clare Bird MCIEEM of HDA (licence number 2021-51250-CLS-CLS). Dates, along with weather conditions, are provided in *Table 1* below.

Table 1: Timing and conditions of Phase 2 climbed roost inspections

Tree	Date	Conditions
Tree 61	12.08.2025	20% cloud cover, Beaufort Scale = 0-1, dry.
	28.08.2025	Clear, Beaufort Scale = 0, dry
	16.09.2025	30% cloud cover, Beaufort Scale = 1, dry.

- 2.3.3 In line with current best practice guidelines (BCT, 2023), Phase 2 bat roost surveys were not conducted on trees which were assessed as supporting features with the potential to support very low numbers / individual roosting bats (PRF-I). Further surveys of PRF-I trees are not required, at this stage, in support of a planning application. However, in the event that retention of a tree identified as having low potential (PRF-I) to support roosting bats is not possible, the appropriate approach to works is given in *Section 5* below.

2.4 Limitations of surveys

- 2.4.1 All surveys followed best practice guidelines and were conducted at an appropriate time of year, under favourable weather conditions and with an appropriate level of survey effort both in terms of the number of surveyors used and number of survey visits undertaken. The level of survey work carried out within the site is therefore considered sufficient to inform an assessment of the likely effects of the proposed development on bats and inform the recommendations provided in *Section 5* of this report with regard to the protection of individual bats during works and the maintenance of the favourable conservation status of the local bat population.

3 RESULTS

3.1 Phase 1 tree survey

- 3.1.1 All trees within the site were inspected during the Phase 1 bat scoping survey. *Table 2* details the findings of the Phase 1 tree survey and the locations of the trees are illustrated in *Appendix A*.

Table 2: Results of Phase 1 tree survey

Tree ref*	Species	Findings	Bat Roost Potential
Tree 75	Oak	Knot hole leading to potential cavity at approximately 5m on the eastern aspect. Multiple areas of lifted bark on the eastern and southern aspects from 3m to more than 10m.	Moderate or higher bat roost potential (PRF – M)
Tree 78	Oak	Dense Ivy coverage. No suitable features identified from ground level, but suitable roosting features could be concealed.	Low bat roost potential (PRF – I)
Tree 187	Oak	Dense Ivy coverage. No suitable features identified from ground level, but suitable roosting features could be concealed.	Low bat roost potential (PRF – I)
Tree 1756	Oak	Multiple hollowed out branch collars at approximately 6m on the south-western aspect.	Moderate or higher bat roost potential (PRF – M)
Tree A (within G74)	Sycamore	Dense Ivy coverage. No suitable features identified from ground level, but suitable roosting features could be concealed.	Low bat roost potential (PRF – I)
Tree 181	Oak	Woodpecker hole on the northern and western aspects at more than 10m . Cavity around branch tear out at approximately 10m on the north-western aspect.	Moderate or higher bat roost potential (PRF – M)
Tree 184	Copper Beech	Tree of an age where no suitable features identified from ground level, but suitable roosting features could be concealed.	Low bat roost potential (PRF – I)
Tree 61	Ash	Two woodpecker holes at approximately 7m and 9m on the northern aspect.	Moderate or higher bat roost potential (PRF – M)

**Tree reference numbers relate to those used for the Tree Protection Plan (SJA, 2025) except where additional information has been required to identify individual trees.*

3.1.2 All other trees within and immediately adjacent to the site were assessed as having negligible potential to support roosting bats.

3.2 Phase 2 bat roost surveys

3.2.1 The results of the Phase 1 bat scoping survey was used to determine the requirement for Phase 2 bat roost survey work of trees where these had the potential to be affected by the development proposals. The Phase 2 bat roost surveys took the form of climbed inspections.

3.2.2 In accordance with best practice guidelines (BCT, 2023), Tree 61 was subject to three climbed inspection surveys to record the identified potential roosting features in more depth, record any evidence of roosting bats and, if applicable, reassess their potential to support roosting bats.

3.3.3 The results of the survey are described in *Table 3* below, and their locations are given in *Appendix A*. Photograph references relate to the photographs provided in *Appendix B*.

Table 3: Results of Phase 2 bat roost surveys

Tree / survey type	Results	Updated roost status of entire feature
Tree 61 Climbed inspection	PRF 1 - Trunk cavity from vertical tear out approximately 10m above ground level on the northern aspect of the tree. The entrance to the cavity is 10cm high and 8cm wide and internally the cavity is approximately 10cm deep, extends 14cm above the top of the entrance and extends 16cm below the bottom of the entrance. The cavity is tube shaped with a flat top and bottom. The cavity was bobbly, bumpy and blacked with some evidence of nesting birds. Lots of woodlice, cobwebs, and debris were present on all three surveys. The cavity is suitable for individual / very low numbers of bats (PRF - I) however no evidence of roosting bats was encountered (Photos 1 to 4). PRF 2 - Trunk cavity from vertical tear out approximately 10.1m above ground level on the northern aspect of the tree. The entrance is 7cm in height and 3cm in width and internally the cavity is approximately 6cm wide, extends 10cm above the top of the entrance and extends 16cm below the bottom of the entrance. The cavity was dry, bobbly and blackened with dust and debris. The main part of the cavity formed a tube, which led on to another cavity through a gap in the top. The upper section of the cavity formed a wedge. Woodlice, debris, and slugs were also present in the cavity on all three surveys. By the third survey the cavity was obstructed by fungal fruiting bodies. The cavity is suitable for multiple bats (PRF - M) and on the first survey an individual Soprano Pipistrelle was recorded at the top of the cavity (Photos 5 to 10). PRF 3 - Cavity has formed from woodpecker hole below a rotting branch collar approximately 13m above ground level on the northern aspect of the tree. The entrance is 10cm in height and 7cm in width with an internal depth of 30cm. The cavity formed a large tube which was slightly blackened, clean, and bumpy. The cavity was full of bird feathers, debris and woodlice on all three surveys. The cavity is suitable for multiple bats (PRF - M) however no evidence of roosting bats was encountered (Photos 11 to 12).	Confirmed roost for an individual Soprano Pipistrelle

4 EVALUATION

4.1 Roosting bats

4.1.1 An individual Soprano Pipistrelle was recorded on one occasion roosting within Tree 61. The survey results indicate that this is a small low-status non-breeding roost which may be used by male and/or non-breeding female bats. The estimated UK population of Soprano Pipistrelle is 4,670,000 individuals (Mathews *et. al.*, 2018). Soprano Pipistrelle is a relatively common and widespread species and therefore the roost recorded within Tree 61 is considered to be of low local interest.

4.1.2 Notwithstanding the low status of the bat roost recorded, due to the proposed felling of Tree 61 it will not be possible to retain the identified roost and therefore proposals have the potential to conflict with the nature conservation legislation afforded to bats as set out in *Section 1.2*. In view of this a full European Protected Species (EPS) licence would need to be applied for from Natural England, and granted, prior to the development works taking place¹. The licence application would need to be supported by a detailed method statement setting out measures for how individual bats would be protected during construction works and opportunities for roosting bats would be maintained thereby ensuring the continued favourable conservation status of the local bat population. Suitable measures by which this can be achieved are provided in *Section 5* below.

4.1.3 An appropriate approach to works is given in *Section 5* for measures to protect any bats that might be present and to maintain roosting opportunities at the site following works.

5 RECOMMENDATIONS

5.1 This section identifies any requirements for measures to be implemented during development of the site in order to avoid, mitigate and compensate potential effects of development on bats. In addition, measures for enhancement of the site for roosting bats are included in accordance with the 2024 NPPF and the 2006 NERC Act.

Tree 61

5.2 The climbed inspection survey confirmed the presence of a low status day roost for one Soprano Pipistrelle bat within Tree 61.

5.3 Proposed development of the site indicates that Tree 61 will be felled as it's a U category Ash tree (SJA, 2025). If it is not possible to retain Tree 61, a European Protected Species (EPS) licence would need to be obtained from Natural England prior to the commencement of any works affecting the roost. All works affecting the bat roost should be supported by a detailed method statement describing how the favourable conservation status of bats at the site would be maintained, including information on how loss of the roost site would be compensated and timing of works to minimise impacts on bats. Mitigation would centre on:

- Creation of appropriately designed and sited new roosting opportunities for bats, proportionate to that being lost; and
- Implementation of works affecting roost sites at a time of year when bats are least vulnerable to disturbance/likely to be present, employing sensitive working practices.

¹ The works will not qualify for a 'low impact licence' due to the loss of a bat roost being associated with a tree.

Measures by which this can be achieved are given below. These should be implemented unless otherwise agreed with Natural England and/or the Local Planning Authority.

Replacement of the roost site

- 5.4 A strategy for mitigating the loss of the roost site associated with Tree 61 is described below. Provision of replacement roosting opportunities should be reviewed at an appropriate stage in light of detailed design and, where necessary, the findings of updated surveys to determine the status of bats at the time of works.
- 5.5 Soprano Pipistrelle are known to roost in both trees and bat boxes (University of Bristol, 2005; Schofield & Mitchell-Jones, 2004), with records of bat boxes having been used for successful breeding. To provide replacement opportunities for bats associated with the identified roost prior to felling commencing, bat boxes should be installed on suitable retained trees in the vicinity of the existing roost to be lost. These should be located within areas away from the proposed construction works. The precise position should be determined in consultation with an appropriately qualified and experienced bat ecologist, but will need to integrate the location of suitable retained trees and habitat connections with avoidance of areas with highest potential future lightspill. Specifically, replacement roost mitigation should consist of one Greenwood's Ecohabitats 'two crevice bat box' (or similar) as advised by a suitably qualified ecologist. Several trees suitable for the placement of the bat box are located along the boundaries within the site that will fall within areas of informal greenspace.
- 5.6 To provide the opportunity for bats to find and utilise new roost sites prior to development, the bat box should be put in place at an appropriate stage in advance of works commencing. The bat box described above should be retained on completion of development to mitigate for the loss of bat roosting opportunities during the site clearance/demolition works.

Approach and timing of works

- 5.7 Works on Tree 61 affecting the confirmed roost should ideally be carried out at a time of year when bats are least likely to be present. Although the findings of the survey suggest that only a non-breeding roost is present, a degree of uncertainty always exists in relation to the exact status of a summer roost. Furthermore, the presence of hibernating bats using the tree during the winter period cannot be completely ruled out. Unless future surveys demonstrate otherwise, felling works affecting Tree 61 should avoid the period of June-August inclusive when dependent young may be present and should ideally avoid the winter period of November-February inclusive when bats are likely to be torpid or hibernating and most at risk if disturbed. It is therefore recommended that any works affecting the identified bat roost site are carried out between March and May and/or September and October.

5.8 In the event that tree felling is required outside of the timeframe described above then works to Tree 61 potentially affecting roosting bats should be either: (i) preceded by an updated survey to confirm the continued absence of a breeding roost (for felling works between June and August); or (ii) be carried out during periods of mild weather when bats are active with minimum night time temperatures exceeding 7°C for five consecutive nights (for felling works between November and February).

5.9 As identified above, the bat box on a retained tree should be provided in advance of loss of any roost in order to provide alternative roost sites prior to works commencing.

5.10 All felling works involving the removal of features from Tree 61 with the potential to conceal roosting bats should be overseen by a licensed bat worker under an Ecological Watching Brief. Potential features on Tree 61 include trunk cavities on both stems. Suitable features should be inspected prior to felling and a cautious approach should be employed, particularly in the vicinity of the known roosts, with key features removed by hand where appropriate. Further details on the approach to felling of Tree 61 are given in *Section 5.2.14* below.

5.11 Should any bat be encountered during these works, it should be moved by the licensed bat worker to the pre-installed bat box described in *Section 5.5*.

Works to other trees

5.12 The development proposals indicate that with the exception of the loss of the bat roost associated with Tree 61, no other trees with moderate or higher (PRF-M) potential to support roosting bats will be lost as a result of the proposed development. However, due to the presence of opportunities for roosting bats within a number of trees across the site and the highly mobile nature of bats, an approach to works affecting other trees lost to development or affected by future maintenance works (e.g. for health and safety) is set out below. This involves either further survey prior to works commencing to confirm the continued absence of roosting bats or through a sensitive approach to works.

5.13 In the event that retention of a tree identified as providing opportunities for roosting bats is not possible within the site, due to the transitory nature with which bats may use roost sites in trees, it is recommended that felling/trimming works should be carried out in accordance with the following procedure:

1. In the event that future pruning or felling works for reasons of health and safety are required to trees with moderate or higher potential to support roosting bats (PRF-M), these should first be subject to three aerial inspection surveys between May to

September, with at least two of the surveys conducted from May to August by a licensed bat worker to inspect potential roost sites for bats (BCT, 2023).

2. Trees with moderate or higher potential to support roosting bats (PRF–M), for which an exhaustive climbed inspection is not possible or practical, should be subject to three emergence/re-entry surveys following current BCT best practice guidelines (BCT, 2023) to confirm the absence of roosting bats prior to any works affecting the tree commencing.
3. Trees that are classified as having low potential (PRF–L) to support roosting bats, should be aerial inspected immediately in advance of works to confirm the absence of roosting bats prior to any works affecting the tree commencing. Trees that are unsuitable for aerial inspections and/or have not been subject to an emergence survey immediately in advance of works should be ‘soft felled’ under the supervision of a suitably qualified ecologist. Soft felling involves progressive removal of the tree, using ropes to gently lower sections of tree potentially supporting roosting bats to the ground for inspection by a suitably qualified ecologist. Where appropriate, features should be left on the ground overnight before clearing to allow any bats present to escape.

- 5.14 In the event that a roosting bat is discovered during any of the above works to a tree not covered under an EPS licence, trimming/felling works must cease and Natural England contacted to agree an appropriate course of action. A licence may need to be applied for, and approved, before works can continue.

Maintenance and enhancement of roosting opportunities

- 5.15 The integrity of retained roosting opportunities within and adjacent to the site should be conserved through the maintenance of connections to commuting and foraging habitat and sensitive use of lighting throughout the construction and operational phases. In addition, trees not supporting roosting bats at the time of survey have potential to support bats in the future and therefore these trees should be retained and their ability to support roosting bats be maintained, where possible to do so. Where significant loss of future roosting opportunities arises, this should be offset through alternative roost provision elsewhere within the site.

- 5.16 Development of the site could provide opportunities to enhance the value of the site for roosting bats in accordance with 2024 NPPF and the 2006 NERC Act through the provision of a range of bat roosting features. The detailed design and location of such features should be determined at an appropriate stage prior to construction, but could include a selection of the following:

- Erection of bat boxes on existing mature trees on the boundaries of the site; and

- Creation of roosting opportunities on new buildings, e.g. through inclusion of bat tubes or 'Habibat' type bat boxes within the external walls, access to roof voids, soffits etc.

These roosting features should be located where good connections exist to suitable foraging and commuting habitat such as on the site boundaries and other areas of newly created and retained semi-natural habitats within and around the site.

5.17 By providing a variety of roosting opportunities in different locations and orientations, a range of roost spaces with varied microclimates could be provided by the site, offering opportunities for roosting bats throughout the year and maintaining and potentially enhancing the future potential of the site to support roosting bats. In the long-term, new areas of landscape planting are also likely to provide an additional bat roosting resource as planted trees develop suitable bat roosting features such as cracks, splits and holes. This would further increase opportunities for roosting bats. Natural development of bat roosting features should be further encouraged by retention of mature trees and standing deadwood, where appropriate.

5.18 The integrity of retained and new foraging and commuting habitat, both within the site and its surrounds, should be conserved through the sensitive use of lighting throughout the construction and operational phases of the proposed development. Consideration should be given to the use of directional, hooded and low-level lighting where appropriate, together with use of narrow spectrum and/or low UV bulbs, whilst maintaining a minimum level required for safety.

Further survey

5.19 Bats may occupy roost sites on a seasonal or temporary basis and old roost sites may be abandoned and new roosts occupied within relatively short periods of time. Where appropriate, bat survey work should be updated in advance of development commencing. The guidance of a suitably qualified ecologist should be sought to determine if and when surveys should be updated with regard to the development programme. This would ensure that up-to-date information is available to inform the extent of any mitigation and licensing requirements relating to bats.

6 CONCLUSION

6.1 The bat survey work at the site recorded a roost supporting an individual Soprano Pipistrelle within Tree 61, which is understood will be lost to the proposed development. Although the roost to be affected by the proposed development works is considered to be of no more than low local value, the proposed works must have due regard to the legal protection afforded to all bats, which protects both individual bats and the conservation status of populations.

6.2 Measures to ensure the protection of individual bats during construction works and maintenance of opportunities for roosting bats in the long-term, including provision of a range of new bat roosting opportunities and suitable timing of activities, are described in *Section 5* of this report. The measures described should form the basis of a detailed Method Statement which would accompany an application to Natural England for a licence to permit development works affecting bats.

6.3 Subject to the implementation of the measures described in *Section 5* to avoid possible adverse effects on roosting bats, it is considered unlikely that any significant adverse effects would arise as a result of the proposed development on the local bat population.

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HDA Document Control and Quality Assurance Record

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Project Reference: 1215.1
Document Title: Bat Survey Report
Commissioning Party: Hicks Developments Ltd

Issue	Description	Date of Issue	Signed
1	Bat Survey Report	November 2025	

	Personnel	Position
Author	Filippo Faraone	Senior Ecologist
Approved for issue	Clare Bird MCIEEM	Associate Ecologist

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APPENDIX A

Bat roost survey summary plan

APPENDIX B

Photographs



Photo 1: Entrance of PRF 1



Photo 2: Base of PRF 1



Photo 3: Ceiling of PRF 1

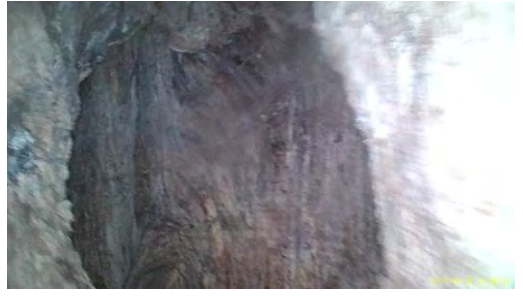


Photo 4: Back of PRF 1



Photo 5: Entrance of PRF 2



Photo 6: Base of PRF 2



Photo 7: Back void of PRF 2



Photo 8: Soprano Pipistrelle in back void of PRF 2



Photo 9: Droppings in base of PRF 2



Photo 10: Fungal fruiting bodies growing out of the void of PRF 2



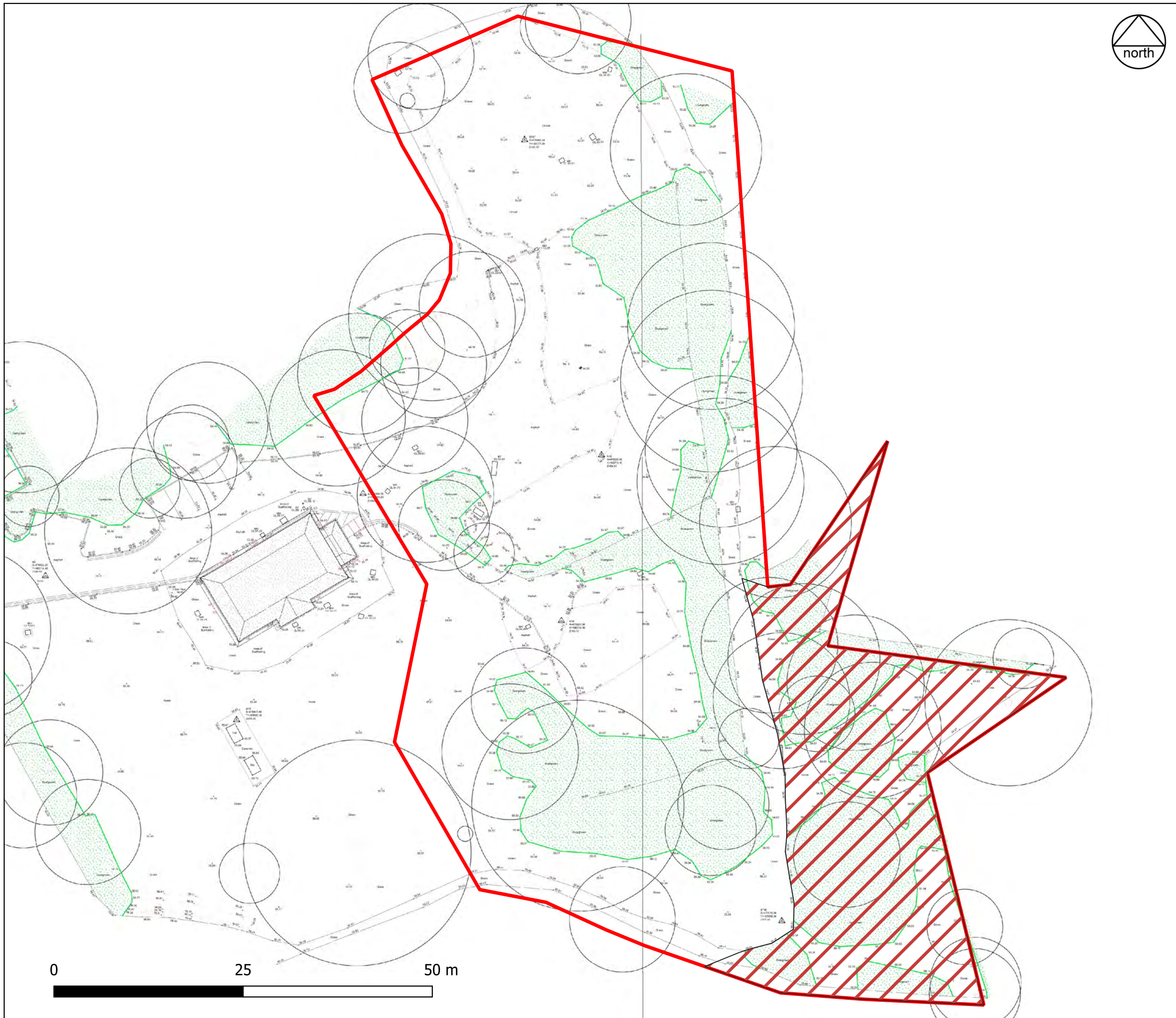
Photo 11: Entrance of PRF 3



Photo 12: Base and side of PRF 3

APPENDIX C

Badger Survey Summary Plan (HDA, 2025)



KEY

-  Site boundary
-  Area inaccessible during Badger survey

No evidence of Badger was identified during the survey

CLIENT:
Hicks Developments Ltd

PROJECT:
Arborfield Green, Parcel S - Phase 2

TITLE:
Badger Survey Summary Plan

SCALE AT A3:
See Scale Bar

DATE:
November 2025

1215.1 / 06

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Landscape Architecture
Masterplanning
Ecology



APPENDIX D

Reptile Survey Report (HDA, 2025)

ARBORFIELD GREEN, PARCEL S – PHASE 2
REPTILE SURVEY REPORT

Prepared for Hicks Developments Ltd

by

Hankinson Duckett Associates

HDA ref: 1215.1

November 2025

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5	Conclusion and Recommendations.....	5
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HDA Document Control and Quality Assurance Record

APPENDICES

A Reptile Survey Summary Plan

1 INTRODUCTION

1.1 Site location and summary description

1.1.1 This report describes a reptile survey of approximately 0.2ha of land at Arborfield Green – Parcel S, Arborfield, Berkshire hereinafter referred to as ‘the site’. The site centre is located by National Grid Reference SU 76998 65743. The study was commissioned by Hicks Developments Ltd in August 2025.

1.1.2 The site is located within Arborfield Green and comprises a previously developed site which has been demolished. The north of the site is dominated by rubble and hardcore which has been colonised by ruderal species and Bramble and the south of the site is dominated by a mosaic of grassland, Bramble scrub and mature trees. The site is bordered to the west by Moat House, with Buttenshaw Avenue beyond; to the south and east by residential houses and associated gardens, with Buttenshaw Avenue beyond; and to the north by residential houses and associated gardens and Biggs Lane. The site is surrounded by the Arborfield Green development, beyond which lies arable fields and woodland.

1.2 Background and legislative context

1.2.1 Four species of reptile are widespread in England: Grass Snake *Natrix helvetica*, Slow-worm *Anguis fragilis*, Common Lizard *Zootoca vivipara* and Adder *Vipera berus*. The Sand Lizard *Lacerta agilis* and Smooth Snake *Coronella austriaca* are restricted to certain sand dune and heathland sites.

1.2.2 Reptiles can be found in a range of habitats and typically require a mosaic of vegetation types. Habitat interfaces are important with reptiles requiring woodland, scrub or hedgerow for shelter, with adjacent longer vegetation for hunting and patches of sheltered short turf, bare ground or log piles for basking areas. Areas which catch the sun (i.e., those with a southerly aspect) are preferred over those where direct sunlight is absent for most of the day. In addition, Grass Snakes favour damp habitats such as those associated with still and running water, grazing marshes, mires etc.

1.2.3 All species of reptile are protected through Sections 9(1) and 9(5) of the 1981 Wildlife and Countryside Act (as amended). It is an offence to:

- Intentionally kill or injure any reptile; and/or
- Sell, offer for sale, possess or transport for the purposes of sale or publish advertisements to buy or sell any reptile.

Due to their rarity, Sand Lizards and Smooth Snakes have additional protection.

1.2.4 Reptiles across the UK have undergone significant declines in recent years and all native reptile species are listed as priority species on the UKBAP and identified as Species of Principal Importance under Section 41 of the 2006 Natural Environment and Rural

Communities (NERC) Act. Section 40 of the Act requires that these species are a material consideration in the planning process.

1.3 Development proposals

1.3.1 Planning permission (O/2014/2280) was granted in April 2015 for a hybrid application. This comprises:

- Outline permission for demolition of buildings and the phased redevelopment of Arborfield Garrison and adjoining land for: up to 2,000 new dwellings; a District centre and transport interchange; village square; Neighbourhood Centre; secondary school; primary school; public open space and sustainable urban drainage systems.
- Full permission for phased development of: creation of two new areas of Suitable Alternative Natural Greenspace (SANGS); re-use of existing MoD gymnasium for sports/community uses/centre; and road improvements.

1.4 Scope and purpose of the report

1.4.1 As part of the hybrid planning application, reptile surveys of areas of the wider site were conducted by ENTEC in 2008, ARUP in 2012 and AECOM in 2014. These identified low populations of Grass Snake, Slow-worm and Common Lizard, with the closest area subject to survey located approximately 100m to the north-east of the site undertaken by ENTEC in 2008 (AECOM, 2014).

1.4. In view of the absence of reptile survey data for the site, the age of the survey data for the surrounding area, the presence of suitable reptile habitat within the site, and within the legislative context set out in *Section 1.2*, a reptile survey was undertaken. The aims of this study are:

- i. To establish the presence/probable absence of reptiles at the site.
- ii. To assess the relative importance of different parts of the site for reptiles; and
- iii. To predict likely impacts potentially arising from the proposed development of the site on reptiles and give recommendations for impact avoidance, minimisation and mitigation.

2 METHODOLOGY

2.1 The methodology has been devised to accord with the requirements of all relevant legislation and good practice guidance, including the Herpetofauna Worker's Manual (JNCC, 1999) and Reptile Survey guidance (Froglife, 1999).

2.2 The site was surveyed on seven occasions by Clare Bird MCIEEM, Neve Philips, Lydia Taylor, Kate Thatcher and Charlotte Grant of HDA. Surveys were generally carried out during optimum temperature and weather conditions (intermittent or hazy sunshine,

temperature between 9°C and 20°C and low winds). Dates of survey visits, with survey timings and weather conditions, are shown in *Table 1* below:

Table 1: Survey times and weather conditions

Survey visit	Date	Time of Visit	Weather conditions	Temp (°C)
1	28.08.2025	14:10 - 14:25	80% Cloud cover, Beaufort Scale 3, dry	18.0
2	11.09.2025	09:25 - 09:45	15% Cloud cover, Beaufort Scale 1, dry	16.0
3	15.09.2025	09:45 - 10:10	40% Cloud cover, Beaufort Scale 1, dry	16.0
4	16.09.2025	10:15 - 10:30	0% Cloud cover, Beaufort Scale 2, dry	16.0
5	06.10.2025	10:15 - 10:30	60% Cloud cover, Beaufort Scale 1, dry	17.0
6	07.10.2025	10:15 - 10:35	20% Cloud cover, Beaufort Scale 1, dry	15.0
7	08.10.2025	14:30 - 15:00	80% Cloud cover, Beaufort Scale 1, dry	15.0

2.3 Two methods of surveying were used. Firstly, artificial refugia (squares of roofing felt 0.5m x 0.5m) were placed, in advance of the survey commencing, at potential basking areas throughout the site. A total of 22 refugia were placed across the site, giving a total density of 19 refugia per hectare. This is above the recommended density of 5 to 10 refugia per hectare of suitable habitat and was intended to increase the chance of encountering reptiles and, if present, provide a more accurate indication of their distribution within the site. Locations of refugia are shown on the map in *Appendix A*.

2.4 During each of the seven subsequent visits, each refugium was inspected for any reptiles basking on the upper side, then lifted and checked for sheltering animals before being carefully replaced.

2.5 The second survey method involved transect searches across suitable habitats within the site. This ensured that all areas were represented in the survey, and that the survey was not biased towards those reptiles more likely to use refugia. Transect searches involve walking slowly around the site, visually searching potential basking areas and marking the locations of any reptiles observed on a map. Potential reptile refuges already present on the site such as logs were also lifted to check for the presence of reptiles.

2.6 The following information was recorded for each reptile survey: species seen, number of animals seen, location (refugium number), date, start and finish times, temperature and weather.

Limitations

2.7 The reptile survey was carried out at appropriate times of the year during suitable weather conditions for reptile activity. It is therefore considered that no significant limitations were encountered during the survey, and the survey findings allow a robust assessment of the likely effects of the proposed development on reptiles and basis for the recommendations provided in *Section 5* of this report.

3 RESULTS

3.1 Habitat assessment

- 3.1.1 Opportunities for common and widespread reptile species such as Slow-worm, Grass Snake and Common Lizard are provided by the mosaic of grassland, scrub and tall ruderal habitats within the site. Opportunities for refuge and hibernation are also provided by the areas of scrub and construction debris situated within the site.

3.2 Refugia and visual searches

- 3.2.1 Despite the presence of suitable habitat for reptiles within the site, no reptiles were recorded during the reptile survey.

4 SITE EVALUATION

- 4.1 A number of guidelines are used to evaluate the importance of a site for reptiles, based on both the population density and number of species present, in addition to historical factors.

- 4.2 The Guidelines for Biological Selection of SSSIs (JNCC, 2022) identifies that for the more common and widespread species of reptile (Adder, Grass Snake, Common Lizard and Slow-worm) the following criteria should be considered for candidate SSSIs:

- The best 5 locations supporting established populations of Adder in any area of search; and/or
- The best localities in which three or more common and widespread reptile species occur.

The presence of populations of one or two common and widespread reptile species, should also count positively in the evaluation of potential SSSIs chosen largely on other grounds, especially where populations are large, located in areas where the species concerned is rare or at the geographical limits of its range.

- 4.3 The Herpetofauna Workers' Manual (JNCC, 1998) suggests that sites falling outside of the SSSI selection criteria should be designated as Sites of Importance for Nature Conservation (SINCs) if they meet the following criteria:

- Any site with a large population of a single species;
- Any site with a moderate population of two species;
- Any site at the edge of the geographical range of a species; and
- Any site with a long documented history.

- 4.4 The Key Reptile Site register is a mechanism designed to promote the safeguard of important reptile sites. To qualify for the register, the site in question must meet at least one of the following criteria (Froglife, 1999):

- Supports three or more reptile species;
- Supports two snake species;

- Supports an exceptional population of at least one species (*Table 2*);
- Supports an assemblage of species scoring at least 4 (*Table 2*); and
- Does not satisfy the above criteria but is of particular regional importance due to local rarity (e.g. in the East Midlands, Adders are very rare so even "low" populations should be designated as Key Sites).

The criteria for scoring populations of the four common reptile species for the purposes of the Key Reptile Register are given in *Table 2* below.

Table 2: Population parameters for the Key Reptile Sites register.

Reptile species	Low population Score 1	Good population Score 2	Exceptional population Score 3
Adder	<5	5-10	>10
Grass Snake	<5	5-10	>10
Common Lizard	<5	5-20	>20
Slow-worm	<5	5-20	>20

Figures in the table refer to maximum number of adults seen by observation and/or under tins (placed at a density of up to 10 per hectare) by one person in one day.

- 4.5 Despite the presence of suitable habitat within the site, no reptiles were recorded during the reptile survey. The site is therefore extremely unlikely to qualify for consideration as a SSSI, SINC or Key Reptile Site either wholly or in part, and is considered to be of negligible importance for reptiles in a local context.

5 CONCLUSION AND RECOMMENDATIONS

- 5.1 No reptiles were recorded during the reptile survey. It is therefore considered that the site does not support reptiles on a regular basis and that where areas of suitable reptile habitat are affected by the proposed development, reptiles are unlikely to be present. No mitigation specific to reptiles is therefore currently recommended in relation to the proposed works.
- 5.2 It is recommended however that any need for mitigation is reviewed at an appropriate stage prior to works commencing in order to allow consideration of time passed or any changes to management of habitats at the site which may have affected their ability to support reptiles since this report was produced.
- 5.3 Notwithstanding the apparent absence of reptiles from the site, consideration should also be given to inclusion of areas of suitable reptile habitat within the landscape scheme for the proposed development, such as rough grassland, scrub and hedgerow planting. The value of these habitats could be further enhanced through provision of refuge and hibernation opportunities such as log piles and purpose-built hibernacula. This would be in keeping with planning policy and guidance and Section 40 of the 2006 NERC Act.

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Beebee T. and Griffiths R. (2000). *Amphibians and Reptiles*. HarperCollins Publishers Ltd, London.

Froglife (1999). *Reptile survey. An introduction to planning, conducting and interpreting surveys for snake and lizard conservation*. Froglife Advice Sheet 10. Froglife, Halesworth.

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HDA Document Control and Quality Assurance Record

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Project Reference: 1215.1
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Commissioning Party: Hicks Developments Ltd

Issue	Description	Date of Issue	Signed
1	Reptile Survey Report	November 2025	

	Personnel	Position
Author	Charlotte Grant	Assistant Ecologist
Approved for issue	Clare Bird MCIEEM	Associate Ecologist

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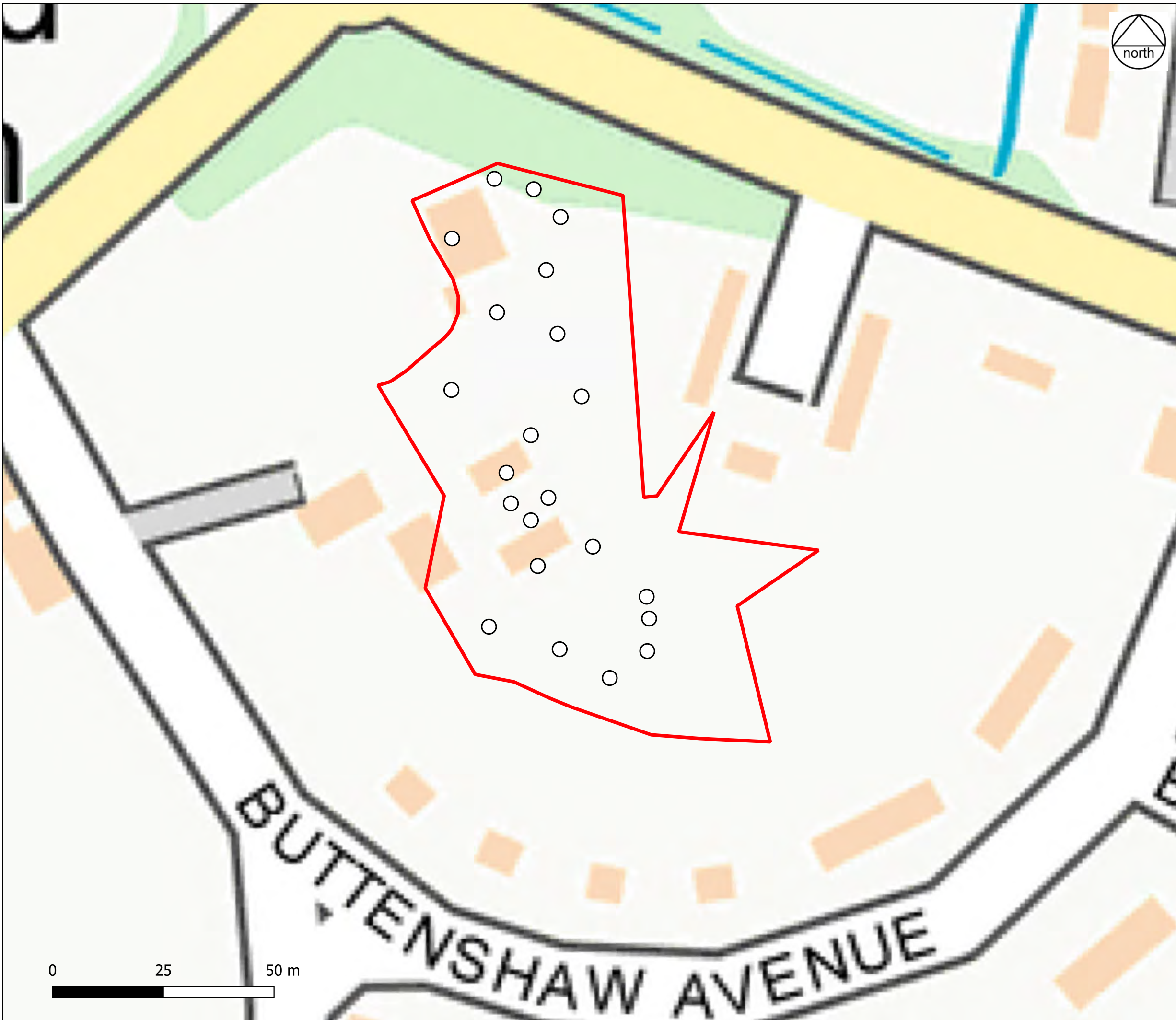
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APPENDIX A

Reptile Survey Summary Plan



KEY

- Site boundary
- Reptile Mats
- No reptiles recorded

CLIENT:
Hicks Developments Ltd

PROJECT:
Arborfield Green, Parcel S - Phase 2

TITLE:
Reptile Survey Summary Plan

SCALE AT A3: DATE:
See Scale Bar November 2025

1215.1 / 04

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Landscape Architecture
Masterplanning
Ecology



APPENDIX E

Landscape Masterplan (Murdoch Wickham, 2025)

Legend

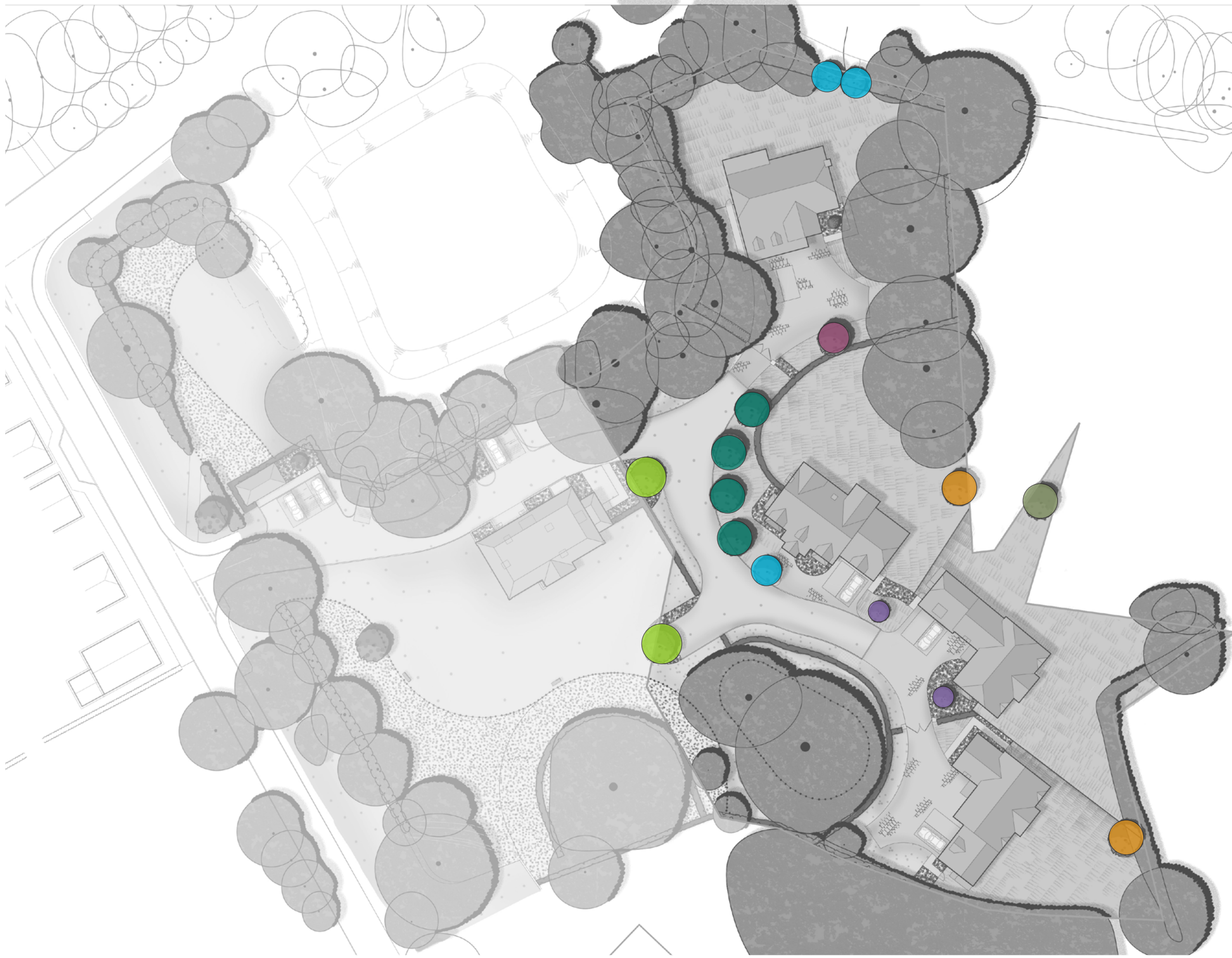
- Existing trees and vegetation
- Proposed trees
- Shrub planting
- Native hedge planting
- Mixed native hedge planting
- Regularly mown grass
- Areas of long grass and wildflowers
- Bitumen macadam
- Block paving
- PC slab paving
- Metal estate railings 1.2m high
- Cleft chestnut post and rail fencing 1.2m high
- Timber close boarded fence 1.8m high
- Application boundary

Scale
1:250
0 5 10 15m

Landscape Plan - 1:250



Proposed Tree Plan



Proposed Trees & Multi-stems



Landscape Images



Metal estate railings

Cleft chestnut post and rail fencing

APPENDIX F

Management Schedules

Grassland Management

Habitat Type	Management Phase	Operational objective	Activity	J	F	M	A	M	J	J	A	S	O	N	D
Wildflower meadow	Establishment	Ensure establishment of a healthy sward.	Once established cut to a height of approximately 10cm. Remove cuttings. Carried out every 6-8 weeks throughout first growing season from mid-summer onwards.												
	Maintenance	Maintain and enhance meadow grassland for ecological diversity.	Cut once annually to no less than 10cm, at the end of August. Remove cuttings.												
Amenity	Establishment	Ensure establishment of a healthy sward.	Carry out first cut once grass has reached 5cm, cutting off 1cm, and lightly roll. Maintain sward at 5cm by regular cutting at appropriate intervals through the growing season.			1	1	2	2	2	2	1	1		
	Maintenance	Maintain a short, neat sward for moderate recreational use. Prevent encroachment of woody species.	Regular cutting to 5cm throughout March-October (up to 14 times per year). Water and weed when needed.			1	1	2	2	2	2	1	1		
All new grassland	Establishment	Control problem species, e.g. Ragwort, Nettles, Thistle	Apply spot herbicide as required (Assume 1% of total area to be treated) or hand pull if within 5m of waterbodies					1							
	Maintenance	To maintain a healthy and uniform sward. Do not apply organic or inorganic fertilisers or lime. Do not apply insecticides, herbicides or fungicides; the exception is herbicides for the control of specific problem weeds – herbicides for these species should be applied by weed wiper or spot treatment with a back-pack sprayer.	Repair any erosion and settlement with re-seeding with the same species seed mix as used originally at appropriate time during the growing season. Control encroaching scrub.												

Note: Shaded blocks indicate recommended window for the relevant management activity to be carried out. Numbered blocks indicate that management should be carried out at this time and the frequency.

Hedgerows and Boundary Management

Type	Management Phase	Operational Objective	Activity	J	F	M	A	M	J	J	A	S	O	N	D
Native Hedgerows	Establishment	Establish new native hedgerows.	Plant hedgerows and protect with appropriate guards (see 'Trees and Scrub' schedule). Cut annually for 3 years to encourage bushy growth.												
	Maintenance	Maintain and enhance ecological value. Allow the development of standard trees within the hedges.	Native hedgerows (informal): Cut on 2-3 year cycle with tractor mounted cutter or hand held equipment, with 1/3 of hedges being cut every year on rotation.												
			Native hedgerows (formal): Cut up to 3 times a year using tractor mounted cutter or hand held equipment (preceded by nesting bird check where appropriate).						1		1		1		
Plant guards	Establishment	Protect from animal damage.	Inspect and maintain guards twice a year for up to 5 years after planting (see 'Trees and Scrub' schedule).												
All boundaries	Maintenance	Maintain condition and ensure boundaries are fulfilling duties.	Inspect twice per annum.												

Note: Shaded blocks indicate recommended window for the relevant management activity to be carried out. Numbered blocks indicate that management should be carried out at this time and the frequency.

Native Scrub and Tree Management

Habitat Type	Management Phase	Operation Objective	Activity	J	F	M	A	M	J	J	A	S	O	N	D
New trees planting	Establishment	Ensure establishment of healthy trees.	Protect with appropriate guards/fencing.												
			Maintain >1m weed-free zone around base of newly planted trees and shrubs using mulch and/or 3 herbicide applications per year.				1		1			1			
			• Replace any dead plants during establishment period.												
	Maintenance	Ensure establishment by observing moisture levels around base of trees during dry months and tree stakes are intact.	• Water during long, dry spells. • Regularly check tree stakes until fully established, 3 times per year. Repair and replace damaged tree stakes and ties. Remove stakes once established. • Keep clear stems up to 2m.												
		Maintain and enhance for ecological diversity, amenity and public safety.	• Inspect. Stop low branches and scrub encroaching onto footpaths.												
		Maintain for public safety and check for diseases.	Inspect. Fell dangerous trees, remove dangerous branches.												
Plant guards	Establishment	Protect from animal damage.	Inspect and maintain guards twice a year for up to 5 years after planting.												
Tree stakes	Maintenance	Maintain for support of trees until self supporting.	Check ties 3 times per year. Tighten/loosen and replace as necessary. Remove stakes once established.												

Note: Shaded blocks indicate recommended window for the relevant management activity to be carried out.

Furniture, Footpath and Miscellaneous Management

Type	Management Phase	Operational Objective	Activity	J	F	M	A	M	J	J	A	S	O	N	D
Litter and fly tipping	Establishment, Maintenance	Ensure site is kept free from litter and fly tipping.	Clear litter from site while undertaking maintenance tasks throughout the year. Fly tipping to be monitored and reviewed.	1	1	1	1	1	1	1	1	1	1	1	1
Deadwood	Maintenance	Construct log and brash piles through areas of habitat from deadwood and felled trees/scrub.	Create piles from deadwood and felled vegetation during maintenance.												
Non-native Invasive Species	Establishment, Maintenance	Prevent re-establishment of non-native invasive species.	• Inspect annually and control any alien or invasive species (e.g. Rhododendron) as they appear.												
Site inspection and audit	Maintenance	Ensure site is establishing, identify any particular problems as early as possible. Ensure maintenance is running effectively in the long term.	Inspection of site establishment and maintenance effectiveness every 6 months. Update management plan as appropriate.												

Note: Shaded blocks indicate recommended window for the relevant management activity to be carried out. Numbered blocks indicate that management should be carried out at this time and the frequency.

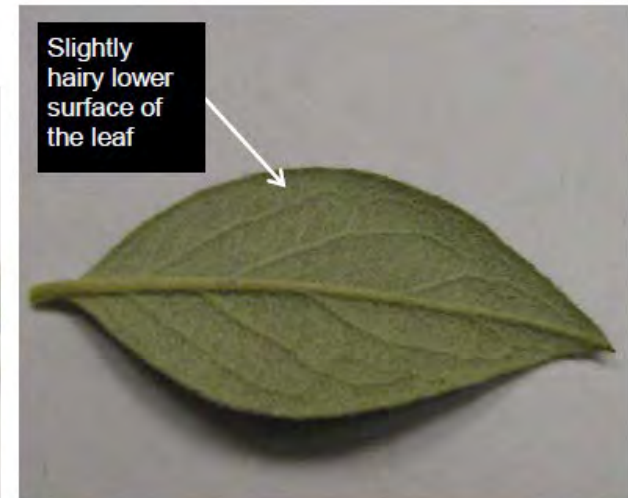
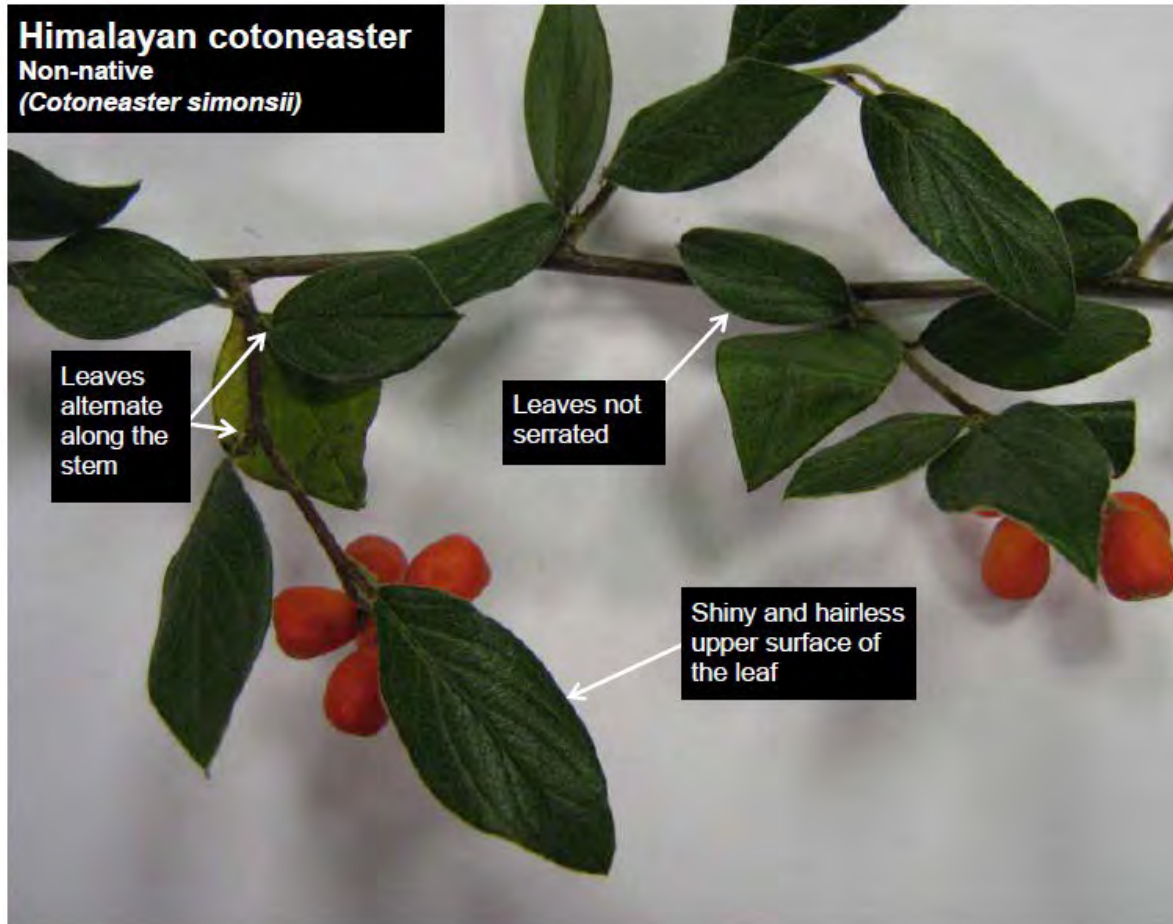
APPENDIX G

Key identification features of the invasive, non-native species recorded on the wider site or wider area

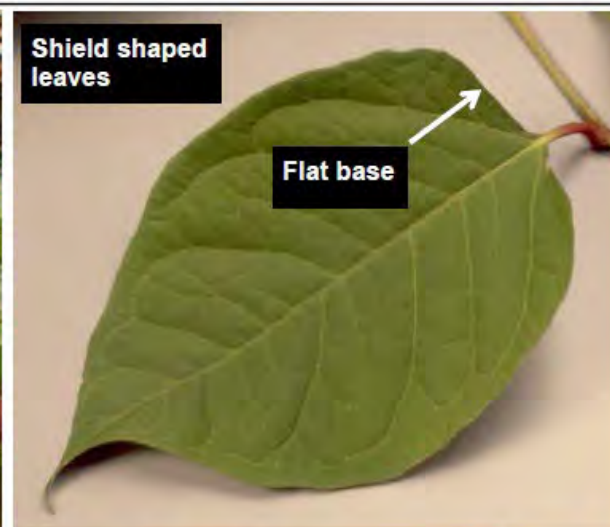
Key ID Features



Key ID Features



Key ID Features



Identification throughout the year

Spring



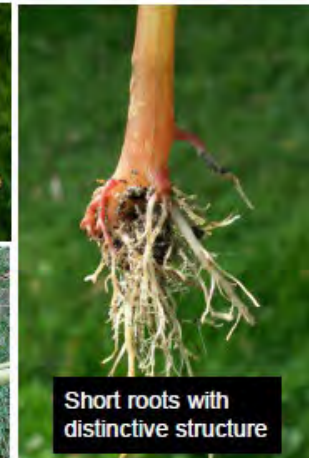
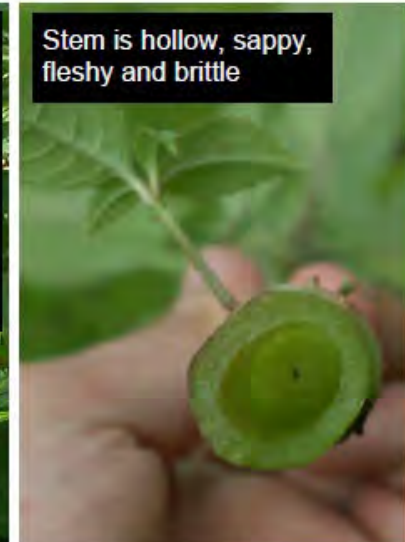
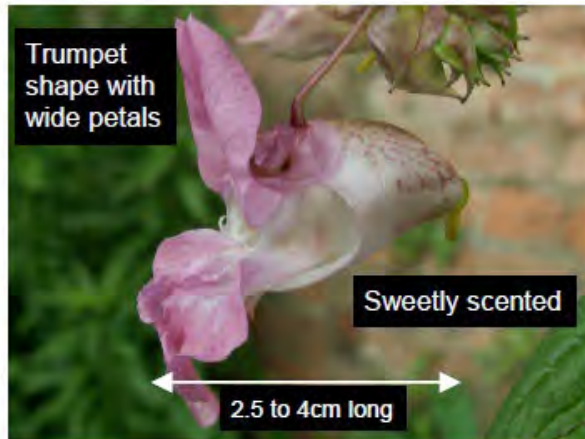
Summer



Winter



Key ID Features



Variegated Yellow Archangel (www.nonnativespecies.org)

- Erect hairy perennial. The green variegated leaves have characteristic and distinctive silvery patches, they are hairy with toothed edges, growing in opposing pairs to a length of 4-7cm.
- Yellow flowers which are lipped and hooded, flowering from April to June.



Cherry Laurel (www.nonnativespecies.org)

- A large shrub or small tree with leathery, glossy, oblong, evergreen leaves, and with erect racemes of white flowers that give rise to black cherry-like fruits

