

Land West of Worthing Road, Southwater

Phase 5

Ecological Assessment

June 2024



T: 0118 989 10 86
E: info@derekfinnie.com
W: www.derekfinnie.com

20 Soames Place, Mulberry Grove
Wokingham, Berkshire RG40 5AT



COMMISSIONED BY
Berkeley Homes (Southern) Limited
Berkeley House
Bay Tree Avenue
Leatherhead
Surrey
KT22 7UE

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Derek Finnie Associates Ltd

20 Soames Place
Wokingham
Berkshire
RG40 5AT

info@derekfinnie.com



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1 INTRODUCTION

1.1 Background

- 1.1.1 Derek Finnie Associates was commissioned by Berkeley Homes (Southern) Ltd (BHS) to provide ecological advice in relation to an area of land to the south of Church Lane and east of Shaw Lane in Southwater, herein referred to the 'Site'. The Site had previously formed Phase 5 of BHS's wider *Land West of Southwater* development which received outline planning permission for residential development (Ref: DC/14/0590). This report has been prepared in support of amendments associated to application DC/19/2464 and Phase 5 of the development known as Broadacres, Southwater.
- 1.1.2 The proposed changes solely relate to the unbuilt Phase 5 with the aim to deliver an alternative housing mix, amend the number of homes (an increase of 14 compared to the resolved to be approved plans) and an improved design. The proposed amendments remain in accordance with the approved outline application parameter plans.
- 1.1.3 The revised development relates to the erection of 94 dwellings with associated access, parking and landscaping at Land West of Worthing Road (Phase 5), Southwater as detailed in the covering letter. Therefore, there is a need to re-assess the ecological implication of the proposal as some time has lapsed since the previous ecological assessment of the Site undertaken as part of the outline application.
- 1.1.4 To this end a suite of ecological surveys, including an Extended Phase 1 survey, badger survey, reptile survey and bat assessment were undertaken across the Site between April and June 2024, to ensure the current proposal is informed by up-to-date ecological information. These surveys build upon previous survey undertaken by Derek Finnie Associates in 2013, 2014 and 2019 to inform the Environmental Statement submitted in support of the original outline application.
- 1.1.5 The following report outlines the methodologies employed throughout the ecological assessment, describes the current ecological status of the Site and discusses the ecological constraints to any future development, as well as options for biodiversity enhancement. Some of the surveys are on-going, the final results of which will be made available as an Addendum to this report.

2 LEGISLATIVE FRAMEWORK

2.1 National policy and Guidance

Legal Framework

2.1.1 The legislative framework applicable to this assessment is summarised below.

International Conventions and Directives

- Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (EC Habitats Directive);
- Council Directive 2009/147/EC on the Conservation of Wild Birds (Birds Directive);
- The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) 1979;
- The Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) 1983; and
- Convention on Biological Diversity 1992.

National Legislation

- The Environment Act 2021
- The Wildlife and Countryside Act 1981 (WCA);
- The Conservation of Habitats and Species Regulations 2017;
- The Countryside and Rights of Way Act 2000 (CRoW);
- Natural Environment and Rural Communities Act 2006 (NERC);
- The Protection of Badgers Act 1992; and
- The Hedgerow Regulations 1997.

Statutorily Protected Sites

2.1.2 Local Nature Reserves (LNRs); National Nature Reserves (NNRs); Sites of Special Scientific Interest (SSSIs); Special Areas of Conservation (SAC); and Special Protection Areas (SPAs) contain examples of some of the most important natural and semi-natural ecosystems in Europe and receive strict protection under United Kingdom (UK) legislation. Although not strictly protected under legislation, Ramsar sites are given the same level of protection through policy.

Non-Statutory Sites

2.1.3 Non-statutory sites of county conservation value are designated by Local Planning Authorities (LPAs); within West Sussex these are known as County Wildlife Sites (CWS). Such sites are afforded a measure of protection in local development plans.

Protected Species

2.1.4 Under UK legislation, a number of species, including bats *Chiroptera* sp. and great crested newts *Triturus cristatus* are strictly protected from death, injury or harm; whilst places used for their shelter or rest are protected from damage, disturbance and



destruction. Certain species such as some reptiles and birds receive partial protection under UK legislation, e.g. protection from killing / injuring only or protection at certain times of the year only.

Invasive Weeds

- 2.1.5 The WCA 1981 makes it an offence to plant or otherwise cause to grow in the wild numerous species including Japanese knotweed *Fallopia japonica* and giant hogweed *Heracleum mantegazzianum*.

Non-Statutory Policies

- 2.1.6 The UK Biodiversity Action Plan (UK BAP) was established in response to the global Convention on Biological Diversity, 1992. Individual Action Plans define actions and measures to meet the conservation objectives defined in the strategy and specify measurable targets. They determine the broad habitats and species that are of value to the natural environment of the UK and identify actions and projects that could be undertaken to help protect or enhance the national biodiversity.
- 2.1.7 Local Biodiversity Action Plans (LBAPs) are implemented through planning policy, identifying habitats and species in need of conservation action at the local or regional level. BAPs in the UK have no statutory status but provide a framework for implementing conservation requirements.

Planning Policy

National Planning Policy

National Planning Policy Framework (2023)

- 2.1.8 The following objectives relating to biodiversity conservation are considered relevant to this assessment. The National Planning Policy Framework (NPPF) seeks to:
- Protect and enhance valued landscapes, geological conservation interests and soils;
 - Recognise the wider benefits of ecosystem services;
 - Minimise impacts on biodiversity and provide net gains in biodiversity, where possible, contribute to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
 - Prevent both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability;
 - Remediate and mitigate despoiled, degraded, derelict, contaminated and unstable land, where appropriate; and
 - Prevent the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss.

Local Policy and Guidance

- 2.1.9 Policy 31 of the *Horsham District Planning Framework* (November 2015) is also relevant to the current proposal, and states:

Policy 31

Green Infrastructure and Biodiversity

1. Development will be supported where it can demonstrate that it maintains or enhances the existing network of green infrastructure. Proposals that would result in the loss of existing green infrastructure will be resisted unless it can be demonstrated that new opportunities will be provided that mitigates or compensates for this loss and ensures that the ecosystem services of the area are retained.

2. Development proposals will be required to contribute to the enhancement of existing biodiversity and should create and manage new habitats where appropriate. The Council will support new development which retains and /or enhances significant features of nature conservation on development sites. The Council will also support development which makes a positive contribution to biodiversity through the creation of green spaces, and linkages between habitats to create local and regional ecological networks.

3. Where felling of protected trees is necessary, replacement planting with a suitable species will be required.

4. a) Particular consideration will be given to the hierarchy of sites and habitats in the district as follows:

i. Special Protection Area (SPA) and Special Areas of Conservation (SAC)

ii. Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs)

iii. Sites of Nature Conservation Importance (SNCIs), Local Nature Reserves (LNRs) and any areas of Ancient woodland, local geodiversity or other irreplaceable habitats not already identified in i & ii above.

b) Where development is anticipated to have a direct or indirect adverse impact on sites or features for biodiversity, development will be refused unless it can be demonstrated that:

i. The reason for the development clearly outweighs the need to protect the value of the site; and,

ii. That appropriate mitigation and compensation measures are provided.

5. Any development with the potential to impact Arun Valley SPA or the Mens SAC will be subject to a HRA to determine the need for an Appropriate Assessment. In addition, development will be required to be in accordance with the necessary mitigation measures for development set out in the HRA of this plan.

- 2.1.10 Although not strictly approved policy as yet, some weight has been given to the policies in the emerging Horsham District Local Plan 2023-2040 Regulation 19, specifically Policy 17:

Strategic Policy 17: Green Infrastructure and Biodiversity
Green Infrastructure

1. Development will be supported where it can demonstrate that it maintains and enhances the existing network of green infrastructure and contributes to the delivery of public open space, the Local Nature Recovery Strategy, Nature Recovery Network, natural capital, ecosystem services and / or biodiversity. Green Infrastructure should be integral to the design and layout of development, and new provision, including green linkages, should be provided taking into account Natural England's green infrastructure guidance and the council's green infrastructure strategy. Provision should seek to optimise public access to open space and nature via foot, bicycle, wheeling, and also horse as appropriate.

2. Proposals that would result in any loss, degradation or harmful impacts to green infrastructure, or core areas of the Local Nature Recovery Strategy and Nature Recovery Network will be resisted unless it can be demonstrated that new opportunities will be provided that appropriately mitigates and / or compensates for the respective harm and ensures that the ecosystem services of the area are retained and enhanced. Development proposals will be expected to remove invasive species.

3. Proposals will be expected to retain and enhance existing priority habitats and trees, and accord with the aims and objectives of the Green Infrastructure and Local Nature Recovery Strategies. Habitat enhancement including additional hedgerow and tree planting must take account of the local landscape and habitat context. It should seek to optimise biodiversity, ecological connectivity and function, and climate change resilience.

4. Development likely to affect a watercourse and its associated corridor should seek to conserve and enhance its ecological, landscape and recreational value. This should include providing adequate natural buffer zones to the watercourse.

Biodiversity

5. The Council will support appropriate new development which delivers at least 12% biodiversity net gain and:

a) Retains and enhances significant features of nature conservation value on development sites;

b) Makes a positive contribution to biodiversity and accords with the aims and objectives of the Green Infrastructure and Local Nature Recovery Strategies, through the creation of appropriate green spaces, that provide linkages



between habitats to create local and regional ecological networks that enable the movement of wildlife through development sites; and / or

c) Following the principle of 'right habitat in the right place', significantly increases woodland or other habitats for the purpose of appropriately enhancing biodiversity, carbon sequestration, pollution control, and / or flood mitigation.

6. Relevant development proposals will be expected to deliver 12% biodiversity net gain and must submit Biodiversity Net Gain information to show how this will be achieved using the mandated Biodiversity Metric or the Small Sites Metric as appropriate and must abide by the metric trading rules. Submissions must make clear what will be provided to meet no net loss and what will deliver net gains. The net gain must be achieved through the delivery of appropriate on-site biodiversity net gain or, where this is not practicable, through off-site net gain within the District especially areas, as suitable to the habitats subject to gain, identified in the District's Green Infrastructure Strategy or the Local Nature Recovery Strategy, or as agreed by the Council. All such schemes, excluding any respective element using statutory biodiversity credits, must submit for approval by the Council a funded maintenance and management plan, including monitoring / reporting and appropriate enforcement processes, that secures the biodiversity net gains for at least 30 years.

7. All other development proposals must seek to demonstrate how measurable biodiversity net gains will be delivered.

Protected Sites and Species

8. Proposals must give appropriate consideration to protected and notable species. They will be expected to protect priority species and seek to aid their recovery, and must conserve, restore and enhance priority habitats, and should create and manage appropriate new habitats, taking into account pollination, where practicable.

9. Particular consideration will be given to the hierarchy of sites and habitats, including buffer areas, within the District, or functionally linked to, as follows:

a) Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites;

b) Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs), Veteran Trees, Ancient Woodland and other irreplaceable habitats;

c) Local Wildlife Sites (LWS), Local Nature Reserves (LNRs) and any areas of priority habitats including traditional orchards, local geodiversity, Core Sites in the emerging NRN and other irreplaceable habitats not already identified in a & b above.

10. An appropriate buffer around woodland will be required, this will be at least 15m around Ancient Woodland or greater in accordance with good practice, and consideration should be given to the potential for protected species, such as bats, and impacts on hydrology. Around ancient and veteran trees a minimum buffer zone of at least 15 times larger than the diameter of the tree, or 5 metres from the edge of the tree's canopy whichever is the larger, will be required.

11. Where the felling of a tree is necessary, for example due to disease, replacement planting with a suitable tree species, age and location to retain and enhance the link with the wider network of habitats and Green Infrastructure, will be required.

12. Where development is anticipated to have a direct or indirect adverse impact on sites or features of importance to nature conservation, development will be refused unless it can be demonstrated that:

- a) The mitigation hierarchy has been applied and the objectives of a site's designation, where applicable, and integrity of the area will not be undermined;
- b) The reason for the development clearly outweighs the likely impact to notified features and / or the need to protect the value of the site; and
- c) Appropriate mitigation and compensation measures will be provided alongside the delivery of measurable biodiversity net gain as relevant.

13. Any development with the potential to impact the Arun Valley SPA / SAC / Ramsar site, The Mens SAC and / or Ebernoe Common SAC will be subject to a Habitats Regulation Assessment to determine the need for an Appropriate Assessment. In addition, development will be required to be in accordance with the necessary mitigation measures for development set out in the Habitat Regulation Assessment of this Plan.

2.1.11 Policy SNP of the Southwater Neighbour Plan was also considered:

SNP18 - A Treed Landscape

SNP18.1. Development proposals should produce measurable enhancements to the treed environment to ensure biodiversity net gains (regardless of land ownership). Where existing trees or an area of woodland is to be lost, it must be replaced with trees or new woodland of greater environmental value on site or elsewhere within the Plan Area. Trees planted should be suitably mature and, as a minimum, conform to British Standard BS 3936-1 / Standard 10-12cm girth.

SNP18.2. Development proposals affecting areas of Ancient Woodland in the Plan area, as shown on the Policies Map, should provide long-term and measurable enhancements to them.

SNP18.3. Major development must provide a minimum of one new tree (conforming to British Standard BS 3936-1 / Standard 8-10cm girth) per 40m² of floor space created. This should be provided on-site or off-site within the Plan Area if there is nowhere suitable within the site. Measures will be implemented on any permissions granted to secure these trees and their survival. If these trees cannot be provided on site, and the applicant is unable to deliver the trees at an alternative location within the Plan Area, a commuted sum may be paid in lieu of tree planting.

3 METHODOLOGY

3.1 Desk Study

- 3.1.1 A review of the Government's MAGIC website was undertaken for the location and extent of statutory protected sites within 2km of the Site, extending to 5km in the case of Natura 2000 sites.
- 3.1.2 The previous surveys undertaken by Derek Finnie Associates in 2013, 2014 and 2019 were also reviewed.

3.2 Habitat survey

- 3.2.1 An 'extended' Phase 1 Habitat Survey was carried out on several visits between April and June 2024; this followed the methodology presented by the JNCC (2010). The Phase 1 technique aims to classify each habitat into categories based on the assemblage of plant species present, with the dominant plant species for each habitat being noted. In some cases, sub-divisions or modifications of the standard categories can be made where this is useful in providing further detail. The 2024 survey builds up the surveys undertaken in 2013 and 2019, providing a picture of the habitats within in the site over a 10-year time frame.
- 3.2.2 An 'extended' form of the basic methodology was employed to determine whether any notable or protected species of fauna utilise the study area, in particular badgers, bats, amphibians, reptiles and birds. In the absence of direct evidence of these species, an assessment was made on the potential for the site to support such species.

3.3 Badger Survey

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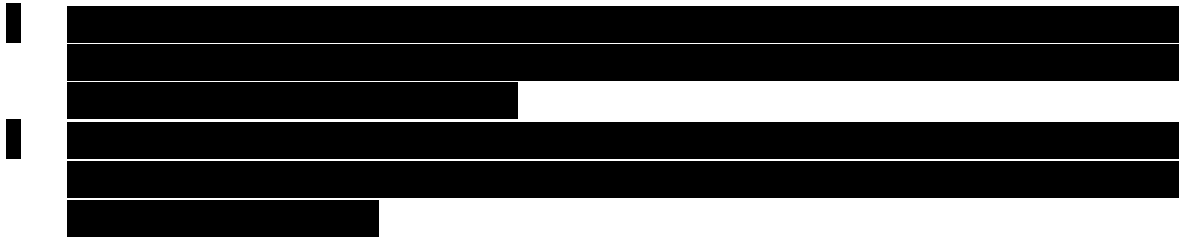
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3.4 Reptile survey

- 3.4.1 A previous survey undertaken in 2019 identified a low populations of grass snake, common lizard, and slow worm from within the Phase 5 area. Prior to proposed earth works within the Phase 5 area, a reptile translocation exercise was undertaken in line with draft condition attached to the previous permission. A total of 72 slow worm, five grass snake and 21 common lizard were caught in August 2022 and moved to a dedicated receptor site in the west of the Site. The receptor site was separated from the main area of the Site by reptile exclusion fencing, preventing reptiles recolonising the Site.
- 3.4.2 However, given the time that has passed since the original translocation, it was deemed appropriate to undertake an update survey within the Site to ensure there has been no re-colonisation of the area by reptiles. Therefore, a repeat of the 2019 survey was undertaken across the proposed construction area of the Site.
- 3.4.3 A total of 70 refugia, consisting of heavy-duty roofing felt approximately 0.5m², were placed across the Site in line with best practice survey guidance. To maximise the efficiency of the survey the refugia were concentrated in areas which appeared to be more likely to support reptiles. The refugia were placed across the 6.6ha site at the density recommended by Froglife (1999) of 10ha⁻¹.
- 3.4.4 The refugia generally heat up quicker than the surrounding environment, which makes them attractive to reptiles which need to attain a certain body temperature to hunt effectively. Thus, careful inspection of the refugia results in a more effective way to locate these often-elusive animals.
- 3.4.5 The refugia were placed on Site on the 19th May 2024 and allowed to 'bed in' for at 10 days before the survey proper began. The refugia will be checked on seven occasions throughout the survey period, on suitable days, which are classified as sunny, or partially sunny days, with little or no wind and an air temperature between 8°C and 19°C. To date, the refugia have been inspected on three occasions, specifically the 29th May, 6th June and the 12th June 2024.
- 3.4.6 In addition to checking the artificial refugia, other suitable natural basking areas around the Site were carefully inspected from a short distance using Leica 10x32 BGA binoculars, expanding the search area to cover parts of the Site where refugia could not be placed.

3.5 Bat Survey

Activity Surveys

- 3.5.1 As suite of bat surveys was undertaken across the Site in 2019 in line with the Bat Conservation Trust guidelines (BCT 2016), modified to meet the specific site requirements. The aim of the survey was to provide an update of the level of bat activity within the Site, building upon the results previously obtained in 2013 and 2014. The surveys comprised four dusk surveys across the Site during 2019, as per the dates in Table 2.

Table 1. Bat Activity Survey Dates and Conditions

Date	Sunset	Start time	Temperature	Weather
22/05/19	20:30	20:15	13°C	Dry, light breeze
15/06/19	21:19	21:00	15°C	Clear, light breeze
03/07/19	21:20	21:05	16°C	Partial cloud, gentle breeze
12/08/19	20:29	20:05	16°C	Clear, light breeze

- 3.5.2 Given the time that has elapsed since the previous surveys, as well as change I the guidance (see BCT 2023), additional surveys in 2023 were deemed appropriate to further build upon the results previously obtained. A total of six activity survey sand six static surveys will be undertaken across the 2024 survey season, with two activity and two static surveyors already completed.

3.6 Survey Constraints

- 3.6.1 Access was available to all areas of the Site. The surveys have been undertaken across several months over numerous years which allowed for a comprehensive picture of ecological receptors within the Site to be gained. Therefore, confidence in the results is high.
- 3.6.2 The survey was undertaken in line with the latest sectoral guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM) and BS 42020: 2013 *Biodiversity – Code of Practice for Planning and Development*.

4 SITE DESCRIPTION

4.1 Desk Study

Statutory Sites

- 4.1.1 There are no statutory designated sites within 2km of the Site. The search area was then extended to 5km for European designated sites (SPA and SAC); no further records were returned.

Non-statutory Designated Sites

- 4.1.2 There are two non-statutory designated sites within 2km of the Site:

- The South Downs Link, Nutham Wood and Greatsteeds Farm Meadow; and
- Courtland Wood.

- 4.1.3 Details of the non-statutory designated sites are detailed below in Table 3.

Table 2. SNCIs within 2km of the Site.

Site Name	Designation	Proximity to survey area	Description
The Downs Link, Nutham Wood & Greatsteeds Farm Meadow	SNCI	0.6km south east	The Downs Link is a disused railway line which has developed into a species rich belt of shrubs. Adjacent to the Downs Link are a small herb-rich meadow and stream and some ancient woodland. A rare butterfly breeds on this site.
Courtland Wood	SNCI	0.9km north	Relatively small ancient broadleaved woodland with Conifer introductions in the east. It has a varied structure dominated by Small Leaved Lime coppice in the west.
Key: SNCI – Site of Nature Conservation Importance			

- 4.1.4 In addition to this, there are 14 areas of ancient woodland within 2km of the Site, a country park and a known ancient/veteran tree.

Protected and Notable Species

- 4.1.5 The data search did not return any specially protected species, or species of a raised conservation status for the Site itself. However, previous surveys undertaken by Derek



Finnie Associates in 2013, 2014 and 2019 had identified a low population of slow worms, common lizard and grass snake within the Site, as well as relatively poor assemblage of bat species.

4.2 Field Survey

Phase 1 Survey

4.2.1 The Site comprises former agricultural land which has been left fallow in recent years; it was subject to cutting in 2022 as part of the reptile mitigation strategy. The majority of the Site's boundaries are formed by outgrown hedgerows that contain numerous semi-mature trees. Towards the north of the western boundary is an area that forms part of the ecological mitigation area for the wider Land West of Southwater Phases 1 – 2, whilst a new works compound (that serves the other phases of the wider development) is located in the north east corner of the Site.

4.2.2 The town of Southwater lies to the east, while the land use to the north, south and west is predominantly agricultural.

4.2.3 The following Phase 1 habitats were encountered throughout the Site visits:

- Species poor, semi-improved grassland/fallow agricultural land;
- Species rich grassland (newly created); and
- Outgrown hedgerows.

4.2.4 Each habitat is described in turn below and depicted on Figure 1.

Species poor, semi-improved grassland/fallow arable land

4.2.5 The majority of the Site comprises former agricultural land that has been slowly colonised by a semi-improved, species poor grassland community. Areas of soft brome *Bromus hordeaceus* are locally dominant, with evidence of a past cereal crops still present. Other graminoid species noted include perennial rye grass *Lolium perenne*, cock's-foot *Dactylis glomerata*, meadow foxtail *Alopecurus pratensis* and false oat grass *Arrhenatherum elatius*. There is a paucity of forbes within the sward, but where they are present, they are typical of arable weeds, such as charlock *Sinapis arvensis*, hoary cress *Lepidium draba*, common nettle *Urtica dioica*, common mallow *Malva sylvestris*, white clover *Trifolium repens*, goosefoot *Chenopodium sp. and*, mugwort *Artemisia vulgaris*.

Species rich grassland (newly created)

4.2.6 An area of species rich grassland is present towards the west of the Site, within an area that forms part of the mitigation land associated with Phase 1 and 2 of the wider development. This was sown with a species rich grassland mix in 2017 as part of the site wide mitigation strategy, hence the species present reflect the composition of the original seed mix, although some species such as black knapweed *Centaurea nigra* and ox-eye daisy *Leucanthemum vulgare* are beginning to become more dominant.

Hedgerows

- 4.2.7 The hedgerow along the western field boundary (H1), running along the length of Shaw's Lane, comprises a mature, outgrown hedgerow, with numerous semi-mature standard trees. It is relatively species rich, containing hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, elder *Sambucus nigra*, hazel *Corylus avellana*, field maple *Acer campestre*, holly *Ilex aquilinum* and elm *Ulmus* sp. The semi-mature trees present are generally oak *Quercus* or ash *Fraxinus excelsior*, although sycamore *Acer pseudoplatanus* becomes locally abundant in areas.
- 4.2.8 The southern hedgerow (H2) is similar in composition to H1, although fewer species were noted, with both elm and holly being absent. Towards the western end of the hedge, mature lime *Tilia* sp was noted as being locally abundant, replacing oak as the main standard tree.
- 4.2.9 The southern section of the eastern hedgerow (H3) is more or less a line of continuous mature trees, comprising oak in the main. However, towards the north, the hedgerow changes character completely being dominated by well managed hawthorn, with few standard trees.
- 4.2.10 The northern hedgerow (H4), which forms part of the northern boundary, comprised hawthorn and blackthorn with several mature oak.
- 4.2.11 The field layer associated with each of the hedgerows is limited in extent as a result of the past agricultural practises extending to almost the base of the hedge. However, where a field layer was noted it comprised a mix of common widespread species such as cock's-foot, sterile brome *Bromus sterilis*, cow parsley *Anthriscus sylvestris*, bramble *Rubus fruticosus* agg., broad-leaved dock *Rumex obtusifolius* and common nettle Bracken *Pteridium aquilinum* is locally dominant in places along the eastern hedge line.

Non-native Invasive Species

- 4.2.12 A large patch of giant hogweed *Heracleum mantegazzianum* is present at the south of the Site.

Fauna

Badgers

- 4.2.13 No evidence of badgers was encountered throughout the Site. The Site may provide foraging habitat for any badger clans that may be present in the wider area.

Reptiles

- 4.2.14 Three species of reptile were encountered throughout the surveys in 2019, with maximum counts of two grass snakes, six common lizard and five slow worms. Grass snake were restricted to the northern boundary of the Site, with all records associated with the base of hedgerow H4 (Figure 1), whilst common lizard were only recorded at the base of the northern section of H3. Slow worm, however, were distributed more widely over the Site, with records close to H1, H3 and H4.



- 4.2.15 During 2022, as part of works associated with soils movement works on the wider site, a translocation exercise was undertaken, with reptiles being caught from the main part of the site and translocated to a dedicated receptor site in the west of the Site (Figure 1). A total of 72 slow worm, five grass snake and 21 common lizard.
- 4.2.16 No reptiles have been encountered within the main area of the Site during the partial survey so far undertaken in 2024. However, the survey will need to be completed before reptiles can be assumed to be absent from the Site.

Bats

Activity Surveys

- 4.2.17 The level of bat activity within the Site, and the composite species, was similar to that recorded during previous surveys in 203, 2014 and 2019, although the surveys are still ongoing. Again, a total of five species were recorded throughout the survey period, with common pipistrelle being by far the most frequently encountered species, as summarised in Table 5.

Table 3. Summary of Bat Registrations

Species	22/05/19	15/06/19	03/07/19	12/08/19
Common pipistrelle	12	17	31	24
Soprano pipistrelle	2	5	2	3
Noctule	2	1	0	2
Serotine	0	1	1	0
<i>Myotis</i> sp	0	1	1	0

- 4.2.18 As would be expected, the majority of the registrations were associated with the mature tree belts, particularly along the western boundary of the Site.

Static Surveys

- 4.2.19 The data collated by the static bat detector were analysed using Anabat Insight software and are summarised as Bat Registration per Night (BRPN) for each species. It should be noted that whilst the number of registrations is proportional to the level of bat activity, a direct assessment of the population size cannot be calculated; it is possible for a single bat to be more or less continually foraging under the bat detector for an extended period of time.
- 4.2.20 The results from the 2019 surveys are given in Table 4 and more or less mirror those recorded during the manual surveys, with common pipistrelle being the most frequently recorded species, followed by soprano pipistrelle.

Table 4. Static Bat Detector results

Date	Detector	Number or registrations (BRPN)				
		Common pipistrelle	Soprano pipistrelle	Noctule	<i>Myotis</i> sp.	Unknown
10 - 14 /06/19	#1	168	34	5	1	1



Date	Detector	Number or registrations (BRPN)				
		Common pipistrelle	Soprano pipistrelle	Noctule	Myotis sp.	Unknown
	#2	97	12	2	0	0
15 – 19/08/19	#1	184	37	12	0	0
	#2	71	18	7	0	0

- 4.2.21 Initial results for the 2024 surveys appear to be consistent with those recorded in previous years, with the of exception of Barbastelle's bat, which has been recorded on several occasions along the hedgerow on the western Site boundary. Whilst Barbastelle's are considered a rare species, they are known to forage over a wide area. Certainly, reviewing the data it would appear that perhaps a single or low numbers of this species is foraging along the hedgerows for a brief period each evening before moving on to other areas. A roost was located in a tree some 700m to the north of the Site in 2011 as part of preliminary surveys undertaken to inform the original outlain application (*pers. obs.*)

Other fauna

- 4.2.22 Waterbodies are shown on the OS map along the eastern site boundary. However, these were dry throughout the 2019 and 2024 summer surveys, precluding the possibility of breeding amphibians within the Site. The nearest identified population of great crested newts is some 700m to the north of the Site. Hence, the probability of terrestrial phase amphibians being with the Site is negligible.
- 4.2.23 There are no know records of dormouse within 2km of the Site; none of the hedgerows would be directly affected by the proposals.

5 EVALUATION

5.1 Definition of ecological value

- 5.1.1 A geographical scale of reference is used when evaluating ecological receptors within a Site, in line with the latest sectoral guidance presented by CIEEM (2018), as summarised in Table 5. The evaluation categories for each receptor have generally been reached by applying accepted criteria, such as naturalness, rarity, fragility and diversity, first proposed by Ratcliffe (1977) and commonly used in the assessment of both statutory and non-statutory sites.
- 5.1.2 Where sites have already been designated on ecological grounds, the assessment reflects the geographical context of the designations. For example, sites designated under international legislation or treaties are assessed to be of International value, whilst sites designated under UK legislation are of National value.
- 5.1.3 Consideration is also given to legal protection afforded to any ecological receptor within the Site, as are species or habitats identified as 'priorities' for biodiversity conservation in the UK. Local Planning Authorities will often have a duty to consider such species or habitats throughout the planning process, hence their presence within a site is a material consideration.
- 5.1.4 Further frames of reference for individual species are provided by the Red Data Book system, such as the Vascular Plant Red Data List for Great Britain (Cheffings and Farrell 2006) or for birds by reference to the Birds of Conservation Concern (Stanbury et al. 2021).

Table 5. Ecological Evaluation Criteria

Value/Importance	Criteria
International (European)	Habitats An internationally designated Site or candidate Site (Special Protection Area [SPA]), provisional SPA, Special Areas of Conservation (SAC), candidate SAC, Ramsar Site, Biogenetic / Biosphere Reserve, World Heritage Site or an area that would meet the published selection criteria for designation. A viable area of a habitat type listed in Annex I of the Habitats Directive, or smaller areas of such habitat, which are essential to maintain the viability of a larger whole. Species Any regularly occurring population of internationally important species, threatened or rare in the UK (i.e. a UK Red Data Book species) or, of uncertain conservation status or, of global conservation concern. A regularly occurring, nationally significant population/number of an internationally important species.
National (English)	Habitats A nationally designated Site (Site of Special Scientific Interest [SSSI], National Nature Reserve [NNR], Marine Nature Reserve [MNR] or a discrete area), which would meet the published selection criteria for national designation (e.g. SSSI selection guidelines). Species A regularly occurring, regionally or county significant population/number of an internationally/nationally important species. Any regularly occurring population of a nationally important species, threatened or rare in the region or county.



Value/Importance	Criteria
Regional (South east)	Habitats Sites that exceed County-level designations but fall short of SSSI selection criteria. Species Any regularly occurring, locally significant population of a species listed as being nationally scarce, which occurs in 16 of 100 10km² squares in the UK. A regularly occurring, locally significant population / number of a regionally important species. Sites maintaining populations of internationally/nationally important species that are not threatened or rare in the region or county.
Authority Area (e.g. County or District)	Habitats Sites recognised by local authorities, e.g. Local Wildlife Sites (LWS). County/District Sites that the designating authority has determined meet the published ecological selection criteria for designation, including Local Nature Reserves (LNR). A diverse and/or ecologically valuable hedgerow network. Semi-natural ancient woodland greater than 0.25ha. Species Any regularly occurring, locally significant population of a considered regional rarity or localisation. Sites supporting populations of internationally/nationally/regionally important species that are not threatened or rare in the region or county, and not integral to maintaining those populations. Sites/features scarce in the County / District or that appreciably enrich the County/District habitat resource.
Local (immediate local area or village importance)	Habitats Areas of habitat that appreciably enrich the local habitat resource (e.g. species-rich hedgerows, ponds etc). Sites that retain other elements of semi-natural vegetation that due to their size, quality or the wide distribution within the local area are not considered for the above classifications. Semi-natural ancient woodland smaller than 0.25 ha. Species Populations/assemblages of species that appreciable enrich the biodiversity resource within the local context. Sites supporting populations of county/district important species that are not threatened or rare in the region or county and are not integral to maintaining those populations.
Site level (Limited ecological importance)	Sites that retain habitats and/or species of limited ecological importance due to their size, species composition or other factors.

5.2 Site Evaluation

- 5.2.1 No part of the Site, or the immediate surrounding land is cover by any form of statutory of non-statutory designation on conservation grounds. The woodland block to the south east, outwith, but contiguous with the site boundary, is classified as being ancient in origin.
- 5.2.2 The majority of the Site supports former agricultural land that has been colonised by a semi-improved, species poor grassland community. It is species poor and dominated by widespread, common species. Hence is assessed as being of **Negligible** ecological value.
- 5.2.3 The small area of species rich grassland that is within the Site has some ecological value due to the potential number of species that it may contain. However, it is a small section of a much larger area of species rich grassland within the mitigation area and

has only recently been created, hence it could easily be re-created elsewhere. For these reasons, it has been assessed as being of **Site** value only.

- 5.2.4 Perhaps the most significant ecological features within the Site are the hedgerows which form the boundaries, although these would be largely unaffected by the proposal. A summary of the ecological features, and an assessment under the Hedgerow Regulations 1997, is presented in Table 6.

Table 6. Hedgerow Evaluation

Ref No.	Average number of woody species	Description of woody species	Species rich	Description of ground flora	Features	Likely classification in accordance with Hedgerow Regulations 1997
H1	8	hawthorn, blackthorn, elder, hazel, field maple, holly, elm, oak, ash, sycamore	Species rich	cock's-foot, sterile brome, cow parsley, bramble broad-leaved dock and common nettle	2 - no gaps, standards	Important
H2	6	hawthorn, blackthorn, elder, hazel, field maple, lime, oak, ash,	Species rich	cock's-foot, sterile brome, cow parsley, bramble broad-leaved dock and common nettle	2 - no gaps, standards	Not important
H3	4	Hawthorn, blackthorn, oak, ash	Species poor	cock's-foot, bramble, common nettle, bracken	2 - no gaps, standards	Not important
H4	5	Hawthorn, blackthorn, elder, oak, ash	Species poor	cock's-foot, sterile brome, cow parsley, bramble	2 - no gaps, standards	Not important

- 5.2.5 Overall, the hedgerows would be assessed as being of **Local** value.

- 5.2.6 The presence of three reptile species within the Site is notable, although all were recorded at relatively low densities. Whilst the reptiles are currently within the receptor site, their presence within the Site has been assessed as if they were still spread throughout the Site, as this will be the case post development. It would appear that all three species are breeding within the Site, due to the presence of sub-adult, the reptile population would be assessed as being of **Local** value.

- 5.2.7 The bat assemblage within the Site comprised the most common and widespread species, although the distribution of serotine bat is restricted to the south east, which raises the value of the Site for bat slightly. However, the presence of Barbastelle's

does imply the Site would be of **District** value based on the criteria present by Reason & Wray et al. (2023).

5.2.8 No other features, or species, of ecological value have been identified within the Site.

6 DISCUSSION

6.1 Potential Impacts

- 6.1.1 The proposed development would result in the loss of the majority of the species poor, semi-improved grassland, which has been assessed as being of negligible ecological value. Hence, the resulting ecological impact of the construction of the proposed development would be negligible. Two small sections of hedgerow H3 would need to be removed to allow for the access in the Site from the neighbouring Phase 4 to the east. The minimal works required to facilitate the accesses would lead to an insignificant impact.
- 6.1.2 The previous implementation of the reptile mitigation strategy to ensure the construction zone is free of reptiles prior to the commencement of works has eliminated the potential of harm or injury to reptiles. The proposed habitat creation within the ecology and landscape buffers areas would more than offset the loss of reptile habitat.
- 6.1.3 The main western hedgerow which has been shown to be used by Barbastelle's bat would be retained and enhanced throughout the scheme, hence there would be no significant negative impact upon this species or indeed any other bat that may be using the feature.
- 6.1.4 Lighting in and around the development has the potential to have a negative impact upon the foraging activity of the local bat population. However, the lighting design for the Site would be carefully designed to ensure that light spillage onto the surrounding hedgerows is kept below 1 lux, which is equivalent to twilight. Hence there would be no significant negative impact upon bats.
- 6.1.5 The level of predicted impacts would be equivalent to those identified in the previous consented outline permission for the wider development approved under DC/14/0590; the level of impacts was previously deemed acceptable and the resolved to be approved scheme to which these amendments relate.

6.2 Ecological Enhancements

- 6.2.1 The south and southwestern part of the Site will be given over to an ecological mitigation and enhancement area, that connects with the existing mitigation area to the north west and the proposed mitigation area to the south east; together these areas provide the biodiversity mitigation and enhancement for the whole of the wider *Land West of Southwater* development. Within the Phase 5 mitigation area, additional tree and scrub planting will be undertaken, creating a wider green corridor along the western boundary of the whole development. Combined with Phase 4 (the subject of a separate S.73 application) the Neighbourhood Plan Policy regarding tree coverage will be met, with 688 proposed across both phases. A species rich woodland mix will be sown under and around the new scrub and tree planting, which will grade into a species rich meadow mix.
- 6.2.2 In addition, two new ponds will be created within the mitigation area to provide a new species rich habitat. Appropriate emergent and aquatic species will be planted in and around the waterbodies.



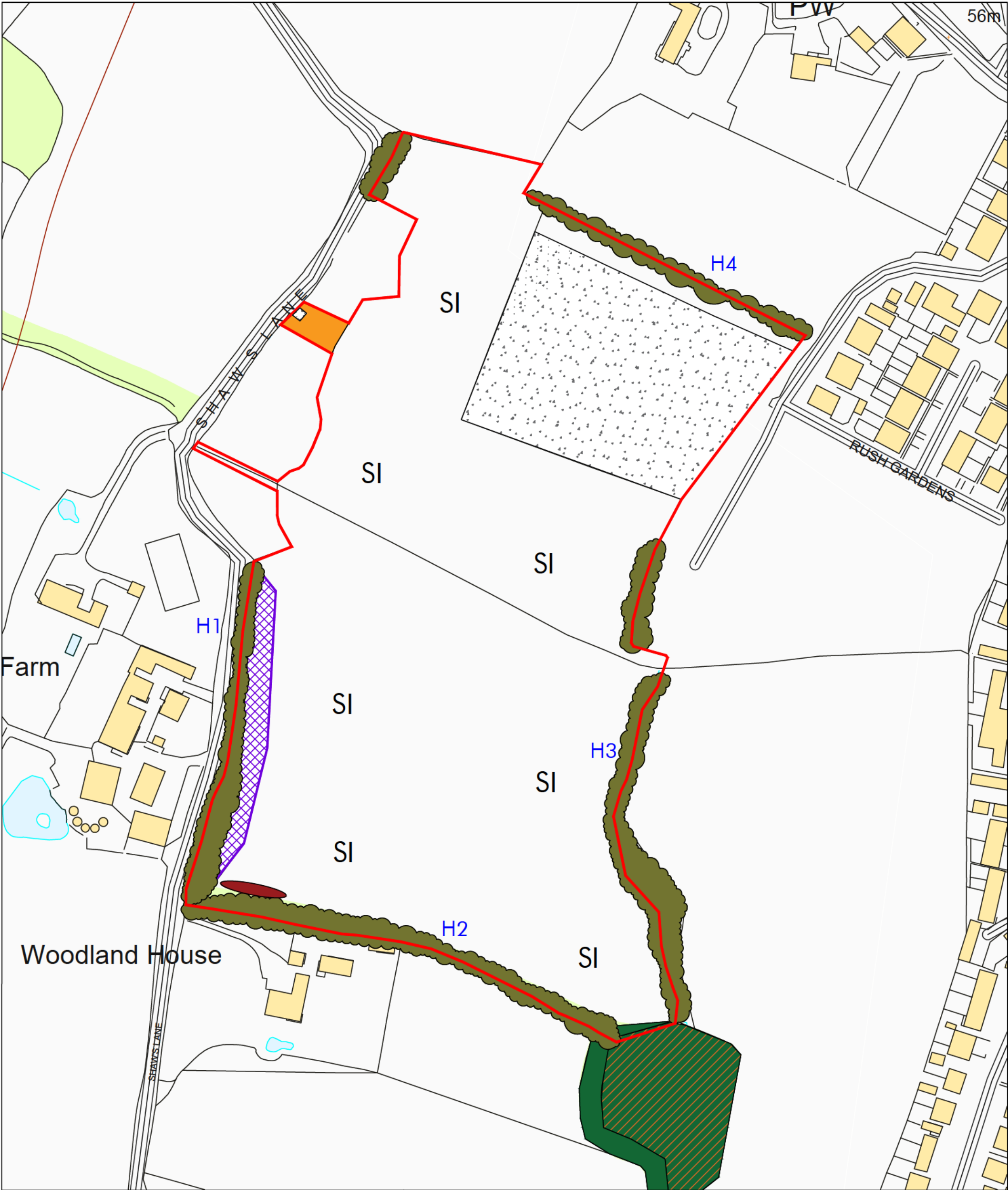
- 6.2.3 Full details of the habitat creation are presented within the Landscape Masterplans and Planting Schedule (Charnwood Landscape Design, Drawing No: CLDL-2434-05-01.01 *et seq.*) submitted with this application; the architects Site Layout is attached as Appendix 1.

7 SUMMARY

- 7.1.1 A suite of ecological surveys is being undertaken across the Land West of Southwater Phase 5 throughout the 2024 survey season. This builds upon previous survey work undertaken in 2013, 2014 and 2019. The Site was found to comprise former agricultural land, which has been colonised by species poor, semi-improved grassland. The Site is more or less surrounded by outgrown hedgerows with numerous semi-mature broad-leaved trees. The hedgerow along the western site boundary is likely to be classified as Important under the Hedgerow Regulations 1997.
- 7.1.2 A small population of grass snake, common lizard and slow worm have been identified from within the Site, whilst a relatively poor bat assemblage, comprising five species, has also been confirmed.
- 7.1.3 The hedgerows and reptile populations were assessed to be of Local value, whilst the main habitat, species poor, semi-improved grassland/abandoned arable, was assessed as being of negligible ecological value. The bat population by contrast is of County value.
- 7.1.4 The proposed development would result in the loss of the majority of the fallow arable field, which has been assessed as a negligible impact. Suitable mitigation strategies have been proposed to ensure that the populations are maintained in a favourable conservation status.
- 7.1.5 Ecological mitigation and enhancement measure will be secured through the creation of species rich habitat within the Ecology Mitigation Area which will ensure the scheme will deliver a biodiversity gain.

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Legend

- Broad-leaved woodland
- Ancient woodland
- Hedgerow
- Species-poor grassland
- Species-rich grassland
- Hardstanding
- Giant hogweed
- Reptile receptor



Figure No:

Figure 1

Title:

Phase 1 Habitat Map

Date:

June 2024

Project:

Southwater Phase 5

Client:

Berkeley



20 Soames Place
Wokingham
Berks
RG40 5AT

info@derekfinnie.com

Appendix 1

Site Layout

9229

PROW

9688

Woodland House

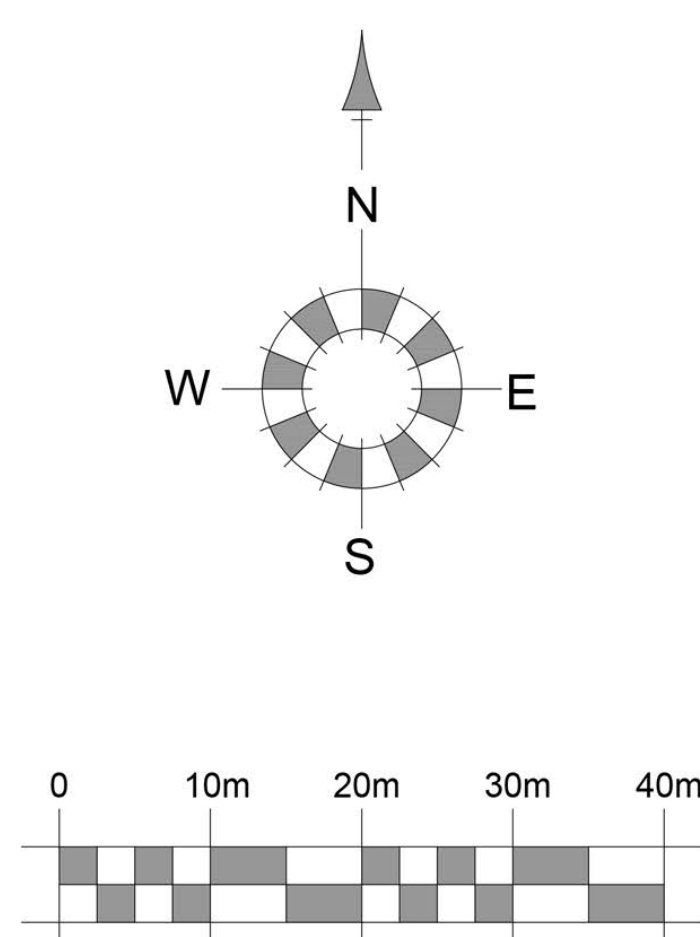
Pond

SHAW'S LANE

SHAW'S LANE

Southwater House

Holy Inno Church
The Vicarage



- D 28/06/24 Layout updated with new mix for planning.
C 13/07/20 Position of Plots 3 & 7 slightly re-adjusted & access road between these plots revised to allow more tree planting. Additional footpaths added in front of Plots 25 & 68 linking to the PROW.
B 05/06/20 Parking/house types adjusted on Plots 8, 15-16, 34-35, 43-44, 53-55 & 71.
A 14/05/20 House type on Plot 62 revised.

DEVELOPER
PHASE 5
SOUTHWATER
WEST SUSSEX

DRAWING TITLE
SITE LAYOUT

Berkeley
Designed for life

Berkeley Homes (Southern) Limited
Berkeley House, Bay Tree Avenue
Leatherhead
Surrey, KT22 7UE
Tel: (01372) 370400

REF	DATE	REVISION
1	14/05/20	House type on Plot 62 revised.
2	05/06/20	Parking/house types adjusted on Plots 8, 15-16, 34-35, 43-44, 53-55 & 71.
3	13/07/20	Position of Plots 3 & 7 slightly re-adjusted & access road between these plots revised to allow more tree planting. Additional footpaths added in front of Plots 25 & 68 linking to the PROW.
4	28/06/24	Layout updated with new mix for planning.

DATE	SCALE
MAY 2020	1:500@A0

PROJECT NO.	REV.
S835/SL/001	D