PROVIDING TRUSTED ECOLOGICAL ADVICE

ANGMERING SPORTS HUB SITE

PRELIMINARY ECOLOGICAL APPRAISAL REPORT 2024

Version 3.0

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Project	Prepared & Checked by	Approved by	Client	Status	Date
RGA260 ASH	Dr Suzy Cardy BSc (Hons) MSc CEcol	A.R. Graves CEcol CEnv FCIEEM	MACE	Final	Dec 2024
	[redacted]				

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1 Summary

Instruction

Richard Graves Associates Ltd was commissioned by MACE, on behalf Arun District Council, in 2024 to undertake a Preliminary Ecological Appraisal (PEA) of a parcel of land identified for a proposed community sports facility known as the 'Angmering Sports Hub' (and referred to henceforth as 'the Site') in Angmering, Littlehampton.

Development Proposal

The survey was required to support MACE in their undertaking of Due Diligence surveys prior to submitting a planning application for the proposed re-development of the existing Palmer Road Recreation Ground for the provision of a new community sports hub which will include the demolition of existing structures, construction of a new sports hub facility building, artificial sports pitches, car parking, EV charging points, access road, landscaping and associated works and infrastructure. The development will result in the clearance of some habitats including the loss of a small area of woodland and associated scrub habitat.

Habitats

The majority of the Site comprised a recreational field with short sward amenity / modified grassland, of low ecological value. Bordering the Site was a woodland belt and strip of scrub which formed, in places, an ecotone as the habitat graded from woodland, scrub and finally to grassland.

A basketball court (developed land / sealed surface) and cricket pitch (artificial unvegetated, unsealed surface) were present in the centre of the grassland and small children's play area (part wood chippings and part modified grassland) was located to the south. The 'Angmering Sports and Social Club' building and associated car parking was located at the main entrance to the Site, along the southern boundary. A small patch of tall ruderal habitat (tall forbs) was located adjacent to the carpark. A small number of individual trees were present on the grassland, towards the perimeter of the Site.

Protected Species

Habitat that could support a range of protected and notable species was identified during the PEA Survey. As a result, to establish a baseline for the Site's ecological features, further surveys / scoping assessments have been recommended (and have been subsequently completed / are in progress) for bats[1,2,3], great crested newts *Triturus cristatus*, hazel dormice *Muscardinus avellanarius*, reptiles, and badgers *Meles meles*[4]. Precautionary, pre-site clearance checks for nesting birds (depending on the timing of site clearance) and for badgers have been recommended.

Designated Sites

One European designated site is located within 10km of the Site: Arun Valley Special Protection Area (SPA), Special Area of Conservation (SAC) and Ramsar Site. Given the proximity of this European designated site to the Site, it is possible that the competent authority (likely to be the Planning Authority) may require a Habitats Regulations Assessment (HRA). However, effects from the construction or operation of the proposed development are considered to be unlikely.

[1] John Wenman (2024) Angmering Sports Hub - Ground Level Tree Assessment
[2] John Wenman (2024) Angmering Sports Hub - Interim Bat Activity Survey
[3] John Wenman (2024) Angmering Sports Hub - Interim Bat Survey Preliminary Roost Assessment & Emergence Survey
[4] Richard Graves Associates (2024) *Angmering Sports Hub Site – Phase 2 Survey Report*

The South Downs National Park, is located approximately 450m north of the Site, on the opposite side of the A27, which provides a significant barrier separating the proposed development from this designated site.

Invasive Species

A *Cotoneaster* Spp. was recorded on-site. Some species of Cotoneaster are listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). Should the species be confirmed as a Schedule 9 species, (and if the plants are to be removed as part of the works), appropriate remediation and disposal will be required by an invasive non-native species (INNS) specialist.

Generic Site-wide Recommendations

In addition to the protected species recommendations listed above, and in the Phase 2 Survey Report, a comprehensive suite of site-wide measures targeted at protecting the ecological feature on and off-site should be delivered, in accordance with the Mitigation Hierarchy[5] principles to 'avoid, minimise, remediate and compensate' impacts, as briefly outlined below:

Avoidance:

- A precautionary site walkover should be undertaken by a suitably qualified Ecologist(s), prior to the start of any site clearance, demolition or construction works to identify any change in ecological status;
- Should any tree or vegetation clearance be required, it should be timed to avoid the nesting bird season (and all other relevant sensitive ecological periods);
- Where a Construction Management Plan (CMP) and Site Waste Management Plan (SWMP) are prepared for the development, they should include a section detailing the provisions aimed at protecting biodiversity;
- Loss of any of the woodland on-site should be avoided: all of this important habitat should be retained and protected, wherever possible.

Minimising Impacts:

- Good practise application should be followed during all construction activities to minimise impacts to nearby designated sites and habitats; and
- A Site-specific Lighting Strategy, sensitive to the requirements of bats, dormice and other nocturnal wildlife should be designed and implemented.

Remediation:

- Where existing poor condition modified grassland is to be removed, a percentage of it should be replaced with high quality habitat, where possible, to provide foraging habitat for bats, birds and invertebrates.

Compensation:

- Tree removal should be avoided, but where this is not possible, the number of trees scheduled for removal should be limited to those essential for construction and they should be replaced with new tree planting.

Enhancement:

The following measures should be delivered:

- Woodland enhancement and management;

[5] British Standard BS 42020:2013 Biodiversity. *Code of practice for planning and development*

- Native planting scheme;
- Provision of dormouse nest boxes;
- Installation of bat boxes;
- Installation of bird boxes; and
- Creation of herpetofauna habitats.

Further consideration of protected species related mitigation has been made in the species-specific survey reports and any mitigation provided will, where necessary, be in accordance with any Protected Species Licence required / granted for the development.

Conclusion

If the recommendations of this report, and any subsequent species-specific survey reports, are undertaken at the appropriate stage there are no undue constraints, with respect to ecology, to potential development.

2 Introduction

2.1 Instruction

Richard Graves Associates Ltd was commissioned by MACE, on behalf Arun District Council, in 2024 to undertake a Preliminary Ecological Appraisal (PEA) of a parcel of land identified for a proposed community sports facility known as the 'Angmering Sports Hub' (and referred to henceforth as 'the Site') within in Angmering, Littlehampton.

2.2 Survey Objectives

The aims of the PEA study and survey work were to:

- Undertake a desktop study consulting the local biological records centre and online resources to obtain an ecological baseline for the Site;
- Undertake a UK Habitat Survey of the Site to determine the extent of habitats and highlight the potential for protected species to be present, identifying any ecological constraints;
- Outline appropriate mitigation and any further survey effort considered necessary to support planning requirements; and
- Where possible, highlight any initial ecological enhancement opportunities.

2.3 Site Location and Setting

The proposed Site for the Angmering Sports Hub, Palmers Road is currently known as the 'Palmer Road Recreation Ground' which covers approximately 4 hectares (ha) and is centred at Ordnance Survey (OS) grid reference: TQ 06574 05141. Palmer Road Recreation Ground is a large public open space in north Angmering, that currently includes a sports pavilion, grass football pitches, a basketball court, a cricket pitch and a children's play area. The Site is bordered by housing to the south and east, arable to the west, and a development site to the north known as the 'Harvest Rise, Angmering' (Figure 1 & 2).

Figure 1: Site Location Indicated by Red Marker © Google Earth 2024

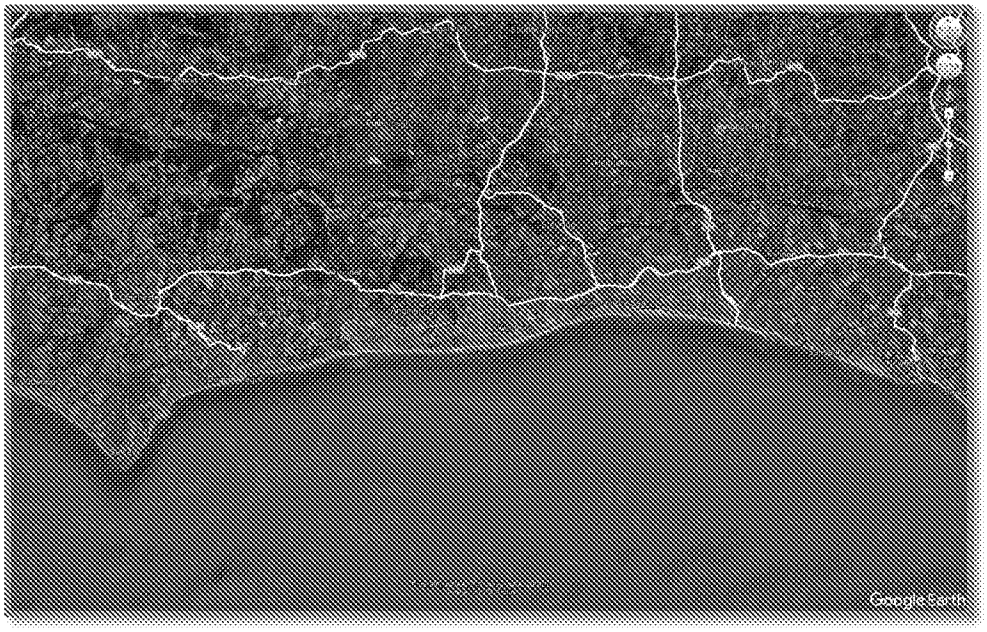
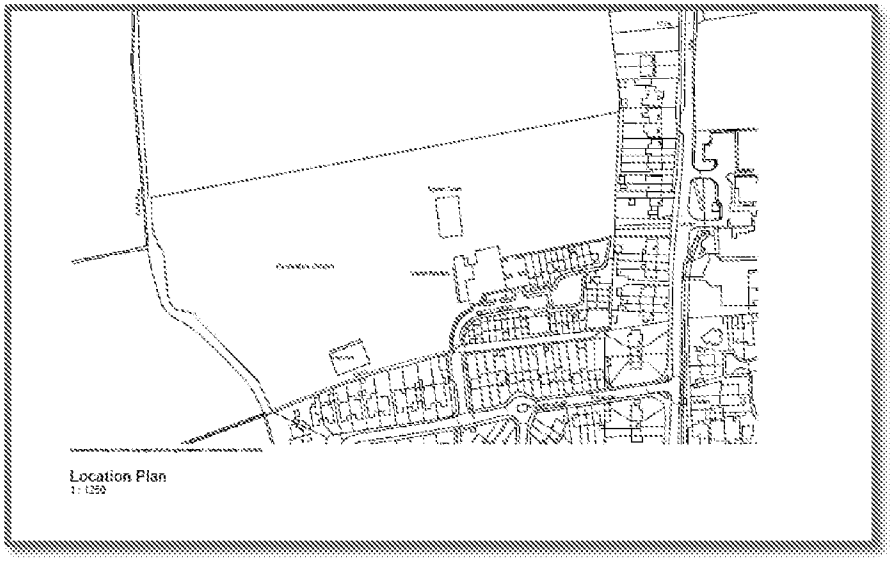


Figure 2: Site Redline Boundary©[6]



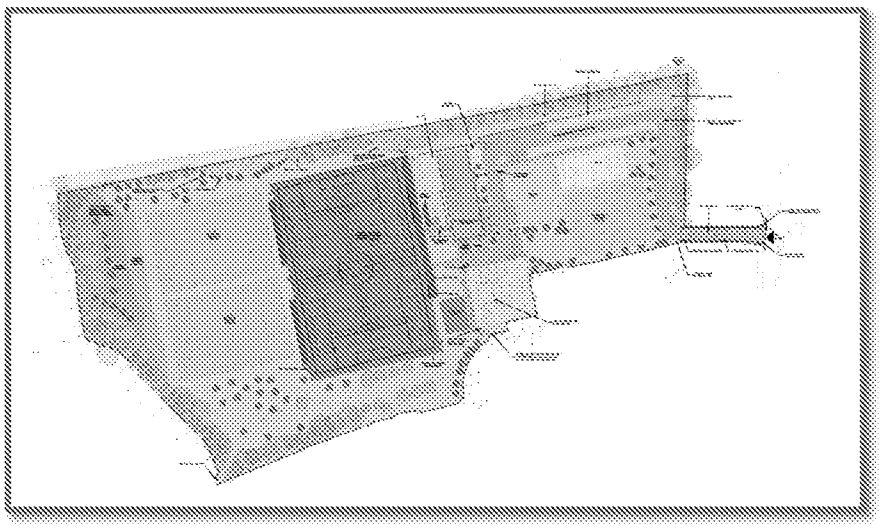
2.4 Rationale for the Survey

The survey was required to support MACE in their undertaking of Due Diligence surveys prior to submitting a planning application for the proposed development.

2.5 Proposed Development

Palmer Road Recreation Ground has been identified as a strategic priority within the Local Plan for the provision of a community sports hub. The proposal aims to help meet the shortfall in sport and leisure facilities in the district and enhance the quality of the current facilities at Palmer Road with the provision of a new community sports hub which will include the demolition of existing structures, construction of a new sports hub facility building, artificial sports pitches, car parking, EV charging points, access road, landscaping and associated works and infrastructure (Figure 3). The development will result in the clearance of some habitats on-site including one relatively small area of woodland and associated scrub habitat to allow for a cricket pitch.

Figure 3: Proposed Site Layout ©[7]



[6] Saunders Boston Architects (2024) Palmer Road Sports Hun. Site Location. Drawing Number: 2072-SBA -XX -S1 -DR-A -5001.

[7] Saunders Boston Architects (2024) Palmer Road Sports Hun. Site Plan Drawing Number: 2072-SBA -XX -S1 -DR-A -5002.

2.6 Assessment

The assessment documented in this report is a 'Preliminary Ecological Appraisal' (PEA)[8] which includes an assessment of evidence of, and suitable features for, protected species. Protected species are those which are fully or partially protected by legislation. The relevant legislation includes:

- The Conservation of Habitats and Species Regulations 2017 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- The Environment Act 2021;
- The Natural Environment and Rural Communities Act 2006;
- The Countryside and Rights of Way Act 2000;
- The Badgers Act 1992; and
- The Wild Mammals (Protection) Act 1996.

2.7 Quality Assurance

All surveys are led by Ecologists who are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) at the appropriate level. By joining the CIEEM staff sign up to a professional code of conduct.

[8] Dean, M (2017) Guidelines for *Preliminary Ecological Appraisal*, 2nd Edition, CIEEM, Winchester

3 Methods

3.1 Preliminary Ecological Appraisal

A Preliminary Ecological Appraisal was conducted, in accordance with current Chartered Institute of Ecology and Environmental Management (CIEEM) Guidance[8] and comprised of the following tasks:

- Ecological Desktop Study;
- Protected Species Walkover; and
- UK Habitat Survey.

3.2 Desktop Study

3.2.1 Sources of Ecological Information

The following sources of information were reviewed as part of the desktop study:

- Ecological Reports for the adjacent Harvest Rise Site;
- MAGIC (Multi-Agency Geographic Information for the Countryside) - this is a web-based interactive mapping service that provides information on key environmental schemes and designations;
- Local Records Centre Data (The Sussex Biodiversity Record Centre (SBRC)); and
- Ordnance Survey (OS) Online Mapping and Google Earth 2024.

3.2.2 Local Records Centre Data

Richard Graves Associates obtained the following information from SBRC within a 2 km search radius of the OS Grid Reference TQ 06574 05141:

- Statutory and non-statutory site designations; and
- Protected and Notable Species records.

3.2.3 MAGIC Data Search

This web-based data set was interrogated for the following designated sites:

- National Statutory Sites (Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNR)) and Local Nature Reserves (LNR) within a 2km radius of OS Grid Reference: TQ 06574 05141; and
- International Designated Sites: Special Areas of Conservation (SAC), Special Protection Areas (SPA) & Ramsar sites within a 10km radius of OS Grid Reference: TQ 06574 05141.

3.2.4 Ponds

The identification of ponds within 250m of OS Grid Reference: TQ 06574 05141 was facilitated by the interrogation of the following information:

- OS Online Mapping and Google Earth;
- Identification (*via* MAGIC) of ponds / great crested newt records submitted as part of the 'Great Crested Newt Natural England Class Survey Licence Returns (England)'[9]; and

[9] Natural England - GCN - Class Survey Licence Returns (England) https://data.gov.uk/dataset/5e3d32c2-200a-4ed2-982c-be0c5ea3bc0f/gcn-class-survey-licence-returns-england [Accessed 14th July 2022].

- Interrogation (*via* MAGIC) for ponds subject to the 'Great Crested Newt eDNA Habitat Suitability Index Pond Surveys for District Level Licensing 2017, 2018, 2019'[10].

3.2.5 Protected Species Licences

MAGIC was used to search for granted European Protected Species Licence Applications relating to the following taxa: amphibians, bats, invertebrates, other mammals, plants and reptiles within 2km of OS Grid Reference: TQ 06574 05141.

3.3 Harvest Rise Site Ecological Reports

A suite of ecological surveys has been undertaken for the Redrow Homes development site known as 'Land at Arundel, Angmering, Littlehampton, BN16 4ET' originally, and now as 'Harvest Rise, Angmering'. As part of the outline planning application for the development, the following detailed ecological information was submitted:

- Ecological Mitigation and Enhancement Strategy (CSA Environmental, 2019). A number of Phase 2 protected species were completed in support of the Ecological Mitigation and Enhancement Strategy, and included the following surveys;
    - Preliminary Ecological Appraisal (CSA Environmental, 2017/2018);
    - Preliminary Roost Assessment (CSA Environmental, 2017);
    - Phase 2 bat surveys (emergence/re-entry and activity surveys) (CSA Environmental, 2017/2018);
    - Phase 2 hazel dormouse surveys (CSA Environmental, 2017/2018);
    - Phase 2 badger surveys (CSA Environmental, 2018);
    - Phase 2 reptile surveys (CSA Environmental, 2018); and
    - Phase 2 great crested newt surveys (CSA Environmental, 2018).
- Ecological Impact Assessment (CSA Environmental, 2019).
- Phase 2 Survey Report – S73 Update (RPS, 2024), which included details of a number of protected species surveys including:
    - Dormouse surveys;
    - Bat emergence re/entry surveys;
    - Great crested newt Environmental DNA (eDNA) surveys; and
    - Badger surveys; and
- Ecological Mitigation and Enhancement Strategy (RPS, 2024).

A European Protected Species Mitigation License (EPSML) (2023-64144-EPS-MIT) for hazel dormouse was also obtained.

3.4 Protected Species Walkover and UK Habitat (UKHab) Survey

The Site was visited for the UK Habitat (UK Hab) Survey[11] and Protected Species Walkover by Dr Suzy Cardy BSc MSc CEcol MCIEEM on the 4th June 2024. The UK Habitat Survey (UKHab) is a standardised methodology for classifying and assessing terrestrial, freshwater and coastal habitats across the UK. The UKHab Survey uses a detailed coding system to classify habitats. The codes are hierarchical, with a five-level Primary Habitat Hierarchy and a list of secondary codes, the latter are sub-divided into Essential codes and Additional codes. Botanical species were recorded and were noted in the text using nomenclature in accordance with (Stace, 2019)[12].

[10] Natural England - Great Crested Newt eDNA Habitat Suitability Index Pond Surveys for District Level Licensing 2017, 2018, 2019. https://data.gov.uk/dataset/8643f1b9-b419-4ee8-8e9c-18200e0edc31/great-crested-newt-edna-habitat-suitability-index-pond-surveys-for-district-level-licensing-2017-2018-2019 [Accessed 14th July 2022].

[11] UKHab Ltd (2023). UK Habitat Classification Version 2.0. Available at: https://www.ukhab.org (Accessed Nov 2024)

[12] Stace, C., 2019. New Flora of the British Isles 4th Edition C & M Floristics

Features in the Site suitable for, or indicating evidence of, protected species and species of nature conservation significance were recorded using a Global Positioning System (GPS) application (Petosoft, 2010)[13]. Where access was limited, aerial mapping sources including Google Earth Pro were used to provide additional information on the habitats and features within the Site.

3.5 Surveyor Qualifications and Experience

Dr Suzy Cardy

Dr Suzy Cardy BSc (Hons) MSc CEcol MCIEEM has over twenty years' experience in the management and execution of the ecological elements of large-scale development projects including major rail infrastructure developments and one of the UK's largest translocation of protected species. Suzy has a Natural England licence to survey for great crested newts and dormice and has a Level 2 Bat survey licence. Suzy has worked with a variety of Clients across multiple sectors (transport, industrial, education, government, healthcare, commercial, leisure and power / energy).

3.6 Limitations

- A PEA Survey only provides a snapshot of the broad habitats and species present in an area at the time the survey is undertaken.
- Species are mobile and can move in to and out of an area quickly. The survey relies on evidence such as tracks and droppings to provide evidence that a species is present.
- The locations of all features and target notes within the report and the figures are indicative and approximate only.
- The data provided from consultees and meta-databases is based on existing records, but does not necessarily constitute a comprehensive list of protected and notable species records. These records are not exhaustive as there is currently no national or regional policy for systematic data gathering. Therefore, absence of data does not constitute evidence of absence (i.e. it may be that the Site has not previously been surveyed). It is also possible that other data exist within this area that has not been made available to Richard Graves Associates.
- Whilst any incidental sightings of non-native invasive species are recorded, a full invasive species survey is not with the scope of the survey.
- Checks for veteran trees and tree preservation orders should be made prior to development, these checks are outside the scope of this PEA.

[13] Petosoft, 2010. GPS Version 1.3, Petosoft.

4 Results: Desktop Study

4.1 Introduction

The desktop study ecological records report requested from SBRC, was received on the 4th June 2024[14]. The following sections summarise: the findings from the records centre, the MAGIC results and the other information sources.

4.2 Statutory Protected Sites

4.2.1 International Sites

International and European sites are designated for particular habitat and / or species interest and receive the highest level of protection in law under the Conservation of Habitats and Species Regulations 2017 (as amended). It is also necessary to consider impacts on these sites from development proposals even at some distance.

One European designated site is located within 10km of the Site (Table 1): Arun Valley Special Protection Area (SPA), Special Area of Conservation (SAC) and Ramsar Site. Given the proximity of this European designated site to the Angmering Sports Hub Site, it is possible that the competent authority (likely to be the Planning Authority) may require a Habitats Regulations Assessment (HRA). However, effects from construction and operation of the proposed development are considered to be unlikely.

4.2.2 National Sites

4.2.2.1 National Nature Reserves

National Nature Reserves (NNRs) were established to protect some of our most important natural features and species and to facilitate conservation and scientific research. NNRs are declared by the statutory country conservation agencies under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981 (as amended). No NNRs are situated within 2km of the Site.

4.2.2.2 National Parks

National Parks in Britain were established under the National Parks and Access to the Countryside Act 1949. These, often dramatic, landscapes are home to both people and wildlife. Farms, villages, and towns within these parks are protected alongside the natural environment. Unlike Areas of Outstanding Natural Beauty (AONBs), National Parks have their own dedicated authorities to oversee planning and conservation.

There is one National Park within the search area: the South Downs National Park, which was designated in 2009 and officially opened in 2010, located approximately 450m north of the Site, on the opposite side of the A27 road. Effects from the construction or operation of the proposed development on the National Park are considered to be unlikely.

4.2.2.3 Sites of Special Scientific Interest

Sites of Special Scientific Interest (SSSIs) are protected under the Wildlife and Countryside Act 1981 (as amended) and designated for their wildlife or geo-morphological interest. It is usually necessary to consider direct impacts from development within (or adjacent to) SSSIs, or within the Impact Risk Zones (IRZs) of such sites. No SSSIs are situated within 2km of the Site.

4.2.2.4 SSSI Impact Risk Zones

To facilitate the identification of potential impacts on SSSIs, SSSI Impact Risk Zones (IRZ) have been defined around each SSSI. The IRZs:

[14] Sussex Biodiversity Record Centre (2024) Ecological data search for land at Angmering Sports Hub. On behalf of Suzy Cardy (Richard Graves Associates). Report reference SxBRC/24/152. Prepared on 04/06/2024

"reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts"[15].

Natural England's Magic Map indicates that the Site falls within one SSSI 'Impact Risk Zone' (IRZ) however, the type of development which may prompt the need for consultation with Natural England, does not include that which is the subject of this proposal.

4.2.2.5 Local Nature Reserves

Local Nature Reserves (LNRs) are designated and protected under the National Parks and Access to the Countryside Act 1949 and are usually owned and managed by local authorities. There are no LNRs within the 2km search radius.

Table 1: Statutory Sites within the Desktop Search Area*

Site Name*	Approx. Distance to the Nearest Site	Reason for Citation / Description of Site
European Designated Sites within 10km of the Site		
Arun Valley Special Protection Area (SPA), Special Area of Conservation (SAC) and Ramsar Site	8.3km	The Arun Valley comprises an area of wet meadow on the floodplain of the River Arun. The wet neutral grassland is subject to winter and occasional summer flooding. The site is dissected by a network of wet ditches which support a rich aquatic flora and invertebrate fauna. Variation in the chemical status of the water has resulted in an exceptionally high diversity of aquatic plant species in some of the ditches. The area is of outstanding ornithological importance notably for wintering wildfowl and breeding waders. SAC - Annex II species present as a qualifying feature, but not a primary reason for site selection: Ramshorn snail *Anisus vorticulus.* The SPA - Over winter the area regularly supports important populations of Bewick's Swan Birds *Cygnus columbianus bewickii.* *Ramsar Site:* The site holds seven wetland invertebrate species listed in the British Red Data Book as threatened. The site also supports four nationally rare and four nationally scarce plant species. In addition to the Red Data Book invertebrate and plant species, the ditches intersecting the site have a particularly diverse and rich flora. All five British duckweed *Lemna* species, all five water-cress *Rorippa* species, and all three British water milfoils (*Myriophyllum* species), all but one of the seven British water dropworts (*Oenanthe* species), and two-thirds of the British pondweeds (*Potamogeton* species) can be found on site. Waterfowl assemblages of international importance, including Northern pintail, *Anas acuta.*
National Sites within 2km of the Site		
South Downs National Park	450m	The South Downs National Park covers over 1600 square kilometres of England's most valued lowland landscapes in the busiest part of the UK, it has been shaped by the activities of its farmers and foresters, its large estates and communities, its charities and local businesses. It includes inspirational landscapes, internationally important wildlife, cultural heritage and lively market towns and villages.

[15] Natural England (2019) Natural England's Impact Risk Zones for Sites of Special Scientific Interest (For use by Local Planning Authorities to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites and determine when to consult Natural England) User Guidance. Version MAGIC v3.2 Issue Date: 03 June 2019.

4.3 Non-statutory Sites

4.3.1 Local Wildlife Sites

Sites which are not of national significance, but may contain features important for wildlife, may be designated and given some protection under the planning system. In West Sussex, these are known as Local Wildlife Sites (LWS). There are no LWSs present within the 2km search area.

4.4 Ancient Woodland

There are at least 16 of areas of Ancient Semi-natural Woodland (ASNW) and Ancient replanted Woodland (AWS - ancient woodland site or PAWS - plantation on ancient woodland site) within the 2km search area, the nearest areas are:

- 'Orchard Rough Ancient & Semi-Natural Woodland' - located approx. 300m to the west of the Site; and
- 'Decoy Pond Wood, Plat, The Lag, Poling Brook Ancient & Semi-Natural Woodland' – located approx. 400m to the west of the Site.

4.5 Habitats

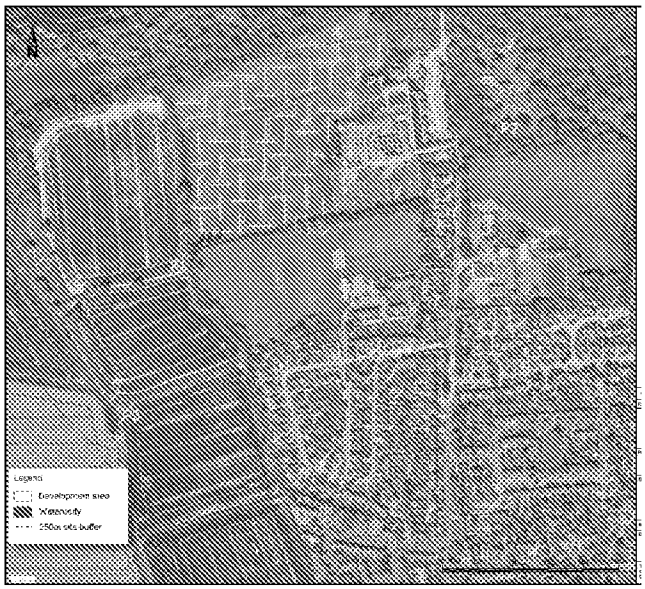
The following Section 41 Habitats are present within close proximity to the Site:

- Open Water – a ditch running along the southern boundary of the Site and several waterbodies to the northwest;
- Ancient Woodland; and
- Deciduous Woodland.

4.6 Ponds

- Review of OS mapping identified three ponds within 250m of the Site from the Site boundary (Figure 5).
- No positive records were returned for great crested newt from records submitted as part of the 'Great Crested Newt Natural England Class Survey Licence Returns (England)' within 250m of the Site.
- No ponds surveyed as part of the 'Great Crested Newt eDNA Habitat Suitability Index Pond Surveys for District Level Licensing 2017, 2018, 2019', were recorded within 250m of the Site.

Figure 5. Waterbodies within 250m of the Site © Google EarthPro 2024



4.7 Protected Species Licences

MAGIC was used to search for granted European Protected Species Licence Applications relating to the following taxa: amphibians, bats, invertebrates, other mammals, plants and reptiles within 2km of the Site. The following EPS Licences were recorded within the search area:

- Bat Licence 2019-43864-EPS-MIT-2 (2020-2025) for common pipistrelles (approx. 1.4km south-east of the Site); and
- Great Crested Newt Licence 2014-1236-EPS-MIT (2014-2015) (approx. 1.2km west) of the Site.

Based on the review the ecological reports associated with the Harvest Rise Site the following licence is also known to be within the search area:

- Dormouse Licence 2023-64144-EPS-MIT (2023-2024) for hazel dormice (this site is adjacent and connected *via* hedgerow habitat to the Site).

4.8 Protected / Notable Species

Protected and notable species records were returned from SBRC, dating from 1980-2023. Whilst the whole data set has been interrogated, only records considered to be relevant to the habitats within the Site, the scale of the proposed works and from the last five years have been included in this report. The sections below summarise the findings of this report (referred to as 'SBRS') and also provide information on the records associated with the adjacent development site (referred to as 'Harvest Rise Site'), for completeness.

4.8.1 Bats

- **SBRC:** Records for four species of bat were returned; soprano pipistrelle *Pipistrellus pygmaeus*, common pipistrelle *Pipistrellus pipistrellus*, noctule *Nyctalus noctula* and serotine *Eptesicus serotinus*. The records also included records for three common pipistrelle roosts.
- **Harvest Rise Site:** Bat species recorded foraging and commuting across the site included: common pipistrelle, soprano pipistrelle, *Myotis* species, barbastelle *Barbastella barbastellus*, noctule, serotine, brown long-eared *Plecotus auritus* and Nathusius' pipistrelle *Pipistrellus nathusii*. A single soprano pipistrelle roost and single common pipistrelle roost were also recorded in buildings on the site in 2018, but found to no longer be present in 2022.

4.8.2 Non-volant mammals

- **SBRC**: Records of European water vole *Arvicola amphibius* (dated 2018), were located approximately 750m away from the Site). Records were also returned for dormouse *Muscardinus avellanarius* (dated 2021 and 2018). Other records included hedgehog *Erinaceus europaeus.*
- **Harvest Rise Site**: Dormice and their nests were recorded on the Site during surveys undertaken in 2018 and 2021. Badger sett(s) are known to be present on the Harvest Rise Site.

4.8.3 Reptiles

- **SBRC**: Recent records of slow worm *Anguis fragilis* have been recorded within the search area.
- **Harvest Rise Site**: A single common lizard was found during surveys undertaken in 2018.

4.8.4 Amphibians

- **SBRC**: No recent records for great crested newt *Triturus cristatus* were returned.
- **Harvest Rise Site**: No evidence of great crested newt was found during surveys undertaken in 2018 and 2021.

4.8.5 Birds

- **SBRC:** Bird records were returned and included a range of birds listed on Schedule 1 of the Wildlife & Countryside Act 1981 (as amended) including red kite *Milvus milvus*, barn owl *Tyto alba* and black redstart *Phoenicurus ochruros*. These birds are protected by special penalties at all times.

4.8.6 *Invertebrates*

- **SBRC:** The invertebrate records include three species protected under the Wildlife and Countryside Act 1981 (as amended): stag beetle *Lucanus cervus*, Duke of Burgundy *Hamearis lucina*, and brown hairstreak *Thecla betulae*. None of these species were recorded on or adjacent to the Site.

4.8.7 Plants

- **SBRC:** Field records for the Schedule 8 species bluebell *Hyacinthoides non-scripta* have been recorded within the search area.

4.9 Section 41 Species

Species "of principal importance for the purpose of conserving biodiversity", covered under section 41 (England) of The Natural Environment and Rural Communities Act (2006), which were recorded within 2km of the Site including hedgehog, house martin *Delichon urbicum* and tree sparrow *Passer montanus*.

5 Results: UK Habitat Survey

5.1 Introduction

This section provides an overview of the habitats and species within the Site. Figure 4 (Section 8) illustrates the location and extent of habitats recorded.

5.2 Habitats On-Site

The majority of the Site comprised a recreational field with short sward amenity / modified grassland, of relatively low ecological value. The grassland has been regularly mowed (and the arisings removed) and appeared to receive much nutrient enrichment and trampling impacts from the frequent dog walkers and sports activities. Bordering the Site was a woodland belt and strip of scrub which formed, in places, an ecotone as the habitat graded from woodland, scrub and finally to grassland.

A basketball court (developed land / sealed surface) and cricket pitch (artificial unvegetated, unsealed surface) were present in the centre of the grassland and small children's play area (part wood chippings and part modified grassland) was located to the south. The 'Angmering Sports and Social Club' building and associated car parking was located at the main entrance to the Site, along the southern boundary. A small patch of tall ruderal habitat (tall forbs) was located adjacent to the carpark. A small number of individual trees were present on the grassland, towards the perimeter of the Site.

*5.2.1 Modified Grassland - **g4 516, g4 16, g4 1171, g4 847***

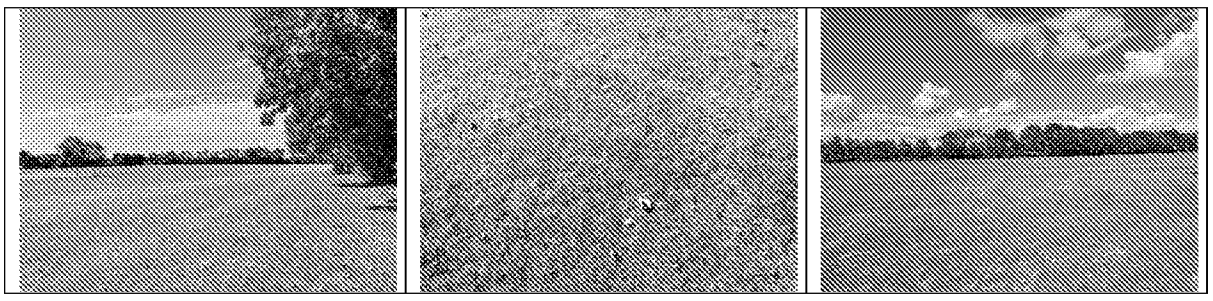
The majority of the Site comprised intensively managed short sward, mown amenity / **modified grassland**. Species recorded included: annual meadow grass *Poa annua*, daisy *Bellis perennis*, dandelion *Taraxacum officinale* agg., clover *Trifolium* spp., ribwort plantain *Plantago lanceolata*. Mole *Talpa europaea* hills were also observed across the field.

A small patch of **tall forbs** was present along the southern boundary of the Site. Species included: dock *Rumex* spp., nettle *Urtica dioica*, Yorkshire fog *Holcus lanatus*, wall barley *Hordeum murinum*, smooth meadow grass *Poa pratensis*, buttercup *Ranunculus* spp. crane's bill. *Geranium* spp, spear thistle *Cirsium vulgare*, hawksbeard *Crepis* spp., bristley oxtongue *Picris hieracioides*, green alkanet *Pentaglottis sempervirens*, yarrow *Achillea millefolium*, poppy *Papaver* spp., campion *Silene* spp., oxeye daisy *Leucanthemum vulgare*, cocks foot *Dactylis glomerata*, common vetch *Vicia sativa*, rough meadow grass *Poa trivialis* and cow parsley *Anthriscus sylvestris*.

Located at the eastern pedestrian access point to the Site was a small patch of **introduced shrub**, with species including cotoneaster species and cherry laurel *Prunus laurocerasus.*

A small number of **individual trees** were recorded near the perimeter of the Site. Species included: holly *Ilex aquifolium*, horse chestnut *Aesculus hippocastanum*, common oak *Quercus robur* and holm oak *Quercus ilex*.

Photo Group 1 – Modified Grassland



*5.2.2 Other Woodland; broadleaved - **w1g***

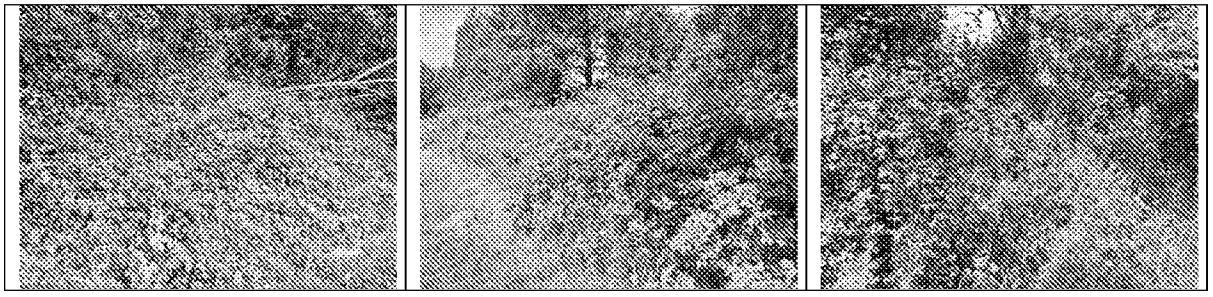
The perimeter of the recreational field was bordered by a belt of broadleaved woodland (**other woodland, broadleaved**). The strip varied in width with the densest stands (approx. 15m wide) located to the south west and the central section of the northern boundary. The habitats met the UKHabs criteria for woodland i.e. '*land with ≥ 25% cover of trees that are ≥ 5m in height*'. Species included: wild cherry: *Prunus avium*, field maple *Acer campestre*, sycamore *Acer pseudoplatanus*, ash *Fraxinus excelsior*, oak *Quercus spp.*, lime *Tilia* spp., horse chestnut, hazel *Corylus avellana*, blackthorn *Prunus spinosa*, common alder *Alnus glutinosa* and white poplar *Populus alba.*

Photo Group 2 – Other Woodland; broadleaved

*5.2.3 Mixed Scrub - **h3h***

As described above, a scrub strip (**mixed scrub**), dominated by bramble *Rubus fruticosus* agg. and nettles *Urtica dioica*, bordered the majority of the woodland perimeter and was more pronounced along the northern and eastern boundary. Other, less abundant, species recorded included: false oat grass *Arrhenatherum elatius*, cleavers *Galium aparine*, dock, herb Robert *Geranium robertianum*, cock's foot, rough meadow grass and ground ivy *Glechoma headracea.*

Photo Group 3 – Mixed Scrub



*5.2.4 Urban - **u1b, u1b5, u1c***

The Site included two **buildings** a pavilion building (Building 1) and a shipping container storage outbuilding (Building 2), as well as areas of **developed land; sealed surface** (car park and baseball court) **developed land; unsealed surface** (woodchip in the children's playground, and artificial cricket pitch).

Building 1 was a timber clad, single storey building with a pitched roof with corrugated roof sheets and was situated on brick-built base. The building was in a moderate condition and possessed multiple potential roosting features (PRFs) for bats including, but not limited to, gaps in the timber cladding, gaps in the roofing sheets and roof ridge, gaps around cable entry points and gaps between the soffits and fascia's. The building also had wooden windows and door frames.

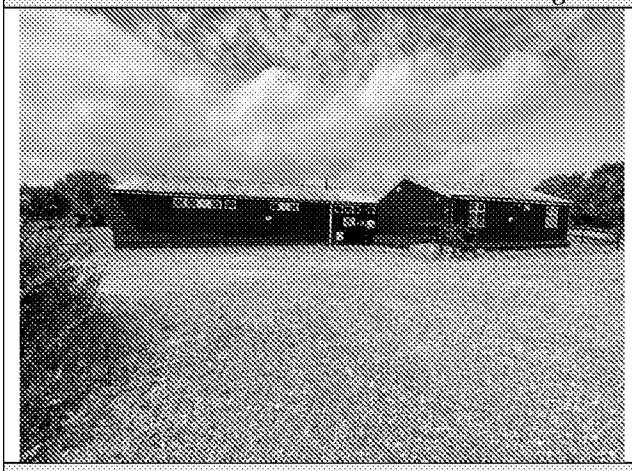
Building 2 was a metal shipping container/ storage outhouse, without windows. The building lacked any visible PRFs.

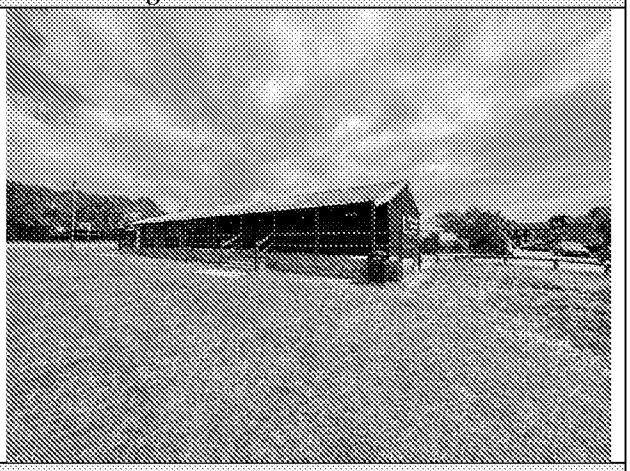
*5.2.5 Native Hedge - **h2a***

A short length of hedgerow was present to the rear of a garden backing onto the Site. Species recorded included hawthorn *Crataegus monogyna,* honeysuckle *Lonicera periclymenum* and bramble.

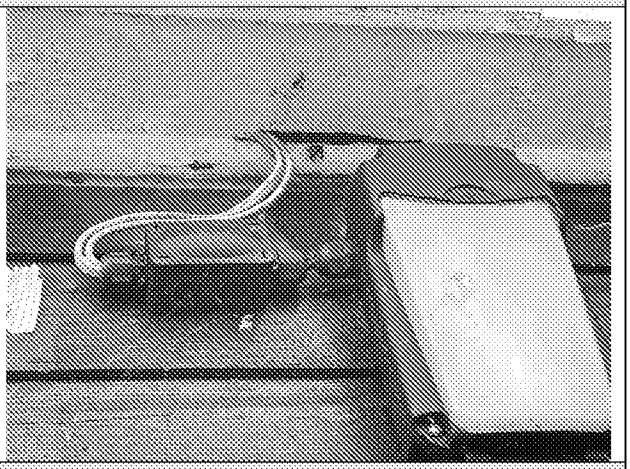
Photo Group 4 – Buildings

Building 1 - Pavilion Building

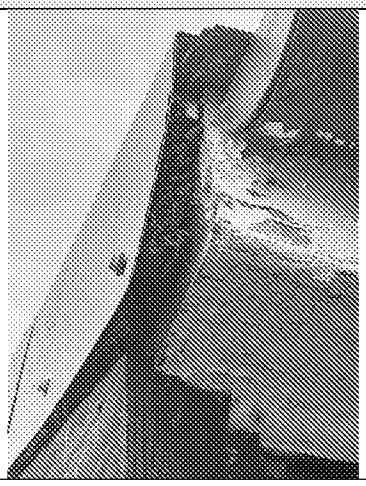


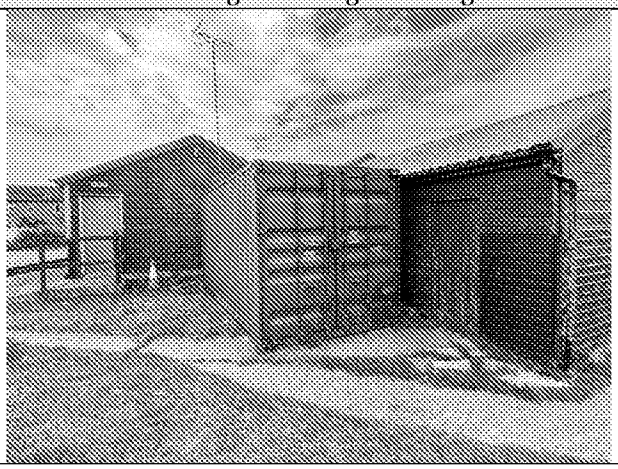


Building 1 – PRFs



Building 1 – PRFs



Building 2 - Storage Building


5.3 Protected / Notable Species

Based on the desktop and field survey undertaken, suitable habitat for supporting the following protected species / taxa was recorded:

- *Hazel dormice*: the woodland and scrub on-site have the potential to support dormice;
- *Bats*: some mature trees and Building 1 within the Site were noted as supporting suitable potential bat roosting features;
- *Great crested newts*: there are ponds within 250m of the Site (however, there was no evidence of this species during surveys undertaken for the Harvest Rise Site in 2018 or 2021);
- *Common reptile species*: slow worms, common lizards, grass snakes and adder – potentially in the woodland edge and scrub habitats;
- [redacted]
- *Nesting birds:* on / within trees / vegetation / in the woodland; and
- *Section 41 Species*: such as hedgehogs, potentially within the Site / adjacent to the Site.

Details of the legislation pertaining to these species, the habitats present, and the recommended surveys / actions are summarised in Table 2.

Note, cotoneaster (species unconfirmed) was recorded on-site. Some species of cotoneaster are listed Schedule 9 Species. The advice of INNS consultant should be gained regarding any further requirements regarding invasive non-native species.

6 Recommendations

6.1 Introduction

Table 2 at the end of this chapter summarises each of the ecological constraints and potential ecological constraints (protected species and designated sites), the likelihood of the ecological constraint being present, their protection status and initial recommendations for further survey / mitigation. Generic site-wide recommendations and prescriptions for habitat and species protection, as well as site enhancement, are provided below. These measures are based on the principles of the Mitigation Hierarchy to avoid, mitigate or, as a last resort, compensate for any adverse impacts on biodiversity.

6.2 Generic Site-wide Proposals for Habitat and Species Protection

6.2.1 Pre-clearance Ecological Walkover

As the status of protected species may change over time, a site walkover by a suitably qualified Ecologist(s), should be undertaken prior to the start of any site clearance, demolition or construction.

6.2.2 Protection of Off-Site Habitats

There are a number of important habitats that are in close proximity to the Site, including ancient woodland. There should be no direct access between the development and these sites and sensitive construction practices should be adhered to – see Appendix A for an outline of sensitive working practices.

6.2.3 Sensitive Timing of Works

Should any vegetation or tree clearance be required, where possible, this should be timed to avoid the most sensitive ecological seasons. Where this is not possible, ecological supervision should be provided. Requirements in respect of dormouse, bats, reptiles and other protected species will be dependent on any Licence / Precautionary Method Statement specifications.

6.3 Consideration of Lighting

6.3.1 Potential Impacts of Lighting

Lighting can impact hazel dormice by making them more vulnerable to predation. Lighting schemes can also damage bat foraging habitat (and habitat used by other nocturnal species) directly through loss of land and spatial exclusion of bats due to high illuminance, or indirectly by severing commuting routes from roosts, through light spillage polluting hedgerows, mature tree lines and other linear features often used by commuting bats. Lighting around roosts has also been shown to delay emergence, causing bats to miss the peak in insect prey abundance affecting survival and health[16].

It should be noted that some bat species (common pipistrelle and noctule) can benefit from lighting and are known to forage around and above streetlights, whereas other species such as brown long-eared *Plecotus auritus* bats are light averse and will avoid brightly lit areas. As such, the severity of impacts of any lighting scheme will vary depending on the species present.

6.3.2 Designing a Site-specific Lighting Strategy

As part of the design process, the impact of external lighting on the local biodiversity should be assessed in line with current guidance and in consultation with the Project Lighting Team. Any lighting during construction should be addressed in the CEMP. The lighting strategy should be based on principles of the following policies and guidance or any subsequent updates:

- Bats and Artificial Lighting at Night[17];

[16] Stone, E.L. (2013) Bats and Lighting: Overview of current evidence and mitigation guidance

[17] Bat Conservation Trust and Institution of Lighting Professionals Guidance Note 08/ 23 "Bats and Artificial Lighting at Night"

- Planning guidance (National Planning Policy Framework, 2023)[18]; and

The lighting associated with the new development should avoid significant light trespass on mature trees and woodland. Further consideration of lighting impacts should be made following the Phase 2 Surveys.

6.3.3 Maintenance of Grassland Mowing Regime

The existing mowing and management regime covering the main part of the Site (the modified grassland) should be maintained prior to site clearance to minimise the risk of protected species colonising the area and thus being disturbed when the area is cleared for development.

6.4 Habitat Creation

6.4.1 Sensitive Planting

Where possible, native and pollinator plant species should be used throughout the landscaping and should include plant species to encourage a diversity of insects, which in turn may attract different bat species, be of benefit to dormice and generally deliver biodiversity benefits. Planting option guidance could also be taken, where appropriate, from sources including:

- Bat Conservation Trust's 'Landscape and Urban Design for Bats and Biodiversity' (Gunnell, 2012);
- Bat Conservation Trust's 'Encouraging Bats: A Guide for Bat-Friendly Gardening and Living' (Bat Conservation Trust, 2015); and
- The Dormouse Conservation Handbook. 2nd ed. (Bright, P., Morris, P. and Mitchell-Jones, T., 2019).

6.5 Enhancement

Opportunities for biodiversity gain as well as avoiding impact, should be considered. For the proposed development, such opportunities include:

- Dormouse nest boxes in the woodland;
- The use of predominately native and pollinator plant species in the planting palette;
- Installation of bat boxes within the new builds to provide roosting opportunities; and
- The provision of herpetofauna habitats such as hibernacula and log piles for amphibians and reptiles.

[18] Ministry of Housing, Communities & Local Government. 2023. Policy Paper. National Planning Policy Framework September 2023.

Table 2: Confirmed and Potential Ecological Constraints within the Site

Ecological Constraint	Location of Confirmed/ Potential Constraint	Protection Status	Initial Recommendations / Mitigation Proposals
Bats	Bat roost potential in the trees and Building 1 on-site Foraging and commuting habitat within the wider Site.	The proposed works could cause disturbance to bats in their breeding or resting places, damage, obstruction or destruction of their roosts or/ and risk of killing and injury to bats. These actions would constitute offences under the Wildlife and Countryside Act 1981, as amended and the Conservation of Habitats and Species Regulations 2017 (amended).	**Bat Surveys & Mitigation** - Bat surveys for Building 1 and the trees on-site should be undertaken in accordance with the Bat Survey Guidelines (Collins, 2023)[19]. These survey have been undertaken / are in progress[1,2,3]. - Should a bat(s) be found to be roosting in any of the trees subject to tree works, or buildings works will need to be carried out under a licence issued by Natural England. Additional surveys may be required, and replacement roosts may also be needed to ensure the favourable conservation status of the species is maintained. - All lighting for the development (construction and operation phases) must avoid / minimise any light spill on key bat habitats and roosts as set out in the corresponding Bat Survey Report(s). - The green infrastructure on-site should be retained and protected wherever possible. - Mitigation in the form of bat boxes and native planting should be included in the development design.
Hazel Dormice	There is suitable habitat on-site and in the surrounding area for hazel dormice in the form of woodland and scrub. Dormice presence has been confirmed during surveys undertaken in 2021 on the Harvest Rise Site which is adjacent to, and connected with, the Site.	Should hazel dormice be present on-site, site works may cause disturbance to them in their breeding or resting places, damage, obstruction or destruction of their breeding and resting places or / and killing and injury. These actions would constitute offences under the Wildlife and Countryside Act 1981, as amended and the Conservation of Habitats and Species Regulations 2017 (as amended).	**Hazel Dormouse Surveys & Mitigation** - In accordance with best practice guidelines[20] dormouse surveys should be undertaken.[21] - Assuming dormice are confirmed as present during the surveys, works will need to be carried out under a Dormouse Licence obtained from Natural England. Site-specific mitigation prescriptions will be required to ensure the favourable conservation status of the species is maintained. - Given the presence of dormice on the Harvest Rise Site, if dormice are not recorded during the surveys, it is recommended that works are undertaken under a Pre-cautionary Method Statement that should be submitted to the LPA for approval, prior to the start of works.
Great crested newts	There are known ponds within 250m of the Site and the Site included some, limited, potential terrestrial great crested newt habitat in the form of woodland and scrub.	Should the works cause disturbance to great crested newts in their breeding or resting places, damage, obstruction or destruction of their breeding and resting places or / and killing and injury to great crested newts, these actions would constitute offences under the Wildlife and Countryside Act 1981, as amended and the Conservation of Habitats and Species Regulations 2017 (as amended).	**Great Crested Newt Scoping Assessment** - There are no ponds on-site and it's understood that no ponds are to be directly impacted by the proposed development. - A suite of great created newt surveys have undertaken for the Harvest Rise Site which is adjacent to, and connected with, the Site. - Undertake 'Great Crested Newt Scoping Assessment' to review the existing survey data and assess the need for any further survey work or precautionary working methods[22].
[redacted]			
Reptiles	There is habitat suitable on-site for the more 'widespread' reptile species, the majority of which is located around the Site playing field margins, suitable habitats included woodland edge, scrub and grass clipping piles.	Proposed works may risk killing and injury to any reptiles, should they be present. This would constitute an offence under the Wildlife and Countryside Act 1981, as amended.	**Reptile Presence / Absence Surveys** - Reptile Surveys were undertaken across the Site in 2024; a low population of slow worm was recorded[24]. - A 'Reptile Mitigation Strategy' should be prepared to set out the measures required to ensure reptiles are protected during the works.

[19] Collins, J. (ed) 2023. Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition)., London: The Bat Conservation Trust

[20] Bright, P. Morris, P. and Mitchell-Jones, T. (2006) The dormouse conservation handbook. Second edition

[21] Dormouse surveys currently in progress and will be completed in 2025 – refer to 'Richard Graves Associates (2024) *Angmering Sports Hub Site – Phase 2 Survey Report'*.

[22] Following the completion of this PEA, this assessment has been undertaken - see 'Richard Graves Associates (2024) *Angmering Sports Hub Site – Phase 2 Survey Report'*.

[23] Following the completion of this PEA, this survey has been undertaken - see 'Richard Graves Associates (2024) *Angmering Sports Hub Site – Phase 2 Survey Report'*.

[24] Richard Graves Associates (2024) 'Richard Graves Associates (2024) *Angmering Sports Hub Site – Phase 2 Survey Report'*.

Ecological Constraint	Location of Confirmed/ Potential Constraint	Protection Status	Initial Recommendations / Mitigation Proposals
Nesting Birds	Potential nesting features present in the trees and vegetation and buildings within the Site.	Tree works / vegetation removal risks damage to and destruction of the nests and eggs of wild birds which would be an offence under the Wildlife and Countryside Act 1981, as amended. Nesting bird species listed on Schedule 1 of the Wildlife and Countryside Act 1981, as amended, are also protected from disturbance.	**Nesting Bird Check Prior to Works & Breeding Bird Scoping Assessment** - Tree removal and any vegetation clearance / building demolition should be undertaken outside of the nesting bird season (subject to other protected species considerations). - If tree removal /vegetation clearance is not undertaken outside the bird nesting season, they must be checked by a suitably qualified Ecologist for nesting birds, prior to removal. - If an active nest(s) is found, a suitably qualified Ecologist should delineate a 'work exclusion buffer' around the structure containing the nest(s). No works are to take place within this buffer until after young have fledged.
Section 41 / BAP Species e.g. bats, and house sparrow & hedgehog	Various potential BAP /S.41 species likely to be in / surrounding the Site.	Under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, local authorities should have regard to biodiversity when determining planning permission. The Section 41 / BAP lists are drawn up to assist local authorities and other bodies in their duties.	**Retention of Habitats & Enhancements** - Protection of key habitats where possible (see Sensitive Working Practices in Appendix A). - Incorporation of features and enhancements to benefit and support local biodiversity.
Mature Trees and Woodland	**Present:** There are a number of mature trees within the Site and a small section of hedgerow.	Any trees / hedgerows with trees due for removal should be subject to assessment for nesting birds and roosting features for bats. Nesting birds (and their nest and eggs) and roosting bats (and their habitats) are protected under nature conservation legislation. Retained trees should be adequately protected during construction works in accordance with BS5837: 2012. 'Trees in relation to Design, Demolition and Construction - Recommendations'.	**Tree Assessment and Protection** - Should tree(s) / hedgerows be impacted by proposed work, checks / surveys (and if required) licences for protected species should be undertaken / obtained as detailed in this table. - Retained trees must be adequately protected in accordance with BS5837: 2012. 'Trees in relation to Design, Demolition and Construction - Recommendations' during construction works. - Where tree removal is necessary, replacement tree planting should be undertaken, where possible.
Schedule 9 Invasive Non-native Plant Species	A *Cotoneaster Spp.* was recorded on-site. Some species of *Cotoneaster* are listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).	A number of species of plant species are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). As such it is an offence to plant or otherwise allow this species to grow in the wild.	**Invasive Species Control** - Should any activities impact upon areas of invasive plant species, specialist advice should be sought to advise on any remediation and disposal that may be necessary.

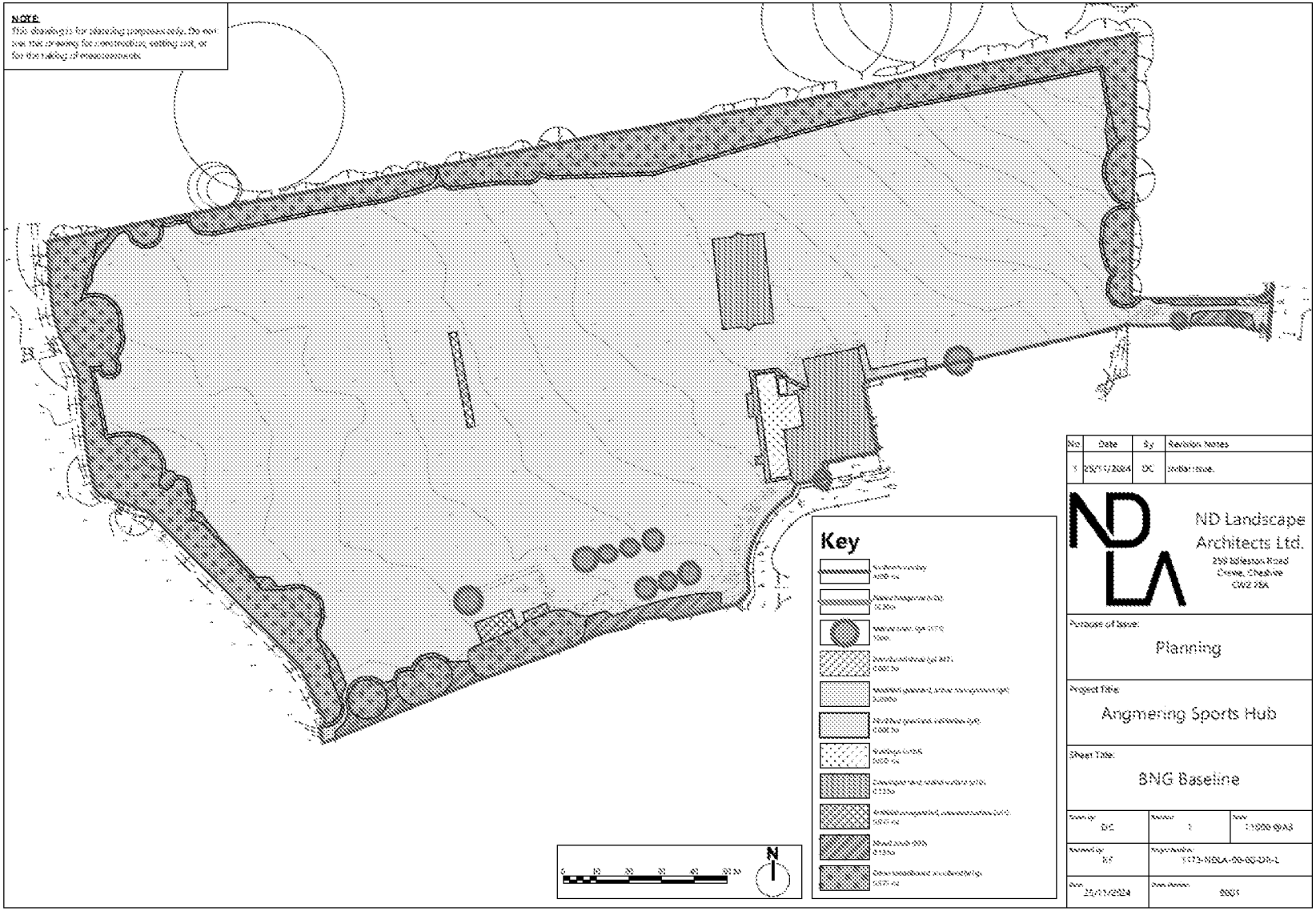
7 Conclusions

In 2024, Richard Graves Associates undertook a 'Preliminary Ecological Appraisal' of the proposed Angmering Sports Hub Site. The Site was dominated by intensively modified grassland and areas of hard standing, currently used as a recreational ground, bordered by habitats of higher ecological value namely broadleaved woodland and scrub. The Site has the potential to host a variety of protected species. As a result of the findings of this report, a suite of ecological surveys for protected species have been recommended and subsequently undertaken / are in progress. The findings of this report and the subsequent species-specific surveys will be / have been employed to help develop an ecologically sensitive and biodiversity promoting, Masterplan for the Site.

If the recommendations of this report, and any subsequent species-specific survey reports, are undertaken at the appropriate stage there are no undue constraints, with respect to ecology, to potential development.

8 Figures

- Figure 4: UK Habitats Map



Appendix A: Protection of Sensitive Habitats

Good construction practice should be followed to reduce the risk of impacts to nearby wildlife sites and sensitive habitats. These should include provisions for the protection of biodiversity within the 'Precautionary Ecological Method Statement' Site DMP / CMP and SWMP as well as the following:

- *Surface Run-off* – construction activities, wheel washers and pollution incidents must all be properly managed in line with current best practice to minimise pollution of nearby watercourses and habitats by surface run off. Safe storage of chemicals/oil must be enforced, and spill kits and other measures to be in place on-site.
- *Minimising lighting* - Many nocturnal animals require dark areas of habitat for commuting and foraging. Using powerful lighting on wildlife corridors can, for some species, effectively sever connectivity. Consequently, lighting should be minimised wherever possible. On-site, directional lighting, facing away from surrounding habitats. Lighting should be turned off when not in use except to meet the minimum requirements for health and safety;
- *Limiting construction dust* - large quantities of construction dust can travel great distances and negatively impact vegetation and habitats that it settles on. All best practice guidelines regarding limiting construction dust should be followed, especially in relation to surrounding sensitive habitats;
- *Reducing construction noise* - Noise from construction activities can cause disturbance to wildlife. Good practice guidelines should be followed and the timing of activities likely to result in high noise levels should be agreed with the relevant authorities.
- *Disposal of waste* – All waste products generated by the re-development should be properly stored and disposed of in line with best practice.