

**LAND REAR OF 60 FIR COPSE ROAD,
WATERLOOVILLE, HAMPSHIRE**

PRELIMINARY ECOLOGICAL APPRAISAL

Draft Document

December 2017

Preliminary Ecological Appraisals • Protected Species Surveys and Licensing • NVC • EcIA • Management Plans
Habitats • Badger • Bats • Hazel Dormouse • Birds • Reptiles • Amphibians • Invertebrates • Riparian and Aquatic Species

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ECOSA Quality Assurance Record

This report has been produced in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Report Writing 2015¹. The report has been prepared in line with current best practice guidance and survey work has been undertaken in line with references within CIEEM's Source of Survey Guidance².

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¹ Chartered Institute of Ecology and Environmental Management (2015). *Guidelines for Ecological Report Writing*. Technical Guidance Series. <http://www.cieem.net/publications/23/ecological-report-writing>

² www.cieem.net

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Map 1 Site Location Plan

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EXECUTIVE SUMMARY

The site is located in Waterlooville, Hampshire and comprises dense, unmanaged vegetation located on the edge of an adjacent woodland Site of Nature Conservation Interest. The proposals for the site are for the construction of a single residential dwelling with associated landscaping and car parking. The works will involve the relocation of the existing electricity sub-station.

ECOSA were commissioned by Pario Design to carry out a Preliminary Ecological Appraisal of the site to assess its ecological baseline and to determine any impacts and effects of the proposal. The main findings of the Preliminary Ecological Appraisal are:

- The site is adjacent to Sandy Dell SINC. The habitats within the site consist of dense scrub with scattered trees, a single hedgerow and a small area of amenity grassland. The features of relatively greater ecological value in the context of the site and the surrounds are the adjacent boundary woodland SINC and the on-site hedgerow.
- The site has been assessed as having suitability to support foraging and commuting bats, badger and breeding birds.
- Given the presence of Sandy Dell SINC immediately adjacent to the site it is recommended that a Construction Environmental Management Plan (CEMP) should be prepared and implemented at the site to ensure no indirect impacts on the adjacent SINC.
- It is recommended that no external lighting be introduced at the site as part of the proposals. If this cannot be avoided, sensitive lighting in relation to bats will be designed to ensure no adverse effects on foraging/commuting bats.
- Vegetation clearance required should be undertaken outside the main breeding bird season of March and August, inclusive, or if not possible, an ecologist should be present immediately prior to clearance to check the vegetation.
- The site lies within 5.6 kilometres of the Chichester and Langstone Harbour SPA and Ramsar site and Solent Maritime SAC. Therefore, there will need to be a contribution towards the Solent Disturbance and Mitigation Project (SDMP) for strategic mitigation measures. At the time of preparing this report this contribution stands at £181 per dwelling.
- If the planning application boundary changes or the proposals for the site alter, a re-assessment of the impacts and effects may be required.

1.0 INTRODUCTION

1.1 Background

Ecological Survey & Assessment Limited (ECOSA) have been appointed by Pario Design to undertake a Preliminary Ecological Appraisal to support a planning application for the development of Land rear of 60 Fir Copse Road, Waterlooville, Hampshire PO7 5HZ (hereafter referred to as the site).

1.2 The Site

The site is located in Waterlooville, Hampshire, centred on National Grid Reference (NGR) SU 6791 0752 (**Map 1**).

The site itself comprises dense, unmanaged vegetation on the edge of an adjacent woodland Site of Nature Conservation Interest (SINC). An electricity sub-station is present towards the centre of the site. The site is bounded by residential development to the north, south and west and the woodland SINC to the east. Sandy Brow runs along the northern boundary of the site.

The wider landscape is surrounded by residential development with arable fields and associated hedgerow networks further afield and dense woodland to the east and west.

1.3 Aims and Scope of Report

The information within this report is based on a field survey and desktop study carried out during November 2017. The report provides an initial assessment of any potential ecological impacts³ and associated effects⁴, and likely ecological constraints to the proposed development of the site, based on the identified features of ecological interest. It identifies the need for any measures to avoid or mitigate negative effects on habitats and species, outlines enhancements to be implemented as part of the development and provides recommendations for further ecological work, if required. The objectives of the assessment are:

- To provide baseline information on the current habitats and ecological features both on site and in the immediate vicinity of the site, where relevant;
- To identify the proximity of any statutory and non-statutory sites designated for nature conservation importance and provide an assessment of potential effects the proposed development may have on these;

³ Defined by CIEEM as an 'action resulting in changes to an ecological feature' e.g. hedgerow removal.

⁴ Defined by CIEEM as an 'outcome to an ecological feature from an impact' e.g. loss of habitat.

- To identify the presence/potential presence of diverse habitats and protected species and to provide an appraisal of potential effects the proposed development may have on these; and
- To provide recommendations for avoidance, mitigation, compensation and enhancement measures and, where required, recommendations for additional survey work and/or consultation required to support the planning application.

1.4 Site Proposals

The proposals for the site are for the construction of a single storey residential dwelling with associated landscaping and car parking. The works will involve the relocation of the existing electricity sub-station. Site access will be from Sandy Brow. At this stage, lighting proposals are unknown, however, lighting will form part of the scheme design.

The report is based on Proposed Plans & Elevations drawing number 17060/001P dated September 2017 (**Appendix 1**). The planning application for the scheme was submitted to Havant Borough Council (APP/17/01036) on 18th September 2017. The exact timescales for the construction are currently unknown, however for the purposes of this report it is assumed that construction would have commenced by December 2019.

2.0 PLANNING POLICY CONTEXT

2.1 Introduction

This section summarises the planning policy in relation to ecology and biodiversity within the Havant Borough Council administrative area. This information is then used to assess the compliance of the scheme in relation to relevant planning policy and where necessary make recommendations for mitigation and enhancements (see Section 6.0).

2.2 Planning Policy

2.2.1 National Policy

The National Planning Policy Framework (NPPF) sets out the government's requirements for the planning system in England. A number of sections of the NPPF are relevant when taking into account development proposals and the environment. As set out within Paragraph 14 of the NPPF *"At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking"*. However, Paragraph 119 goes on to state that *"The presumption in favour of sustainable development does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined"*.

The general impetus of the NPPF in relation to ecology and biodiversity is for development proposals to not only minimise the impacts on biodiversity but also to provide enhancement. Paragraph 109 states that the planning system should contribute to and enhance the natural environment by *"...minimising impacts on biodiversity and providing net gains in biodiversity where possible..."*

Paragraph 118 states that *"when determining planning applications, local planning authorities should aim to conserve and enhance biodiversity"*. A number of principles are set out in Paragraph 118, including that where harm cannot be adequately avoided then it should be mitigated for, or as a last resort, compensated for. Where impacts occur on nationally designated sites, the benefits must clearly outweigh any adverse impact and incorporating biodiversity in and around developments should be encouraged. Protection of irreplaceable habitats, such as ancient woodlands and those sites proposed as Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites or acting as compensation for SPAs, SACs and Ramsar sites, should receive the same protection as European sites.

In addition to the NPPF, Circular 06/05 provides guidance on the application of the law relating to planning and nature conservation as it applies in England. Paragraph 98

states “*the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat*”. Whilst paragraph 99 states “*it is essential that the presence or otherwise of a protected species, and the extent that they may be affected by the proposed development, is established before planning permission is granted*”.

2.2.2 Local Policy

Local planning policy within Havant Borough is provided by the Havant Borough Core Strategy March 2011 with a single policy referring in part ecology and biodiversity:

- **Policy CS11:** Protecting and Enhancing the Special Environment and Heritage of Havant Borough. This policy refers in part to biodiversity stating that planning permission will be granted for development that:
 - Protects and where possible enhances the borough’s statutory and non-statutory designated habitats and features of biological interest. Protection and enhancement will be achieved by appropriate adaptation and mitigation measures;
 - Has particular regard for nature conservation designations with international designations given the highest regard;
 - Supports an ongoing programme of survey of habitats, species and designations of SINCs;
 - Incorporates partnership working with conservation organisations to improve public understanding of biodiversity and to manage public access to designated sites, particularly associated with the coasts, in order to minimise harm;
 - Incorporates partnership working with landowners and developers to ensure land management practices restore, enhance and where appropriate create new valued landscapes, habitats and their soil structure, particularly the ancient woodland remnants of the Forest of Bere and coastal salt marsh;
 - Protects wildlife habitats and corridors to prevent fragmentation and to allow species to adapt to climate change; and
 - Responds to the emerging evidence from the Solent Disturbance and Mitigation Project and published recommendations and further research.
- **Policy DM9:** Development in the Coastal Zone. This policy refers to the protection of the coastal zone as defined on the Proposals Map. Permission will only be granted in the coastal zone where the following criteria are met:

-
- Has no harmful effects on nature conservation within the Chichester and Langstone Harbour SSSIs and SPA, Solent Maritime SAC and Ramsar site, or any SINC and Local Nature Reserves;
 - Maintains and enhances the appearance and distinctiveness of existing settlements and landmarks along the coast;
 - Contributes positively to the landscape and has regard to best practice on the design of new buildings in coastal locations;
 - Upgrades existing footpaths and ensures that public access is retained and provided to connect existing paths along the waterfront where appropriate;
 - Would result in improvements to or redistribution of moorings, marine berths or launch on demand facilities (dry berths) in the harbours;
 - Would not be detrimental to infrastructure for, and quality of, water-based recreation, or be detrimental to the safety of navigation; and
 - Provides recreational opportunities that do not adversely affect the character and appearance of the coast

3.0 METHODS

3.1 Introduction

This section details the methods used during the field survey and desktop study carried out as part of the Preliminary Ecological Appraisal. This section also considers any significant limitations to the appraisal.

3.2 Zone of Influence

To define the total extent of the study area for this appraisal (Zone of Influence⁵), the proposed scheme was reviewed to establish the spatial scale at which ecological features could be affected. The appropriate survey radii for the various elements of the appraisal (i.e. desktop study and field survey) have been defined in the relevant sections below. These distances are determined based on the professional judgement of the ecologist leading the appraisal, taking into account the characteristics of the site subject to appraisal, its surroundings and the nature and scope of the proposals.

3.3 Scoping

Protected species considered within this appraisal are those species/species groups considered likely to be encountered given the geographical location and context of the site. These are discussed within the results section (Section 4.0) of the current report. Where such a species is unlikely to be present on site a justification for likely absence is provided. Species considered likely absent from the site are not then considered in the potential development impacts and ecological effects section (Section 5.0), and recommendations and conclusions section (Section 6.0) of this report.

3.4 Desk Study

3.4.1 Biological Records Centre

Hampshire Biodiversity Information Centre (HBIC) was consulted on 17th November 2017 for the following data:

- Records of non-statutory designated sites (Local Wildlife Sites (LWSS), Sites of Importance for Nature Conservation (SINCs), Site of Nature Conservation Interest (SNCIs) etc.) within one kilometre of the site boundary;
- Records of legally protected and notable species (flora and fauna) within one kilometre of the site boundary, including priority species and Species of Principal Importance for the Conservation of diversity in England notified under Section

⁵ The Zone of Influence (Zoi), as defined by CIEEM, is the area over which ecological features may be subject to significant effects as a result of the proposed project and associated activities.

41 of the Natural Environment and Rural Communities (NERC) Act 2006 and as listed in the England Biodiversity List (**Appendix 4**).

3.4.2 Multi-Agency Geographic Information for the Countryside

The Multi-Agency Geographic Information for the Countryside (MAGIC)⁶ database was reviewed on 29th November 2017 to establish the location of statutory designated sites located within the vicinity of the site. This included a search for all internationally and nationally designated sites such as Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Wetlands of International Importance (Ramsar sites), Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) and Local Nature Reserves (LNRs) within one kilometre of the site. Where appropriate, the desk study search area has been extended to take account of any appropriate statutory designated sites which need consideration in terms of potential in-direct effects and which support particularly mobile species⁷. The Impact Risk Zones (IRZs) were also obtained from MAGIC, which are used to help guide and assess planning applications for likely effects on SSSIs.

Sites within two kilometres of the site boundary where European Protected Species Mitigation (EPSM) licences have been granted were reviewed. This information allows a greater understanding of the potential for European protected species to be present in the local area.

Online mapping resources, at an appropriate scale, were used to identify the presence of habitats such as woodland blocks, ponds, watercourses and hedgerows, in the vicinity of the site.

3.5 Field Survey

The field survey broadly followed standard Phase 1 habitat survey methodology⁸ and included a search for evidence of the presence of, and an assessment of the site's suitability to support, protected and notable species as recommended by CIEEM⁹. The field survey covered all accessible areas of the site, including boundary features.

3.5.1 Phase 1 Habitat Survey

An assessment was made of all areas of vegetation within the site based on the standardised Phase 1 habitat survey methodology¹⁰. This involved identification of

⁶ www.defra.magic.gov.uk

⁷ Search areas for bat records are based upon information contained within Collins, J. (Ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Third Edition). The Bat Conservation Trust, London. Relevant distances for consideration of impacts on SPAs, SACs, Ramsar sites have been based on current published guidance available through web-based sources.

⁸ Joint Nature Conservation Committee (2010) *Handbook for Phase 1 habitat survey: A technique for environmental audit*

⁹ CIEEM (2013). *Guidelines for Preliminary Ecological Appraisal*

¹⁰ The standard JNCC Phase 1 habitat survey methodology involves the production of a Phase 1 map showing the location and extent of habitat types, however, given the limited size and complexity of the site surveyed a Phase 1 habitat map has not been produced in this instance.

broad vegetation types, which were then classified against Phase 1 habitat types, where appropriate. A list of characteristic plant species for each vegetation type was compiled and any invasive species¹¹ encountered as an incidental result of the survey recorded.

3.5.2 Protected and Notable Species Appraisal

A preliminary appraisal of the site's suitability to support legally protected and notable species was carried out. The following species/species groups were considered during the appraisal.

Bats

The survey conformed to current Bat Conservation Trust guidelines¹². An assessment was made of the suitability of trees on the site and immediately on the site boundary to support roosting bats based on the presence of Potential Roosting Features such as holes, cracks, splits, loose bark and ivy cladding for trees.

An assessment was made of the suitability of the site and the surrounding landscape to support foraging and/or commuting bat species. The assessment of the suitability of the site to support roosting, foraging and commuting bats is based on a four-point scale as detailed in **Appendix 3**.

Badger

The survey involved an assessment of the suitability of the site to support badger. Evidence of the species was recorded as an incidental result of the Phase 1 habitat survey and included locating badger setts, paths, and signs of territorial activity such as latrine sites.

Hazel Dormouse

The appraisal for the suitability of the site to support hazel dormouse was based on an assessment of habitat features that may indicate that the species is present. This includes the presence of key food sources such as hazel and bramble, or plants used as nesting material such as honeysuckle and clematis. Additionally, the species requires a continuum of food supply so that habitat structure, diversity and connectivity to adjacent areas of woodland/scrub are important features in determining the suitability of the site for hazel dormouse.

Birds

The appraisal of breeding birds on the site was based on the suitability of habitat present to support nesting bird communities, the presence of bird species that may

¹¹ Plant species included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). The survey was not specifically aimed at assessing the presence of these species and further specialist advice may need to be sought.

¹² Collins, J. (Ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Third Edition). The Bat Conservation Trust, London

potentially nest within the available habitat and evidence of nesting such as old or currently active nests.

The assessment of wintering birds was based on an assessment of the suitability of the habitat on site to support important wintering bird species and populations. Particular attention was paid to the suitability for the site to support wintering farmland bird species, waders and wildfowl.

Reptiles

The reptile appraisal was based on an assessment of the suitability of the habitat present within the site to support a population of reptiles. Reptiles particularly favour scrub and rough grassland interfaces and the presence of these is a good indication that reptiles may be present on-site. In addition, reptiles may utilise features such as bare ground for basking, tussocky grassland for shelter and compost heaps and rubble piles for breeding and/or hibernating.

Great Crested Newt

The appraisal of the site to support great crested newt included establishing the presence of suitable aquatic habitats such as ponds, lakes or other waterbodies within or adjacent to the site and the presence of suitable terrestrial habitat. Waterbodies that are densely shaded, highly eutrophic or that contain fish are likely to be less suitable for this species.

In addition, online mapping resources at a minimum scale of 1:25,000 were used to identify the presence of ponds or other waterbodies within a 500 metre radius of the site. The 500 metre radius is a standardised search radius to assist in the assessment of the suitability of a site and its surrounding habitat to support this species, based on current Natural England guidance¹³.

Invertebrates

An assessment was made of the suitability of the site to support diverse communities of invertebrates. The assessment was based on the presence of habitat features which may support important invertebrate communities. These features include, for example, an abundance of dead wood, the presence of diverse plant communities, varied woodland structure, sunny woodland edges with a diverse flora, waterbodies and water courses and areas of free draining soil exposures. During the field survey there was no attempt made to identify species present as this is a more specialist area of ecological assessment reserved for targeted surveys.

¹³ English Nature (2001) Great Crested Newt Mitigation Guidelines. Peterborough

Other Relevant Species

An assessment was made of site suitability for other notable species such as more rarely encountered protected species, Species of Principal Importance for the Conservation of diversity in England notified under Section 41 of the NERC Act 2006 and as listed in the England Biodiversity List, and Local Biodiversity Action Plan (LBAP) species¹⁴, specific to the study region.

Invasive Species

During the field survey any incidental records of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded. However, it should be considered that the survey was not specifically aimed at assessing the presence of these species and further specialist advice may need to be sought.

3.6 Field Survey Details

The field survey was carried out by Lucy Grable, Graduate Assistant Ecologist of ECOSA on 23rd November 2017. The weather conditions were sunny with approximately 0% cloud cover, an ambient temperature of 10°C and a moderate breeze.

During the survey, the surveyor was equipped with a ladder, 10x40 binoculars, a high powered torch and a digital camera.

3.7 Limitations

Ecological surveys are limited by factors which affect the presence of plants and animals such as the time of year, migration patterns and behaviour. The field survey has therefore not produced a complete list of plants and animals and in the absence of evidence of any particular species should not be taken as conclusive proof that the species is absent or that it will not occur in the future.

It is not always possible to provide definitive assessments of a species' presence/likely absence at a site and so in the absence of direct evidence, assessments and recommendations are based on the presence of suitable habitat within/adjacent to a site and the results of species records within the desk study data.

The survey was undertaken at a time of year when many species of plant and animal are either dormant, not visible above ground or simply not present in the UK (such as migratory birds). Therefore, the survey was based upon an assessment of the habitat present on site and the suitability of this habitat to support protected species.

¹⁴ LBAPs identify local priorities for biodiversity conservation by translating national targets for species into effective action at the local level and identifying targets for species important to the local area.

The desk study data mainly originates from ad-hoc surveys by volunteers and other records from members of the public. Therefore, the data search results cannot be taken as an exhaustive list of species present in the area.

Not all areas of the site were visible to the surveyor due to the presence of dense scrub which made it difficult to observe any evidence of badger, and, therefore assessments are based upon the suitability of the site to support badger.

4.0 BASELINE ECOLOGICAL CONDITIONS

4.1 Introduction

This section details the results of the Preliminary Ecological Appraisal undertaken for the site. It assesses the baseline ecological conditions of the site at the time the desktop study was completed and based on the ecological features recorded during the field survey carried out on 23rd November 2017.

4.2 Desktop Study

4.2.1 Protected Species

A number of protected species have been recorded within one kilometre of the site boundary and a number of bat species within one kilometres. These are discussed further within Paragraphs 4.3 and 4.4¹⁵.

4.2.2 Statutory and Non-statutory Designated Sites

The site is situated immediately adjacent to Sandy Dell SINC. In addition, there are a further ten non-statutory designated sites of nature conservation interest situated within one kilometre of the site boundary. No statutory designated sites of nature conservation are situated within one kilometre of the site boundary. The nearest statutory designated sites of nature conservation interest are Chichester and Langstone Harbours SPA and Ramsar site, Solent Maritime SAC, Chichester Harbour SSSI, Langstone Harbour SSSI and Farlington Marshes LNR, all of which are located approximately 2.3 kilometres south-east of the site. Details of these designations are provided in **Table 1**. Further information on sites designated for nature conservation is provided in **Appendix 2**.

Table 1: Designated Sites Located Within the Zone of Influence

Designation	Name	Approximate Relative Location	Reason for Designation
SINC	Sandy Dell	Immediately east	The site has been designated for comprising ancient semi-natural woodland.
SINC	Purbrook Park Wood	580 metres south	The site has been designated for comprising ancient semi-natural woodland.
SINC	London Road Fen	750 metres west	The site has been designated for supporting semi-natural woodland which comprise important community types of restricted distribution in the County and wetlands.
SINC	Newlease Copse, Havant	790 metres north-east	The site has been designated for comprising ancient semi-natural woodland.

¹⁵ The full data set is available on request from ECOSA.

Table 1: Designated Sites Located Within the Zone of Influence

Designation	Name	Approximate Relative Location	Reason for Designation
SINC	Marrelsmoor Coppice	800 metres north-west	The site has been designated for comprising ancient semi-natural woodland and for supporting hazel dormouse <i>Muscardinus avellanarius</i> .
SINC	Portsmouth Golf Course West	840 metres south	The site has been designated for supporting semi-improved grasslands which retain a significant element of unimproved grassland and also grasslands which have become impoverished through inappropriate management but which retain sufficient elements of relic unimproved grassland to enable recovery.
SINC	Fort Purbrook Paddock 1 (Havant)	920 metres south-east	The site has been designated for including semi-improved grasslands which retain a significant element of unimproved grassland and supporting small blue butterfly <i>Cupido minimus</i> and autumn lady's-tresses <i>Spiranthes spiralis</i> .
SINC	Fort Purbrook	950 metres south	The site has been designated for comprising agriculturally unimproved grasslands and supporting sainfoin <i>Onobrychis viciifolia</i> and autumn lady's-tresses.
SINC	Johnston's Coppice	950 metres north-east	The site has been designated for comprising ancient semi-natural woodland and for supporting hazel dormouse.
SINC	Portsmouth Golf Course East	970 metres south-east	The site has been designated for supporting semi-improved grasslands which retain a significant element of unimproved grassland and also grasslands which have become impoverished through inappropriate management but which retain sufficient elements of relic unimproved grassland to enable recovery.
SINC	Gundymoor Wood (West)	1 kilometre east	The site has been designated for comprising ancient semi-natural woodland.

4.3 Habitats

4.3.1 Desktop Study Results

Consultation with HBIC identified the BAP priority habitat of lowland mixed deciduous woodland immediately east of the site in the form of Sandy Dell SINC. Sandy Dell SINC has also been designated for comprising ancient semi-natural woodland.

Consultation with HBIC did not identify any notable plant species within or immediately adjacent to the site.

4.3.2 Field Survey Results

Habitats are described in general terms using standard Phase 1 habitat survey terminology, with reference to dominant, characteristic and notable species in each vegetation type. The main habitats recorded on site during the Phase 1 habitat survey were as follows:

4.3.3 Broad-leaved Woodland

The eastern margin of the site is formed by broad-leaved woodland (**Figure 1**). The woodland is mature and diverse in composition with a dense understorey of bramble in some areas. Species present include ash *Fraxinus excelsior*, pedunculate oak *Quercus robur*, willow *Salix* species, holly *Ilex aquifolium*, blackthorn *Prunus spinosa*, hawthorn *Crataegus monogyna*, dog-rose *Rosa canina*, garden privet *Ligustrum ovalifolium*, hazel *Corylus avellana* and alder *Alnus glutinosa*. This woodland is designated as Sandy Dell SINC.



Figure 1: Broad-leaved woodland forming eastern margin of site

4.3.4 Dense Scrub

The majority of the site comprises dense, unmanaged scrub dominated by bramble *Rubus fruticosus* aggregate (**Figure 2** and **Figure 3**). Other species recorded include garden privet, passionflower *Passiflora caerulea*, holly, dog-rose, ivy *Hedera helix*, snowberry *Symphoricarpos albus* and common nettle *Urtica dioica* with wood avens *Geum urbanum* present in the ground flora. A few scattered trees are also present including willow species, hawthorn, blackthorn, oak species and Leyland cypress *Cupressus × leylandii*.



Figure 2: Dense scrub facing west



Figure 3: Dense scrub facing south

4.3.5 Species-poor Intact Hedgerow

A single, unmanaged hedgerow up to three metres in height is present along the southern edge of Sandy Brow (**Figure 4**). The hedgerow has a scrubby appearance and is connected to the adjacent woodland SINC. Species present include bramble, willow species, blackthorn, ash, ivy, dog-rose, oak species, garden privet, passionflower and stinging nettle.



Figure 4: Hedgerow along the southern edge of Sandy Brow east of the existing substation

4.3.6 Other Habitats

Sandy Brow track is present to the north of the site (**Figure 5**). The centre of the well used track comprises a small strip of amenity grassland. Species present include perennial rye grass *Lolium perenne*, fescue *Festuca* species, ribwort plantain *Plantago lanceolata*, dandelion *Taraxacum officinale* aggregate, daisy *Bellis perennis*, red clover *Trifolium pratense* and cleavers *Galium aparine*.



Figure 5: Worn track with amenity grassland facing

An electricity sub-station is present towards the centre of the site surrounded by timber board fencing (**Figure 6**).



Figure 6: Existing substation

4.3.7 Summary

The habitats within the site itself comprise common and widespread species typical of a scrub habitat. The features of relatively greater ecological interest in terms of the site are the boundary Sandy Dell SINC to the east and the scrubby hedgerow south of Sandy Brow.

4.4 Notable and Legally Protected Species

4.4.1 Bats

Desktop Study Results

No granted EPSM licences in relation to bats were identified within two kilometres of the site boundary.

A number of records of bats were returned by HBIC as part of the desktop study undertaken. The nearest of which was for a record of common pipistrelle *Pipistrellus pipistrellus* recorded 515 metres south-west of the site in 2013. Other records recorded

within two kilometres of the site include parti-coloured bat *Vespertilio murinus*, soprano pipistrelle *Pipistrellus pygmaeus*, pipistrelle *Pipistrellus* species¹⁶, brown long-eared bat *Plecotus auritus*, serotine *Eptesicus serotinus* and Natterer's bat *Myotis nattereri*.

Tree Assessment

The trees within the site lacked any potential roosting features such as dense coverings of ivy or rot holes and are therefore assessed as having negligible suitability for supporting roosting bats. It is likely that trees in the immediate surrounds, such as those situated in Sandy Dell SINC to the east are likely to support potential roosting features.

Foraging and Commuting Habitat

The hedgerow situated south of Sandy Brow is connected to the adjacent Sandy Dell SINC and offers good foraging and commuting habitat for bat species. These features also allow good connectivity into the wider landscape including linkage to residential gardens, extensive woodland and mature hedgerows within the wider area which provide optimal foraging and commuting habitats. Despite the suitable foraging and commuting habitat on site being small in extent, it is part of a continuous habitat connection within the wider landscape, and, therefore, overall the site is assessed as having moderate suitability to support foraging and commuting bats.

4.4.2 Badger

Desktop Study Results

Two records of badger *Meles meles* were returned by HBIC from within one kilometre of the site boundary as part of the desktop study undertaken. The exact locations of the records were not provided with both recorded in 2005 and located in a one kilometre OS grid square south-west of the site.

Field Survey Results

A collapsed mammal excavation was recorded to the east of the site where the sub-station is to be relocated. The hole was partially filled with leaf litter at the time of survey with no evidence to determine which species utilises it.

No evidence of resident badger was recorded during the survey undertaken such as latrines, hairs or footprints although it is possible that any setts present may have been obscured by the dense scrub within the site. The scrub present within the site offers suitability for foraging badger. Good quality habitats for badger are likely present in the

¹⁶ There are three species of pipistrelle bat, the common pipistrelle *Pipistrellus pipistrellus*, the soprano pipistrelle *Pipistrellus pygmaeus* and the Nathusius' pipistrelle *Pipistrellus nathusii*. The species can be separated by their echolocations, examination of physical characteristics and Phylogenetic Analysis Identification of bat droppings. Unless confirmation of identification has been made by visual identification the three species shall be referred to in this report as pipistrelle bat. All three species will roost in similar locations within buildings. The soprano pipistrelle has a tendency to form larger roosts numbering 100's of bats and is associated with wetland habitat. Nathusius' pipistrelle bats frequently share maternity roosts with soprano pipistrelle bats.

wider area including the adjacent woodland SINC and also further afield in the form of extensive woodland, hedgerow networks and fields.

4.4.3 Hazel Dormouse

Desktop Study Results

Nine granted EPSM licences in relation to hazel dormouse were identified within two kilometres of the site boundary in association with the A3 vegetation and woodland copse areas. The nearest granted licences are located approximately one kilometre north-west of the site.

Three records of hazel dormouse were returned by HBIC from within one kilometre of the site boundary as part of the desktop study undertaken. The records were located in one kilometre OS grid squares north-west and south-west of the site in 2006, 2007 and 2012.

Field Survey Results

The site itself supports a suitable structure and diversity of vegetation for supporting hazel dormouse. However, the hazel dormouse is an arboreal species which requires connectivity to wooded vegetation in order to disperse. Whilst the site is connected to the adjacent woodland SINC, the woodland itself is isolated from suitable habitat in the vicinity including the locations of the granted EPSM licences. The likelihood of hazel dormouse presence is further reduced due to the small size of the woodland. Since hazel dormouse live at low density the woodland itself is not considered sufficiently large to support a viable population. Hazel dormouse have been confirmed in the local area. The extensive areas of woodland within the wider area of the site provide suitable food resources, structure and connectivity into the wider area that the species generally requires. The habitat on site is unsuitable for hazel dormouse and therefore the species is not considered further in this report.

4.4.4 Birds

Desktop Study Results

Consultation with HBIC produced records of 30 bird species within the desktop study area. Of these species the red listed¹⁷ species including marsh tit *Poecile palustris*, song thrush *Turdus philomelos* and mistle thrush *Turdus viscivorus* and the amber

¹⁷ The UK's birds are split into three categories of conservation importance - red, amber and green. Red is the highest conservation priority, with species needing urgent action. Amber is the next most critical group, followed by green. Red List criteria include species which are: globally threatened; have been subject to historical population decline in UK during 1800–1995; are in severe (at least 50%) decline in UK breeding population over last 25 years, or longer-term period, or; subject to severe (at least 50%) contraction of UK breeding range over last 25 years, or longer-term period.

listed¹⁸ bullfinch *Pyrrhula pyrrhula*, were considered most likely to breed in the on-site hedgerow and scrub.

Field Survey Results

A small number of common and widespread bird species were recorded during the survey undertaken including robin *Erithacus rubecula* and blue tit *Cyanistes caeruleus*.

The site supports habitats for breeding birds in the form of the hedgerow situated south off Sandy Brown and the dense scrub which contains a few scattered trees. There are also three bird boxes erected on trees. Given the small size of the site it is considered that the site would support only small numbers of common bird species. A variety of suitable habitats for supporting breeding birds are present in the wider area in the form of woodland, scrub, hedgerows agricultural fields and residential gardens.

The habitat on site is considered to have limited suitability for wintering birds, being small in size and enclosed. Small numbers of wintering passerine species such as redwing *Turdus iliacus* and fieldfare *Turdus pilaris* may occasionally occur. Other habitat in the surrounds provide suitable habitat for supporting wintering bird species including a range of fields. Therefore, the habitat on site is considered to have only limited suitability for wintering birds, and, therefore will not be considered further in this report.

4.4.5 Reptiles

Desktop Study Results

Two records of common lizard *Zootoca vivipara* were returned by HBIC from within one kilometre of the site boundary as part of the desktop study undertaken. Both records were recorded 920 metres south of the site in 2006 and 2007.

Field Survey Results

The majority of the site comprises dense scrub which is densely shaded, and, therefore provides limited opportunities for basking reptiles. Being ectothermic reptiles require the warmth of the sun to warm up their body temperature. The shaded nature of the site therefore limits the suitability of the site to support common species of reptile. The site, and to a greater extent the Sandy Dell SINC woodland, provides shelter, refuge and hibernation opportunities for common species of reptiles in the form of root

¹⁸ The UK's birds are split into three categories of conservation importance - red, amber and green. Red is the highest conservation priority, with species needing urgent action. Amber is the next most critical group, followed by green. Amber list criteria include species which are: in unfavourable conservation status in Europe; subject to historical population decline during 1800–1995, but recovering; subject to moderate (25–49%) decline in UK breeding population or contraction of UK breeding range over last 25 years, or the longer-term period; subject to moderate (25–49%) decline in UK non-breeding population over last 25 years, or the longer-term period; rare breeders (1–300 breeding pairs in UK); rare non-breeders (less than 900 individuals), or; internationally important species with at least 20% of European breeding or non-breeding population in UK.

systems, tree stumps and dead wood. The habitat on site is unsuitable for reptiles and therefore this species group is not considered further in this report.

4.4.6 Great Crested Newt

Desktop Study Results

No granted EPSM licences in relation to great crested newt *Triturus cristatus* were identified within two kilometres of the site boundary.

Consultation with HBIC produced no records of great crested newt within the desktop study area, however, this does not confirm the absence of the species in the local area.

A review of online 1:25,000 OS mapping and aerial imagery suggests there is a single waterbody within a 500 metre radius of the site, located approximately 465 metres north of the site.

Field Survey Results

No ponds are present within the site itself, and, therefore the site does not support breeding great crested newt. The site provides optimal terrestrial habitat for great crested newt albeit being small in scale with the dense scrub, on-site hedgerow and adjacent woodland SINC offering suitable foraging, refuge and hibernating opportunities for the species during their terrestrial stage. However, the single waterbody within a 500 metre radius is isolated from the site by road networks and so any breeding great crested newt in the vicinity are unlikely to use the site during their terrestrial stage. The habitat on site is unsuitable for great crested newt and therefore the species is not considered further in this report.

4.4.7 Invertebrates

Desktop Study Results

A number of notable terrestrial invertebrates were returned by HBIC from within one kilometre of the site boundary as part of the desktop study undertaken. Of these the majority related to Lepidoptera (butterflies and moths). There were also two records of the Species of Principal Importance¹⁹ stag beetle *Lucanus cervus*.

Field Survey Results

The site offers some suitable habitat for supporting invertebrates in the form of the hedgerow and dense scrub. No decaying material was found onsite. However, the adjacent woodland comprises tree stumps which may provide material for the female stag beetle to lay eggs on. Stag beetles may disperse to the site in search of mates

¹⁹ As listed on NERC Act 2006

from mid-May before the female returns to usually the same site she has emerged from a larva.

4.4.8 Other Relevant Species

Desktop Study Results

Consultation with HBIC produced no records of other notable species within the desktop study area, however, this does not confirm the absence of other notable species in the local area.

Field Survey Results

The site supports some suitable habitat for hedgehog *Erinaceus europaeus*¹⁷ in the form of the hedgerow and boundary woodland.

4.5 Summary of Key Ecological Features

The site mainly comprises unmanaged scrub with a single hedgerow and is of relatively limited value. The following features are those with greatest ecological value:

- The adjacent woodland Sandy Dell SINC;
- Suitability of the site to support foraging and commuting bats;
- Suitability of the site to support badger; and
- Suitability of the site to support breeding birds.

5.0 POTENTIAL DEVELOPMENT IMPACTS AND ECOLOGICAL EFFECTS

5.1 Introduction

This section considers, in outline, the potential impacts of the proposed development scheme and effects on the features of ecological interest as identified in Section 4.0 and summarised in Paragraph 4.5. The impacts considered may have either a positive or a negative effect and are considered unmitigated i.e. prior to any mitigation or compensation being implemented.

The proposed development entails the construction of a single residential dwelling with associated landscaping and car parking. The works will involve the relocation of the existing sub-station. This will result in the loss of a small area of hedgerow and dense scrub. Lighting will also be introduced to the site although lighting proposals were unknown at time of writing this report. In the absence of mitigation, the potential ecological effects of these works are detailed in the sections below.

5.2 Designated Sites

The proposals have the potential to result in direct and indirect impacts on Sandy Dell SINC, which is situated immediately adjacent to the site as a result of construction activities through noise, disturbance and pollution events. During the operational phase there is the potential for indirect impacts through the introduction of new lighting and the potential for increased pollution events.

The site lies 2.3 kilometres north-west of the Chichester and Langstone Harbour SPA and Ramsar site and Solent Maritime SAC. However, given the distance of the site from these designated sites the proposal for the construction of a single dwelling will result in minimal impact.

Given the removed nature of the site from any other designated sites no impacts on any other designated sites are anticipated as a result of the proposals.

5.3 Habitats

The habitats within the site are of low ecological value comprising dense scrub, a single hedgerow and patch of amenity grassland. In the absence of mitigation, the proposals would result in the loss of a small area of hedgerow, dense scrub including a number of trees and a small area of amenity grassland.

5.4 Notable and Legally Protected Species

Of those notable and protected species identified as being likely present on site during the Preliminary Ecological Appraisal the following potential effects have been identified:

5.4.1 Bats

Vegetation removal has the potential to result in the loss of suitable foraging and commuting habitat for bats. The proposals also have the potential for long-term disturbance to foraging and commuting bats following the completion of development through the introduction of new lighting.

In England, bats and their habitat are fully protected under the Wildlife and Countryside Act 1981 through inclusion in Schedule 5. In addition, all bat species are protected under the Conservation of Habitats and Species Regulations 2017. Refer to **Appendix 4** for details.

5.4.2 Badger

No evidence of badger was recorded within the site although it is possible that any setts present may have been obscured by the dense scrub within the site, and, therefore the proposals have the potential to result in the loss of setts and construction opportunities.

The proposals also have the potential to result in an overall loss in suitable badger foraging habitat. However, it is not considered that any local population would rely on the site for foraging given that the small size and connectivity to adjacent woodland habitat.

Badger are protected from killing and injury, and their setts protected from damage and interference, under the Protection of Badgers Act 1992. Refer to **Appendix 4** for details.

5.4.3 Birds

The proposals will result in an overall loss in suitable nesting bird habitat and have the potential for direct impacts on nesting birds as a result of the clearance of suitable habitat if undertaken during the nesting bird season (March to August inclusive).

All birds, their nests, eggs and young are legally protected, with certain exceptions, see **Appendix 4** for details.

5.4.4 Invertebrates

The proposals will result in the overall loss in suitable habitat for terrestrial invertebrates through the loss of areas of scrub, hedgerow and trees within the site.

5.4.5 Other Relevant Species

The proposals will result in the small loss of habitat for a wide range of other species such as hedgehog.

6.0 RECOMMENDATIONS AND CONCLUSIONS

6.1 Introduction

This section provides a summary of the recommendations resulting from the baseline ecological condition and the outline assessment of impacts and effects. Methods for addressing potential negative effects on features of ecological interest have been approached in accordance with the mitigation hierarchy²⁰ with avoidance of negative effects prioritised where possible. Where negative effects cannot be avoided mitigation²¹ is prioritised over compensation²². Enhancement²³ has been recommended to provide a net gain in biodiversity post-development.

6.2 Mitigation/Compensation

6.2.1 Designated Sites

Given the proximity of the Sandy Dell SINC, it is recommended that a Construction Environmental Management Plan (CEMP) be implemented as part of the construction phase of the scheme. The measures to be included in the plan should ensure no indirect impacts on the adjacent SINC. The CEMP will include guidance on reducing the risk of pollution incidents during construction in accordance with Environment Agency Pollution Prevention Guidelines including the provision of spill kits and the appropriate storage of materials and machinery far away from Sandy Dell SINC as possible. The CEMP will also establish Root Protection Zones for any trees to be retained within or adjacent to the site and will outline how Sandy Dell SINC will be protected using high visibility fencing.

The site lies within 5.6 kilometres of the Chichester and Langstone Harbour SPA and Ramsar site and Solent Maritime SAC. Therefore, there will need to be a contribution towards the SDMP for strategic mitigation measures in relation to the Chichester and Langstone Harbour SPA/Ramsar site and Solent Maritime SAC. At the time of preparing this report this contribution stands at £181 per dwelling.

²⁰ In accordance with CIEEM Ecological Impact Assessment guidance a sequential process is adopted to address impacts on features of ecological interest, with 'Avoidance' prioritised at the top of the hierarchy and Compensation/Enhancement' at the bottom. This is often referred to as the 'mitigation hierarchy'.

²¹ "Measures taken to avoid or reduce negative impacts. Measures may include: locating the development and its working areas and access routes away from areas of high ecological interest, or timing works to avoid sensitive periods." CIEEM (2017) Technical Guidance Series - EcIA Guidelines - Glossary [online]. Available from: <http://www.cieem.net/glossary> [Accessed 9th January 2017]

²² "Measures taken to make up for the loss of, or permanent damage to, biological resources through the provision of replacement areas. Any replacement area should be similar to or, with appropriate management, have the ability to reproduce the ecological functions and conditions of those biological resources that have been lost or damaged." CIEEM (2017) Technical Guidance Series - EcIA Guidelines - Glossary [online]. Available from: <http://www.cieem.net/glossary> [Accessed 9th January 2017]

²³ "The genuine enhancement of the natural heritage interest of a site or area because the project includes improved management or new habitats or features, which are better than the prospective management, or the habitats or features present there now. There is, therefore, a net or new benefit to the natural heritage." CIEEM (2017) Technical Guidance Series - EcIA Guidelines - Glossary [online]. Available from: <http://www.cieem.net/glossary> [Accessed 9th January 2017]

6.2.2 Habitats

Wherever possible, it is recommended that the existing hedgerow south of Sandy Brow is retained as part of the development.

Any new landscaping should primarily incorporate native species as opposed to ornamental or cultivated species wherever possible. The plans currently include cherry laurel *Prunus laurocerasus rotundifolia* hedging which is undesirable given the proximity of Sandy Dell SINC since the species can be invasive. Better alternatives include holly or beech *Fagus sylvatica* hedging.

6.2.3 Bats

Although the site has been assessed as having moderate suitability for foraging/commuting bats, bat activity surveys are not recommended given the small size of the site and the frequency of better quality habitats in the local area. The information gathered during the Preliminary Ecological Appraisal can reliably established the potential impacts and mitigation that is to be provided as part of the development scheme on foraging/commuting bats.

It is recommended that no external lighting is introduced at the site as part of the proposals. If this cannot be avoided, sensitive lighting in relation to bats will be designed to minimise light spill onto retained and boundary vegetation to ensure no adverse effects on foraging/commuting bats. Any lighting to be installed should be motion-activated and task-related with a lux level of less than one.

6.2.4 Badger

Given the dense vegetation cover present at the time the survey was undertaken a watching brief should be maintained by on-site contractors throughout the construction period for any mammal excavations. In the event that any mammal excavations are identified then a suitably qualified ecologist should be contacted for further advice.

In the unlikely event that a badger becomes trapped in excavations during construction works, a timber ramp should be inserted to allow the animal to escape of its own accord.

6.2.5 Birds

Vegetation clearance required should be undertaken outside the main breeding bird season of March and August, inclusive, or if not possible, an ecologist should be present immediately prior to clearance to check the vegetation. Active nests should be left with an undisturbed five to ten metre buffer until nesting ends naturally.

It is recommended that five new bird boxes (Schwegler 2H and 1B or similar) are erected on retained trees or the new building within the site to offset the loss of suitable nesting habitat.

6.3 Enhancement

6.3.1 Bats

As an enhancement measure, it is recommended that a bat roost unit could be incorporated into the new building in order to provide new roosting opportunities. A single Schwegler 1FR or similar would provide suitable enhancement.

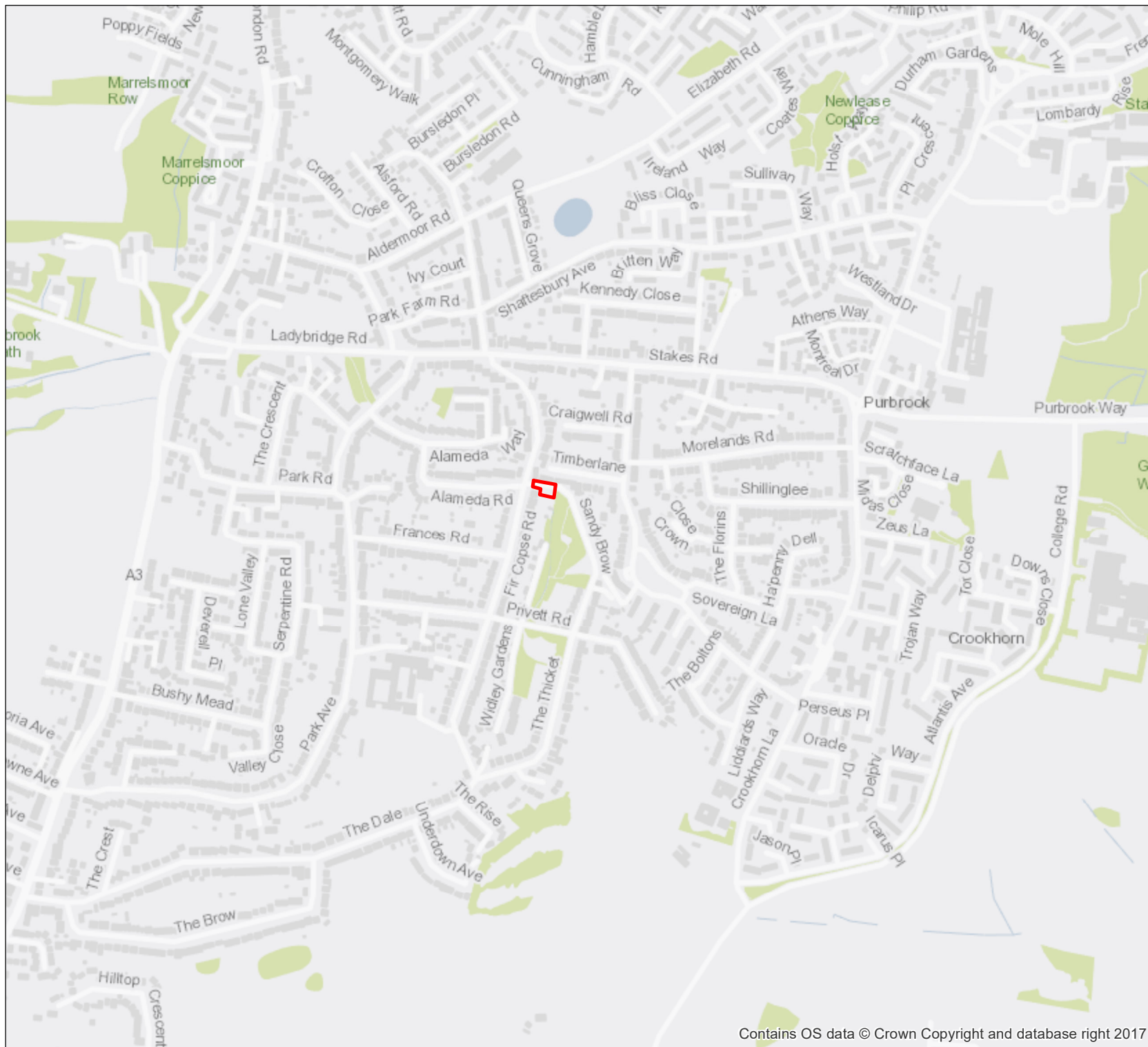
6.4 Conclusion

The site has been assessed as having suitability to support protected species including foraging/commuting bats, foraging badger and breeding birds. The site is situated immediately adjacent to the Sandy Dell SINC, which is the key ecological constraint of the development, and, therefore, suitable measures have been proposed in order to ensure no negative impact on the SINC during the construction or operational phase of the development.

6.5 Updating Site Survey

Given the mobility of animals and the potential for colonisation of the site, it is recommended that an updating walkover of the site is undertaken prior to the development commencing should this not occur within 12 months of the date of the survey.

Map 1 Site Location Plan



LAND REAR OF 60 FIR COPSE ROAD, WATERLOOVILLE, HAMPSHIRE

PRELIMINARY ECOLOGICAL APPRAISAL

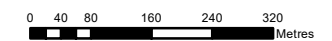
Map 1 - Site Location Plan

Client:	Pario Design
Date:	December 2017
Status:	Final

KEY

 Site Boundary

Scale at A4: 1:10,000



ECOSA

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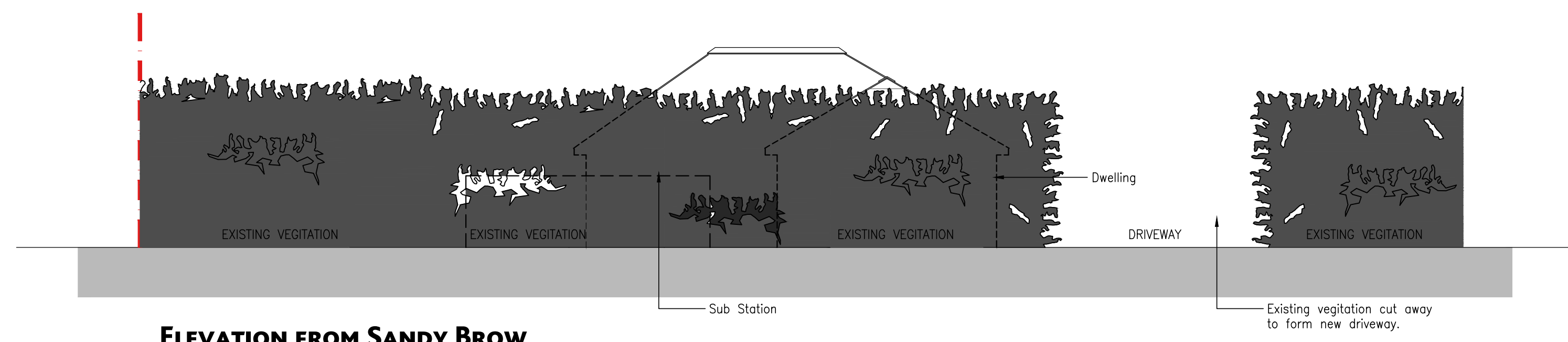
Appendix 1 Site Proposals Plan

NOTE:
It may not be reproduced in part or in whole without prior written permission.
All dimensions to be checked on site before work commences.
SUBJECT TO BUILDING REGULATIONS, FIRE REGULATIONS AND STATUTORY APPROVALS.
This drawing is only to be used in conjunction with drawing notes & specification prepared by
PARIO CONSULTANTS Limited.
Subject to statutory approval.

Legend

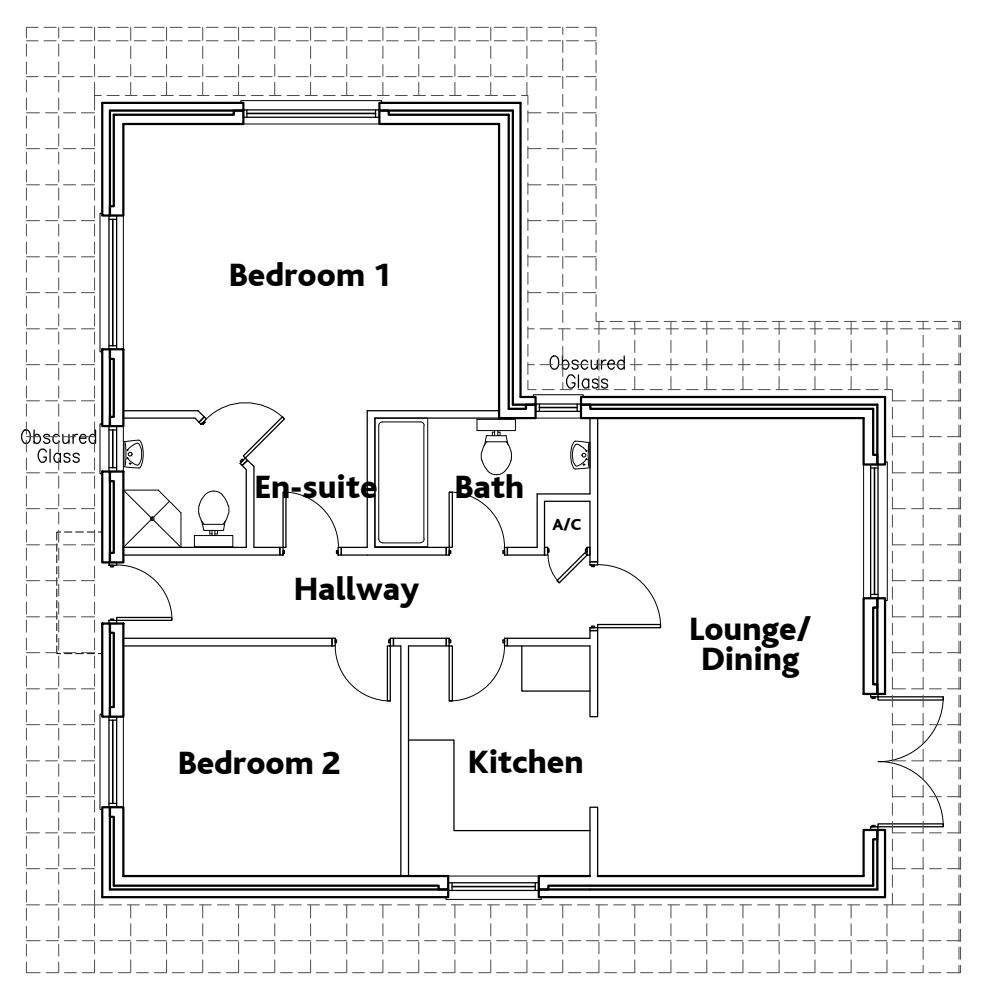
Extent of possible flooding, lowest bridging point of level of 42.26 shown.

Elevated footpath at level 42.30. To give access to dry escape route.

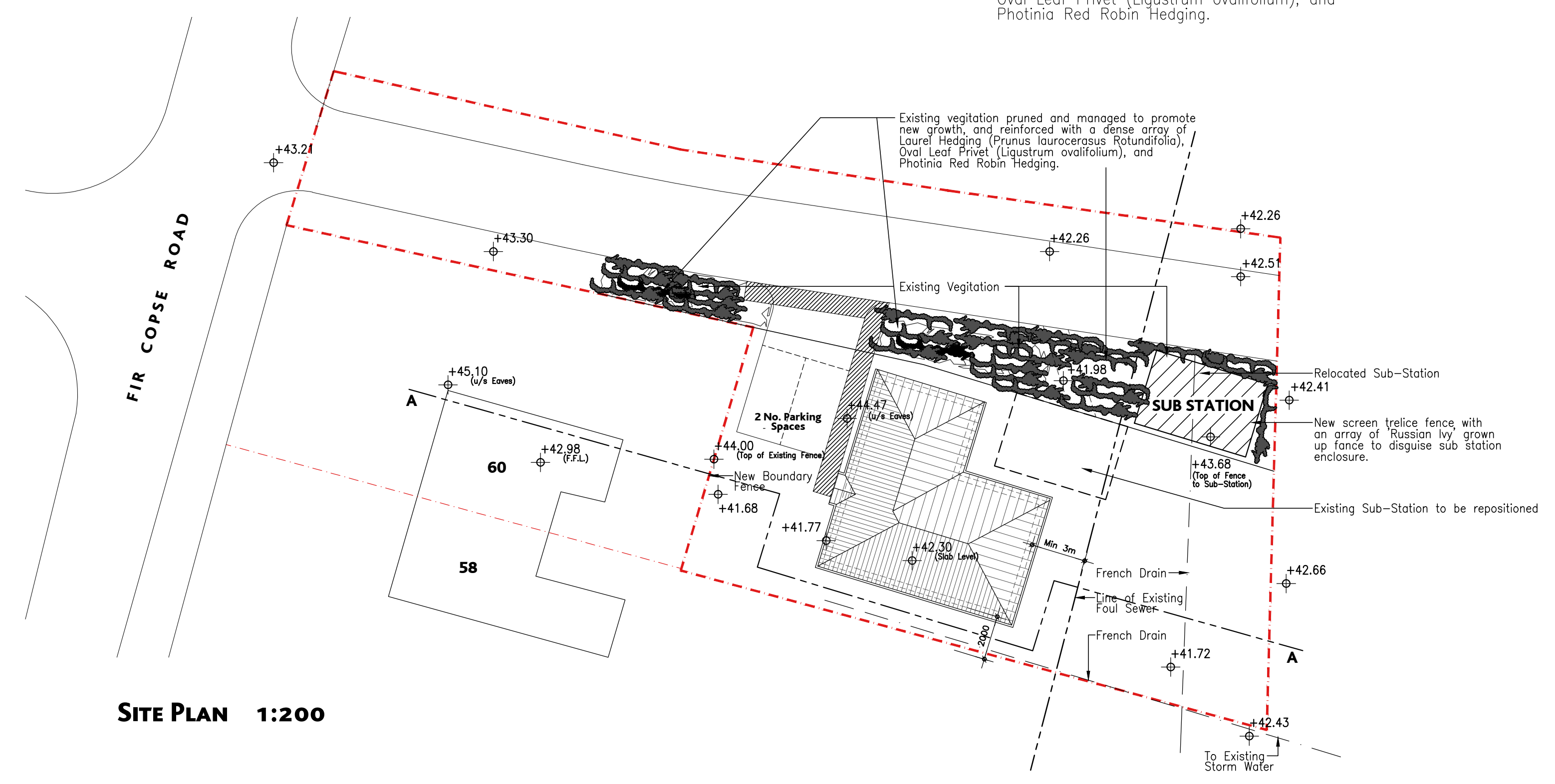


ELEVATION FROM SANDY BROW

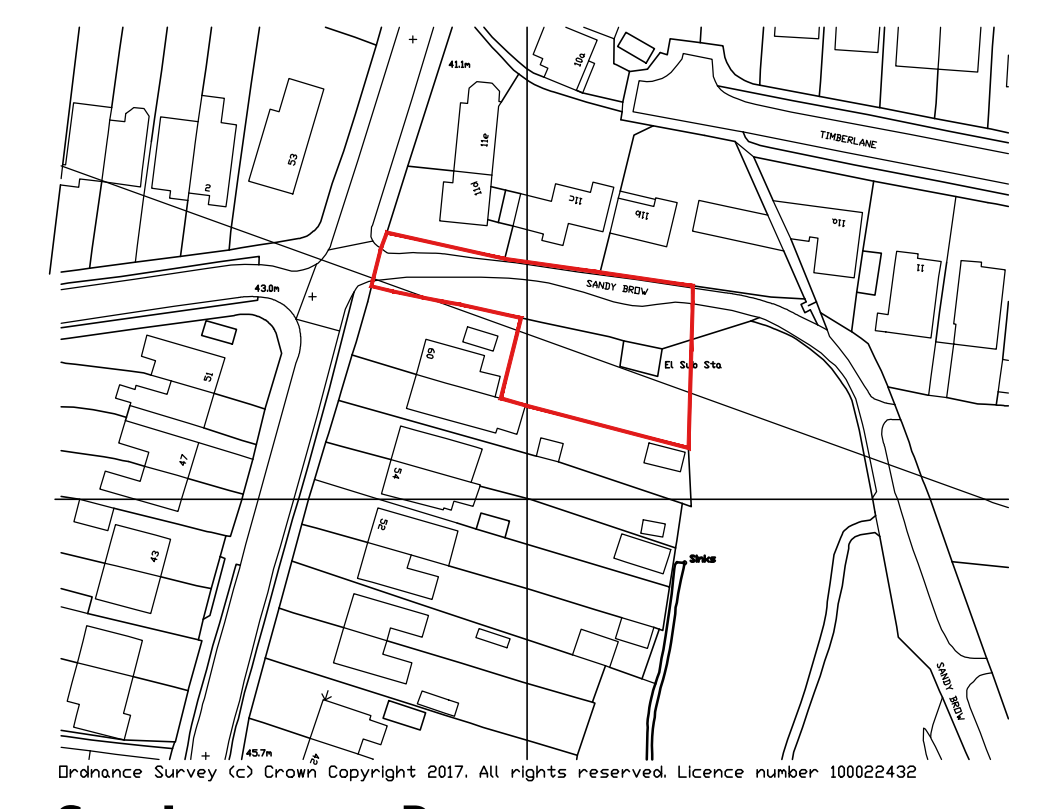
Existing vegetation pruned and managed to promote new growth, and reinforced with a dense array of Laurel Hedging (Prunus laurocerasus Rotundifolia), Oval Leaf Privet (Ligustrum ovalifolium), and Photinia Red Robin Hedging.



GROUND FLOOR PLAN



SITE PLAN 1:200



SITE LOCATION PLAN 1:1250



FRONT ELEVATION



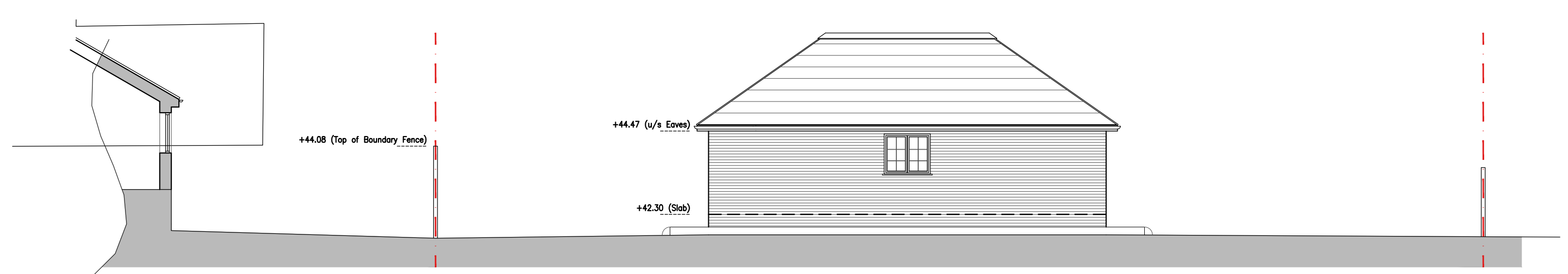
SIDE ELEVATION



REAR ELEVATION



ENTRANCE ELEVATION



SITE SECTION A - A

pario

pario architecture
25 barnes walls road
segenoworth east
hampshire
PO15 5TT

architecture + design

Client: Mr Stantiall 9 Eliot Close Whiteley Hampshire PO15 7NQ		
Project: New Detached Bungalow Fir Copse Road, Waterlooille		
Drawing Title: Proposed Plans & Elevations		
Scale: 1:100	Date: Sep '17	Author: NRS
Drawing No.: 17060/001P	Revision: -	

Appendix 2 Sites Designated for Nature Conservation

Statutory Sites

Internationally Designated Sites - Ramsar Sites, Special Areas of Conservation and Special Protection Areas

Special Protection Areas (SPA) and Special Areas of Conservation (SAC) form a network of protected sites across the European Union called Natura 2000 sites. In the United Kingdom the primary legislative protection is afforded to these sites under the Conservation of Habitats and Species Regulations 2017 (as amended).

Ramsar sites are designated as wetlands of international importance which are afforded similar legislative protection to Natura 2000 sites.

SACs are sites which support internationally important habitats or internationally important assemblages or populations of species. SPAs are designated for supporting internationally important populations of birds listed in the annexes of the Birds Directive. SACs, SPAs and Ramsar sites are generally also designated as Sites of Special Scientific Interest.

Under Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended) there is a legal requirement that competent authorities, such as local planning authorities, need to consider whether plans or projects are likely to have a significant adverse effect on Natura 2000 sites or Ramsar sites, either alone, or in combination with other plans or projects. In the event that a likely significant effect cannot be ruled out, on the basis of objective information, then the competent authority must undertake an “Appropriate Assessment” to fully assess the plan or project against the site’s conservation objectives. Unless certain defined derogation tests can be met, the competent authority may not authorise nor undertake any plan or project which adversely affects the integrity of a Natura 2000 site or Ramsar site.

Nationally Designated Sites – Sites of Special Scientific Interest and National Nature Reserves

Sites of Special Scientific Interest (SSSI) receive legal protection under the Wildlife and Countryside Act 1981 (as amended). Such sites are designated to protect specific areas of biological or geological interest of national importance. Such sites also generally receive strict protection through the planning system.

National Nature Reserves (NNR) are also usually designated as SSSIs and are specifically managed for their wildlife value. They receive legal protection through the National Parks and

Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981 (as amended). As with SSSIs, these sites generally receive strict protection through the planning system.

Locally Designated Sites – Local Nature Reserves

Local Nature Reserves (LNR) are designated by local authorities under the National Park and Access to the Countryside Act 1949. These are generally designated not only for their local wildlife value but also for education, scientific and recreational purposes. These sites generally receive protection from development through the planning system.

Non-Statutory Sites

Locally Designated Sites

In addition to statutory designations, local authorities often designate sites of nature conservation importance at the local level. Such designations are named differently by each local authority and may be referred to as Local Wildlife Sites (LWS), Sites of Importance for Nature Conservation (SINC) or Sites of Nature Conservation Importance (SNCI), amongst others. The exact level of protection afforded to these sites varies and is normally defined through local planning policy.

Appendix 3 Assessment Criteria for Bats

Criteria used to Assess Suitability of the Site for Bats

The criteria used to assess the suitability of roosting and foraging/commuting habitat for bats is based on industry guidelines and outlined in **Table 2**²⁴.

Table 2: Criteria used to Assess Suitability of Roosting and Foraging/Commuting Habitat for Bats

Suitability	Description of roosting habitats	Commuting and foraging habitats
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.
Moderate	A structure of tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically/structure that does not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential.	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerows or un-vegetated stream, but isolated (i.e. not very well connected to the surrounding landscape by other habitat). Suitable, but isolated, habitat that could be used by small numbers of foraging bats such as a lone tree or a patch of scrub.
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.

²⁴ Table adapted from Collins, J. (Ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Third Edition). The Bat Conservation Trust, London

Appendix 4 Protected Species Legislation

Bats

All UK bat species are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017. They are afforded full protection under Section 9(4) of the Act and Regulation 43 of the Regulations. These make it an offence to:

- Deliberately capture, injure or kill any such animal;
- Deliberately disturb any such animal, including in particular any disturbance which is likely:
 - To impair its ability to survive, breed, or rear or nurture their young;
 - To impair its ability to hibernate or migrate;
 - To affect significantly the local distribution or abundance of that species;
- Damage or destroy a breeding site or resting place of any such animal;
- Intentionally or recklessly disturb any of these animals while it is occupying a structure or place that it uses for shelter or protection; or
- Intentionally or recklessly obstruct access to any place that any of these animals uses for shelter or protection.

In addition, five British bat species are listed on Annex II of the Habitats Directive. These are:

- Greater horseshoe bat *Rhinolophus ferrumequinum*;
- Lesser horseshoe bat *Rhinolophus hipposideros*;
- Bechstein's bat *Myotis bechsteinii*;
- Barbastelle *Barbastella barbastellus*; and
- Greater mouse-eared bat *Myotis myotis*.

In certain circumstances where these species are found the Directive requires the designation of Special Areas of Conservation (SACs) by EC member states to ensure that their populations are maintained at a favourable conservation status. Outside SACs, the level of legal protection that these species receive is the same as for other bat species.

Badger

The Protection of Badgers Act 1992 consolidates previous legislation (including the Badgers Acts 1973 and 1991 Badgers (Further Protection) Act 1991). It makes it an offence to:

- Kill, injure or take a badger;
- Attempt to kill, injure or take a badger; or
- To damage or interfere with a sett.

The 1992 Act defines a badger sett as ‘any structure or place which displays signs indicating current use by a badger’.

Breeding Birds

With certain exceptions, all wild birds, their nests and eggs are protected by Section 1 of the Wildlife and Countryside Act 1981 (as amended). Therefore, it is an offence, to:

- Intentionally kill, injure or take any wild bird;
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built; or
- Intentionally take or destroy the egg of any wild bird.

These offences do not apply to hunting of birds listed in Schedule 2 subject to various controls. Bird species listed on Schedule 1 of the Act receive further protection, thus for these species it is also an offence to:

- Intentionally or recklessly disturb any bird while it is nest building, or is at a nest containing eggs or young; or
- Intentionally or recklessly disturb the dependent young of any such bird.

Species of Principal Importance in England

The Natural Environment and Rural Communities (NERC) Act came into force on 1st Oct 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The England Biodiversity List is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the NERC Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions. There are currently 943 species of principal importance included on the England Biodiversity List.