

Preliminary Ecological Appraisal
at
Land adjacent to Waverley House, Littlestone,
Kent TN28 8QN
for Gary Robinson

Icení Ecology Ltd.



April 2019

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Project	Author	Status	Date
Littlestone Ref: 19 0021	Drusilla Hall BSc (Hons) MCIEEM CEnv  Bat Licence: 2015-10742-CLS-CLS (Level 2). Dormouse Licence: 2016-20740-CLS-CLS. Great Crested Newt Licence: 2015-18908-CLS-CLS (Level 2).	Final v1.0	May 2019

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INTRODUCTION

Instruction and background

Iceni Ecology Ltd. was instructed by Mr Gary Robinson 'the Client', to undertake a Preliminary Ecological Appraisal (PEA) of land adjacent to Waverley House, Marine Parade, Littlestone, New Romney, Kent TN28 8QN. This is referred to as 'the site' hereafter, within this report.

The site currently comprises a four-storey residential building, separated into flats, with an adjoining small parcel of land to the north, comprising hardstanding amenity grassland with early successional plants.

The PEA is in support of a future planning application to develop the adjoining parcel of land into residential.

The purpose of the survey was to:

- Identify any features of ecological significance within the footprint of the proposed development and surrounding area.
- Broadly categorise the habitats within the site, and surrounding area if deemed necessary.
- Assess the potential for the presence or likely absence of protected species, including bats; and species or habitats of principal importance, within the footprint of the proposed development and surrounding area.
- Assess the likely impacts of the proposed development on key receptors.
- Recommend if further surveys are required.
- Provide an early indication of any likely mitigation or compensation requirements.

Location and description of site

The site is located on the Marine Parade seafront at Littlestone and is essentially an end plot (Figure 1), approximate Ordnance Survey (OS) Grid Reference TR 08470 24544.

The site has Marine Parade to the east, beyond which is a strip of amenity grassland and beach; to the south Waverley House adjoins other residential buildings of uniform architecture; to the north is a block of newly constructed flats; and to the west is residential and parking.

The redline boundary is shown on Figure 2.

Figure 1: Location of site, centred on red marker

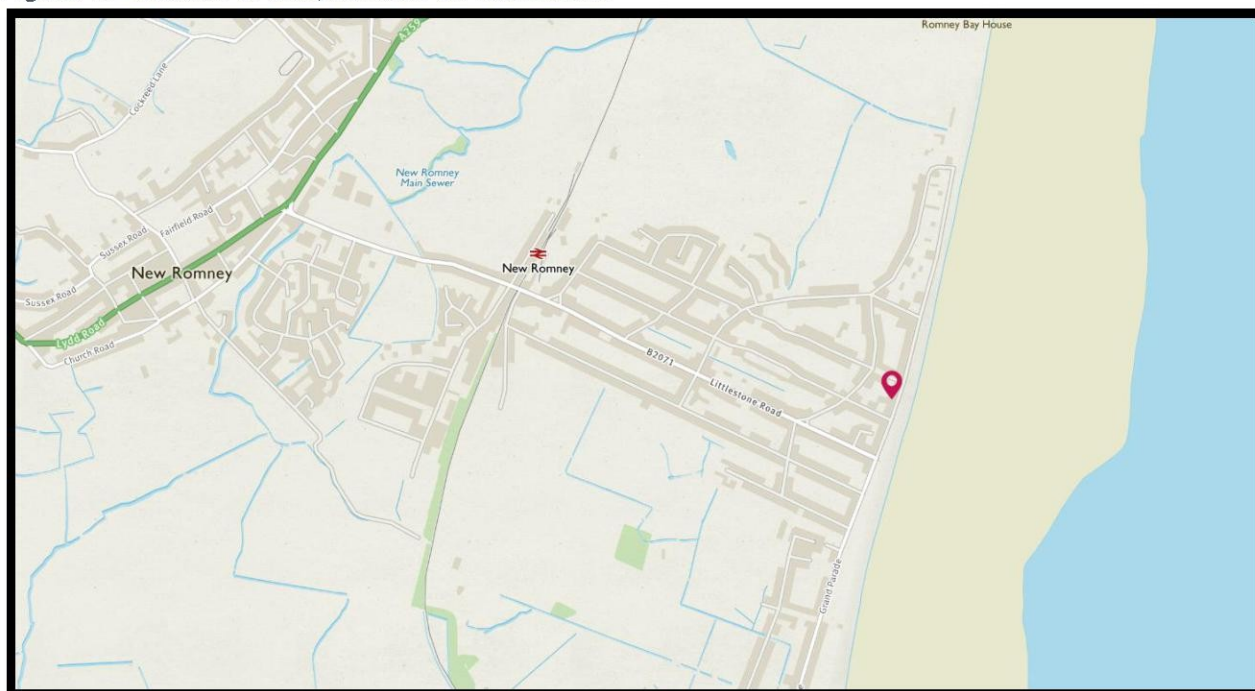
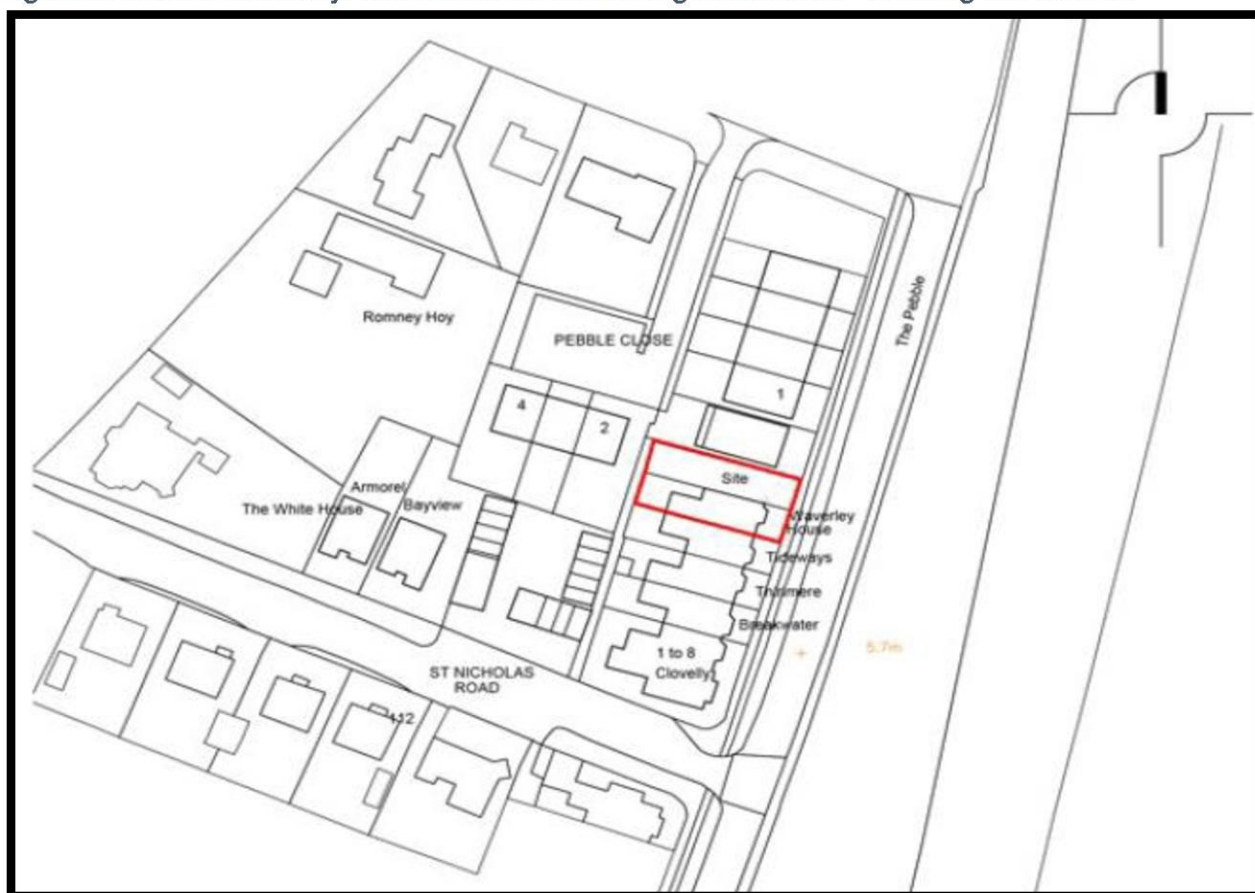


Figure 2: Redline boundary. Source: Adam Woodbridge Architects – Drawing No. 18-91-01



Relevant wildlife legislation

Certain habitats and species are protected under legislation. The principal legislation relevant to the proposed development is as follows:

- The Conservation of Habitats and Species Regulations 2017¹ ['The Habitats Regulations']. The Habitats Regulations implement The Habitats Directive 1992 [92/43/EEC] into English Law.
- Wildlife & Countryside Act 1981 (as amended)² (WCA).
- The Natural Environment & Rural Communities Act 2006 (NERC).
- The Protection of Badgers Act 1992 (The Badgers Act).

With respect to bats, under The Habitats Regulations it is an offence to:

- Deliberately capture, injure or kill a bat.
- Deliberately disturb a bat in a way that would affect its ability to survive, breed or rear young (or hibernate or migrate) or significantly affect the local distribution or abundance of the species.
- Damage or destroy a roost. This is an 'absolute' offence and need not be deliberate or intentional.
- Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or any part of a bat.

With respect to bats under the WCA, it is an offence to:

- Intentionally or recklessly disturb a bat at a roost.
- Intentionally or recklessly obstruct access to a roost.
- Sell and advertise.

Planning context

The National Planning Policy Framework

The National Planning Policy Framework (NPPF) 2018 – which applies only to England – was first published in 2012. It provides the framework for producing local plans for housing and other development, which in turn provide the background against which applications for planning permission are decided.

The NPPF must be taken into account in preparing the development plan and is a material consideration in planning decisions. Planning policies and decisions must also reflect relevant international obligations and statutory requirements.

Species and Habitats of Principal Importance

Under NERC, 56 habitats and 943 species respectively, of Principal Importance are listed in Section 41 (S41) of the Act. The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their

¹ Amended by the Conservation of Habitats and Species (Amendment) Regulations 2012 S.I. 2012/1927.

² Amended by the Countryside & Rights of Way Act (2000).

duty under Section 40 of NERC, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

SURVEY METHODOLOGY

Desk study

Designated areas

Web based resources³ were used to identify statutory and non-statutory designated areas within 1km of the site. A large radius was not considered necessary given the scale of the proposals.

Location of waterbodies

Web based resources⁴ were also used to assess the site's proximity to waterbodies with respect to amphibians, particularly great crested newt *Triturus cristatus* (GCN).

GCN utilise both aquatic and terrestrial habitat. Adults breed in waterbodies or 'ponds' during the spring and then emerge onto land, spending the summer resting, foraging and dispersing before hibernating through the winter. ***Under wildlife legislation, both aquatic and suitable terrestrial habitat is protected.***

GCN have been found to move over considerable distances from their breeding ponds, however, the vast majority will inhabit an area much closer, and the exact distribution and migration patterns of newts on land depend on a variety of factors. The quality of terrestrial habitat near to breeding ponds is important, as are the lack of barriers to dispersal (such as fast-flowing rivers, or very busy roads). Several studies have been conducted which reveal a great deal of variation, but GCN commonly move between ponds that are within **250m** of each other⁵.

Biological records

Biological records were not sought for the site due to the small-scale nature of the site and proposals. Adequate ecological information has been gained from other desk study resources and walkover survey.

Walkover survey

A walkover survey was undertaken of the site on 3rd May, 2019 by Dru Hall BSc (Hons) MCIEEM CEnv of Icen Ecology Ltd.

General habitats and protected species

The survey methodology followed the standard Phase 1 methodology (JNCC, 2010⁶). An extension of this basic methodology was also undertaken to provide

³ MAGIC. www.magic.defra.gov.uk.

⁴ Ordnance Survey Online Mapping.

⁵ English Nature, 2001: Great Crested Newt Mitigation Guidelines. Version: August 2001.

⁶ JNCC (2010). *Handbook for Phase 1 habitat survey: a technique for environmental audit (revised reprint)*. Joint Nature Conservation Committee, Peterborough.

further details in relation to notable or protected habitats present within the survey area, or in relation to habitats present that have the potential to support notable or protected species (CIEEM, 2013⁷).

Bats (Preliminary Roost Assessment)

An assessment for bat roost potential was undertaken at site during the survey in accordance with the Bat Conservation Trust's (BCT's) Good Practice Guidelines⁸ since the new build will adjoin Waverley House.

Buildings and trees are categorised in terms of their 'suitability' to support a roost or provide suitable habitat, as per 'Table 4.1' from the Guidelines (see below).

Table 4.1 Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.		
Suitability	Description Roosting habitats	Commuting and foraging habitats
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.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ^a 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 ^b). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential. ^c	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated 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 (not in a parkland situation) or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^a and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	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.
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 ^a 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.

^a For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

^b Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten *et al.*, 2015). This phenomenon requires some research in the UK but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in large buildings in highly urbanised environments.

^c This system of categorisation aligns with BS 8596:2015 Surveying for bats in trees and woodland (BSI, 2015).

The assessment entails a detailed inspection of a structure to look for features that bats could use for entry/exit and roosting and to search for signs of bats and actual

⁷ Chartered Institute of Ecology and Environmental Management, April 2013. Guidelines for preliminary ecological appraisal.

⁸ Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.

bats. The aim of this survey is to determine the actual presence of bats and whether further survey and/or mitigation may be required.

External inspection

A systematic search was undertaken of the exterior of the structures on the site to identify potential or actual bat access points and roosting places and to locate any evidence of bats such as live or dead specimens, bat droppings, urine splashes, fur-oil staining and/or noises.

Further surveys for bats

Where the possibility that bats are present cannot be eliminated or evidence of bats is found during the assessments, then further surveys are likely to be necessary if impacts on the potential roosting habitat (or the bats using it) are predicted.

As a general rule, Table 7.3 from the Guidelines is used to determine the level of further survey effort required and Tables 7.1 and 7.2 are used for timings (see below).

Table 7.3 Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).		
Low roost suitability	Moderate roost suitability	High roost suitability
One survey visit. One dusk emergence or dawn re-entry survey ^a (structures). No further surveys required (trees).	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey. ^b	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn. ^b

^a Structures that have been categorised as low potential can be problematic and the number of surveys required should be judged on a case-by-case basis (see Section 5.2.9). If there is a possibility that quiet calling, late-emerging species are present then a dawn survey may be more appropriate, providing weather conditions are suitable. In some cases, more than one survey may be needed, particularly where there are several buildings in this category.

^b Multiple survey visits should be spread out to sample as much of the recommended survey period (see Table 7.1) as possible; it is recommended that surveys are spaced at least two weeks apart, preferably more. A dawn survey immediately after a dusk one is considered only one visit.

Table 7.1 Recommended timings for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).		
Low roost suitability	Moderate roost suitability	High roost suitability
May to August (structures) No further surveys required (trees)	May to September ^a with at least one of surveys between May and August ^b	May to September ^a with at least two of surveys between May and August ^b

^a September surveys are both weather- and location-dependent. Conditions may become more unsuitable in these months, particularly in more northerly latitudes, which may reduce the length of the survey season.

^b Multiple survey visits should be spread out to sample as much of the recommended survey period as possible; it is recommended that surveys are spaced at least two weeks apart, preferably more, unless there are specific ecological reasons for the surveys to be closer together (for example, a more accurate count of a maternity colony is required but it is likely that the colony will soon disperse). If there is potential for a maternity colony then consideration should be given to detectability. A survey on 31 August followed by a mid-September survey is unlikely to pick up a maternity colony. An ecologist should use their professional judgement to design the most appropriate survey regime.

Table 7.2 Recommended timings for presence/absence surveys.

Survey type	Start time	End time
Dusk emergence	15 minutes before sunset ^a	1.5–2 hours after sunset ^b
Dawn re-entry	1.5–2 hours before sunrise ^b	15 minutes after sunrise ^c

^a Survey start time should be adjusted on subsequent surveys if bats are recorded already in flight at 15 minutes before sunset on the first survey (or, if only one survey had been planned, this survey may then need to be repeated).

^b The possibility of late-emerging and early-returning species should be considered in setting times for surveys (see Section 3.5).

^c If bats are still in flight 15 minutes after sunrise then ecologists should remain in position until all the bats have entered their roosts.

Limitations

There were no limitations to the walkover survey.

RESULTS AND DISCUSSION

Desk study

Statutory designated areas – 1km radius

The desk study identified three statutory designated wildlife areas within 1km of the site (Table 1).

Table 1: Statutory designated areas within 1km of the site

Statutory designated area	Distance from survey site (at its shortest distance)	Information on designated area
Dungeness, Romney Marsh and Rye Bay Ramsar	Opposite Marine Parade (coast)	6377.63 ha The site qualifies under Criterion 1 because it contains representative, rare, or unique examples of natural or near-natural wetland types. The site qualifies under Criterion 2 because it supports threatened ecological communities. The site further qualifies under Criterion 2 because it supports vulnerable, endangered or critically endangered species. The site qualifies under Criterion 5 because it regularly supports 20,000 or more waterbirds. The site qualifies under Criterion 6 because it regularly supports 1% of the individuals in the populations of a number of species or subspecies of waterbird in any season.
Dungeness, Romney Marsh and Rye Bay Site of Special Scientific Interest (SSSI)	Opposite Marine Parade (coast)	9,090.00 ha Dungeness, Romney Marsh and Rye Bay is a nationally important site with a diverse coastal landscape comprising a number of habitats which appear to be unrelated to each other. However, all of them exist today because coastal processes have formed and continue to shape a barrier of extensive shingle beaches and sand dunes across an area of intertidal mud and sand flats. The site contains the largest and most diverse area of shingle beach in Britain, with low lying hollows in the shingle providing nationally important saline lagoons, natural freshwater pits and basin fens.
Dungeness Special Area of Conservation (SAC)	Opposite Marine Parade (coast)	3241.43ha Annex I habitats that are a primary reason for selection of this site: 1210 Annual vegetation of drift lines; 1220 Perennial vegetation of stony banks. Annex II species that are a primary reason for selection of this site: 1166 GCN. Dungeness in south-east England has the largest shingle expanse in Europe and contains a large number of waterbodies within its 2,000 ha. This extensive site hosts a large and viable GCN population in a range of natural and anthropogenic habitats.

In terms of risks to statutory designated sites, the small-scale nature of the proposed development, together with distance, is unlikely to result in any adverse impacts or require the Local Planning Authority to consult with Natural England.

Non-statutory designated areas – 1km radius

There were no non-statutory designated wildlife areas identified within 1km of the site.

Waterbodies within the vicinity of the site

The desk study did not identify any standing waterbodies / ponds within 250m of the site.

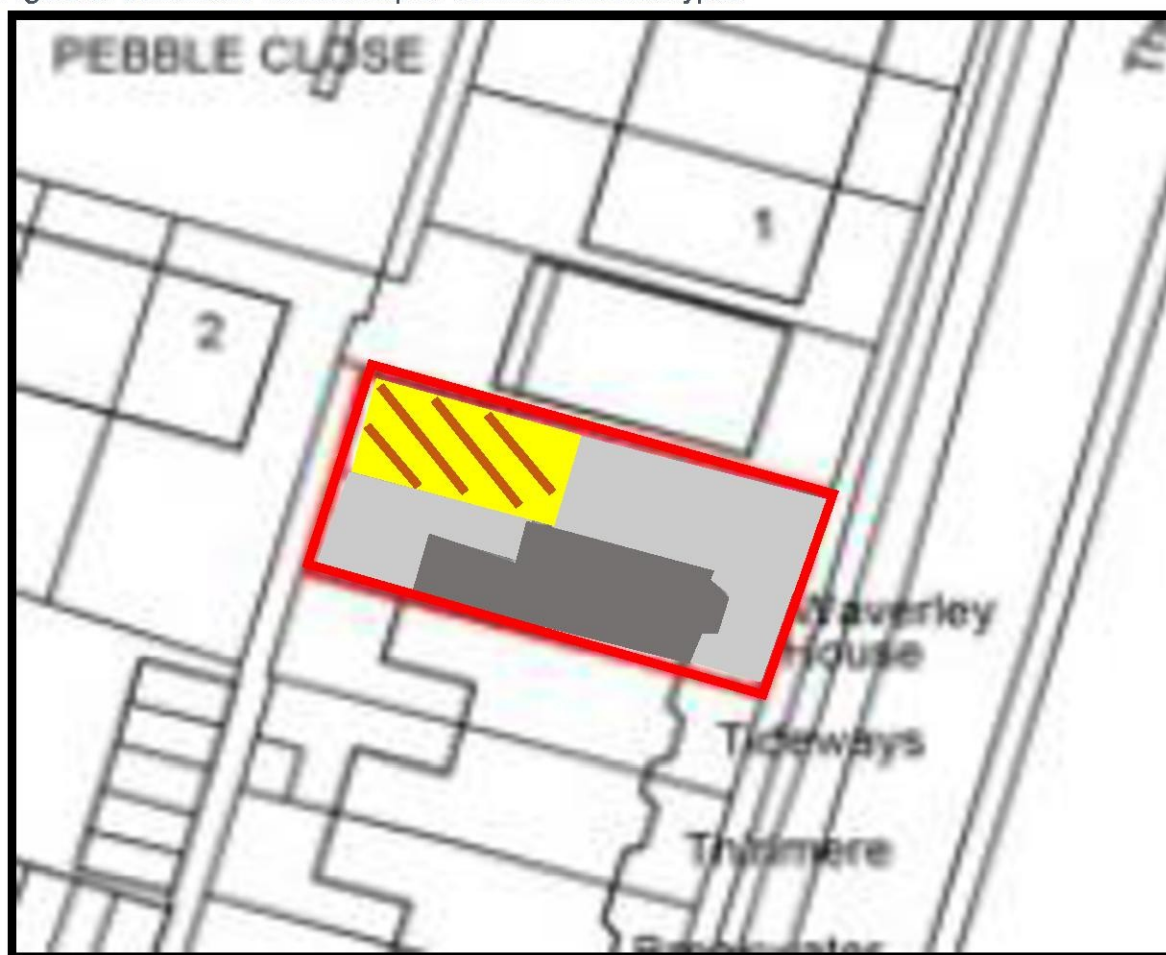
Walkover survey

Habitats on the site

The site comprised a number of dominant 'habitat types', adapted from those listed in the Handbook for Phase 1 Habitat Survey⁶.

- Amenity grassland;
- Tall ruderals;
- Buildings; and
- Hardstanding.

These habitat types are described below and are shown schematically (for indicative purposes only) on Figure 3.

Figure 3: Schematic habitat map of dominant habitat types**Habitat legend of dominant habitats**

	Redline boundary		Amenity grassland
	Tall ruderal plants		Buildings
	Hardstanding		

The site comprises a building, with hardstanding, amenity grassland and successional tall ruderal plant species (Table 2), which are early successional species often found on disturbed ground. A few typical garden plant species were also identified. The grass species comprised mainly red fescue *Festuca rubra* (typically from lawn seed).

Table 2: Tall ruderal species (with some additional plant species)

Scientific name	Common name
<i>Achillea millefolium</i>	Yarrow
<i>Beta vulgaris</i> subspecies <i>maritima</i>	Sea beet
<i>Cirsium arvense</i>	Creeping thistle
<i>Cirsium vulgare</i>	Spear thistle
<i>Euphorbia lathyris</i>	Caper spurge
<i>Galium aparine</i>	Cleavers
<i>Geranium molle</i>	Dove's foot cranesbill
<i>Geranium robertianum</i>	Herb Robert
<i>Hyacinthoides non-scripta</i>	Bluebell
<i>Lamium purpureum</i>	Purple deadnettle
<i>Mallow</i> sp.	Mallow
<i>Oxalis acetosella</i>	Wood sorrel
<i>Parietaria officinalis</i>	Pellitory-of-the-wall
<i>Plantago lanceolata</i>	Ribwort plantain
<i>Picris echioides</i>	Bristly ox-tongue
<i>Ranunculus repens</i>	Creeping buttercup
<i>Senecio vulgaris</i>	Groundsel
<i>Smyrniolum olusatrum</i>	Alexanders
<i>Taraxacum officinale</i>	Dandelion
<i>Urtica dioica</i>	Common nettle

The following photographs in Table 3 show examples of some of the habitats described. The building will be discussed under 'bats' and 'birds'.

Table 3: Photographs of some of the habitats described



Hardstanding area (foreground) with amenity grassland / tall ruderals (background). Photographer facing west.



Rear of property. Photographer facing east.



Front of property with. Photographer facing west.



Front of property showing roof area. Photographer facing west.

Habitat evaluation

Under NERC 2006, 56 habitats are listed under Section 41 as being 'Habitats of Principal Importance in England' and consequently require conservation priority and planning consideration.

None of the habitats on the site are classed as a habitat of 'Principal Importance' under NERC.

Protected species

The habitats and site as a whole were considered with respect to their potential to support protected species.

Mammals - badger

There were no signs of badger *Meles meles* activity at or in the vicinity of the site. Signs typically include setts, hair, latrines, footprints and snuffle holes.

Mammals - bats

The building was assessed for its potential to support roosting bats. This is a four-storey brick building with uPVC windows and slate or slate-effect pitched tiled roof with ridge tiles. There is lead flashing around the chimney stack and the building has soffits.

There were no gaps observed in the roof tiles or in soffits, apart from a single hole to the northern elevation where a bird's nest was observed. There are no other gaps where bats could enter and exit and no signs of use by bats such as droppings on windowsills. The building is assessed as having 'negligible' potential to support a bat roost.

Foraging

Foraging opportunities for bats are also considered to be 'negligible' due to the lack of suitable food plants, flight lines and open space.

Mammals – hazel dormouse

The hazel dormouse *Muscardinus avellanarius* is typically found in woody habitats which provide a diverse supply of fruit and seeds and which offer a dense three-dimensional structure, such as broadleaf woodland with a dense shrub layer or mature species-rich scrub and hedgerows. Their distribution is generally skewed towards the south of England.

There is no suitable habitat on the site for hazel dormouse.

Birds

A starling *Sturnus vulgaris* nest with young was observed in a hole in the soffit at the northern elevation of the building (see photograph below). These birds typically have a single brood, however any adjoining works to the building would need to wait until the nest is no longer in use and any nesting activity has ceased.



Reptiles

The limited habitats on the site are considered to be sub-optimal for common reptile species such as slow worm *Anguis fragilis*, common lizard *Zootaca vivipara*, and grass snake *Natrix natrix*. The site is small, isolated, surrounded by hard standing and buildings and lacks structure.

During the walkover survey, debris, such as bricks were turned over and no reptile species were observed.

The site is assessed as having 'negligible' potential to support common reptile species.

Amphibians

There were no standing waterbodies / ponds identified by the desk study within 250m of the site.

The terrestrial habitat on the site itself is considered sub-optimal.

The site is assessed as having 'negligible' potential to support GCN.

Invertebrates

The limited habitats on the site are unlikely to support a diverse assemblage of invertebrates due to lack of suitable food plants.

Flora

No rare or protected flora was identified during the walkover survey.

Invasive plant species such as Japanese knotweed *Fallopia japonica* were not identified at the site.

EVALUATION AND RECOMMENDATIONS

Table 4 below includes an evaluation of the desk study and walkover survey, together with recommendations for further survey. The Table represents the site as a whole, within the redline boundary.

Table 4: Survey evaluation and recommendations

Ecological Receptor	Evaluation	Recommendations / Comments
Designated areas - statutory	The desk study identified three statutory designated wildlife areas within 1km of the site – forming part of the coast opposite the site: Dungeness, Romney Marsh and Rye Bay Ramsar and SSSI; and the Dungeness SAC. Due to the small-scale nature of the proposed development and distance from the coast, no adverse impacts are anticipated. <u>Legislation</u> • SSSIs: WCA, CRoW Act (Schedule 9).	No further assessment recommended.
Designated areas – non-statutory	The desk study did not identify any non-statutory wildlife areas within 1km of the site.	No further assessment recommended.
Habitats	The main habitats on the site comprise: • Amenity grassland; • Tall ruderals; • Buildings; and • Hardstanding. None of these are listed as habitats of Principal Importance under Section 41 of NERC. <u>Legislation/Policy</u> • NERC. Section 41 Habitats of Principal Importance. The S41 list is used to guide decision-makers in implementing their duty under Section 40 of NERC, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.	See section on 'Ecological Enhancements' within this report.
Mammals - badger	There were no signs of badger at or in the vicinity of the site. <u>Legislation / Policy</u> • Badgers and their setts are protected under the Protection of Badgers Act	No further surveys recommended.

Ecological Receptor	Evaluation	Recommendations / Comments
	1992. Protection also extends to include disturbance. • Schedule 6 WCA: illegal to capture badgers with certain methods listed. • IUCN Red Data Book List: Least Concern.	
Mammals – bats	The building was assessed as having 'negligible' potential to support a bat roost due to the lack of conducive features. Foraging opportunities for bats are also considered to be 'negligible' due to the lack of suitable food plants, flight lines and open space. <u>Legislation / Policy</u> • All bats: Schedule 2 Habitats Regulations 2017. • All bats: Schedule 5 WCA (full protection). • All bats: Section 41 NERC (species of Principal Importance). • All bats: Wild Mammals (Protection) Act, 1996. • All bats: EUROBATS Agreement. • Habitats Directive Annex II: Horseshoe bats (<i>Rhinolophidae</i>), Barbastelle <i>Barbastella barbastellus</i> and Bechstein's bat <i>Myotis bechsteinii</i> • IUCN Red Data Book List: Varies. Bechstein's bat: Near Threatened. Bats are classed as 'European Protected Species' (EPS) and mitigation will typically be undertaken under the auspices of an EPS licence from Natural England.	No further surveys recommended.
Mammals – hazel dormouse	The site does not comprise any suitable hazel dormouse habitat. <u>Legislation / Policy</u> • Schedule 2 Habitats Regulations 2017. • Schedule 5 WCA (full protection). • Section 41 NERC (species of Principal Importance). • Wild Mammals (Protection) Act, 1996. • IUCN Red Data Book: Least Concern.	No further surveys recommended.

Ecological Receptor	Evaluation	Recommendations / Comments
	The hazel dormouse is classed as 'European Protected Species' (EPS) and mitigation will typically be undertaken under the auspices of an EPS licence from Natural England.	
Birds	A hole in the soffit within the northern elevation of the building supports a starling nest, currently with young. <u>Legislation / Policy</u> • The Birds Directive 2009. • WCA (all species, with exceptions). • Section 41 NERC (some species are of Principal Importance). • BoCC • IUCN Red Data Book: Varies. Combined legislation means that all birds, their nests and eggs are protected by law and it is an offence, with certain exceptions, to: a) intentionally kill, injure or take any wild bird; b) intentionally take, damage or destroy the nest of any wild bird while it is in use or being built; c) intentionally take or destroy the egg of any wild bird; d) have in one's possession or control any wild bird (dead or alive), part of a wild bird or egg of a wild bird; e) intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building or is in, on or near a nest with eggs or young; or disturb the dependent young of such a bird; f) have in one's possession or control any birds of a species listed on Schedule 4 of the Act unless registered in accordance with the Secretary of State's regulations.	Prior to any building works, it must be ensured that the nest is no longer in use and that no nesting activity is being carried out.
Reptiles	The limited habitats on the site are considered to be sub-optimal for common reptile species. There were no reptiles found under debris during the walkover survey. The site is assessed as having 'negligible' potential to support common reptile species.	No further surveys recommended.

Ecological Receptor	Evaluation	Recommendations / Comments
	<u>Legislation / Policy</u> • Schedule 2 Habitats Regulations 2017 (smooth snake <i>Acipenser sturio</i> and sand lizard <i>Lacerta agilis</i>, only). • Schedule 5 WCA (intentional killing and injuring; and trade) – all native reptile species. • Section 41 NERC (species of Principal Importance) - all native reptile species. IUCN Red Data Book: Least Concern.	
Amphibians, particularly GCN	There were no standing waterbodies / ponds identified on or within 250m of the site. The site is assessed as having 'negligible' potential to support GCN. Both aquatic and terrestrial habitat is protected under wildlife legislation. <u>Legislation / Policy</u> • Schedule 2 Habitats Regulations 2017. • Schedule 5 WCA (full protection) • Section 41 NERC (species of Principal Importance). • IUCN Red Data Book: Least Concern. GCN is classed as 'European Protected Species' (EPS) and mitigation will typically be undertaken under the auspices of an EPS licence from Natural England.	No further surveys recommended.
Invertebrates	The limited habitats on the site are unlikely to support a diverse assemblage of invertebrate species. <u>Legislation/Policy</u> • Schedule 2 Habitats Regulations 2017 (large blue butterfly <i>Maculinea arion</i>, Fisher's Estuarine moth <i>Gortyna borelii lunata</i>, and lesser whirlpool ram's-horn snail <i>Anisus vorticulus</i>). • Schedule 5 WCA (varying protection). • Section 41 NERC (species of Principal Importance) – some species. • IUCN Red Data Book: Varies.	No further surveys recommended.

Ecological Receptor	Evaluation	Recommendations / Comments
Flora	No rare or protected flora were identified during the walkover survey. No invasive plant species were identified such as Japanese knotweed. <u>Legislation/Policy – native species</u> • Schedule 5 Habitats Regulations 2017 (9 species). • Schedule 8 WCA. Prohibits unauthorised uprooting or destruction of plants listed on Schedule 8; also prohibits sale/possession etc. of any plant listed on Schedule 8 or parts or derivatives of these plants. • Section 41 NERC (species of Principal Importance) – some species. • IUCN Red Data Book: Varies. <u>Non-native plant species</u> • Section 14 WCA, Schedule 9. • Section 33 Environmental Protection Act, 1990.	No further surveys recommended. Currently, no further action is required for invasive species.

ECOLOGICAL ENHANCEMENTS

Introduction

The proposed development is considered unlikely to be adversely detrimental to any designated areas, protected species or habitats, provided the recommendations are followed in Table 4.

Although the site is very limited in size, enhancements are recommended under the NPPF.

Landscape planning

With respect to any proposed landscaped areas on the site, it is recommended that new planting of shrubs and trees should comprise native species and / or be of benefit to wildlife.

Nesting birds

It is recommended that a sparrow terrace is installed in the new build, if feasible, such as a Schwegler terrace, obtainable from www.nhbs.co.uk. The Sparrow Terrace has been designed to help redress the balance of falling house sparrow numbers. The current UK population of 6 million pairs is half what it was in 1980 and this is thought to be due to habitat destruction and lack of suitable nesting spaces. Sparrows are social birds and like to nest in company. This terrace provides ideal nesting opportunities for three families. Made of wood-concrete mix, this terrace is durable, breathable and will last many decades. It may also occasionally other species.

The terrace can be fixed on to the surface of a suitable wall or incorporated into the wall. It is suitable for all types of houses in built-up areas, and on industrial and agricultural buildings such as barns, sheds and factories. Due to its weight (15kg), it is not suitable for fences or garden sheds. Ideally place the terrace two metres or more above the ground. Either install on the surface of the wall using the plugs and screws provided, or install directly into the wall (see the images tab for illustrations). Cleaning is advisable but not necessary. The front panel can be removed by turning the screw hook. The Sparrow Terrace is available in either Stone or Brown.

