

**DURLEY CHINE SEAFRONT, BOURNEMOUTH,  
DORSET**

**ECOLOGICAL IMPACT ASSESSMENT**

**Final Document**

October 2020

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Preliminary Ecological Appraisals • Protected Species Surveys and Licensing • NVC • EclA • HRA • 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 2017 (CIEEM, 2017). The Ecological Impact Assessment and report has been prepared in line with the CIEEM Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018) and survey work has been undertaken in line with references within CIEEM's Source of Survey Guidance (CIEEM, 2017).

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**DURLEY CHINE SEAFRONT, BOURNEMOUTH,  
DORSET**

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## EXECUTIVE SUMMARY

Ecological Survey and Assessment Ltd (ECOSA) have been appointed by Bournemouth Christchurch and Poole Council to undertake an Ecological Impact Assessment to support a planning application for the redevelopment of Durley Chine Seafront, Bournemouth. The site comprises a number of buildings, including beach huts, lifeguard station and public conveniences with hardstanding. The proposals entail a new Environmental Innovation Hub and Visitor Centre.

The main findings of the Ecological Impact Assessment are:

- The site is 30 metres north of the Solent and Dorset Coast SPA and directly adjacent to the Poole Bay Cliffs SSSI. A Construction Environmental Management Plan (CEMP) will be required to detail appropriate mitigation measures to ensure construction does not result in an adverse impact on these designated sites.
- The Poole Bay Cliffs SSSI is designated in part due to the presence of sand lizard and notable invertebrate species. Surveys undertaken of the cliffs confirmed the presence of a low population of sand lizard, common lizard and a number of notable invertebrate species. The required CEMP will be sufficient to avoid impacts on these protected species.
- Enhancement measures, including habitat management of the cliffs, installation of bat roosting and bird nesting features native species planting will result in a net gain of biodiversity overall.
- Given the impacts identified, and the mitigation, compensation and enhancement measures proposed it is considered that the proposals accord with all relevant local and national planning policy.
- If the planning application boundary changes or the proposals for the site alter, a re-assessment of the scheme in relation to ecology may be required. Given the mobility of animals and the potential for colonisation of the site over time, updating survey work may be required, particularly if development does not commence within 18 months of the date of the most recent relevant survey.

## **1.0 INTRODUCTION**

### **1.1 Background**

Ecological Survey & Assessment Limited (ECOSA) have been appointed by Bournemouth Christchurch and Poole Council to undertake an Ecological Impact Assessment to support a planning application for the redevelopment of Durley Chine Seafront, Bournemouth, Dorset BH2 5JF (hereafter referred to as the site).

### **1.2 The Site**

The site is located in Bournemouth, Dorset, centred on National Grid Reference (NGR) SZ 0803 9047 (**Map 1**). The Phase 1 habitat map (**Map 2**) depicts the boundary of the site.

The site covers an area of approximately 0.2 hectares and comprises an area of hardstanding with a number of buildings adjacent to the beach.

The wider landscape comprises an area of sand to the south dividing the site from Poole Bay, to the north and west of the site cliffs are present with heathland and small areas of woodland. A number of commercial buildings are present within the local area in the form of cafés, bars and shops.

### **1.3 Aims and Scope of Report**

The information within this report is based on a field survey and desktop study and relevant species-specific surveys carried out between 17<sup>th</sup> March 2020 and 22<sup>nd</sup> September 2020. The report describes the habitats and species (hereafter referred to as ecological features) within the site's Zone of Influence (Paragraph 3.2), and provides a detailed assessment of potential ecological effects of the proposed development of the site. It identifies the need for any measures to avoid, mitigate or compensate for significant adverse effects<sup>1</sup> ecological features and outlines enhancements to the site's ecology to be implemented as part of the development. The objectives of the assessment are:

- To provide baseline information on ecological features within the site's Zone of Influence and determine the importance of these features;
- To assess, characterise and quantify the effects on ecological features, including cumulative effects, and identify significant effects in the absence of any mitigation;

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<sup>1</sup> For the purposes of this assessment a 'significant' adverse effect is one which will have an adverse effect on the ecological feature at the site level or higher.

- To set out measures to avoid, mitigate and compensate for significant ecological effects in accordance with the ‘mitigation hierarchy’<sup>2</sup>;
- To provide an assessment of the significance of any residual effects;
- To outline opportunities for enhancement in order to achieve a net gain for biodiversity; and
- To set out the requirements for any post-construction monitoring.

#### 1.4 Site Proposals

Proposals for the site are for the demolition of all buildings and creation of a new Environmental Innovation Hub and Visitor Centre with staff welfare facilities, meeting and office space, public toilets, storage and kiosk facilities.

The assessment made reference to an initial proposals plan produced by Footprint Architects, no date (Drawing No. 7265-P006, Drawing No. 7265-P007 and Drawing No. 7265-P008) (**Appendix 1**).

A planning application was submitted during July 2020 and this report has been produced to support the outline planning application.

There is the potential that cliff stabilisation works may be required as part of the scheme. If required, a separate application will be submitted with additional ecological mitigation and compensation measures.

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<sup>2</sup> In accordance with CIEEM Ecological Impact Assessment guidance (CIEEM, 2018) 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’.



## 2.0 PLANNING POLICY CONTEXT

### 2.1 Introduction

This section summarises the planning policy in relation to ecology and biodiversity within the Bournemouth Christchurch and Poole 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, compensation and enhancements (see Section 5.0).

### 2.2 National Policy

The National Planning Policy Framework (NPPF) sets out the government's requirements for the planning system in England. The original document was published in 2012 with a revised NPPF published in February 2019. A number of sections of the NPPF are relevant when taking into account development proposals and the environment. As set out within Paragraph 11 of the NPPF "*Plans and decisions should apply a presumption in favour of sustainable development*". However, Paragraph 177 goes on to state that "*The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.*".

The NPPF sets out that development proposals should not only minimise the impacts on biodiversity but also to provide enhancement. Paragraph 170 states that the planning system should contribute to and enhance the natural environment by "*...minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures...*".

A number of principles are set out in Paragraph 175, 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. Specific reference is also made to the protection of irreplaceable habitats<sup>3</sup>, including ancient woodland<sup>4</sup>. Where loss to irreplaceable habitats occurs planning permission would normally be refused unless there are wholly exceptional reasons and an adequate compensation strategy is in place. Paragraph

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<sup>3</sup> The NPPF defines irreplaceable habitats as "*Habitats which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. They include ancient woodland, ancient and veteran trees, blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen.*"

<sup>4</sup> Natural England defines ancient woodland as "An area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland and plantations on ancient woodland sites (PAWS)."

175 also states “*development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity*”. Protection of sites proposed as SPAs, SACs and Ramsar sites or acting as compensation for SPAs, SACs and Ramsar sites, should receive the same protection as habitat 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*”. 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 Project Development, is established before planning permission is granted*”.

### 2.3 Local Policy

Local planning policy within the Bournemouth, Christchurch and Poole Council administrative area is still under consideration since the merging of the councils on 1<sup>st</sup> April 2019. In the meantime, planning policy for the area previously controlled by Bournemouth Borough Council, within which the site is located, will remain in force. The planning policy associated with Bournemouth Borough Council is provided by the Bournemouth Borough Council Core Strategy (adopted October 2012) and the Bournemouth District Wide Local Plan (BDWLP) adopted in 2002. A total of four saved policies within the Core Strategy make reference to ecology and biodiversity, including statutory and non-statutory designated sites of nature conservation:

- **Policy CS32** International Sites. This policy specifically refers to the protection of candidate or designated sites of nature conservation of international importance.
- **Policy CS33** Heathland. This policy states that “*proposals for residential development will continue to be assessed against this policy and the Dorset Heathlands Planning Framework 2012-2014 SPD until these are superseded by a Joint Dorset Heathland Mitigation Development Plan Document:*
  - *Development will not be permitted unless it can be ascertained that the development will not lead to an adverse effect upon the integrity, directly or indirectly, of the Dorset Heaths international designations. To ensure the heathland sites are not harmed:*

- 
- *Residential development involving a net increase in dwellings will not be permitted within an identified zone (normally 400 metres) around heathlands; and*
  - *Between the identified zone and 5 kilometres of a heathland, residential development will be required to take all necessary steps on site to avoid or mitigate any adverse effects upon the heathland site's integrity, or, where this cannot be achieved within the development, make provision for mitigation measures designed to avoid such adverse effects taking place."*
- **Policy CS34** Sites of Special Scientific Interest. This policy specifically refers to the protection of Sites of Special Scientific Interest.
  - **Policy CS35** Nature and Geological Conservation Interests. This policy states that the Council "*will seek to ensure that the sites, or features, biodiversity and / or geodiversity interest*" and "*to restore, or add to, the Borough's biodiversity and geological conservation networks and seek protection and recovery of priority species having regard to the National and Local Biodiversity Action Plan (BAP) targets and to the negative impacts resultant from the loss of garden space.*".

## 3.0 METHODS

### 3.1 Introduction

This section details the methods employed during the Ecological Impact Assessment. Any significant limitations to the assessment are also considered.

### 3.2 Zone of Influence

To define the total extent of the study area for this assessment, the proposed scheme was reviewed to establish the spatial scale at which ecological features could be affected<sup>5</sup>. The appropriate survey radii for the various elements of the assessment 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 assessment, its surroundings and the nature of the proposals.

### 3.3 Scoping

Protected species considered within the Ecological Impact Assessment are those species/species groups considered likely to be encountered given the geographical location and context of the site. Where the site was found to be suitable to support these species/species groups, and adverse effects cannot be avoided from the outset, further species-specific surveys are undertaken. 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 assessment of ecological effects and mitigation/compensation measures section (Section 5.0) of this report.

### 3.4 Desk Study

#### 3.4.1 Biological Records Centre

Dorset Environmental Records Centre (DERC) was consulted on 18<sup>th</sup> March 2020 for the following data:

- Records of non-statutory designated sites Site of Nature Conservation Interest (SNCIs) within one kilometre of the site boundary. See **Appendix 3** for details; and
- Records of legally protected and notable species (flora and fauna) within one kilometre of the site boundary, including Species of Principal Importance for the Conservation of diversity in England notified under Section 41 of the Natural

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<sup>5</sup> 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 (CIEEM, 2018).

Environment and Rural Communities (NERC) Act 2006 and as listed in the England Biodiversity List (**Appendix 4**); and

- Records of bats within two kilometres of the site boundary. Bat species are highly mobile and therefore the search radius is increased for this species group.

### **3.4.2 Multi-Agency Geographic Information for the Countryside**

The Multi-Agency Geographic Information for the Countryside (MAGIC) database (DEFRA, 2020) was reviewed on 23<sup>rd</sup> March 2020 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. See **Appendix 3** for details. 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 species, particularly those specifically mentioned in local planning policy. The Impact Risk Zones (IRZ) 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.

### **3.4.3 Other Sources of Information**

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. These habitats may offer resources and connectivity between the site and suitable habitat in the local area, which may be exploited by local species populations.

The presence of ponds or other waterbodies within a 500 metre radius of the site in particular are noted in relation to great crested newt. 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 guidance (English Nature, 2001).

## 3.5 Field Survey

### 3.5.1 Survey Methods

The field survey broadly followed standard Phase 1 habitat survey methodology (JNCC, 2010) and included a search for evidence of, and an assessment of the site's suitability to support, protected and notable species as recommended by CIEEM (CIEEM, 2017). The field survey covered all accessible areas of the site, including the adjacent SSSI, as cliff stabilisation works may be required mitigation and compensation measures will be required at the reserved matters stage.

Habitats described in Section 4.0, have been mapped (**Map 2**) and photographs provided, where relevant.

#### Phase 1 Habitat Survey

An assessment was made of all areas of vegetation within the site and adjacent to the site boundaries based on the standardised Phase 1 habitat survey methodology (JNCC, 2010). This involved identification of 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 species<sup>6</sup> encountered as an incidental result of the survey recorded.

#### Protected and Notable Species Appraisal

A preliminary appraisal of the site's suitability to support legally protected and notable species was carried out. Specific methods for species/species groups considered during the appraisal are provided in **Appendix 5**.

### 3.5.2 Survey Details

The field survey was carried out by Joanne Richmond, Ecologist of ECOSA on 17<sup>th</sup> March 2020. The weather conditions were mild and dry with approximately 75% cloud cover, an ambient temperature of 11°C and a gentle breeze.

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

### 3.5.3 Field Survey 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.

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<sup>6</sup> 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.

Online mapping resources provide an indication of habitat features present in the wider area, but do not provide a detailed assessment of habitat types.

Not all potential bat roosting features are accessible to the surveyor, e.g. gaps beneath roof materials or holes or cracks in trees, and therefore assessments are based upon the potential for these features to provide suitable roosting opportunities.

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 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.

For health and safety reasons, in relation to the COVID-19 outbreak, it was not possible to undertake an internal inspection of the buildings within the site.

### **3.6 Bat Survey**

#### **3.6.1 Survey Methods**

##### *Bat Emergence Survey*

The bat emergence survey was undertaken in line with current best practice guidelines (Collins, 2016). In accordance with the guidelines for a building assessed as having low suitability to support roosting bats a single dusk emergence survey of Building 4 was undertaken in order to ascertain the presence/likely absence of roosting bats from within the building. Where the presence of roosting bats is confirmed the data also allows for an assessment of the status of the roost present.

The surveys were carried out by three experienced ECOSA surveyors, positioned at previously identified vantage points around Building 4 (**Map 3**). These vantage point locations allowed a sufficient coverage of the Potential Roosting Features identified on the building impacted by the proposals.

During the surveys surveyors recorded the time, species, location and direction of flight for each bat encountered, with particular attention paid to establishing bat access/egress locations to any roosts within the buildings.

### 3.6.2 Survey Details

#### Bat Emergence Survey

The bat emergence survey was undertaken on 7<sup>th</sup> July 2020. **Table 1** provides details of the emergence survey.

**Table 1:** Bat emergence survey details

Survey Date	Survey Type	Survey Timings	Weather Conditions	Sunset/Sunrise Time
7 <sup>th</sup> July 2020	Emergence	Start: 21:06 End: 23:21	General conditions: dry Start temp: 18°C End temp: 17°C Cloud Cover: 70% Wind Speed: a strong breeze	21:21

During the bat emergence survey the surveyors were equipped with Pettersson D240x time expansion bat detectors. The Pettersson detectors were connected to Edirol R-05 recorders for the full duration of the survey. Recordings made with the detectors were later analysed using Sonobat® (v2.9.7) to confirm the identity of any species encountered.

The bat emergence survey was coordinated by Joanne Richmond, Ecologist of ECOSA (Natural England Bat Licence 2017-31217-CLS-CLS) assisted by suitably qualified and experienced ECOSA surveyors Olivia Walton, Kate Dey and Andrey Sukhorukov.

### 3.6.3 Survey Limitations

Some bat species, e.g. long-eared bats *Plecotus* species<sup>7</sup>, generally emerge from their roosts in total darkness and do not produce strong echolocations, and therefore these bats can be difficult to observe and record during bat surveys, leading to under-recording.

The quality of both hand-held bat detector recordings is based, to a large extent, on the proximity of a bat to the detector's microphone. Obstructions such as vegetation or environmental variables such as rainfall and wind noise from vegetation will all influence the quality of sound reaching the microphone and thus some bat echolocation recordings are of insufficient quality for specific identification. Bats routinely alter their echolocations in relation to behaviour and their environment. It is not always possible to make a robust identification of every bat recording.

<sup>7</sup> There are two species of long-eared bat, the brown long-eared bat *Plecotus auritus* and the grey long-eared bat *Plecotus austriacus*. These species can only be separated by examination of physical characteristics and Phylogenetic Analysis Identification of bat droppings. Unless confirmation of identification has been made by visual identification the two species shall be referred to in this report as long-eared bat. The brown long-eared bat is the commonest of the two species typically being found roosting within large roof voids although small voids and trees are also utilised. The grey long-eared bat is rare and confined to southern England and like the brown long-eared typically roosts in roof voids.



The use of bat detectors is likely to result in the under-recording of a percentage of bats present, such as those flying at height (Collins & Jones, 2009), which would be out of the recording range for the detectors.

### **3.7 Reptile Survey**

#### **3.7.1 Survey Methods**

The reptile survey was undertaken in accordance with current best practice guidelines (Froglife, 2015).

The reptile survey consisted of the laying bitumen felt mats approximately 500 millimetres x 500 millimetres in areas of suitable habitat within the Poole Bay Cliffs SSSI. Typically, this included areas of suitable habitat with good exposure to the sun. The mats were distributed in all areas considered to offer suitable reptile habitat. The locations of these mats are marked on **Map 4**.

The use of such refugia is an effective way of surveying for all species of reptile and current survey guidance states that seven inspections are sufficient to confirm presence/likely absence. Survey visits were undertaken in marginal weather conditions such as cold but sunny weather or hazy and somewhat overcast conditions, as this will maximise the thermal value of the refugia for basking reptiles.

During each visit surveyors also undertook a visual inspection survey of other suitable refugia in the site and other suitable basking locations. During the survey a note was also made of any suitable hibernation features present within the site.

#### **3.7.2 Survey Details**

A total of 50 reptile refugia were distributed on 24<sup>th</sup> April 2020 with seven inspection visits undertaken between 7<sup>th</sup> May 2020 and 22<sup>nd</sup> September 2020. **Table 2** provides details of each reptile survey.

**Table 2:** Reptile survey details

Survey Date	Air Temperature (°C)	Weather Conditions
7 <sup>th</sup> May 2020	15	Dry, 20% cloud cover, a light breeze
23 <sup>rd</sup> May 2020	17	Dry, 5% cloud cover, calm
12 <sup>th</sup> June 2020	16	Dry, 75 - 90% cloud cover, a light breeze
26 <sup>th</sup> June 2020	18	Dry, 50% cloud cover, a light breeze
7 <sup>th</sup> July 2020	19	Dry, 60% cloud cover, a light breeze
21 <sup>st</sup> July 2020	16	Dry, 0% cloud cover, a moderate breeze
22 <sup>nd</sup> September 2020	14	Dry, 95% cloud cover, a light breeze

The reptile survey was coordinated by Joanne Richmond, Ecologist of ECOSA and undertaken by Hugh Turner, Ecologist of ECOSA (Natural England rare reptiles licence 2020-45180-SCI-SCI).

### 3.7.3 Survey Limitations

There were no significant limitations to the reptile survey.

## 3.8 Invertebrate Survey

### 3.8.1 Survey Methods

The terrestrial invertebrate surveys consisted of three day-time surveys, of the Poole Bay Cliffs SSSI. Survey methods involved visual searching of nectaring sites and basking areas, the use of a sweep net and pooter to capture individual species, sweeping vegetation, beating foliage and grubbing. This range of techniques allowed the sampling of a range of species with different habits from the groups selected for survey.

Specimens of some of the more critical/difficult to identify groups were taken in a pooter and identified under the microscope with the aid of specialist keys.

The species groups selected for survey were those considered most likely to be useful in informing site management. These were:

- *Diptera* (primarily hoverflies, soldier-flies and picture-winged flies);
- *Aculeate Hymenoptera* (bees and wasps);
- *Coleoptera* (primarily leaf-beetles, longhorn-beetles and click-beetles);
- *Lepidoptera* (primarily butterflies but also any day-flying moths);

- *Orthoptera* (grasshoppers and crickets);
- *Hemiptera* (true bugs); and
- *Arachnidae* (mainly ground dwelling spiders).

During the first survey it was evident that the diversity of ground dwelling arachnids was low and therefore these species were not sampled further.

### 3.8.2 Survey Details

Dates and details of each invertebrate survey are provided in **Table 3**.

**Table 3:** Invertebrate survey details

Survey Date	Temperature	Weather Conditions
9 <sup>th</sup> June 2020	17°C	Sunny with a moderate breeze
21 <sup>st</sup> July 2020	21°C	Sunny with a light breeze
26 <sup>th</sup> August 2020	20°C	Sunny spells with a moderate breeze

The invertebrate surveys were carried out by Adam Wright, an experienced entomologist and Simon Colenutt, Managing Principal Ecologist of ECOSA.

### 3.8.3 Survey Limitations

There were no significant limitations to the surveys carried out, however, three visits totalling around twelve hours on site over the entire summer period represents a snapshot of invertebrate activity and therefore the list of species recorded is only a small proportion of the total invertebrate fauna at the site.

Due to the methods used during the survey it was difficult to develop standardisation to allow any quantitative assessment of the abundance of invertebrates at the site. Similarly, many of the scarcer species recorded are either difficult to identify without taking a specimen or are cryptic and only recorded when sweeping and hence cannot be reliably counted. However, for the scarcer species an indication of the numbers recorded during the surveys have been provided within Paragraph 4.12.1.

The spring survey was carried out later in the survey season due to adverse weather conditions and so some of the earlier flying species may have been missed

## 3.9 Criteria used to Assess Ecological Value

The evaluation criteria used in this report are based on ECOSA's professional judgement and publicly available publications, survey data and other sources as referenced in the main text. The evaluation is based on a sliding scale of importance

as follows; international and European, national, regional, county, local and site. There are a wide range of characteristics which contribute to the importance of ecological features, and these may justify an increase or reduction in the value of an ecological feature. Where deviations occur, these will be explained in the evaluation section of this report (Section 4.0). Current published relevant guidance, including information sources such as A Nature Conservation Review (Ratcliffe, 1977) and Guidelines for Ecological Impact Assessment in the United Kingdom (CIEEM, 2018) have also been used to inform the assessment.

## 4.0 BASELINE ECOLOGICAL CONDITIONS AND EVALUATION

### 4.1 Introduction

This section details the results of the Ecological Impact Assessment 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 findings of the field survey and subsequent protected species surveys. This section also provides an assessment of the ecological value of ecological features present at the site.

### 4.2 Statutory and Non-statutory Designated Sites

#### 4.2.1 *Baseline Ecological Conditions*

Details of designated sites are provided in the paragraphs below.

##### Statutory Designated Sites

There are two statutory designated sites of nature conservation interest situated within one kilometre of the site boundary. These are:

- Solent and Dorset Coast (SPA) – located approximately 30 metres south and designated to protect foraging little tern *Sternula albifrons*, common tern *Sterna hirundo* and Sandwich tern *Thalasseus sandvicensis* (all Annex I species) which breed in the Solent and the wider area; and
- Poole Bay Cliffs (SSSI) – located directly on the northern and eastern boundaries of the site and designated due to the presence of heath vegetation, populations of sand lizard *Lacerta agilis* and notable invertebrates such as the shore bug *Saldula arenicola* and the fly *Cephalops straminipes*.

Further details of the statutory designations listed above are provided in **Appendix 7**.

##### Non-Statutory Designated Sites

There are two non-statutory designated sites of nature conservation interest situated within one kilometres of the site boundary. These are:

- Bournemouth Cliffs (SNCI) – a series of disjointed land parcels covering approximately 27 hectares which includes approximately two hectares of acid grassland. The nearest parcel to the site is located approximately 55 metres west; and
- Alum Chine (SNCI) – located approximately 930 metres north-west and designated due to the presence of heathland.

Further information on sites designated for nature conservation are provided in **Appendix 3**.

#### **4.2.2 Evaluation**

The Solent and Dorset Coast SPA is of European value while the Poole Bay Cliffs SSSI is of value at the national level. The two SNCI's are of value at a county level.

### **4.3 Habitats**

#### **4.3.1 Baseline Ecological Conditions**

##### Desktop Study Results

Consultation with the MAGIC database did not reveal the presence of any Habitats of Principal Importance (HPIs) within the site however, did reveal the presence of Maritime Cliff and Slopes HPI<sup>8</sup> directly to the north and east of the red line boundary of the site.

Surveys undertaken of the Durley Chine SSSI by DERC in 2007 (Dorset Environmental Records Centre, 2007) recorded a number of Dorset notable plant species within Compartment 11 – Durley Chine, including, sand sedge *Carex arenaria*, Bermuda grass *Cynodon dactylon*, buck's-horn plantain *Plantago coronopus*, slender trefoil *Trifolium micranthum*, subterranean clover *Trifolium subterraneum* and suffocated clover *Trifolium suffocatum*.

##### Field Survey Results

Habitats within the site and adjacent to the site are shown on the Phase 1 Habitat Map (**Map 2**), Target Notes and photographs have been provided as appropriate. 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:

##### *Coniferous Woodland*

The central area of the cliff, to the north of the site, has been colonised by Corsican pine *Pinus nigra* (**Figure 1** and **Figure 2**). The understorey of the woodland is sparsely vegetated with some bracken *Pteridium aquilinum* and occasional European gorse *Ulex europaeus* around the perimeter.

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<sup>8</sup> Maritime cliffs and slopes comprise sloping to vertical faces on the coastline where a break in slope is formed by slippage and/or coastal erosion. Maritime cliffs can broadly be classified as 'hard cliffs' or 'soft cliffs'. Hard cliffs are vertical or steeply sloping; included to support few higher plants other than on ledges and in crevices, they tend to be formed of rocks resistant to weathering such as granite, sandstone and limestone. Soft cliffs are formed in less resistant rocks such as shales or in unconsolidated materials such as boulder clay. Being unstable they often form less steep slopes and are therefore more easily colonised by vegetation (JNCC, 2016)..



**Figure 1:** Coniferous woodland to the north of site



**Figure 2:** Coniferous woodland

#### *Dense Scrub / Coastal Grassland Matrix*

The habitat located directly on the northern and western site boundaries comprises a dense scrub / coastal grassland matrix (**Figure 3** and **Figure 4**). The habitat is being colonised by scrub, largely gorse, with limited areas of grassland as a direct result of cliff stabilisation which as a result is causing the loss of grassland habitat associated with mobile cliffs.

Species recorded within this habitat largely include gorse and bracken with yarrow *Acillea millefolium*, bramble *Rubus fruticosus* aggregate, ribwort plantain *Plantago lanceolata*, sheep sorrel *Rumex acetosella*, common ragwort *Senecio jacobaea*, spear thistle *Cirsium vulgare*, primrose *Primula vulgaris*, common vetch *Vicia sativa*, hairy bittercress *Cardamine hirsuta*, broadleaved dock *Rumex obtusifolius*, lesser celandine *Ranunculus ficaria*, bristly ox-tongue *Picris echioides*, ivy *Hedera helix*, hogweed *Heracleum sphondylium* and cleavers *Galium aparine*. In addition, occasional pine *Pinus* saplings and semi-mature holm oak *Quercus ilex* are also present.



**Figure 3:** Dense scrub / coastal grassland matrix adjacent to the site along north-western boundary



**Figure 4:** Dense scrub

### *Other Habitats*

The site largely comprises hardstanding with buildings which form a storage yard, public conveniences, lifeguard station and workshops. Further details of the building descriptions are provided in Paragraph 4.4.1. Very small areas of ephemeral vegetation are located within the storage yard to the west of the site with some ribwort plantain, dandelion *Taraxacum officinale* aggregate and hairy bittercress.



**Figure 5:** Hardstanding to north of site



**Figure 6:** Hardstanding and building to west of site

### **4.3.2 Evaluation**

Habitats within the application site are limited in their extent comprising ephemeral vegetation which is considered to be negligible value. The coniferous woodland, outside of the red line boundary, is a common and widespread habitat and considered to be of site value while the dense scrub / coastal grassland matrix, also outside of the red line boundary, is considered of being of local value.

## **4.4 Bats**

### **4.4.1 Baseline Ecological Conditions**

#### Desktop Study Results

Consultation with DERC returned a total of 28 bat records of four different species, from within a two kilometre radius of the site. Species recorded include serotine *Eptesicus serotinus*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus* and long-eared bat *Plecotus* species<sup>9</sup>.

Consultation with the MAGIC database revealed the presence of two recently granted EPSM licences in respect of bats within a two kilometre radius of the site. The closest licence, located approximately 1.7 kilometres north-east, was granted in 2017 for the

<sup>9</sup> There are two species of long-eared bat, the brown long-eared bat *Plecotus auritus* and the grey long-eared bat *Plecotus austriacus*. These species can only be separated by examination of physical characteristics and Phylogenetic Analysis Identification of bat droppings. Unless confirmation of identification has been made by visual identification the two species shall be referred to in this report as long-eared bat. The brown long-eared bat is the commonest of the two species typically being found roosting within large roof voids although small voids and trees are also utilised. The grey long-eared bat is rare and confined to southern England and like the brown long-eared typically roosts in roof voids.



destruction of a resting place of common pipistrelle. The second licence, located approximately 1.75 kilometres north, was granted in 2010 for the destruction of resting places of common pipistrelle and soprano pipistrelle.

### Field Survey Results



#### *Building Assessment*




There are a total of six buildings within the site, most of which are single storey constructions with flat roofs and no suitable features for roosting bats. The public conveniences, Building 4, provide limited suitable habitat for roosting bats in the form of lifted roof tiles and was assessed as being of low suitability for roosting bats, all remaining buildings were assessed as being of negligible suitability for roosting bats. The results of the building assessment are provided in **Table 4**, with building numbers shown on **Map 2**.




#### *Foraging and Commuting Habitat*


The site provides limited suitable habitat for foraging and commuting bats due to the lack of vegetation and exposure location. Habitat to the north of the site, in the form of coniferous woodland on the cliffs and mixed woodland and grassland on the tops of the cliffs, provide more suitable habitat for foraging and commuting bats in the wider area. It is considered that individual bats may pass over the site on occasion while commuting to further suitable habitat in the wider area. Therefore, the site is assessed of being of low suitability for foraging and commuting bats.

**Table 4:** Building Assessment – Summary of Features with Bat Roost Potential and Evidence of Bat Roost Activity

Surveyed Feature	Figure	Building Description	Description of Potential Bat Roost Features	Evidence of Bat Roost Activity and Location	Assessment of Suitability for Roosting Bats
Beach huts (B1)	 <p>Figure 7: Southern elevation of the beach huts</p>	<p>The beach huts comprise seven individual huts which are all single storey wooden construction with gable ended roof lined with bitumen roofing felt (Figure 7).</p>	<p>The beach huts are all well sealed and do not contain gaps which provide suitable roosting features for bats. Therefore, these buildings are considered unsuitable for roosting bats.</p>	<p>No evidence of roosting bats was recorded during the survey.</p>	<p>Negligible</p>
Lifeguard station (B2)	 <p>Figure 8: Southern elevation of lifeguard station</p>	<p>The lifeguard station is a single storey construction with a flat roof (Figure 8 and Figure 9). No internal roof void is present.</p>	<p>The building is considered unsuitable for roosting bats due to the lack of suitable roosting features for bats.</p>	<p>No evidence of roosting bats was recorded during the survey.</p>	<p>Negligible</p>

Surveyed Feature	Figure	Building Description	Description of Potential Bat Roost Features	Evidence of Bat Roost Activity and Location	Assessment of Suitability for Roosting Bats
	 <p data-bbox="421 611 792 663"><b>Figure 9:</b> Northern elevation of lifeguard station</p>				
Workshop (B3)	 <p data-bbox="421 967 792 1019"><b>Figure 10:</b> Eastern elevation of Workshop</p>	<p data-bbox="824 692 1167 831">The workshop is a single storey brick construction clad with plastic with a flat bitumen felt roof (<b>Figure 10</b>). No roof void is present internally.</p>	<p data-bbox="1189 692 1552 855">The building is well sealed and no gaps are present to provide suitable roosting features for bats. Therefore, the building is considered unsuitable for roosting bats.</p>	<p data-bbox="1574 692 1854 775">No evidence of roosting bats was recorded during the survey.</p>	Negligible
Public conveniences (B4)	 <p data-bbox="421 1323 792 1375"><b>Figure 11:</b> Southern elevation of Public Conveniences</p>	<p data-bbox="824 1048 1167 1212">The public convenience building is a single storey brick construction rendered with plaster (<b>Figure 11</b>). The building has a gable ended roof with clay pan tiles.</p> <p data-bbox="824 1233 1167 1316">Internally a single roof void is present however, no access was possible during the survey.</p>	<p data-bbox="1189 1048 1552 1295">A small number of roof tiles, particularly on the western elevation of the building are lifted, providing suitable access for roosting bats (<b>Figure 12</b>). On the northern elevation vents are present which may also provide access for roosting bats (<b>Figure 13</b>)</p>	<p data-bbox="1574 1048 1854 1131">No evidence of roosting bats was recorded during the survey.</p>	Low

Surveyed Feature	Figure	Building Description	Description of Potential Bat Roost Features	Evidence of Bat Roost Activity and Location	Assessment of Suitability for Roosting Bats
	 <p>Figure 12: Lifted tiles on western elevation</p>  <p>Figure 13: Vents located on northern elevation</p>				
Plant room (B5)	 <p>Figure 14: South-western elevation of plant room</p>	The plant room is a single storey stone construction with a flat roof (Figure 14). No roof void is present.	There are some gaps present within the missing mortar within the stonework however, these gaps are considered insufficient to provide roosting features bats.	No evidence of roosting bats was recorded during the survey.	Negligible

Surveyed Feature	Figure	Building Description	Description of Potential Bat Roost Features	Evidence of Bat Roost Activity and Location	Assessment of Suitability for Roosting Bats
Storage building (B6)	 <p data-bbox="421 611 792 662"><b>Figure 15:</b> North-western elevation of storage building</p>	<p>The storage building is a single storey flat roofed construction with pebble dashed wall and no roof void (<b>Figure 15</b>).</p>	<p>The building does not contain any suitable bat roosting features and therefore the building is considered unsuitable for roosting bats.</p>	<p>No evidence of roosting bats was recorded during the survey.</p>	<p>Negligible</p>

#### Bat Emergence/Re-entry Survey Results

No bats were recorded roosting within the public convenience building during the survey. Foraging and commuting activity within the site was low with common pipistrelle the only species recorded. Foraging activity was restricted to along the adjacent cliffs.

#### **4.4.2 Evaluation**

##### Foraging and Commuting Bats

Bat surveys recorded a single species of bat, common pipistrelle, foraging and commuting during the dusk emergence survey. Common pipistrelle is common and widespread in both Britain and Dorset (Bat Conservation Trust, 2020) and as a result the site is likely of value at a site level for the species.

#### **4.5 Otter**

##### **4.5.1 Baseline Ecological Conditions**

###### Desktop Study Results

Consultation with DERC produced no records of otter *Lutra lutra* within the desktop study area, however, this does not confirm the absence of the species in the local area.

###### Field Survey Results

There are no watercourses either within or adjacent to the site and it is considered likely that otter are absent from the local area and therefore the species is not considered further in this report.

#### **4.6 Badger**

##### **4.6.1 Baseline Ecological Conditions**

###### Desktop Study Results

Consultation with DERC produced no records of badger *Meles meles* within the desktop study area, however, this does not confirm the absence of the species in the local area.

###### Field Survey Results

No evidence of either resident, foraging or commuting badger was recorded on the site at the time of the survey. Given that the site largely comprises hardstanding and buildings with limited vegetation the site is considered unsuitable for badger, due to the lack of foraging or sett building opportunities. As the site is assessed as being unsuitable for badger the species is not considered further in this report.

## **4.7 Hazel Dormouse**

### **4.7.1 Baseline Ecological Conditions**

#### Desktop Study Results

Consultation with BRC produced no records of hazel dormouse *Muscardinus avellanarius* within the desktop study area, however, this does not confirm the absence of the species in the local area.

Consultation with the MAGIC database did not return any records of recently granted EPSM licences in respect of hazel dormouse within a two kilometre radius of the site.

#### Field Survey Results

There are no hedgerows, treelines or woodland within the development site which would provide suitable habitat for hazel dormouse. Therefore, the species is considered absent from the red line boundary of the site.

The adjacent Pool Bay Cliffs SSSI contains coastal scrub / grassland matrix and small areas of coniferous woodland. These habitats are considered sub-optimal for hazel dormouse and given the limited extent of suitable hazel dormouse habitat this species is not considered further in the report.

## **4.8 Water Vole**

### **4.8.1 Baseline Ecological Conditions**

#### Desktop Study Results

Consultation with DERC produced no records of water vole *Arvicola amphibius* within the desktop study area, however, this does not confirm the absence of the species in the local area.

#### Field Survey Results

The site does not contain any suitable habitat for water vole due to the lack of rivers and streams either within the site or within the local area. The habitat on site is unsuitable for water vole and therefore the species is not considered further in this report.

## 4.9 Birds

### 4.9.1 Baseline Ecological Conditions

#### Desktop Study Results

Consultation with DERC returned records of herring gull *Larus argentatus*, black headed gull *Chroicocephalus ridibundus*, sandwich tern *Sterna sandvicensis* and song thrush *Turdus philomelos* from a one kilometre radius of the site.

#### Field Survey Results

During the survey, black headed gull, herring gull, rook *Corvus frugilegus*, wood pigeon *Columba palumbus* and carrion crow *Corvus corone* were all recorded either flying over the site or within the off-site adjacent vegetation. Of these species black headed gull is an amber listed species of conservation concern<sup>10</sup> while herring gull is red listed<sup>11</sup>.

In addition to the species recorded within the site on the initial field survey, during the invertebrate survey undertaken on the 9<sup>th</sup> June 2020 the following species were recorded flying over the site and within adjacent habitats, wood pigeon, swift *Apus apus*, black headed gull, herring gull, great black backed gull *Larus marinus*, kestrel *Falco tinnunculus*, coal tit *Periparus ater*, long-tailed tit *Aegithalos caudatus*, wren *Troglodytes troglodytes*, blackbird *Turdus merula*, robin *Erithacus rubecula* and greenfinch *Chloris chloris*. Of these species swift, great black backed gull and kestrel are all amber listed species of conservation concern<sup>10</sup>.

The majority of the site is considered unsuitable for nesting birds however, it is considered possible that the buildings may be used by nesting gulls and the gaps present within the public convenience buildings may be utilised by nesting house sparrow *Passer domesticus* and starling *Sturnus vulgaris*. In addition, the habitats within the cliffs provide suitable nesting habitat for a range of bird species. It is considered unlikely that the site itself is utilised by tern species present within the Solent and Dorset Coast SPA.

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<sup>10</sup> The UK's birds are split in to 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.

<sup>11</sup> The UK's birds are split in to 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.



#### **4.9.2 Evaluation**

The on-site buildings provide a small area of suitable nesting bird habitat within the context of the surrounding area and are therefore considered to be of site value for nesting birds.

#### **4.10 Reptiles**

##### **4.10.1 Baseline Ecological Conditions**

###### Desktop Study Results

Consultation with DERC produced a total of 13 records of common lizard *Zootoca vivipara* from within a one kilometre radius of the site. In addition, records of wall lizard *Podarcis muralis*, an introduced reptile species, were also returned within the data search.

No records of sand lizard were returned within the data search however, anecdotal records produced by a worker within the site indicated that sand lizard have been seen within the coastal heathland to the north of the site on occasion. The Poole Bay Cliff SSSI, adjacent to the northern boundary of the site, is designated in part due to the presence of populations of sand lizard.

No recently granted EPSM licences in respect of rare reptiles, sand lizard and smooth snake *Coronella austriaca*, were returned within a two kilometre radius of the site.

###### Field Survey Results

The site itself does not provide any suitable habitat for reptiles due to the lack of vegetation. However, the dense scrub / coastal grassland matrix to the north and west of the site provide limited suitable habitat for sand lizard and other common species of reptile such as common lizard and slow-worm *Anguis fragilis*.

###### Reptile Survey Results

A summary of the reptile surveys at the site is provided in **Table 5** and on **Map 4**. A peak count of one adult common lizard and one adult sand lizard have been recorded within cliffs adjacent to the site.

**Table 5:** Summary of reptile survey results

Survey Date	Number of Individuals Recorded			
	Common Lizard		Sand Lizard	
	Adult	Juvenile	Adult	Juvenile
7 <sup>th</sup> May 2020	-	-	-	-
23 <sup>rd</sup> May 2020	1	-	1	-
12 <sup>th</sup> June 2020	1	-	1	-
26 <sup>th</sup> June 2020	-	-	-	-
7 <sup>th</sup> July 2020	-	-	-	-
21 <sup>st</sup> July 2020	1	-	-	-
22 <sup>nd</sup> September 2020	-	-	-	-
<b>Peak Count</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>

#### 4.10.2 Evaluation

##### Population Class Size Assessment

**Table 6** shows the current guidance (Froglife, 1999) for assessing the population size of reptiles based on a refugia density of 10 per hectare which was the density used at the site. However, no guidance is provided for assessing the population size of sand lizard.

**Table 6:** Criteria for population size assessment based upon a refugia density of 10 per hectare

Species	Low Population	Good Population	Exceptional Population
Common lizard	<5	5-20	>20

Given the peak count of one adult, the site can be said to support a low population of common lizard. Given the peak count of one adult, the site can be said to support a low population of sand lizard.

##### Evaluation

Given that surveys have confirmed the presence of sand lizard within the cliffs adjacent to the proposed development site, and that the species is a qualifying factor for the designation of the cliffs as a SSSI. That the cliffs are of national importance for the species.

The site itself is of negligible value to reptiles due to the lack of vegetation present.

#### **4.11 Great Crested Newt**

##### **4.11.1 Baseline Ecological Conditions**

###### Desktop Study Results

Consultation with DERC produced no records of great crested newt *Triturus cristatus* within the desktop study area. In addition, consultation with the MAGIC database did not return any granted EPSM licences for great crested newt within a two kilometre radius of the site. A review of OS mapping and aerial imagery did not reveal the presence of any within 500 metres of the site.

###### Field Survey Results

The site does not contain any suitable habitat for great crested newt and due to the lack of waterbodies within the local area it is considered that the species is likely absent and therefore the species is not considered further in this report.

#### **4.12 Invertebrates**

##### **4.12.1 Baseline Ecological Conditions**

###### Desktop Study Results

Consultation with DERC produced records of stag beetle *Lucanus cervus*, grayling *Hipparchia semele*, cinnabar *Tyria jacobaeae* and the wasp *Nysson trimaculatus*. In addition, the Poole Bay Cliffs SSSI is designated in part due to the presence of the shore bug *Saldula Arenicola* and the fly *Cephalops straminipes* however, no records of these species were returned within the desktop study data.

###### Field Survey Results

The site itself, due to the lack of vegetation and comprising mostly buildings and hardstanding does not provide any suitable habitat for notable species or assemblages of invertebrates. However, the dense scrub / coastal grassland habitat present within the adjacent cliffs likely supports suitable habitat for a range of notable invertebrate species and assemblages.

###### Invertebrates Survey Results

During the invertebrate surveys a number of rare and scarce species were recorded, which are detailed in the paragraphs below. **Appendix 8**, provides further details of invertebrate status definitions. The shore bug *Saldula arenicola* and the fly *Cephalops straminipes* which are both qualifying species for the designation of the cliffs as a SSSI were not recorded during the invertebrate surveys.

A full list of all invertebrate species recorded during the 2020 surveys is provided in **Appendix 9**.

#### *Orthoptera*

Heath grasshopper *Chorthippus vagans* **Rare RBD 3**

Specimens were recorded on the small area of heathland at the western end of the survey area on 21<sup>st</sup> July 2020.

#### *Lepidoptera*

The small heath *Coenonympha pamphilus* **UK BAP (Research only)**

Adults were recorded flying over the grassland area at the western end of the survey site on 9<sup>th</sup> June 2020. Larvae of this butterfly feed on fine grasses such as annual meadow grass *Poa annua*.

The Cinnabar moth *Tyria jacobaeae* **UK BAP (Research only)**

Caterpillars of the cinnabar moth were recorded from ragwort on 21<sup>st</sup> July 2020. The cinnabar is a common species whose larvae develop on ragwort.

#### *Hymenoptera*

A cuckoo wasp *Hedychridium roseum*. **Provisionally Nationally scarce**

This species was found in the heathland at the western end of the survey site on 9<sup>th</sup> June 2020. *Hedychridium roseum* is a parasitoid of the crabronid wasps *Astata boops* and *Tachysphex pompiliformis*, both of which were recorded from this area of heathland during the survey.

A cuckoo wasp. *Hedychrum niemelai* **Rare RDB3**

Specimens of this wasp were recorded from the area of heathland at the western end of the survey site on 9<sup>th</sup> June 2020 and 21<sup>st</sup> July 2020.

Heath potter wasp *Eumenes coarctatus* **Nationally Scarce Na**

A single specimen of this species was netted whilst visiting the flowers of heather on 26<sup>th</sup> August 2020.

A eumenid wasp *Microdynerus exilis* **Nationally Scarce Nb**

Three specimens of this small wasp were recorded from the heathland area of the survey site on 9<sup>th</sup> June 2020.

A Digger wasp *Astata boops* **Provisionally Nationally Scarce pN**

This species was noted on 21<sup>st</sup> July 2020 on bare sand in the heathland area at the western end of the site.

The Bee-wolf *Philanthus triangulum* **Provisionally Nationally Scarce N**

This species was recorded within the heathland area on 21<sup>st</sup> July 2020, and on 26<sup>th</sup> August 2020.

A mining bee *Andrena bimaculata* **Nationally Scarce Nb**

Specimens of this bee were recorded on 9<sup>th</sup> June 2020 flying within the heathland area in the west of the site.

A mining bee *Lasioglossum pauxillum* **Nationally Scarce Na**

This species was found during general sweeping at the western end of the survey site on 9<sup>th</sup> June 2020

A cuckoo bee *Sphcodes crassus* **Nationally Scarce Nb**

A single specimen was found on 26<sup>th</sup> August 2020 on bare sand in the heathland section of the survey site.

A mining bee *Dasygaster hirtipes* **Nationally scarce Nb**

Small numbers of this bee were found in the heathland area of the survey site on 9<sup>th</sup> June 2020.

A nomad bee *Nomada fucata* **Nationally Scarce Na**

This bee was noted on 9<sup>th</sup> June 2020 and 21<sup>st</sup> July 2020, single specimens of *Nomada fucata* were noted on each occasion within the heathland area at the west of the survey site.

#### 4.12.2 Evaluation

The invertebrate surveys recorded two rare RDB3 species, two UK BAP species, one provisionally nationally scarce species, three nationally scarce Na species, four nationally scarce Nb species, one provisionally nationally scarce pN species and one provisionally nationally scarce N species.

The heath grasshopper feed readily on heather, and are mainly recorded from dry, sandy areas with little other vegetation. Nationally, the heath grasshopper has a very restricted distribution, being confined to the heathland areas of Hampshire and Dorset.

The small heath is primarily associated with open grassland sites. It is widespread in Britain, but due to a considerable recent national decline has been added to the national BAP listings for monitoring purposes. The small heath remains a relatively common butterfly in Dorset.

The cinnabar moth remains widespread and frequent through much of the British Isles. It has, however declined considerably over the last 35 years, and for this reason has been added to the UK BAP listings for monitoring purposes.

Recent work has shown that the cuckoo wasp *Hedychridium roseum* is a declining species of heathland and coastal sandy areas in southern Britain. Most records are from Hampshire, Dorset and Surrey. Although not listed in (Shirt, 1987) or (Falk, 1991), (Edwards, 1998) recommends that it's status should be reviewed. It is regularly recorded from the Dorset heaths.

The cuckoo wasp *Hedychrum niemelai* is a parasite of the sand nesting wasps of the genus *Cerceris*, which were abundant within this area of the site. Nationally *Hedychrum niemelai* is confined to open sandy areas in southern England that support populations of its host. (Falk, 1991) considers it to be in decline, with most recent records from heathland sites in southern England, with a considerable number of recent records from Dorset.

The eumenid wasp *Microdynerus exilis* usually nests in old beetle holes in dead wood; it may also utilise dead bramble stems. *Microdynerus exilis* may be found in a variety of habitats. It was first found in Britain in Hampshire in 1937 and is now thinly scattered across southern England. There is a cluster of records from Dorset, and *Microdynerus exilis* is recorded with some frequency in this area.

The digger wasp *Astata boops* is a ground-nesting species, most often associated with sandy soils, but also found in other situations. Nationally, the distribution of *Astata boops* is confined to southern England, East Anglia and the Channel Islands. In view of this restricted distribution (Edwards, 1998) suggests that the status of *Astata boops* requires upgrading to Nationally Scarce. This species has previously been recorded from a number of localities in Dorset.

The bee wolf *Philanthus triangulum* was formerly confined nationally to two permanent sites on the Isle of Wight, but over the last twenty years has spread dramatically. Previously designated as a nationally vulnerable (RDB2) species, it is now considered to be provisionally Nationally Scarce. *Philanthus triangulum* requires sunny sandy slopes in which to nest. This species is now well established in Dorset.

The mining bee *Andrena bimaculata* is associated with warm, open sandy habitats. It is widely but sparsely distributed in southern England and East Anglia. *Andrena bimaculata* collects pollen from a variety of plant species, with gorse being particularly favoured by the spring brood. There are a number of recent records for Dorset (Else & Edwards, 2018).

The mining bee *Lasioglossum pauxillum* nests in sparsely vegetated light soils in warm, sunny conditions. It may be found in a variety of habitats including calcareous grassland, soft rock coastal cliffs and heathland. Previously, *Lasioglossum pauxillum* was a scarce species restricted to south east England, but in the last two decades it

has increased in frequency and expanded its range northwards and westwards (Edwards & Broad, 2005). Its current Nationally Scarce Na status now requires downgrading. It is a frequent species in Dorset.

The cuckoo bee *Sphecodes crassus* is widely distributed in southern and central England as far north as north Yorkshire, and from Wales. It occurs in a range of habitats with warm bare ground or a short sward that are suitable for the host's nests. Such habitats include calcareous grassland, heathland, quarries and soft-rock cliffs. *Sphecodes crassus* has become increasingly common recently (Else & Edwards, 2018) and the status of this species may require downgrading.

The mining bee *Dasypoda hirtipes* requires hot sandy banks in which to nest, and females collect pollen only from yellow composites. Most records of *Dasypoda hirtipes* are from coastal dunes and on sandy sites inland, where it is largely restricted to southern England, East Anglia and the Welsh coast. *Dasypoda hirtipes* has recently been recorded from a number of sites in Dorset.

The nomad bee *Nomada fucata* is a cleptoparasite of the mining bee *Andrena flavipes*, which was also recorded on these dates in the same area. The host is associated with bare or sparsely vegetated soils in a variety of habitats. *Andrena flavipes* is widespread in southern England and south Wales, and appears to have expanded its range in recent decades (Edwards & Telfer, 2002). There are numerous recent records of *Nomada fucata* from Dorset.

Given the number of rare and scarce species recorded within a relatively small area, the cliffs adjacent to the proposed development site are considered to be of county value for invertebrate species and assemblages.

#### **4.13 Other Relevant Species**

##### **4.13.1 Baseline Ecological Conditions**

###### Desktop Study Results

Consultation with DERC produced a single record of European hedgehog *Erinaceus europaeus* within the desktop study data. No other relevant species records were returned.

###### Field Survey Results

The site is considered unsuitable for European hedgehog due to the lack of vegetation. In addition, the habitats in the immediate surrounds of the site are considered unsuitable for European hedgehog and therefore the species is not considered further in this report.

The site is not considered suitable for any other relevant species and therefore are not considered further in this report.



## **5.0 ASSESSMENT OF ECOLOGICAL EFFECTS AND MITIGATION/COMPENSATION/ ENHANCEMENT MEASURES**

### **5.1 Introduction**

This section assesses the ecological effects of the proposed development scheme on the identified ecological features as identified in Section 4.0. Methods for addressing potential impacts on ecological features have been approached in accordance with the mitigation hierarchy<sup>12</sup> with avoidance of impacts prioritised where possible. Where significant adverse effects cannot be avoided other forms of mitigation are prioritised over compensation. Enhancement measures have been detailed, where relevant, in order to not only minimise the impacts on biodiversity but also to provide enhancement in accordance with Paragraph 170 of the NPPF (Paragraph 2.2). It is anticipated that mitigation, compensation and enhancement measures will be secured through the planning process.

### **5.2 Scheme Design**

The proposed development entails demolition of all buildings and creation of a new Environmental Innovation Hub and Visitor Centre with staff welfare facilities, meeting and office space, public toilets, storage and kiosk facilities.

The potential ecological impacts and effects of these proposals, in the absence of mitigation, are described for each ecological feature below. For each ecological feature, measures to mitigate and/or compensate for significant effects are described.

### **5.3 Designated Sites**

#### **5.3.1 Potential Impacts and Effects**

The proposals, which involve small-scale demolition and construction activities are considered unlikely to impact the integrity of the SPA. The works will not result in the loss of the function of the designated site as foraging habitat of the tern species which are the reason for the designation of the site.

The construction activities however, do have the potential to directly impact the Poole Bay Cliffs SSSI either through accidental damage, pollution, noise or vibration.

The site is also within proximity to two non-statutory designated sites, the development is small-scale and will not result in any adverse effects on these non-statutory designates site.

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<sup>12</sup> In accordance with CIEEM Ecological Impact Assessment guidance (CIEEM, 2018) 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'.

### **5.3.2 Mitigation Measures**

In order to avoid adverse impacts on the SSSI during the construction phase it is recommended that a Construction Environmental Management Plan (CEMP) is produced. This plan will detail the proposed working measures to safeguard the SSSI during construction and will include measures such as controlling dust and oil/fuel spills, safe storage of materials and a timetable of works. It is recommended that contractors do not store materials which could potentially contaminate the designated site adjacent to the SSSI site boundary. It is likely that the CEMP will be secured by the Local Planning Authority through a planning condition.

### **5.3.3 Significance of Residual Effects**

Providing that mitigation measures are followed it is anticipated that no significant residual effects are likely to occur.

### **5.3.4 Compensation**

It may be necessary to stabilise the adjacent cliff, if so the impact assessment will be submitted as part of a separate application detailing the required mitigation and compensation measures required in respect of designated sites.

### **5.3.5 Enhancement**

It is recommended that, in order to enhance the Poole Bay Cliffs SSSI in the long-term, management of the cliffs should be implemented to encourage the growth of the coastal grassland / heathland habitat and discourage the colonisation of the site by trees and scrub habitat. This should involve felling of the conifer trees, removal of holm oak and bramble to encourage the re-growth of heather, gorse and other plants noted within the SSSI citation.

### **5.3.6 Monitoring**

If the EMMP is required as part of the development, this will include long-term monitoring of the Poole Bay Cliffs SSSI.

## **5.4 Habitats**

### **5.4.1 Potential Impacts and Effects**

The development will result in the loss of vegetation within the site however, the effect of this habitat loss in the context of the wider area is considered negligible. The current proposals will not directly impact the Poole Bay Cliffs SSSI.

### **5.4.2 Mitigation Measures**

No mitigation measures are required in relation to habitats.

### **5.4.3 Significance of Residual Effects**

No residual effects on habitats are considered likely in relation to habitats.

#### **5.4.4 Compensation**

No compensation measures are required.

#### **5.4.5 Enhancement**

The proposed landscaping plan, see **Appendix 2** provides details of the planting to be included in the proposed development.

Within the proposals, a range of native shrubs will be planted to the north of the proposed building. Proposed native shrubs are to include European marram grass *Ammophila arenaria*, common heather *Calluna vulgaris*, bell heather *Erica cinerea*, Lyme grass *Leymus arenarius*, purple moor grass *Molinia caerulea* and dwarf gorse *Ulex minor*. These plant species have been selected as they are in keeping with the adjacent Poole Bay Cliffs SSSI and will enhance the site for biodiversity overall.

Additional, ornamental planting is to be undertaken within the proposed Environmental Innovation Hub and Visitor Centre. These plants include a range of ornamental shrubs, accent plants and climbing plants including common honeysuckle *Lonicera periclymenum*, ivy *Hedera helix*, purple moor grass *Molinia caerulea*, dwarf gorse, European marram grass, bell heather, common heather and Lyme grass. These species have been selected in order to withstand the coastal location of the site.

The roof of the Environmental Innovation Hub and Visitor Centre is to be a green roof. The roof will be planted with European marram grass, sea thrift, common heather, bell heather, Lyme grass, purple moor grass, sea campion *Silene uniflora* and dwarf gorse.

#### **5.4.6 Monitoring**

No monitoring is required in respect of on-site habitats.

### **5.5 Bats**

#### **5.5.1 Potential Impacts and Effects**

Introduction of lighting on site is likely to result in the disturbance to foraging and commuting bats, particularly if light spill occurs on the adjacent cliffs.

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.

#### **5.5.2 Mitigation Measures**

To reduce the impacts of lighting on site, post development, it is recommended that no lighting is introduced. If this is not possible lighting should comprise hooded luminaires, directed away from the cliffs and the surrounding habitats. Ideally the bulbs will be LED

and at the warmer end of the spectrum (e.g. avoiding blue or white light). LED lights emit much lower levels of UV and therefore have a lower impact on wildlife<sup>13</sup>. The new lighting will be task related, associated with specific entrance/exit points of the development. The lux level will be as low as possible to allow the task to be carried out safely and effectively. Guidance on task related lighting levels and mitigation options as described within the Bats and Artificial Lighting in the UK report will be followed (Institution of Lighting Professionals, Bat Conservation Trust, 2018).

### **5.5.3 Significance of Residual Effects**

Measures to avoid disturbance to foraging bats will mitigate for these potential effects.

### **5.5.4 Compensation**

No compensation measures are required.

### **5.5.5 Enhancement**

Due to the lack of trees within the site bat enhancement opportunities will be integrated into the newly constructed building. This will include two Ibstock Enclosed Bat Box 'C' installed in the walls of the new building on site.

### **5.5.6 Monitoring**

No monitoring is required.

## **5.6 Birds**

### **5.6.1 Potential Impacts and Effects**

It is possible that the buildings on site may be used by nesting birds and vegetation present on the adjacent cliffs provide suitable habitat for nest construction. Demolition of the buildings within the site during the nesting bird season may result in the destruction of nests, if present, and the killing or injury of individuals.

All birds, their nests, eggs and young are legally protected, with certain exceptions, under the Wildlife and Countryside Act 1981 (as amended). Refer to **Appendix 4** for details.

### **5.6.2 Mitigation Measures**

Building demolition works and vegetation removal will be undertaken outside the breeding bird season which extends from March to August, inclusive. If this is not possible, an ecologist will be present immediately prior to works to inspect the building. Active nests, likely to be affected by the works, will be left with a suitable buffer until nesting ends.

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<sup>13</sup> *Wildlife and Artificial Lighting Seminar, 21<sup>st</sup> – 22<sup>nd</sup> March 2014, Arup London, Bat Conservation Trust.*

### **5.6.3 Significance of Residual Effects**

Measures to avoid disturbance or harm to nesting birds during construction will mitigate for these potential effects.

### **5.6.4 Compensation**

No compensation measures are required.

### **5.6.5 Enhancement**

Given the lack of trees on site the recommended enhancement measures in relation to nesting birds included integrated bird nest boxes. A mixture of boxes designed for different bird boxes should be included in the scheme design such as, the Vivara Pro woodstone house sparrow nest box.

In addition, the proposed green roof will provide an additional food resource and nesting opportunities for birds through the increased invertebrate recourse within the site.

### **5.6.6 Monitoring**

No post-development monitoring is required.

## **5.7 Reptiles**

### **5.7.1 Potential Impacts and Effects**

During construction accidental incursions into the SSSI may occur resulting in the damage of sand lizard and common lizard habitat and accidental killing or injury of individuals.

The sand lizard is included under 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 and the Wildlife and Countryside Act 1981. This makes it an offence to kill, injure, capture or disturb individuals and damage or destroy their habitat, see **Appendix 4** for details.

Widespread reptile species (including common lizard *Zootoca vivipara*) are protected under the Wildlife and Countryside Act 1981 against harm. Refer to **Appendix 4** for details.

### **5.7.2 Mitigation Measures**

The production of a CEMP and recommendations included will also mitigate to the potential damage to sand lizard and common lizard habitat and accidental killing or injury of individuals.

### **5.7.3 Significance of Residual Effects**

Mitigation measures will ensure that no significant effects occur on reptiles as part of the scheme however, if cliff stabilisation works are to be undertaken there will be a loss of sand lizard habitat in the local area.

### **5.7.4 Compensation**

It may be necessary to stabilise the adjacent cliff, if so the impact assessment will be submitted as part of a separate application detailing the required mitigation and compensation measures required in respect of reptiles and may include the requirement for an EPSM licence in respect of sand lizard.

### **5.7.5 Enhancement**

It is recommended that creation of sand lizard egg-laying sites be undertaken within the area. Sand lizard lay eggs in bare sand and the sites must be unshaded, close to dense vegetation cover and undisturbed. These areas of exposed sand should be managed to prevent vegetation succession on an annual basis and cover at least 5% of the SSSI.

This can be achieved by removing the coniferous woodland present on the cliff and reducing the overall cover of gorse by approximately 25%. Patches of bare sand should be created by mowing vegetation in winter and stripping topsoil in late April to early May. These egg laying sites should be a size of one metre by two metre, on south facing areas exposed to the sun (Edgar, et al., 2010). These enhancement measures will also be of benefit to the local common lizard population.

The details of this long-term habitat management should be detailed within an Ecological Mitigation and Management plan, likely to be secured through a planning condition.

### **5.7.6 Monitoring**

As part of the Ecological Mitigation and Management plan, long term management of newly created habitats within the site and on the adjacent Poole Bay Cliffs will be undertaken.

## **5.8 Invertebrates**

### **5.8.1 Potential Impacts and Effects**

The site itself does not provide habitat of value for any rare or notable species or assemblages of invertebrates so the proposed demolition works will not have an adverse impact. However, accidental damage to the adjacent SSSI may result in the loss of suitable invertebrate habitats.

### **5.8.2 Mitigation Measures**

The CEMP, to ensure no adverse impacts occur on the adjacent SSSI will also ensure that no adverse impacts occur to notable invertebrates present within the Pool Bay Cliffs.

### **5.8.3 Significance of Residual Effects**

Mitigation measures will ensure that no significant residual effects occur on invertebrate populations in the surrounding habitat to the site.

### **5.8.4 Compensation**

It may be necessary to stabilise the adjacent cliff, if so the impact assessment will be submitted as part of a separate application detailing the required mitigation and compensation measures required in respect of invertebrates.

### **5.8.5 Enhancement**

The proposed green roof and native species planting to the north of the proposed Environmental Innovation Hub and Visitor Centre, see Paragraph 5.4.5 will enhance the site for a range of invertebrates overall.

In addition, a number of the rare and notable invertebrate species recorded within SSSI require bare ground as an important habitat. Therefore, the recommendations for enhancements in relation to sand lizard, see Paragraph 0, will also enhance the cliffs for invertebrate species.

### **5.8.6 Monitoring**

No post development monitoring is required.

## **5.9 Cumulative Effects**

Assuming that the mitigation and compensation measures outlined in the paragraphs above are implemented, no significant residual effects are anticipated. As such it is considered unlikely that the proposals will contribute to cumulative adverse effects in association with other proposals in the local area.

## **6.0 CONCLUSIONS**

### **6.1 Conclusion**

The site and the adjacent Poole Bay Cliffs SSSI are assessed as having suitability for roosting bats, foraging and commuting bats, breeding birds, reptiles and notable species or assemblages of invertebrates. Surveys confirmed the presence of sand lizard, common lizard and a range of notable invertebrate species presence within the Poole Bay Cliffs SSSI however, none of these notable and protected species are present within the red line boundary of the site. Adverse impacts on these ecological features have been identified and appropriate mitigation measures proposed. If cliff stabilisation measures are to be undertaken additional compensation measures will be required in relation to designated sites, habitats, sand lizard and invertebrates however, these will be provided as part of a separate application.

The site will be enhanced through native species planting, bat roosting features and birds nesting boxes resulting in an overall net gain for biodiversity. As such it is considered that the proposals will accord with all relevant national and local planning policy in relation to ecology including Policy CS35 of the Local Plan and the NPPF (see Section 2.0).

### **6.2 Updating Site Survey**

If the planning application boundary changes or the proposals for the site alter, a re-assessment of the scheme in relation to ecology may be required. Given the mobility of animals and the potential for colonisation of the site over time, updating survey work may be required, particularly if development does not commence within 18 months of the date of the most recent relevant survey.



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**Map 1**      Site Location Plan

# DURLEY CHINE SEAFRONT, BOURNEMOUTH, DORSET

## ECOLOGICAL IMPACT ASSESSMENT

Map 1 - Site Location Plan

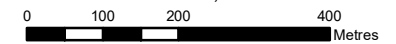
Client:	BCP Council
Date:	October 2020
Status:	Final

### KEY

 Site Boundary



Scale at A4: 1:10,000

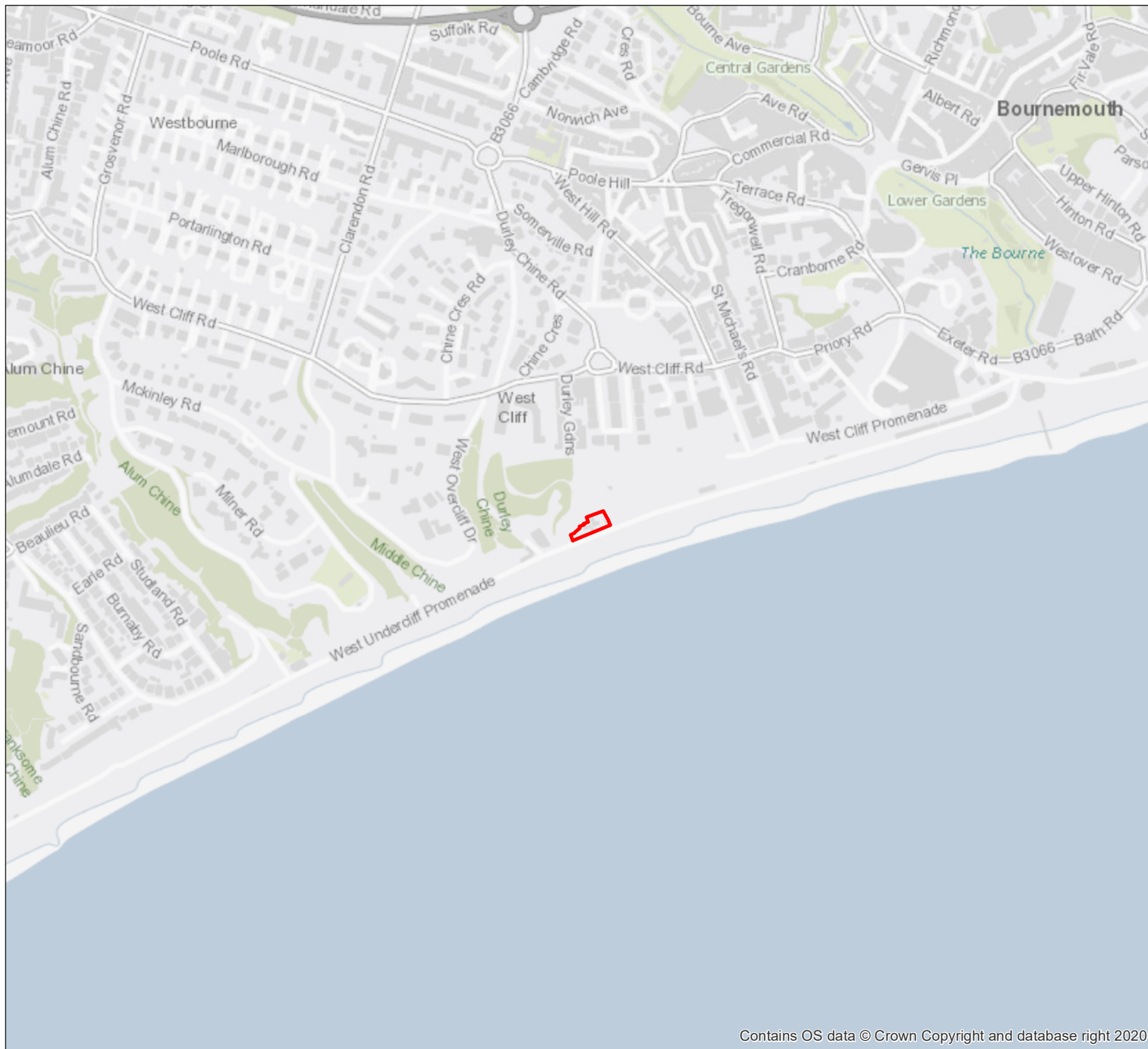


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**Map 2** Phase 1 Habitat Map

# DURLEY CHINE SEAFRONT, BOURNEMOUTH, DORSET

## ECOLOGICAL IMPACT ASSESSMENT











### Map 2 - Phase 1 Habitat Map

Client: BCP Council

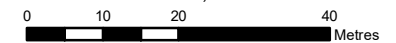
Date: October 2020

Status: Final

#### KEY

-  Site Boundary
-  Solent and Dorset Coast SPA
-  Poole Bay Cliffs SSSI
-  Bournemouth Cliffs SNCI
-  Coniferous Woodland
-  Dense Scrub / Coastal Grassland Matrix
-  Buildings
-  Hardstanding
-  Wall
-  Building Number

Scale at A4: 1:1,000



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**Map 3**      Bat Emergence Survey

# DURLEY CHINE SEAFRONT, BOURNEMOUTH, DORSET

## ECOLOGICAL IMPACT ASSESSMENT




### Map 3 - Bat Emergence/Re-entry Survey

Client: BCP Council

Date: October 2020

Status: Final

#### KEY

-  Site Boundary
-  Bat Surveyors
-  Building Number



N.B. A single bat dusk emergence survey was undertaken at B4 on 7th July 2020. No bats were recorded emerging or re-entering the building during the survey.

Scale at A4: 1:500  
0 5 10 20 Metres



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**Map 4**      Reptile Survey



**DURLEY CHINE SEAFRONT,  
BOURNEMOUTH, DORSET**

ECOLOGICAL IMPACT ASSESSMENT

Map 4 - Reptile Survey






Client:	BCP Council
Date:	October 2020
Status:	Final

**KEY**

 Site Boundary

**Reptile Survey Results 2020**

**Species, Peak Count**

-  Common Lizard, x1 adult female
-  Common Lizard, x1 adult - unsexed
-  Sand Lizard, x1 adult male
-  Sand Lizard, x1 juvenile
-  No reptile records

N.B. A total of 50 reptile refugia were distributed on 24th April 2020 with seven inspection visits undertaken between 7th May 2020 and 22nd September 2020. A peak count of one adult common lizard and one adult and one juvenile sand lizard were recorded; no other species were encountered during the surveys.



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**Map 5**      Invertebrate Survey



Species recorded within heathland area (refer to report):

- Heath grasshopper *Chorthippus vagans*
- Cuckoo wasp *Hedychridium roseum*
- Cuckoo wasp *Hedychrum niemelai*
- Heath potter wasp *Eumenes coarctatus*
- Eumenid wasp *Microdynerus exilis*
- Digger wasp *Astata boops*
- Bee-wolf *Philanthus triangulum*
- Mining bee *Andrena bimaculata*
- Mining bee *Lasioglossum pauxillum*
- Cuckoo bee *Sphecodes crassus*
- Mining bee *Dasypoda hirtipes*
- Nomad bee *Nomada fucata*

Species recorded within grassland area (refer to report):

- Small heath *Coenonympha pamphilus*
- Cinnabar moth *Tyria jacobaeae*

# DURLEY CHINE SEAFRONT, BOURNEMOUTH, DORSET

## ECOLOGICAL IMPACT ASSESSMENT

Map 5 - Invertebrate Survey

Client:	BCP Council
Date:	October 2020
Status:	Draft

### KEY

- Site Boundary
- Suitable Invertebrate Habitats**
- Dense Scrub
- Ericaceous Heath
- Rank Grassland / Low Scrub Matrix

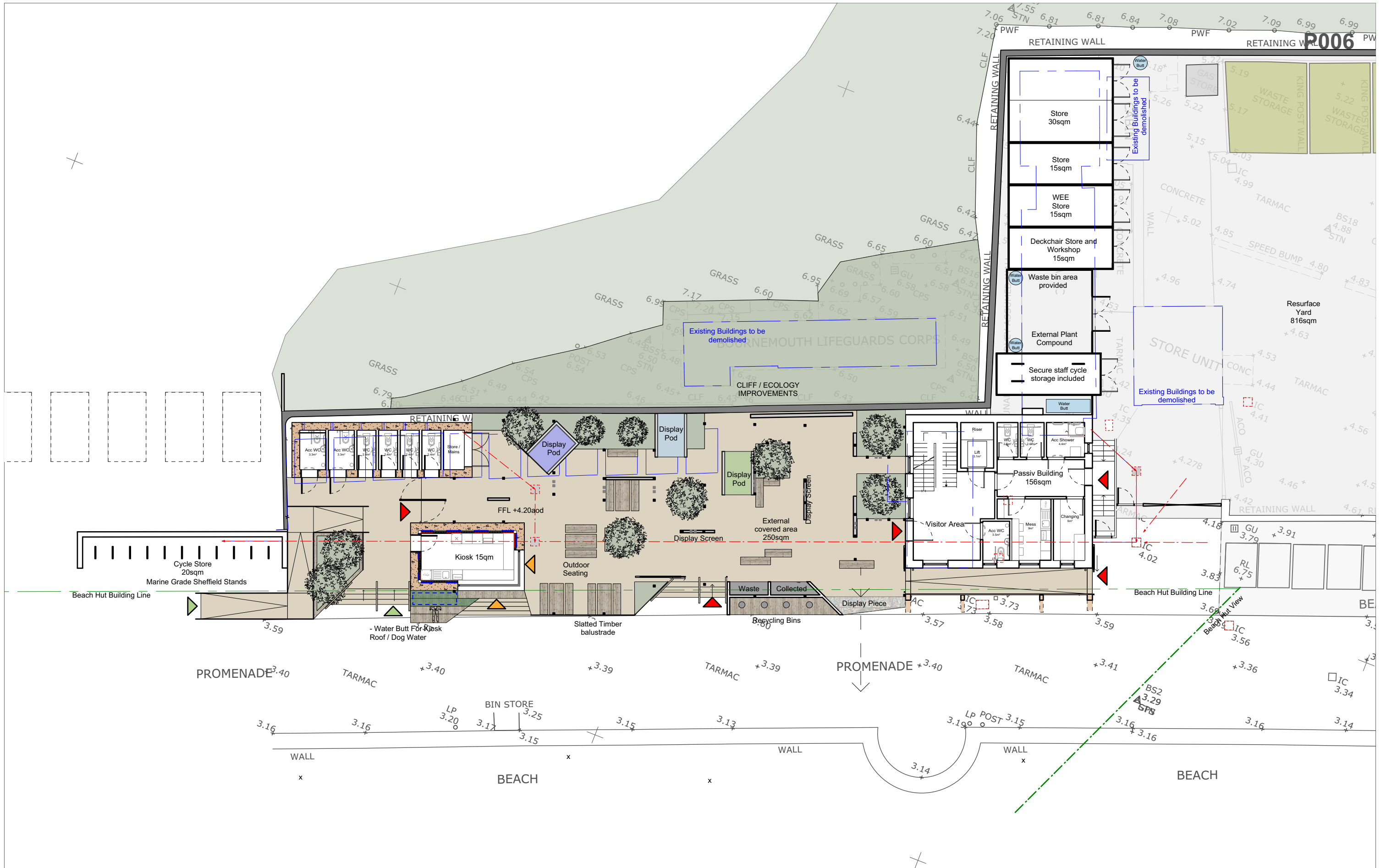
N.B. Invertebrate surveys were undertaken on 9th June, 21st July and 26th August 2020.



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## **Appendix 1** Proposed Site Layout



**Proposed Ground Floor Plan**

x = Exhibitions indicative subject to separate planning application

Notes: Unless otherwise stated, this drawing is for information only. Do not scale. Use figured dimensions only. Check all dimensions on site and advise of any discrepancies before commencing work on site.  
 Digital Transmissions: This data is supplied only as a means to aid you in the production of your work, the data should always be checked against the hard copy of the drawing. Some of the data may have been produced by importing data from external sources, discrepancies may have occurred during this procedure. FootprintArchitects cannot accept responsibility for any discrepancies within the CAD data file. No third party shall issue footprint architects data/drawings without the written approval of FootprintArchitects. FootprintArchitects check all data for viruses but cannot accept responsibility for any loss incurred by any third party as a result of installing data.

General Notes:

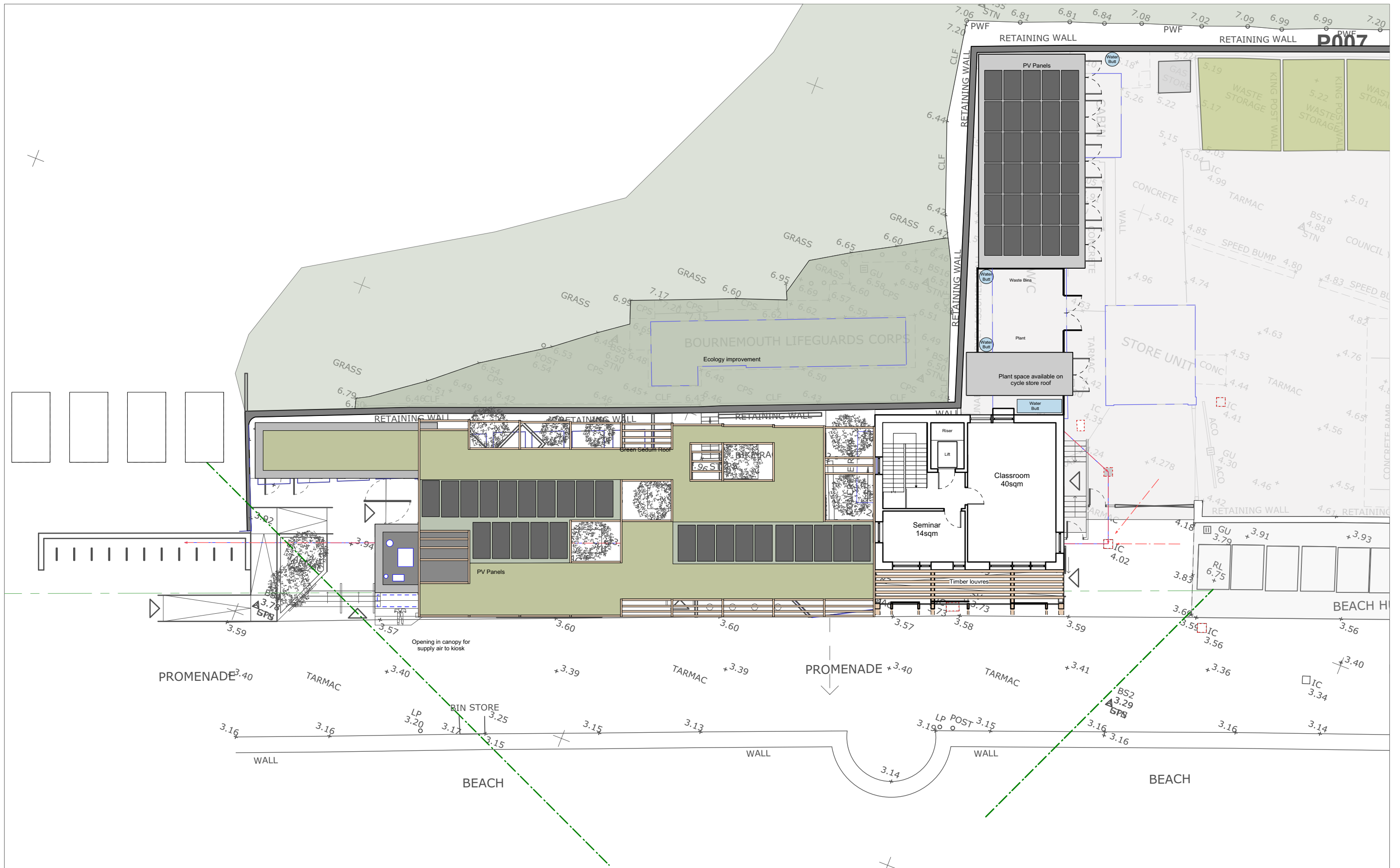
#	Date	Revision Note

Project: Durlley Chine Visitor Centre		
Subject: Proposed Ground Floor Plan		
Scale: 1:250 @ A3	Status: Planning	Date:
Project Ref: 7265	Drawing: P006	Rev:

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 www.footprintarchitects.co.uk

**DRAFT**

Lifeguard Station



**Proposed First Floor Plan**

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General Notes:

# Date Revision Note

0 2 4 8 (1:200 @ A3, 1:100 @ A1) 16m

**DRAFT**

Project: Durlley Chine Visitor Centre		
Subject: Proposed First Floor Plan		
Scale: 1:250 @ A3	Status: Planning	Date:
Project Ref: 7265	Drawing: P007	Rev:

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## **Appendix 2** Landscape Proposals





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## **Appendix 3** 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 intentionally 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 4 Relevant 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.

## 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.

## Reptiles

The four widespread species of reptile that are native to Britain, namely common or viviparous lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, adder *Vipera berus* and grass snake *Natrix helvetica*, are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are afforded limited protection under Section 9 of this Act. This makes it an offence to:

- Intentionally kill or injure any of these species.

The remaining native species of British reptile (sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca*) receive a higher level of protection via inclusion under 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 (in England and Wales only) and the Wildlife and Countryside Act 1981 (as amended). The distribution of these species are restricted to only a few sites in England.

---

## **Appendix 5** Protected and Notable Species Appraisal Methods

### **Bats**

The survey conformed to current Bat Conservation Trust guidelines (Collins, 2016). An assessment was made of the suitability of buildings on the site and immediately on the site boundary to support roosting bats based on the presence of features such as loose or missing roof tiles or lifted lead flashing.

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 potential for the site to support roosting, foraging and commuting bat is based on a four-point scale as detailed in **Appendix 6**.

### **Otter**

The otter appraisal was based on an assessment of the suitability of the habitat present within the site to support otter by reference to habitat type (such as rivers, streams, ditches, wetlands, reed beds, lakes, ponds and reservoirs), proximity of the site to freshwater and potential important feeding resources (such as fisheries), presence of habitat features which could provide opportunities for resting places and/or holts (such as tunnels, hollows at the base of trees and presence of dense, undisturbed habitat). During the survey attention was paid to the presence of evidence such as spraints, feeding remains, footprints and slides.

### **Badger**

The survey involved a detailed investigation of the site to identify evidence of badger residence, foraging or territorial activity. Particular emphasis was placed on locating badger setts, paths, and signs of territorial activity such as latrine sites both on-site and within immediately adjacent areas where access was possible.

### **Hazel Dormouse**

The appraisal for the potential of the site to support 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 potential presence of hazel dormouse.

### **Water Vole**

The water vole appraisal was based on an assessment of the suitability of the habitat present within the site to support water vole by reference to habitat type (such as rivers, streams, ditches, wetlands, reed beds, lakes, ponds and reservoirs), bank structure and the bank side vegetation. Water voles generally require sloping banks in which to burrow and well-developed bank side vegetation to provide shelter and food. During the survey attention was paid to the presence of burrows, latrines, feeding remains, trails and footprints.

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## **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 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 potential 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. The suitability of on-site ponds and terrestrial habitat is considered in relation to the presence of ponds within the wider area, as identified within the desktop study (Paragraph 3.4.3), and their suitability to be used as a network.

## **Invertebrates**

An assessment was made of the site for its potential value 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.

## **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) species<sup>14</sup>, 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.

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<sup>14</sup> 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.



## Appendix 6 Appraisal Criteria 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 7**<sup>15</sup>.

**Table 7:** Criteria used to Assess Suitability of Roosting and Foraging/Commuting Habitat for Bats

Suitability	Description of roosting habitats	Commuting and foraging habitats
<b>High</b>	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.	<p>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.</p> <p>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.</p> <p>Site is close to and connected to known roosts.</p>
<b>Moderate</b>	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.	<p>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.</p> <p>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.</p>
<b>Low</b>	<p>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).</p> <p>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.</p>	<p>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).</p> <p>Suitable, but isolated, habitat that could be used by small numbers of foraging bats such as a lone tree or a patch or scrub.</p>
<b>Negligible</b>	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.

<sup>15</sup> Table adapted from (Collins, 2016)

## Appendix 7 Statutory Designated Sites within the Desktop Study Area

Details of statutory designated sites within the desktop study area, as listed in Paragraph 4.2.1, are provided in **Table 8**.

**Table 8:** Statutory Designated Sites Located Within the Desktop Study Area

<b>Site Name</b>	Solent and Dorset Coast
<b>Site Designation</b>	SPA
<b>Approximate Relative Location</b>	30 metres south
<b>Reasons for Designation:</b>	
<p>The site qualifies for supporting the following Annex I species:</p> <p><b>Breeding</b></p> <ul style="list-style-type: none"> <li>▪ Sandwich tern <i>Sterna sandvicensis</i>, 441 pairs representing at least 4.01% of the breeding population in Great Britain;</li> <li>▪ Common tern <i>Sterna hirundo</i>, 492 pairs representing at least 4.77% of the breeding population in Great Britain; and</li> <li>▪ Little tern <i>Sterna albifrons</i>, 63 pairs representing at least 3.31% of the breeding population in Great Britain.</li> </ul>	

<b>Site Name</b>	Poole Bay Cliffs
<b>Site Designation</b>	SSSI
<b>Approximate Relative Location</b>	Directly adjacent to northern and western boundary
<b>Reasons for Designation:</b>	
<p>Sections of the cliffs support heath vegetation with heather <i>Calluna vulgaris</i>, bell heather <i>Erica cinerea</i>, bristle bent <i>Agrostis curtisii</i> and dwarf gorse <i>Ulex minor</i>. Some areas of exposed sands support dune-like vegetation with marram <i>Ammophila arenaria</i>, lyme-grass <i>Leymus arenarius</i> and other characteristic species. The site supports at least two important populations of the rare and declining sand lizard, these being associated with certain areas of suitable habitat. There are also local seepage features, in places supporting common reed <i>Phragmites australis</i> and purple moor-grass <i>Molinia caerulea</i>. The specialised invertebrate fauna of these seepages includes several rare species such as the shore bug <i>Saldula arenicola</i> and the fly <i>Cephalops chlorinae</i> the latter being recorded from only one other locality in Britain.</p>	

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## **Appendix 8** Invertebrate Status Definitions

### **RDB 1 - Endangered**

Taxa in danger of extinction and whose survival is unlikely if causal factors continue operating.

- Species which are known or believed to occur as only a single population within one 10km square of the National Grid.
- Species which only occur in habitats known to be particularly vulnerable.
- Species which have shown a rapid or continuous decline over the last twenty years and are now estimated to exist in five or fewer 10km squares.
- Species which are possibly extinct but have been recorded in the 20th century and if rediscovered would need protection.

### **RDB 2 - Vulnerable**

Taxa believed likely to move into the endangered category in the near future if the causal factors continue operating.

- Species declining throughout their range.
- Species in vulnerable habitats.

### **RDB 3 - Rare**

Taxa with small populations that are not at present Endangered or Vulnerable, but are at risk.

- Species which are estimated to exist in only fifteen or fewer post 1970 10km squares. This criterion may be relaxed where populations are likely to exist in over fifteen 10km squares but occupy small areas of especially vulnerable habitat.

### **Nationally Scarce (Na)**

Taxa which do not fall within the RDB categories but which are none - the - less uncommon in Great Britain and thought to occur in 30 or fewer 10km squares of the National Grid.

### **Nationally Scarce (Nb)**

Taxa which do not fall within the RDB categories but which are none - the - less uncommon and thought to occur in between 31 and 100 10km squares of the national Grid.

### **Nationally Scarce (N)**

Species which are estimated to occur within the range of 16 to 100 10km squares.

### **Local**

These species may have a restricted geographical range in the UK, for example a requirement for warmth (southern species - usually denoted by species that occur wholly or mainly South of the Severn - Wash line), or cooler environments (northern species occurring wholly or mainly North of the Severn - Wash line) or upland species occurring only in more montane regions in the UK e.g. Dartmoor, Scottish Highlands or Snowdonia. However, within these geographic ranges such species may occur in some abundance in a variety of habitats. Alternatively, some local species have a wide geographical national distribution but occur only in a specific habitat type due to foraging or nesting requirements. For example, some species breed only in sand, or collect pollen and/or nectar only from plants occurring on chalk grassland or their larval development is dependant upon fen conditions or water seepages. Nonetheless, local species may be abundant within areas supporting their specific requirements, differentiating them from Nationally Scarce or threatened species which often have a combination of very exacting geographical and microhabitat requirements.

### **Common and Widespread**

This denotes species that occur over a wide geographical area in the UK, and which have fairly undemanding requirements in terms of habitat type for larval development. Examples include species which develop in decaying vegetation, feed on aphids, live in stems of scrubby plants with no specific host requirement, feed on a variety of grasses or develop in any type of water body (even puddles). Alternatively, they may be mass migrants from continental Europe - some hoverflies e.g. *Episyrphus balteatus* or some common *Eupeodes* species arrive in millions each year and have no exacting habitat requirements.

**Appendix 9** Full Invertebrate Survey Results

Order	Family	Scientific Name	English Name	Status	Date
ORTHOPTERA (Grasshoppers & Crickets)		<i>Chorthippus brunneus</i>	Field grasshopper	Common Widespread	21/07/2020, 26/08/2020
		<i>Chorthippus parallelus</i>	Meadow grasshopper	Common Widespread	09/06/2020, 21/07/2020, 26/08/2020
		<i>Chorthippus vagans</i>	Heath grasshopper	Rare RDB 3	21/07/2020
		<i>Conocephalus discolor</i>	Long-winged conehead	Common Widespread	21/07/2020, 26/08/2020
		<i>Metriopectera roeselii</i>	Roesel's bush cricket	Common Widespread	09/06/2020, 21/07/2020
		<i>Omocestus viridulus</i>	Common grasshopper green	Common Widespread	09/06/2020
HEMIPTERA (True Bugs)	Coreidae (Squash Bugs)	<i>Coreus marginatus</i>	Squash bug	Common Widespread	21/07/2020
	Pentatomidae (Shield Bugs)	<i>Aelia acuminata</i>	Bishops mitre	Common Widespread	09/06/2020
		<i>Eurydema oleracea</i>	Brassica bug	Common Widespread	21/07/2020
ODONATA (Dragonflies & Damselflies)	Libellulidae (Skimmers & Darters)	<i>Libellula quadrimaculata</i>	Four-spotted chaser	Common Widespread	09/06/2020
LEPIDOPTERA		<i>Callophrys rubi</i>	Green hairstreak	Common Widespread	09/06/2020

Order	Family	Scientific Name	English Name	Status	Date
(Butterflies & Moths)		<i>Coenonympha pamphilus</i>	Small heath	UK BAP (Research only)	09/06/2020
		<i>Lycaena phlaeas</i>	Small copper	Common Widespread	09/06/2020, 21/07/2020, 26/08/2020
		<i>Maniola jurtina</i>	Meadow brown	Common Widespread	21/07/2020
		<i>Melanargia galathea</i>	Marbled white	Common Widespread	09/06/2020
		<i>Pieris brassicae</i>	Large white	Common Widespread	21/07/2020, 26/08/2020
		<i>Pieris rapae</i>	Small white	Common Widespread	26/08/2020
		<i>Polyommatus icarus</i>	Common blue	Common Widespread	21/07/2020
		<i>Pyronia tithonus</i>	Gatekeeper	Common Widespread	21/07/2020, 26/08/2020
		<i>Thymelicus sylvestris</i>	Small skipper	Common Widespread	09/06/2020, 21/07/2020
		<i>Tyria jacobaeae</i>	Cinnabar moth	UK BAP (Research only)	21/07/2020
DIPTERA (True Flies)	Asilidae (Robberflies)	<i>Dioctria baumhaueri</i>		Common, Widespread	09/06/2020
		<i>Dioctria linearis</i>		Common Widespread	09/06/2020
		<i>Dysmachus trigonus</i>		Common Widespread	09/06/2020, 21/07/2020

Order	Family	Scientific Name	English Name	Status	Date
		<i>Machimus cingulatus</i>		Common Widespread	21/07/2020, 26/08/2020
	Syrphidae (Hoverflies)	<i>Chrysotoxum bicinctum</i>		Common Widespread	21/07/2020
		<i>Eristalis pertinax</i>		Common, Widespread	26/08/2020
		<i>Eristalis tenax</i>		Common, Widespread	26/08/2020
		<i>Eupeodes corollae</i>		Common Widespread	09/06/2020
		<i>Eupeodes luniger</i>		Common Widespread	21/07/2020
		<i>Helophilus trivittatus</i>		Common Widespread	26/08/2020
		<i>Merodon equestris</i>		Common Widespread	09/06/2020
		<i>Myathropa florea</i>		Common Widespread	21/07/2020, 26/08/2020
		<i>Paragus haemorrhous</i>		Common Widespread	09/06/2020
		<i>Scaeva pyrastris</i>		Common Widespread	09/06/2020
		<i>Sphaerophoria scripta</i>		Common Widespread	09/06/2020, 21/07/2020, 26/08/2020
		<i>Syritta pipiens</i>		Common Widespread	21/07/2020, 26/08/2020
		<i>Volucella bombylans</i>		Common Widespread	09/06/2020

Order	Family	Scientific Name	English Name	Status	Date
		<i>Xanthogramma pedisequum</i>		Common Widespread	09/06/2020
	Conopidae (Thick – headed flies)	<i>Conops ceiraeformis</i>		Common Widespread	21/07/2020
		<i>Conops quadrifasciatus</i>		Common Widespread	21/07/2020
		<i>Sicus ferrugineus</i>		Common Widespread	09/06/2020
	Tephritidae (Picture-winged flies)	<i>Tephritis vespertina</i>		Common Widespread	26/08/2020
	Tachinidae (Tachinid flies)	<i>Eriothrix rufomaculatus</i>		Common Widespread	21/07/2020
HYMENOPTERA (Bees, Wasps, Ants and Relatives)	Chrysididae (Cuckoo wasps)	<i>Hedychridium ardens</i>		Common, Widespread	09/06/2020
		<i>Hedychridium roseum</i>		Provisionally Nationally Scarce	09/06/2020
		<i>Hedychrum niemelai</i>		Rare RDB 3	09/06/2020, 21/07/2020
	Pompilidae (Spider – hunting wasps)	<i>Arachnospila anceps</i>		Common Widespread	21/07/2020
		<i>Episyron rufipes</i>		Common Widespread	09/06/2020
	Eumenidae (Potter & Mason wasps)	<i>Ancistrocerus parietum</i>		Common Widespread	21/07/2020
		<i>Eumenes coarctatus</i>	Heath potter wasp	Nationally Scarce Na	26/08/2020
		<i>Microdynerus exilis</i>		Nationally Scarce Nb	09/06/2020



Order	Family	Scientific Name	English Name	Status	Date
	Vespidae (Social Wasps)	<i>Vespula vulgaris</i>	Common wasp	Common Widespread	21/07/2020, 26/08/2020
	Specidae Digger wasps	<i>Ammophila sabulosa</i>		Common Widespread	09/06/2020, 21/07/2020, 26/08/2020
	Crabronidae (Digger Wasps)	<i>Astata boops</i>		Provisionally Scarce N	Nationally 21/07/2020
		<i>Cerceris arenaria</i>		Common Widespread	09/06/2020, 21/07/2020
		<i>Cerceris rybyensis</i>		Common Widespread	09/06/2020, 21/07/2020, 26/08/2020
		<i>Crossocerus podagratus</i>		Common Widespread	09/06/2020
		<i>Oxybelus uniglumis</i>		Common Widespread	09/06/2020, 21/07/2020, 26/08/2020
		<i>Philanthus triangulum</i>		Provisionally Scarce N	Nationally 21/07/2020, 26/08/2020
		<i>Tachysphex pompiliformis</i>		Common Widespread	09/06/2020
	Colletidae (Mining & Yellow faced bees)	<i>Colletes fodiens</i>		Common, Widespread	21/07/2020
		<i>Colletes succinctus</i>		Common Widespread	26/08/2020
		<i>Hylaeus hyalinatus</i>		Common Widespread	21/07/2020

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	Andrenidae (Mining Bees)	<i>Andrena bimaculata</i>		Nationally Scarce Nb	09/06/2020
		<i>Andrena dorsata</i>		Common Widespread	09/06/2020
		<i>Andrena flavipes</i>		Common Widespread	09/06/2020, 21/07/2020
		<i>Andrena minutula</i>		Common Widespread	09/06/2020, 21/07/2020
		<i>Andrena ovatula</i>		Common Widespread	21/07/2020
		<i>Andrena wilkella</i>		Common Widespread	09/06/2020
	Halictidae (Mining & Cuckoo Bees)	<i>Halictus tumulorum</i>		Common Widespread	21/07/2020
		<i>Lasioglossum morio</i>		Common Widespread	26/08/2020
		<i>Lasioglossum parvulum</i>		Common Widespread	26/08/2020
		<i>Lasioglossum pauxillum</i>		Nationally Scarce Na	09/06/2020
		<i>Lasioglossum punctatissimum</i>		Common Widespread	09/06/2020, 21/07/2020, 26/08/2020
		<i>Lasioglossum villosulum</i>		Common Widespread	09/06/2020, 26/08/2020
		<i>Sphecodes crassus</i>		Nationally Scarce Nb	26/08/2020
	<i>Sphecodes monilicornis</i>		Common Widespread	26/08/2020	

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		<i>Sphecodes pellucidus</i>		Common Widespread	21/07/2020
	Melittidae (Mining bees)	<i>Dasypoda hirtipes</i>		Nationally Scarce Nb	09/06/2020
	Megachilidae (Solitary bees)	<i>Hoplitis claviventris</i>		Common Widespread	09/06/2020
		<i>Megachile maritima</i>		Common Widespread	21/07/2020
		<i>Osmia leaiana</i>		Common Widespread	09/06/2020
	Anthophoridae (Flower & Nomad bees)	<i>Anthophora bimaculata</i>		Local Widespread	09/06/2020, 21/07/2020
		<i>Epeolus cruciger</i>		Local Widespread	26/08/2020
		<i>Epeolus variegatus</i>		Local Widespread	21/07/2020
		<i>Nomada fabriciana</i>		Common Widespread	09/06/2020
		<i>Nomada fucata</i>		Nationally Scarce Na	09/06/2020, 21/07/2020
	Apidae (Social & Cuckoo Bees)	<i>Apis mellifera</i>	Honey bee	Common Widespread	09/06/2020, 26/08/2020
		<i>Bombus hortorum</i>	A garden bumblebee	Common Widespread	21/07/2020
		<i>Bombus jonellus</i>	Heath bumblebee	Common Widespread	09/06/2020
		<i>Bombus lapidarius</i>	Red-tailed bumblebee	Common Widespread	09/06/2020, 21/07/2020

Order	Family	Scientific Name	English Name	Status	Date
		<i>Bombus lucorum</i>	White-tailed bumblebee	Common, Widespread	26/08/2020
		<i>Bombus pascuorum</i>	Common carder bee	Common, Widespread	09/06/2020, 21/07/2020, 26/08/2020
		<i>Bombus pratorum</i>	Early bumblebee	Common Widespread	09/06/2020
		<i>Bombus terrestris</i>	Buff-tailed bumblebee	Common Widespread	26/08/2020
		<i>Bombus lucorum/terrestris</i> worker	A white-tailed bumblebee	Common, Widespread	09/06/2020, 21/07/2020
COLEOPTERA (Soldier Beetles)	Cantharidae (Soldier Beetles)	<i>Rhagonycha fulva</i>		Common, Widespread	21/07/2020
	Carabidae (Ground & Tiger Beetles)	<i>Cicindela campestris</i>	Common tiger beetle	Common Widespread	09/06/2020
	Cerambycidae (Longhorn Beetles)	<i>Leptura livida</i>		Common Widespread	09/06/2020
	Coccinellidae (Ladybirds)	<i>Coccinella 7 - punctata</i>	Seven spot ladybird	Common, Widespread	09/06/2020, 26/08/2020
	Malachiidae (Pollen Beetles)	<i>Malachius bipustulatus</i>		Common Widespread	09/06/2020
	Oedemeridae (Oedemerid Beetles)	<i>Oedemera nobilis</i>		Common, Widespread	09/06/2020

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	Scarabaeidae (Chafers & Dung Beetles)	<i>Amphimallon solstitiale</i>	Summer chafer	Common Widespread	09/06/2020