



ECOLOGICAL IMPACT ASSESSMENT

Crescent Place, Storrington

On Behalf of: Downsview Associates Ltd

Planning Issue

Client:	Downsview Associates Ltd			
Project:	Crescent Place, Storrington			
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Validity:

This report is valid for 18 months from the date of the site visit. If works have not commenced by this date, an updated site visit should be carried out by a suitably qualified ecologist to assess any changes in the habitats present on site, and to inform a review of the conclusions and recommendations made.

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SUMMARY

Lizard Landscape Design and Ecology has been commissioned by Downsview Associates Ltd to undertake an Ecological Impact Assessment of the proposed development of Crescent Place, Storrington (*Grid Reference: TQ 10065 15276—hereafter referred to as 'the site'*). A Preliminary Ecological Appraisal of the site was undertaken on 20th January 2023. An assessment of the ecological impact of the proposals was then undertaken using this baseline data.

The site consists of land within the curtilage of 2no. neighboring residential properties; Little Snapes and Crescent Place. The site is predominantly occupied by buildings, associated hardstanding and modified grassland. These habitats are of limited ecological value and some further features of moderate value were identified: a subsection of tussocky modified grassland to the east, scattered trees, native hedgerows, multiple log piles and the stream running through the site.

The site contains no high value habitat but provides some suitable habitat for bats, reptiles, hedgehogs, [REDACTED], invertebrates and breeding birds. Subject to sensitive design which ensures the retention of suitable habitats, the incorporation of a sensitive lighting scheme and controlled clearance of vegetation, impacts upon these species can be avoided.

Once avoidance, mitigation and compensation measures have been considered, the majority of impacts of the planned development upon biodiversity will be **negligible and non-significant**.

1.0 INTRODUCTION

- 1.1 Lizard Landscape Design and Ecology has been commissioned by Downsview Associates Ltd to undertake an Ecological Impact Assessment of the proposed development of Crescent Place, Storrington (*Grid Reference: TQ 10065 15276 – hereafter referred to as ‘the site’*).
- 1.2 The scope of this assessment has been determined with consideration of best-practice guidance provided by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018) and the Biodiversity: Code of practice for planning and development published by the British Standards Institute (BS 42020:2013).
- 1.3 An initial Preliminary Ecological Appraisal of the site was undertaken on 20th January 2023. Further survey with regards the potential reptile population has been recommended.
- 1.4 Potential impacts of the proposals, and details of avoidance, mitigation and compensation measures have been detailed within this report. Residual impacts are then discussed once all mitigation and compensation measures have been considered.

Site Information

- 1.5 The survey area covers c. 0.4 (ha) and comprises 2no. neighbouring residential properties; Little Snapes to the north of the site and Crescent Place to the south. The boundaries of the properties are delineated by a mixture of hedgerows, trees and fencing. Outside of the dwellings the site is dominated by associated hardstanding, modified grassland and further buildings such as garden sheds, garages and a small self-contained rental unit/pod and an annex building both associated with Crescent Place. The site is located toward the northeast extremity of the village of Storrington in the Horsham district of West Sussex. The site is bordered by residential property to the north and south, Storrington Road to the west and a residential garden runs along the eastern boundary.

Surrounding Landscape

- 1.6 Located towards the northeast edge of Storrington, further residential development dominates the local landscape to the south and west of the site, and mixed farmland to the north and east. Priority Habitat of *Lowland Mixed Deciduous Woodland* exists 250m southeast of the site.
- 1.7 A small stream runs through the site and a single pond was identified within 500m of the site, located c. 380m west of the site.

Development Proposals

- 1.8 It is understood that the proposals include the construction of a single residential property with a garage and associated access / parking area.

Report Aims

- 1.9 The aim of the baseline surveys and Ecological Impact Assessment has been:
- *Describe baseline conditions at the site;*
 - *Determine the importance of features which may be impacted by the scheme;*
 - *Identify impacts of the proposed development and set out appropriate avoidance, mitigation and compensation measures;*
 - *To identify any residual impacts;*
 - *To provide details of enhancements to be incorporated into the scheme;*
 - *Provide sufficient information to determine whether the project accords with relevant nature conservation policies and legislation, and where appropriate, to allow conditions or obligations to be proposed by the relevant authority.*

2.0 PLANNING POLICY AND LEGISLATION

Legislation

- 2.1 Legislation relating to wildlife and biodiversity of particular relevance to this EclA includes:
- *The Conservation of Habitats and Species Regulations 2017;*
 - *The Wildlife and Countryside Act 1981 (as amended);*
 - *The Natural Environment and Rural Communities (NERC) Act 2006.*

- 2.2 This above legislation has been addressed, as appropriate, in the production of this report.

National Planning Policy

- 2.3 The National Planning Policy Framework (*NPPF*) 2021 sets out the government planning policies for England and how they should be applied. '*Chapter 15: Conserving and Enhancing the Natural Environment*' states that development should be '*minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.*'

- 2.4 The Government Circular 06/2005, which is referred to by the NPPF, provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system.

Local Planning Policy

- 2.5 'Policy 31 Green Infrastructure and Biodiversity' of the Horsham Planning Framework (2015) states that:

1. Development will be supported where it can demonstrate that it maintains or enhances the existing network of green infrastructure. Proposals that would result in the loss of existing green infrastructure will be resisted unless it can be demonstrated that new opportunities will be provided that mitigates or compensates for this loss, and ensures that the ecosystem services of the area are retained.
2. Development proposals will be required to contribute to the enhancement of existing biodiversity, and should create and manage new habitats where appropriate. The Council will support new development which retains and / or enhances significant features of nature conservation on development sites. The Council will also support development which makes a positive contribution to biodiversity through the creation of green spaces, and linkages between habitats to create local and regional ecological networks.
3. Where felling of protected trees is necessary, replacement planting with a suitable species will be required.

4. a) Particular consideration will be given to the hierarchy of sites and habitats in the district as follows:
 - i. Special Protection Area (SPA) and Special Areas of Conservation (SAC)
 - ii. Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNRs)
 - iii. Sites of Nature Conservation Importance (SNCIs), Local Nature Reserves (LNRs) and any areas of Ancient woodland, local geodiversity or other irreplaceable habitats not already identified in i & ii above.
- b) Where development is anticipated to have a direct or indirect adverse impact on sites or features for biodiversity, development will be refused unless it can be demonstrated that:
 - i. The reason for the development clearly outweighs the need to protect the value of the site; and,
 - ii. That appropriate mitigation and compensation measures are provided.
5. Any development with the potential to impact Arun Valley SPA or the Mens SAC will be subject to a HRA to determine the need for an Appropriate Assessment. In addition, development will be required to be in accordance with the necessary mitigation measures for development set out in the HRA of this plan.

3.0 METHODOLOGY

3.1 Desk Study

3.1.1 The Multi-Agency Geographic Information for the Countryside (*MAGIC*) was consulted for all designated sites, priority habitats and protected species licence records within a practicable zone of influence of the site. Due to the small scale of the site, a full records search from the local records centre was not proportionate to the predicted impacts of the scheme and so was not sought. This approach is in accordance with best practise guidance (CIEEM, 2020).

3.2 Preliminary Ecological Appraisal

3.2.1 The initial field survey was undertaken on 20th January 2023 by a suitably experienced Ecologist (Sam Hall MSc, 3 years professional experience; Assistant Ecologist, Lizard Landscape Design and Ecology). Weather conditions were cold (c.5°C), with a light wind (Beaufort Scale 1), 20% cloud cover and no rain.

3.2.2 The field survey comprised a walkover inspection of the land and covered all accessible parts of the site, including boundary features. Habitats were recorded according to the UK-Habs Classification System as described within the UK Habitats Manual (Butcher *et al*, 2020). All habitats present on-site were recorded on a UKHab map (Figure No. 01 – Site Habitat Plan). A list of plant species was compiled, together with an estimate of abundance made according to the DAFOR scale (*Table 05*).

3.2.4 The survey methodology was extended to provide more detail in relation to the sites potential to support rare or protected fauna, as described by the *Chartered Institute of Ecology and Environmental Management's Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2017b). The assessment of habitat suitability for protected, rare or priority species is based on current good practice guidance such as that in the *Herpetofauna Workers' Manual* (Gent and Gibson, 2003) and *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collin (ed.), 2016).

3.3 Preliminary Bat Roost Assessment

3.3.1 A Preliminary Bat Roost Assessment was undertaken on 20th January 2023 by Sam Hall (Accredited agent under 2016-20460-CLS-CLS) who undertook a ground level assessment of the existing trees within and adjacent to the site and buildings within the site boundary. The bat surveyor assessed the trees and buildings visually and searched for direct evidence of bats evidence, such as;

- *Grease Marks;*
- *Urine Stains;*
- *Bat Droppings;*
- *Feeding Remains;*
- *Dead or Live Bats.*

3.3.2 Trees were visually identified from the ground, using binoculars where necessary, for any features that could be used by bats such as:

- *Woodpecker Holes;*
- *Knot Holes;*
- *Tear-outs;*
- *Flush Cuts;*
- *Double Leaders.*

3.3.3 Once features had been assessed the trees were then categorised in accordance with *Table 4.1 of the Bat Conservation Trust’s Good Survey Guidelines (2016) (shown below)*:

Table No. 01 – Bat Roost Suitability Guidelines (BCT, 2016)

Category	Buildings	Trees
‘Negligible’	No suitable features identified.	No suitable features identified.
‘Low’	A structure which could be used opportunistically, however, are not likely to be used on a regular basis / by a large number of bats.	Tree of sufficient size / age to support bat roost features; but with none identified from the ground.
‘Moderate’	A building with features which, could be used regularly by a small number of bats.	Tree with features which, may support a bat roost of low conservation status.
‘High’	A building with features suitable for use by a large number of bats on a regular basis.	A tree with several potential bat roost sites that are suitable for use by a large number of bats.

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3.5 Ecological Impact Assessment

3.5.1 The methodology for Ecological Impact Assessment (EclA) follows best practice guidelines set by the Chartered Institute of Ecology & Environmental Management (CIEEM): 'Guidelines for Ecological Impact Assessment' (CIEEM, 2018). This includes identifying the baseline conditions on the site and subsequently rating the potential effects of the development based on the sensitivity and value of the resource affected, combined with the magnitude, duration and scale of the impact (or change). This is initially assessed without mitigation measures, and then assessed again after allowing for the proposed mitigation measures; this provides the residual effects. The assessment is divided into construction effects and longer-term operational effects.

3.5.2 The CIEEM guidelines (2018) state that ecological features should be considered within a 'defined geographical context'. The geographical frame of reference used to determine ecological importance in this assessment is detailed below:

- *International and European;*
- *National;*
- *Regional;*
- *County;*
- *District;*
- *Local;*
- *Site Level;*
- *Negligible.*

3.5.3 Based upon CIEEM guidance, value was determined with reference to the following factors:

- *Its inclusion as a Designated Site or other protected area;*
- *The presence of habitat types of conservation significance, e.g. Habitats of Principal Importance (NERC 2006);*
- *The presence (or potential presence) of species of conservation significance e.g. Species of Principal Importance (NERC 2006);*
- *The presence of other protected species e.g. those protected under The Wildlife and Countryside Act 1981;*
- *The sites social and economic value.*

3.5.4 The ecological impacts resulting from the proposals were then described according to a defined set of characteristics as defined within '*Guidelines for Ecological Impact Assessment in the UK and Ireland*' (CIEEM, 2018). When describing impacts the assessment refers to characteristics such as the extent; magnitude; duration; frequency; and, reversibility of the impact in order to provide justification for any conclusions about the nature and likelihood of the impact described.

3.5.5 Where initial impacts have been identified as significant, avoidance, mitigation and compensation measures have been proposed to avoid, prevent or offset such effects. This assessment then considers residual impacts (*once all mitigation has been considered*), with any significant effects highlighted. A significant effect is defined as "*an effect which either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general*". Enhancement has been proposed to ensure that the development represents a net gain in biodiversity in accordance with National Policy.

3.6 Constraints and Limitations

- 3.6.1 Due to the field survey consisting of only one site visit, certain species, particularly some of the flowering plants, may not have been visible and hence overlooked. These are accepted constraints associated with the standard survey methodology.
- 3.6.2 No other limitations were encountered, or assumptions made during either the desk study or the field survey and it is considered that with the access gained and recording undertaken an accurate assessment of the site's ecological value has been made.

4.0 BASELINE ECOLOGICAL CONDITIONS

4.1 Designated Sites

Statutory Protected Sites

- 4.1.1 The desk study identified national statutory designated sites including Local Nature Reserves (LNRs), National Nature reserves (NNR) and Sites of Special Scientific Interest (SSSIs) within a 2.0km radius of the site, and international statutory designated sites including Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsars (Wetlands of International Importance) within a 10.0km radius of the site. Where SAC's designated for their bat interest are present this Zol has been extended to 12km in accordance with recent guidance (SDNP, 2020).

- 4.1.2 The following statutory protected sites are noted within the zone of influence of the proposed site:

Table No. 02 – Statutory Protected Sites

Site	Description	Location
<i>Sullington Warren SSSI</i>	<i>This site supports a range of heathland habitats including both wet and dry heath, grassland, scrub and woodland. The woodland carries a rich community of breeding birds</i>	<i>500m SW</i>
<i>Chantry Mill SSSI</i>	<i>Geological site that provides the best available exposure of the unusual 'iron-grit' horizon which characterises the Gault/Folkestone Beds junction in this part of Sussex and which contrasts strongly with the type of transition seen between these formations elsewhere in south-east England.</i>	<i>1.3km SW</i>
<i>South Downs National Park NNR</i>	<i>This site covers c. 162,651 hectares from Winchester in the west to Eastbourne in the east. The site contains a wide range of habitats of special ecological, geological and cultural value.</i>	<i>1.3km S</i>
<i>Arun Valley RAMSAR / SAC / SPA</i>	<i>This site is made up of Amberley Wild Brooks SSSI, Pulborough Brooks SSSI and most of Waltham Brooks SSSI. The 3no. component SSSIs encompass a series of wet meadows, alluvial grazing marsh and former raised peat bog. This site regularly supports nationally important numbers of Bewick's swan <i>Cygnus columbianus bewickii</i> and regularly used by over 20,000 waterfowl yearly.</i>	<i>4.4km NW</i>

- 4.1.3 The site is located within the *Impact Risk Zone* of *Sullington Warren SSSI* and *Hurston Warren SSSI*, however development proposals are unlikely to meet the criteria which would require consultation with Natural England.

Non-Statutory Protected Areas

- 4.1.4 *Sites of Nature Conservation Importance (SNCIs)* are designations applied to the most important non-statutory nature conservation sites. They are recognised by the *National Planning Policy Framework (2021)* and as such are material considerations when assessing planning applications. The following SNCIs were identified within 2.0km of the site:

Table No. 03 – Non-Statutory Protected Sites

Site	Location
<i>Heath Common, Sullington</i>	<i>550m S</i>
<i>West Wantley Farm Meadow, Storrington</i>	<i>950m NW</i>

4.2 Habitats

- 4.2.1 Within 2.0 km of the site there are *Priority Habitats* of *Coastal Floodplain and Grazing marsh* and *Lowland Mixed Deciduous Woodland*.

- 4.2.2 Habitats within and adjacent to the site include:

- *u1b5 - Buildings*
- *u1b - Developed Land. Sealed Surface*
- *g4, 10, 11, 231 - Modified Grassland, vegetated garden with scattered scrub and trees*
- *h2b – Other Hedgerow*
- *r2b – Other Rivers and Streams*

u1b5 - Buildings

- 4.2.3 There is a total of 8no. buildings on site including the 2no. main dwellings, a garage and garden shed associated with each of these and a further annex and self-contained holiday rental unit associated with B01 (to the south of the site). The construction of these buildings is described in section 4.3.3. This habitat is of **negligible** ecological value.

u1b – Developed Land. Sealed Surface

- 4.2.4 Sealed surface parking areas exist to the north of Crescent Place and to the west of the central garage building. Further to this much of the garden area to the south of Crescent Place is concrete surrounding a swimming pool and paving slabs. This habitat is of **negligible** ecological value.

g4, 10, 11, 231 - Modified Grassland, vegetated garden with scattered scrub and trees

- 4.2.5 Modified grassland encompasses much of the site, functioning as garden space for the dwellings on site. The sward of the grassland which surrounds each dwelling is kept low and appears typical of a managed lawn. Perennial ryegrass (*Lolium perenne*) dominated the lawn to the north of Crescent place and throughout the other grassland areas red fescue (*Festuca rubra*) and a moss species were codominant. Common and widespread forbs such as dandelion (*Taraxacum officinale*) and creeping buttercup (*Ranunculus repens*) were frequent throughout this habitat with occasional wild strawberry (*Fragaria vesca*) and ragwort (*Senecio jacobaea*). There are also ornamental planting areas throughout featuring a mix of species such as yucca (*Yucca filamentosa*) and stinking iris (*Iris foetidissima*). The grassland area to the east of the site shows evidence of reduced management (see target note 03 on figure 01), with a tussocky structure and an area of scrub (predominantly bramble *Rubus fruticosus* and pendulous sedge *Carex pendula*). Further to this, scattered trees such as oak (*Quercus robur*), cherry (*Prunus sp.*) and western red cedar (*Thuja plicata*), standing deadwood (Target note 02) and log piles (Target note 01) provide potential ecological opportunities. This habitat is therefore of potential **site value**.

H2b – Other Hedgerow

- 4.2.6 3no. distinct hedgerow habitats were noted on site and divide subsections of the site as well as being much of the outer site boundary. The locations of these hedgerows can be seen in figure 01 and species compositions and physical structure is described below:

- H1. Single species (beech *Fagus sylvatica*) hedgerow located along the northern extremity of the eastern site boundary and dividing the grassland to the east of this in two. This hedgerow is actively managed and pruned to a height of 2.0 metres.
- H2. Single species (common box *Buxus sempervirens*) hedgerow located along the boundary to the hardstanding parking area to the west of Little Snipes' garage (B06). This hedgerow is actively managed and pruned to a height of around 1.0m.
- H3. Single species (cherry laurel *Prunus laurocerasus*) hedgerow located along the central section of the western boundary. This hedgerow shows no evidence of management, reaching 4.0m height in places.
- H4. Mixed species (including silver birch *Betula pendula* and holly *Ilex aquifolium*) hedgerow located offsite but immediately adjacent to the northeast and southeast site boundaries. This hedgerow appears to be actively managed to a height of 2.0 metres, although some individuals have been allowed to grow taller.

4.2.7 The hedgerows on and adjacent to the site are of **site value**.

r2b, 73 – Other Rivers and Streams with bare ground

4.2.8 A small stream runs through the site. The bank is dominated by pendulous sedge with frequent herbs such as hemlock water dropwort (*Oenanthe crocata*) and occasional herbs such as cuckoo-pint (*Arum maculatum*) and minor patches of bare ground. The stream itself is dominated by patches of a bur reed species (*Sparganium sp.*)

4.3 Protected Species Assessment

Bats

Desk Study

4.3.1 Common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), Serotine (*Eptesicus serotinus*), western barbastelle (*Barbastella barbastellus*), Daubenton's (*Myotis daubentonii*), whiskered (*Myotis mystacinus*), Natterer's (*Myotis nattereri*), noctule (*Nyctalus noctula*) and brown long-eared (*Plecotus auritus*) bats have been recorded within 2.0km of the site area.

Foraging and commuting value

- 4.3.2 The grassland, buildings and hardstanding that dominate the site offer **negligible** opportunities for local bats. The tussocky grassland, hedgerows, stream and scattered trees and scrub throughout the site offer potential foraging opportunities for bats. No significant linear features are present on site that may provide commuting opportunities. The site is therefore of potential **site value**.

Preliminary Roost Assessment

- 4.3.3 All buildings located within the site boundary were considered in this ecological appraisal and an external ground level assessment undertaken (internal inspection of B01 carried out). A summary of this assessment is shown below.

Table no. 04 – Building Assessment

Ref.	Description	Category
B01	<i>Crescent Place Single storey brick-built dwelling with a pitched and concrete tiled roof, guttering, soffits and PVC fixture windows. No significant entry points noted externally and no signs of bats noted.</i>	Low
B02 + B05 + B08	<i>Garden sheds Single storey garage buildings with flat roofs. No loft spaces. The materials of these structure are unlikely to provide suitable temperatures to support roosting bats. No signs of bats recorded.</i>	Negligible
B03	<i>Annex Single storey annex to Crescent Place – wooden clad façade, slate tiled pyramid roof with guttering and wooden fixture windows. No potential entry points and no signs of bats noted.</i>	Negligible
B04	<i>Self-contained holiday rental unit Single storey 'glamping' type structure – wooden clad with curved roof and windows with metal fittings. No loft space. No signs of bats detected.</i>	Negligible
B06	<i>Garage 3no. port garage building – wooden clad with flat roof. The materials of these structure are unlikely to provide suitable temperatures to support roosting bats. No</i>	Negligible

	<i>signs of bats recorded.</i>	
<i>B07</i>	<i>Little Snapes 2no. storey brick-built and rendered dwelling with a pitched roof with clay tiles, solar panels, guttering and PVC fixture windows including dormer windows. Minor gaps between tiles noted. No signs of bats detected.</i>	<i>Low</i>

- 4.3.4 All trees located within the site boundary were considered in this ecological appraisal and an external ground level assessment undertaken. A summary of this assessment is shown below.

Table no. 07 – Trees with potential roost features

Ref.	Description	Category
<i>T01</i>	<i>Mature oak. Minor lifted bark was noted on a lower branch and the tree was of a size and age that would be expected to support roosting bats.</i>	<i>Low</i>

Amphibians

Desk Study

- 4.3.5 Records of smooth newt, common frog, common toad and Great Crested Newt were returned within 2.0km of the site. The closest common amphibian record was located c. 300m southwest of the site and the closest GCN record was located c. 1.6km southwest of the site.

Site Assessment

- 4.3.6 A stream runs through the site and a single pond was identified within 500m of the site, located c. 380m west of the site.
- 4.3.7 The tussocky grassland, scattered scrub and log piles on site represent habitat of potentially moderate value to amphibians. However, limited records and a lack of suitable waterbodies within a commutable distance suggest that GCN are unlikely to be present on site. The site has been assessed as offering **site value** to common and widespread amphibians but GCN are unlikely to be present.

Reptiles

Desk Study

- 4.3.8 The desk study returned records of grass snake, common lizard, and adder within 2.0km of the site, the closest located c. 800m southeast of the site.

Site Assessment

- 4.3.9 Reptiles require areas with dense vegetation to act as cover, open areas for basking and areas of diverse flora to support viable invertebrate prey for hunting. Although not extensive, the tussocky grassland and scrub to the east of the site offers moderate opportunities for local reptiles and further suitable habitat exists offsite adjacent to the east. The site is therefore of **site value** to reptiles.

Dormouse

Desk Study

- 4.3.10 A total of 26no. records of dormice were returned within 2.0km of the site, the closest located c. 500m to the northwest of the site.

Site Assessment

- 4.3.11 Trees on site are scattered and all hedgerows are actively managed and many are species not favoured by dormouse (e.g. cherry laurel and western red cedar). The managed beech hedgerows along the site boundaries offer potential low value habitat for dormice. The site is therefore of **site value** to this species.

[REDACTED]

Water Vole

Desk Study

- 4.3.14 A single record of water vole was returned within 2.0km of the site, located c. 1.6km west of the site.

Site Assessment

- 4.3.15 The stream on site offers potential habitat of low suitability to water voles. The stream was relatively narrow with shallow banks and a thin strip of bankside vegetation. Further to this, no field signs of water vole were noted. The site has therefore been assessed as offering **site value** to this species.

Birds

Desk Study

- 4.3.16 A total of 96no. bird species have been recorded within 2.0km of the site, including Schedule I species, such as kingfisher (*Alcedo atthis*) and species listed on the BoCC Red List such as skylark (*Alauda arvensis*).

Site Assessment

- 4.3.17 The site offers some nesting and foraging opportunities for passerine species within the hedgerows, smaller trees, scrub and grassland and then for larger bird species within the mature trees. No nests were noted but various passerine species such as blue tit, robin and goldcrest were heard and seen on site. The site is therefore of **site value** for bird species.

Invertebrates

Desk Study

- 4.3.18 The data search returned records of numerous common species of invertebrates within 2.0km of the site.

Site Assessment

- 4.3.19 Although there is a moderate floristic diversity on site, much of this is non-native and of limited value to native invertebrates and unlikely to support notable or rare species. The tussocky grassland, log piles and standing deadwood however represent potentially optimal opportunities for common and widespread species. The site has therefore been assessed as being of **site value** to invertebrates.

5.0 ASSESSMENT OF EFFECTS

- 5.0.1 Using the Guidelines for Ecological Impact Assessment (IEEM, 2006 & updated by CIEEM, 2018), the assessment set out below considers the potential impacts of the scheme prior to mitigation. Detailed avoidance, mitigation and compensation measures are then discussed, with residual impact identified once these measures have been considered. Wherever possible mitigation measures have been designed into the scheme as this gives greater certainty over deliverability and ensures the correct application of the 'Mitigation Hierarchy' (as advocated by BS42020:2013, Defra 2019 and CIEEM, CIRIA & IEMA 2016).

5.1 Designated Sites

Potential Impacts

- 5.1.1 Proposals involve the construction of 2no. residential dwellings within modified grassland. The scale and nature of the development is unlikely to significantly impact local sites.
- 5.1.2 The site is located within the *Impact Risk Zone* of *Sullington Warren SSSI* and *Hurston Warren SSSI*, however development proposals are unlikely to meet the criteria which would require consultation with Natural England.

Mitigation and Compensation

- 5.1.3 With no impacts upon designated sites predicted, no mitigation or compensation is required.

Residual Impacts

- 5.1.4 There will be no likely significant effect upon any statutory designated site.

5.2 Habitats*Potential Impacts*

- 5.2.1 The closest parcel of priority habitat (lowland mixed deciduous woodland) exists c.250m to the southeast of the site and is unlikely to be affected by the proposed construction. Without mitigation, development could have adverse impacts on the stream that runs through the site. Habitats of value within the site only will be lost.

Mitigation and Compensation

- 5.2.2 Standard measures should be undertaken during construction to minimise noise, vibration, dust, air pollution and any further pollution that may enter the stream on site. The banks of the stream shall also be protected from subsidence or disturbance. Trees and hedgerows lost to proposals shall be replaced at a ratio of 1:1 with native trees.

Residual Impacts

- 5.2.3 The overall impact of the scheme will be **negligible**.

5.3 Bats*Potential Impacts*

- 5.3.1 Removal of trees, scrub and the tussocky grassland on site represents loss of potential foraging habitat for local bats. Furthermore, light spill onto retained scrub and trees may cause low level disruption to commuting/foraging bats. Buildings no.1 and no.7 (assessed as low roost potential) will be retained and unaffected by proposals.

Mitigation and Compensation

- 5.3.2 Much of the potentially beneficial vegetation will be retained within proposals including many of the trees on site. Many of the trees that would be removed are non-native and replacement with native species represents an opportunity to improve the site for bats. All light spill on the trees and hedgerows within and adjacent to the site shall be avoided, with lighting designed in accordance with ILP Guidance Note 08 / 18 wherever possible.

Residual Impacts

- 5.3.3 The overall impact of the scheme will be **negligible**.

5.4 Reptiles*Potential Impacts*

- 5.4.1 Without mitigation, vegetation clearance on site could result in the injury or death of individual reptiles, resulting in a contravention of the Wildlife and Countryside Act (1981, as amended).

Mitigation and Compensation

- 5.4.2 The area on site which is most suitable for reptiles (Target Note 3.) will be retained within the curtilage of the new dwelling. A strip along the southeast boundary shall be sectioned off from the new property to create a wildlife area with at least one log pile (see LLD2853-ECO-DWG-001-00-WA).
- 5.4.3 Reasonable Avoidance Measures (RAMs) for reptiles shall be employed in any vegetation clearance on site. This should include that before any vegetation clearance on site, debris such as logs that may provide shelter for reptiles should be removed from the construction zone. Further to this, handheld tools such as strimmers should be used carefully for vegetation clearance, which should take place between March and October in mild conditions ($\geq 10^{\circ}\text{C}$), when reptiles are active and able to escape. The first cut shall be at a height of 150mm with a second cut 24 hours later to ground level. During construction, any materials stored on site should be on pallets and loose materials bagged where appropriate so as not to create places of shelter for reptiles.

Residual Impacts

5.4.3 Providing the RAMS outlined herein are incorporated into the construction phase, the overall impact of the scheme will be **negligible** and an offence is unlikely.

5.5 Breeding Birds

Potential Impacts

5.5.1 Any vegetation clearance, particularly of scrub, tree or hedgerow, may result in disruption/destruction of active bird nests.

Mitigation and Compensation

5.4.2 Any scrub, hedgerow or trees scheduled for removal will be removed outside the nesting season (*season: March-August, although pigeons may nest all year*) or shall be checked prior to removal by a suitably qualified ecologist. Trees and Hedgerow removed will be replaced at a 1:1 ratio with native species.

Residual Impacts

5.4.3 The overall impact of the scheme will be **negligible**.

5.5 [REDACTED] hedgehogs

Potential Impacts

5.5.1 Vegetation clearance may result in harm to individual hedgehogs and [REDACTED] hedgehogs [REDACTED] could become trapped in construction excavations.

Mitigation and Compensation

5.5.2 Shrubs should be checked prior to removal for hedgehogs. [REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]

Residual Impacts

5.5.3 The overall impact of the scheme will be **negligible**.

5.6 Other protected species*Potential Impacts*

5.5.1 With limited habitats on site and only habitats of negligible ecological value to be directly affected, the construction and operational phases of the proposals are unlikely to have any significant impact on other protected species.

6.0 ECOLOGICAL ENHANCEMENTS

6.1 The design of the proposed development includes ecological enhancements for the benefit of wildlife to ensure compliance with *Local Planning Policy* and the emerging *Environment Act 2021* which mandates a minimum 10% net gain in biodiversity across all development sites. Ecological enhancements which will be included as part of development proposals include:

- A Bat box suitable for a range of species to be incorporated into the southern aspect of the new dwelling.
- A Bat box suitable for a range of species to be incorporated into the southern aspect of a larger tree on site.
- 2no. Nest boxes/bricks suitable for a range of bird species to be incorporated into the northern aspect of the new dwelling and/or garages.
- A strip of garden to the southeast extremity of the new dwelling's curtilage shall be fenced off as a wildlife area and include at least one log pile.
- Incorporation of hedgehog holes in garden fences to allow free movement of local hedgehogs.

7.0 CONCLUSIONS

- 7.1 The site is a mosaic of buildings and hardstanding, lawns, tussocky grassland, a stream and scattered scrub, trees and hedgerows. The ecological value of the site is primarily concentrated in the tussocky grassland area to the east of the site (including log piles, scrub and standing deadwood), the stream and the native trees and hedgerows throughout. The stream, tussocky grassland, hedgerows and many of the trees would be retained and compensatory planting will increase the proportion of native trees on site.
- 7.2 Potentially suitable habitat has been identified for [REDACTED] breeding birds, reptiles and bats. Once avoidance and mitigation measures have been considered, the impacts of the planned development upon habitats, local sites and the above species will be **negligible and non-significant**.
- 7.4 The proposed ecological enhancements are likely to result in a minor Biodiversity Net Gain in accordance with local and national planning policy.

8.0 REFERENCES

BCT & ILP. (2018). Guidance Note 08/18. Bats and artificial lighting in the UK. Bats and the Built Environment series

British Standards Institution. (2013). BS 42020:2013 Biodiversity – Code of practice for planning and development. London: BSI

Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). The UK Habitat Classification User Manual Version 1.1 at <http://www.ukhab.org/>

CIEEM. (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM. (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management. Winchester, UK

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

Horsham District Council (2015). Horsham District Planning Framework. [online]. Available at https://www.horsham.gov.uk/_data/assets/pdf_file/0016/60190/Horsham-District-Planning-Framework-November-2015.pdf

Multi-Agency Geographic Information for the Countryside (MAGIC). (2013). Interactive Map. [online]. Available at <http://www.magic.gov.uk/Magicmap.aspx>

Panks, S., White, N., Newsome, A., Potter, J., Heydon, M., Mayhew, E., Alvarez, M., Russell, T., Scott, J. S., Heaver, M., Scott, H. S., Treweek, J., Butcher, B. and Stone, D. (2022). Biodiversity Metric 3.1: Auditing and accounting for biodiversity – User Guide. Natural England. ISBN 978-1-78354-951-1. Available online: <http://publications.naturalengland.org.uk/publication/6049804846366720>

Table No. 05 – Species List for Habitat Parcels

g4, 10, 11, 231 - Modified Grassland, with vegetated garden with scattered scrub and trees

Common Name	Scientific Name	DAFOR
Bay laurel	<i>Laurus nobilis</i>	R
Brambles	<i>Rubus fruticosus</i>	LA
Broad-leaved Dock	<i>Rumex obtusifolius</i>	O
Butterfly bush	<i>Buddleja davidii</i>	R
Clover	<i>Trifolium repens</i>	A
Cock's foot	<i>Dactylis glomerata</i>	O
Common Daisy	<i>Bellis perennis</i>	O
Common Nettle	<i>Urtica dioica</i>	O
Creeping Buttercup	<i>Ranunculus repens</i>	O
Dandelion	<i>Taraxacum officinale</i>	O
English ivy	<i>Hedera helix</i>	LD
Hart's-tongue fern	<i>Asplenium scolopendrium</i>	R
Heal-all	<i>Prunella vulgaris</i>	R
Holly	<i>Ilex aquifolium</i>	O
Moss species	<i>Bryophyta sp.</i>	LD
Pendulous sedge	<i>Carex pendula</i>	LA
Perennial Ryegrass	<i>Lolium perenne</i>	LD
Ragwort	<i>Senecio jacobaea</i>	O
Red fescue	<i>Festuca rubra</i>	LD
Rhododendron species	<i>Rhododendron sp.</i>	R
Ribwort Plantain	<i>Plantago lanceolata</i>	O
Rosebay willowherb	<i>Chamaenerion angustifolium</i>	O
Rosemary	<i>Salvia rosmarinus</i>	R
Stinking iris	<i>Iris foetidissima</i>	LF
Thistle species	<i>Cirsium vulgare</i>	R
Wild Strawberry	<i>Fragaria vesca</i>	O
Yucca	<i>Yucca filamentosa</i>	R
Scattered Trees		
Ash	<i>Fraxinus excelsior</i>	O
Apple species	<i>Malus sp.</i>	R
Cherry laurel	<i>Prunus laurocerasus</i>	F
Cherry species	<i>Prunus sp.</i>	O
Holly	<i>Ilex aquifolium</i>	O
Oak	<i>Quercus robur</i>	O
Scots pine	<i>Pinus sylvestrus</i>	R
Silver birch	<i>Betula pendula</i>	O
Western red cedar	<i>Thuja plicata</i>	F

h2b – Other Hedgerow

Common Name	Scientific Name	DAFOR
Beech	<i>Fagus sylvatica</i>	LD
Brambles	<i>Rubus fruticosus</i>	F
Cherry Laurel	<i>Prunus laurocerasus</i>	LD
Common box	<i>Buxus sempervirens</i>	LD
Holly	<i>Ilex aquifolium</i>	O
Silver birch	<i>Betula pendula</i>	O

r2b – Other Rivers and Streams

Common Name	Scientific Name	DAFOR
Bur reed species	<i>Sparganium sp.</i>	LD
Cuckoo-pint	<i>Arum maculatum</i>	O
Hemlock water dropwort	<i>Oenanthe crocata</i>	F
Pendulous sedge	<i>Carex pendula</i>	LD
Soft rush	<i>Juncus effusus</i>	O

D – Dominant; A – Abundant; F – Frequent; O – Occasional; R – Rare; L – Locally

Table No. 06 – Target Notes

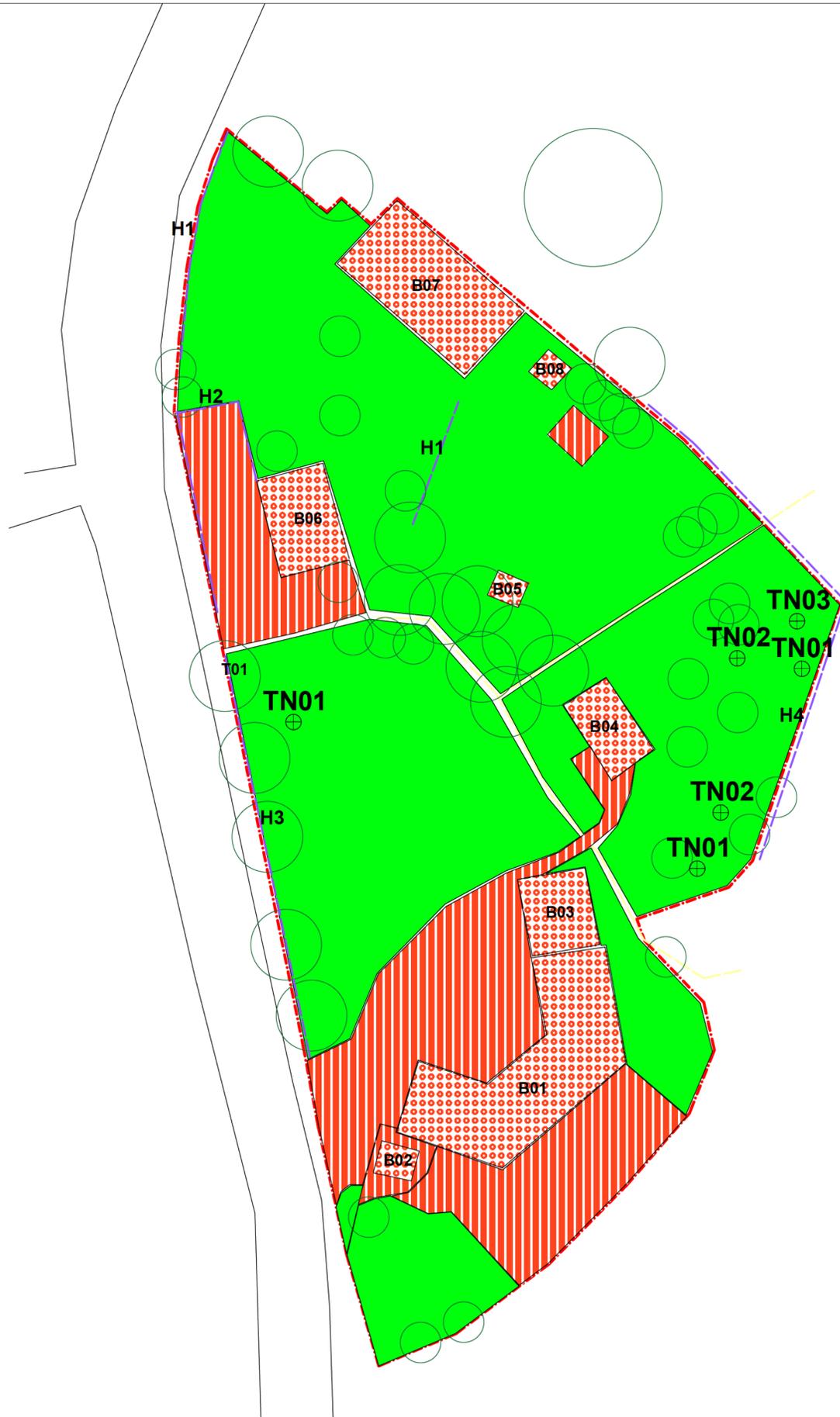
Number	Description
1	Log piles
2	Standing Deadwood
3	Area of scrub that offers potentially suitable reptile habitat (particularly) within the context of the surrounding tussocky grassland.

Appendix A – Site Photographs

Image 01 – View of grassland (typical of much of the site) in front of Little Snapes to the right.



Image 02 – View of scrub and tussocky grass towards the eastern corner of the site.



- Legend**
-  Site Boundary
 -  g4 - Modified Grassland
 -  u1b - Developed Land. Sealed Surface
 -  u1b5 - Buildings
 -  h2b - Other Hedgerow
 -  r2b - Other Rivers and Streams
 -  Target Notes
 -  Hedgerow Numbers

*Notes: The original of this drawing was produced in colour - a monochrome copy should not be relied upon.
Habitat areas are indicative and for information only - please do not scale from this drawing.*

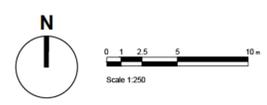
Planning Issue

Rev	Description	Date	Initials
00	Planning Issue	07.02.23	SH



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<i>Client</i> Downsview Associates LTD			
<i>Project Title and Location</i> Crescent Place Storrington			
<i>Drawing Title</i> Figure No.1 - Site Habitat Plan			
<i>Scale</i> 1:250@A1	<i>Drawn</i> SH	<i>Approved</i> GS	<i>Date</i> 07.02.23
<i>Drawing No</i> LLD2853-ECO-FIG-001	<i>Revision</i> 00		



**Figure No.1- Site Habitat Plan
Crescent Place, Storrington**