



Preliminary Ecological Appraisal

Land at Meadowgate, Lympstone

Client: Mr J Morris

Date: March 2022

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Executive summary

It is proposed to construct one or two dwellings on land at Meadowgate, Church Road, Lymptone, Devon EX8 5JX, NGR SX 99406 84134. As no drawn plans were available, this report assumes loss of all grassland habitat within the site boundary. Hedges would be retained.

A preliminary ecological appraisal (PEA), including a daytime survey of buildings for bats and nesting birds and an extended phase 1 habitat survey, was undertaken on the 3rd of March 2022 by Richard Green Ecology Ltd.

The proposed development could result in the loss of up to 0.21 ha of well-managed, modified grassland, and associated planting, considered to result in no more than a minor adverse impact on a local scale. Recommendations are made to plant-up gaps in the western boundary hedgerow with additional native woody hedgerow species.

As it is considered unlikely the buildings are used by bats, their proposed removal would have no impact on bats and would not require a European protected species licence (EPSL).

It is likely that bats forage and commute along the small river adjacent to the southern boundary, and the eastern and western boundaries of the site. The construction of one or two new dwellings has the potential to have an adverse effect on foraging and commuting bats on the site through an increase in lighting.

Lighting design should follow guidance in the Institute of Lighting Professionals Guidance Note 08/18, to ensure that light levels along the southern, western, and eastern boundaries remains below 0.5 lux or no more than current levels.

Other ecological mitigation and enhancement measures recommended include habitat manipulation to avoid potential impacts on reptiles, searching the site prior to site clearance for reptiles and amphibians, timing the works outside of the bird nesting period (or confirming birds are absent prior to removal of habitat suitable for use by nesting birds), pollution control measures, provision of permeable garden boundaries, and the provision of integrated bird nesting and bat roosting provision on the new dwelling(s).

Wildlife Checklist

Protected and priority species (Grid reference of the site: NGR SX 99406 84134)

Species - terrestrial, intertidal, marine	Walkover shows that suitable habitat present and reasonably likely that the species will be found? <u>Yes or No</u>	Detailed survey needed to clarify impacts and mitigation requirements?	Detailed survey carried out and included?	Species Present or Assumed to be present on the site <u>Indicate with P or A and name the species</u>	Impact on species?	Detailed Conservation Action Statement included? Sets out actions needed in relation to avoidance / mitigation / compensation / enhancement	EPS licence required?
Bats (roost)	No						
Bats (flight line / foraging habitat)	Yes – hedgerow, watercourse	x	x	Assumed	None if recommendations followed	✓	x
Hazel Dormouse	No suitable habitat						
Otters	Yes – small river	✓	✓	Assumed	None if recommendations followed	✓	x
Great crested newts	No suitable habitat						
Cirl buntings	No suitable habitat						
Schedule 1 birds	No suitable habitat						
Breeding birds	Yes - nesting habitat, e.g., building, trees and shrubs	x	x	Assumed	None if recommendations followed	✓	x
Reptiles	Yes –compost heap and rock pile	x	x	Assumed	None if recommendations followed	✓	x
Native crayfish	No suitable habitat						
Water voles	No suitable habitat						
Badgers	No suitable habitat						
Section 41 species (other than those included above)	✓ - Hedgehog, common toad	x	x	Assumed	None if recommendations followed	✓	x
Invasive species	x						
Other	x						

Designations / important habitats

Designation	Within the site or potential impact. <u>Yes or No</u>	Name of the site / habitat	Detailed Conservation Action Statement included in report?	Relevant organisation consulted & response included in the application?
Terrestrial, intertidal, marine				
Statutory designations				
European designations - Special Area of Conservation (SAC), Special Protection Area (SPA) and RAMSAR site or within Greater Horseshoe consultation zone	✓	Exe Estuary SPA/Ramsar, East Devon Pebblebed Heaths SPA	Reference made to EDDC policy on HRA	N/A
Site of Special Scientific Interest (SSSIs)	✓	Exe Estuary	✓	N/A
Marine Conservation Zone (MCZ) (not before 2012)	✗			
Local Nature Reserve (LNR)	✗			
Non statutory wildlife designations				
County or Local Wildlife Site (CWS\LWS)	✗			
Ancient woodland	✗			
Habitat of Principal Importance	✗			
Other	✗			

1 Introduction

1.1 Purpose of survey

Richard Green Ecology Ltd were commissioned by Mr J Morris to undertake a preliminary ecological appraisal of land at Meadowgate, Church Road, Lymington, Devon EX8 5JX.

The preliminary ecological appraisal (PEA) consisted of a daytime survey of the buildings for bats and nesting birds, and an extended phase 1 habitat assessment of the site.

The purpose of the PEA was to assess the ecological value of the buildings and habitats within the site, and the presence or likely presence of any protected or priority species which may present a potential constraint to the proposed development. Where further assessment is necessary, the report makes specific reference to ecological surveys. Where relevant, recommendations to avoid and mitigate anticipated ecological impacts have been given in accordance with national and local planning policy and BS 42020:2013 Biodiversity – Code of Practice for Planning and Development. The survey is based upon Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017).

1.2 Site location

The site is located at the western edge of the town of Lymington at National Grid Reference SX 99406 84134 (Figure 1-1). The site is bordered to the east, north and west by urban development, and by agricultural land, hedgerows, and treelines to the south. The Exe Estuary lies approximately 550 m to the west.

1.3 Site description

The site comprised a single-lane gravel and earth track (Plate 1) leading to an area of approximately 131 m² of concrete hardstanding (Plate 2) used for parking in the north-western area of site. A wooden 5-bar gate separated the hardstanding from the access track to the west. The rest of the site comprised 0.21 ha of lawned grassland (Plate 3). The grassland had numerous newly planted willow *Salix* sp. whips (1 m tall), ornamental shrubs and plants, and semi-mature fruit trees on it, with a large compost heap (Plate 4) in the south-eastern corner. There were two solar panels near the western boundary of the site, and a gravel area with gabions surrounding the northern edge, and a pile of rocks (Plate 5) at the southern edge.

The western boundary comprised a 1.8 m high wooden fence with a gappy hedgerow of ornamental and native species shrubs planted along it (Plate 6). The eastern boundary comprised a section of 1.8 m high wooden fence along the hardstanding, and a 1 m high wire and post fence along the garden with neighbouring planted border of shrubs, plants, and mature trees. The northern boundary comprised the southern red-brick wall of a neighbouring single-storey building at the western end, and a 1.8 m high wooden fence. The southern boundary was an earth bank topped with native species shrubs, semi-mature and immature

trees, and plants. A small river and tributary of the River Exe (Wotton Brook) lay to the south of the earth bank (Plate 7).

The site buildings were located along the eastern and western boundaries.

The buildings to the west included:

- one wooden post and panel structure (Plate 8);
- one wooden garden shed (Plate 9); and
- a two-storey open-fronted wooden shed (Plate 10).

The buildings to the east included:

- one wooden shed (Plate 11); and
- one wooden shed/chicken coup on wooden stilts (Plate 12).



Figure 1-1. The site in the context of the wider landscape

1.4 Proposed development

It is proposed to construct one or two dwellings within the site. Currently there are no drawn plans.

1.5 Planning considerations

1.5.1 *National Planning Policy Framework (NPPF), July 2021*

The National Planning Policy Framework outlines the Government's commitment to protect and enhance sites of biodiversity value and minimise impacts on and provide net gains for biodiversity, including the principle of refusing planning permission if significant harm to biodiversity resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for.

1.5.2 *East Devon District Local Plan*

The East Devon District Local Plan 2013 to 2031 (adopted in 2016) contains the following relevant strategy and policies:

Strategy 47 – Nature Conservation and Geology

All development proposals will need to:

1. Conserve the biodiversity and geodiversity value of land and buildings and minimise fragmentation of habitats.
2. Maximise opportunities for restoration, enhancement, and connection of natural habitats.
3. Incorporate beneficial biodiversity conservation features.

Development proposals that would cause a direct or indirect adverse effect upon internationally and nationally designated sites will not be permitted unless:

- a) They cannot be located on alternative sites that would cause less or no harm.
- b) The public benefits of the development clearly outweigh the impacts on the features of the site and the wider network of natural habitats.
- c) Prevention, mitigation and compensation measures are provided.
- d) In respect of Internationally designated sites, the integrity of the site will be maintained.

EN5 - Wildlife Habitats and Features:

Wherever possible sites supporting important wildlife habitats or features not otherwise protected by policies will be protected from development proposals which would result in the loss of or damage to their nature conservation value, particularly where these form a link between or buffer to designated wildlife sites. Where potential arises positive opportunities for habitat creation will be encouraged through the development process.

Where development is permitted on such sites, mitigation will be required to reduce the negative impacts and where this is not possible adequate compensatory habitat enhancement or creation schemes will be required and/or measures required to be taken to ensure that the impacts of the development on valued natural features and wildlife have been mitigated to their fullest practical extent.

EN14 - Control of Pollution

Permission will not be granted for development which would result in unacceptable levels, either to residents or the wider environment of:

1. Pollution of the atmosphere by gas or particulates, including. smell, fumes, dust, grit, smoke and soot.
2. Pollution of surface or underground waters including:
 - a) Rivers, other watercourses, water bodies and wetlands.
 - b) Water gathering grounds including water catchment areas, aquifers and groundwater protection areas.
 - c) Harbours, estuaries, or the sea.
3. Noise and/or vibration.
4. Light intrusion, where light overspill from streetlights or floodlights on to areas not intended to be lit, particularly in areas of open countryside and areas of nature conservation value.
5. Fly nuisance.
6. Pollution of sites of wildlife value, especially European designated sites or species.
7. Odour

1.5.3 *Appropriate Assessment – East Devon Pebblebed Heaths Special Protection Area (SPA) and the Exe Estuary SPA*

The East Devon Pebblebed Heaths SPA and Exe Estuary SPA are internationally important wildlife sites. The local authority has a duty under the Habitats Regulations, 2010 (as amended) to assess and seek to minimise the impacts of new developments on these sites. Impacts from increased visitor numbers from nearby housing and tourism developments are highest from developments within 10km of these designated areas.

Mitigation for recreational impacts can take the form of access management within the European sites, or provision of substantial alternative recreation locations to draw users away from the European sites. To make it easier for developers to 'deliver' such mitigation, in many cases East Devon District Council will accept a financial contribution per new house.

Alternatively, East Devon District Council may undertake a Habitats Regulation Assessment based on mitigation proposed by the applicant.

2 Methods

2.1 Desk study

2.1.1 Designated sites

A search for sites designated for nature conservation and any notable habitats was undertaken on the DEFRA Magic website (<http://magic.defra.gov.uk>). This resource includes statutory designated sites (e.g., Sites of Special Scientific Interest, SSSIs) and Biodiversity Action Plan (BAP) habitats. As impacts outside of the site are limited, only sites within 500 m of the site are noted. Protected and notable species

2.1.2 Protected and notable species

Given the small extent and limited effects of the proposal, it is considered that any protected species outside the site would be unaffected. As a detailed survey has been undertaken and any protected species present or potentially present on the site would have been identified, it was not considered necessary to obtain any species records from a local records centre.

2.2 Scoping

Consideration was made of the potential for protected and notable species listed in the Wildlife Checklist at the beginning of this report. Where it is considered that certain species are unlikely to be present, these are scoped out in the Wildlife Checklist and no further consideration is made herein.

2.3 Field survey

2.3.1 Extended phase 1 habitat survey

An extended phase I habitat survey of the site was undertaken following recommendations made by the former Institute of Environmental Assessment (1995). Habitat descriptions are based on the UK Habitat Classification (UKHab) system. Note was taken of the more conspicuous flora, and any evidence of, or potential for the presence of protected and alien invasive species was recorded.

2.3.2 Bat and bird survey - visual inspection

The survey involved a thorough external and (where possible) internal visual inspection of the buildings for any signs of protected species. Species likely to be encountered in such buildings include bats and nesting birds. A search for characteristic signs of bats was made, such as droppings, feeding remains, staining, and any bats present. A search was also made for any signs of bird nesting activity including nests, collections of droppings, and eggshells.

Equipment used and at hand included: Nikon 10x close-focusing binoculars, Lightway BMFL1265 720 lumen torch, Lightway 160 lumen torch, Ridgid Micro CA-300 inspection camera and a 3.8 m extendable ladder.

2.3.3 *Timings and weather conditions*

The survey was carried out during the early afternoon on the 3rd March 2022. The weather was dry with light winds, cloud cover of 5/8 oktas, and the temperature was 11°C.

2.3.4 *Personnel*

The survey was carried out by Helen Calver MSc ACIEEM, a Senior Ecologist at Richard Green Ecology Ltd. Helen is an Associate member of the Chartered Institute of Ecology and Environmental Management (CIEEM), with over five years' experience in conducting ecological surveys. She holds a level 2 Natural England (NE) bat survey licence (CL18 - 2020-44826-CLS-CLS) and level 1 NE dormouse survey licence (CL10a - 2018-38324-CLS-CLS).

2.3.5 *Survey limitations*

The interiors of two of the wooden garden sheds could not be accessed as they were locked. These were assessed from the exterior, and it is considered that this was adequate to establish their potential for use by bats and nesting birds.

The client has yet to decide whether one or two dwellings will be constructed on the site, and no drawn plans are available. To ensure that all impacts are adequately considered within this report, it has been assumed that all grassland and small buildings would be lost.

The survey was carried out during the early spring when some botanical species may not be evident. It is considered that sufficient vegetation was identified during the survey to provide an understanding of the site and any potential implications this may have on the proposal. Richard Green Ecology Ltd accepts no liability for the presence of any invasive or protected species present that were not recorded during the survey.

2.4 **Evaluation**

Habitat evaluations are based on guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM). The level of value of specific ecological receptors is assigned using a geographic frame of reference, i.e., international value being most important, then national, regional, county, district and lastly, local.

Value judgements are based on various characteristics that can be used to identify ecological resources or features likely to be important in terms of biodiversity. These include site designations (such as Sites of Special Scientific Interest (SSSI)), or for undesignated features, the size, conservation status (locally, nationally, or internationally), and the quality of the ecological resource. In terms of the latter, 'quality' can refer to habitats (for instance if they are particularly diverse, or a good example of a specific habitat type), other features (such as wildlife corridors or mosaics of habitats) or species populations or assemblages.

3 Survey results

3.1 Desk study

3.1.1 Designated sites

The site is not within any designated sites for wildlife interest and there are no statutory designated sites within 500 m of the site. However, the Exe Estuary Site of Special Scientific Interest (SSSI), Special Protection Area (SPA) and Ramsar Site is located approximately 550 m to the west.

The Exe Estuary SSSI/SPA/Ramsar site is designated for its internationally important assemblage of wintering wildfowl and waders, rare plant species, nationally significant invertebrate communities, and contains key features of geological interest. These features are directly linked to the waters, foreshore, sandbanks, and mudflats associated with the estuary.

The site is also within 10 km of the East Devon Pebblebed Heaths SPA.

3.1.2 Protected and notable species

There are two records of Natural England European Protected Species Licences (EPSLs) located 221 m to the south-east of the site. The licences were issued for common pipistrelle bat *Pipistrellus pipistrellus* and Nathusius's pipistrelle bat *Pipistrellus nathusii* (non-breeding site) in 2011, and common pipistrelle bat and soprano pipistrelle bat *Pipistrellus pygmaeus* (non-breeding site) in 2010.

The site lies within a 2 km Cirl Bunting Consultation Zone. Cirl buntings *Emberiza cirlus* favour mixed mosaics of farmland with fields of around 2 ha in size. They require dense hedgerows or scrub for nesting.

The site is within a Great Crested Newt Consultation Zone. These are 5 km buffer zones around existing and historical (post 1970) great crested newt records. Great crested newts *Triturus cristatus* require ponds for breeding in the spring, and woodland, hedgerows, marshes, and tussocky grassland the rest of the year. They hibernate underground, amongst tree roots, and in stone walls.

3.2 Field survey

3.2.1 Habitats

The results of the extended phase 1 habitat survey are described below. The botanical species composition percentages for each habitat are indicated using the DAFOR Scale (see Table 5-1). The UKHab survey code (e.g., g3c) that the habitat is attributed to, along with secondary codes (as appropriate) are given with a description.

Table 5-1. The DAFOR Scale

Value	Percentage Cover
D - Dominant	> 75%
A - Abundant	51 – 75%
F - Frequent	26 – 50%
O - Occasional	11 – 25%
R - Rare	1 – 10%

3.2.2 *Modified grassland (g4)*

The main habitat within the site comprised 0.21 ha of well managed species-poor modified grassland (Plate 3). The grassland had no thatch layer, and the sward was approximately 80 mm in length. The grass immediately surrounding the rock pile near the western boundary had a sward length of approximately 250 mm. The dominant species within the grassland was perennial rye-grass *Lolium perenne*, with (O) cock's-foot grass *Dactylis glomerata*, (F) white clover *Trifolium repens*, (O) daisy *Bellis perennis*, (O) dandelion *Taraxacum officinale*, (O) creeping buttercup *Ranunculus repens*, (O) sheep sorrel *Rumex acetosella*, (O) ribwort plantain *Plantago lanceolata*, (O) lesser celandine *Ficaria verna*, and (O) sow thistle *Sonchus oleraceus*.

Daffodils *Narcissus* sp., had been planted within flower beds within the grassland, along with numerous shrubs and trees. These included ornamental species of shrub, semi-mature apple trees *Malus* sp., and willow whips.

The site modified grassland lacked botanical diversity and this habitat is common and widespread throughout the surrounding area. This habitat is considered to be of low ecological value at the local scale.

3.2.3 *Hedgerow (h2b)*

The western boundary hedgerow (Plate 6) was planted approximately five years ago. It was gappy and comprised semi-mature ornamental and native species shrubs and trees including (O) common beech *Fagus sylvatica*, (O) Chinese holly *Ilex cornuta*, (O) English elm *Ulmus procera*, (O) common hawthorn *Crataegus monogyna*, (R) Leyland cypress *Cupressus x leylandii*, (R) firethorn *Pyracantha* sp., and (R) butterfly bush *Buddleja davidii*.

The hedgerow does not meet the criteria for a priority habitat hedgerow (i.e., being comprised of at least 80% of native species) but provides foraging and sheltering opportunities for common birds, and small mammals. This hedgerow is considered to be of local importance.

3.2.4 *Developed land - Hardstanding (u1b6)*

The north-western area of the site comprised approximately 131 m² of concrete hardstanding (Plate 2).

3.2.5 Buildings (u1b5)

In total there were five buildings within the site, three located along the western boundary and two along the eastern boundary (Figure 3-1).



Figure 3-1. Approximate locations of site buildings

Building 1 was used for storage and comprised four wooden posts with single-pitched plastic panelled roof. This building was constructed between two metal storage containers. The western elevation was covered by wooden panelling, whilst the eastern elevation was partially panelled leaving an open access (Plate 8).

Building 2 was a new wooden shed with dual-pitched timber sheet roof covered with bitumen felt (Plate 9). The shed was well sealed with no gaps or crevices and the windows and door were intact.

Building 3 was a two-storey, open-fronted (eastern elevation) wooden shed with asymmetric dual-pitched roof covered with bitumen felt (Plate 10). There were solar panels on the southern elevation of the roof. The building had no gaps or crevices.

Building 4 was a new wooden shed with dual-pitched roof covered with bitumen felt (Plate 11). The shed was well sealed with no gaps or crevices and the windows and door were intact. This building was locked and not viewed internally.

Building 5 was fenced off with a 1.8 m high chicken wire and post fence. It comprised a small wooden shed/chicken coup on wooden stilts with dual-pitched roof topped with bitumen felt (Plate 12). The shed was well sealed with no gaps or crevices, and the window and door were intact.

3.3 Protected species

3.3.1 Bats

Bats are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

(a) Buildings

Building 1 was had no signs of bats (i.e., droppings, urine staining, or feeding remains) or bats, and there were no potential roost features (PRFs).

Buildings 2, 4 and 5 were well sealed with no gaps and no PRFs.

Building 3 was open-fronted and light inside. There were no PRFs on the exterior. The interior timbers were tightly fitted, and there were no signs of bats, or bats present.

The buildings were assessed as having negligible suitability to support roosting bats.

(b) Habitats

The habitats surrounding the site largely comprised the urban development of Lymptstone. The southern area of the site is bordered by agricultural land with good connectivity throughout the wider landscape. The surrounding habitats are assessed as being of moderate quality for commuting and foraging bats. This is defined in Collins, 2016 as '*continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland, or water*'.

Bat foraging and commuting activity is likely to be focused along the small river which lies immediately adjacent to the southern boundary of the site, the eastern boundary fence and neighbouring planted borders, and the western boundary gappy hedgerow and fence. The site modified grassland is regularly managed and presents limited foraging opportunities for bats due to its size. The site is considered to be of local importance to foraging bats.

3.3.2 Nesting birds

Nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended).

The site lies within a 2 km Cirl Bunting Consultation Zone. The site does not contain suitable habitat, i.e., mixed farmland, or dense hedgerows and scrub, for cirl buntings. The site is assessed as having negligible local importance to cirl buntings.

There were no signs of nesting birds within the site buildings. Building 3 is open fronted and it is possible that nesting birds could utilise the interior for nesting.

The site semi-mature trees and western boundary gappy hedgerow offer some nesting habitat for a variety of birds. A single, small, old bird's nest was observed

within a shrub on the southern boundary of the site. The site habitats are unremarkable and abundant in the surrounding landscape and is considered to have no special significance for nesting birds. The assemblage of birds on site is likely to be typical for its size and geographic location. The site is considered to be of local importance to nesting birds.

3.3.3 Reptiles

Common reptiles, such as slow worm *Anguis fragilis*, common lizard *Zootoca vivipara* and grass snake *Natrix helvetica* are protected under the Wildlife and Countryside Act 1981 (as amended) against killing and injury and are species of principle importance under Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC Act, 2006).

The site grassland is regularly managed with no thatch layer and a sward of approximately 80 mm in length, offering limited shelter for reptiles.

The large compost heap in the south-east corner of the site and the rock pile with longer grass near the western boundary offer potential hibernation habitat for common reptiles. In addition, the compost heap provides potential egg-laying habitat for grass snakes, if present. The site is considered to have local importance to reptiles.

3.3.4 Amphibians

Great crested newts are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Common toad *Bufo bufo* is a species of principle importance under Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC Act, 2006).

The site lies within a Great Crested Newt Consultation Zone. Great crested newts have a range of approximately 250 m from their breeding ponds. Aerial images show that the site does not lie within 250 m of a pond, and so is unlikely to be used by this species. The site is considered to have negligible local importance to great crested newts.

The site rock pile offers some shelter for common amphibians including common toad during their terrestrial phase. Common amphibians use shallow, still water to spawn and breed, including ponds and puddles. Common toads have a range of up to 5 km from their breeding sites. There are several ponds within 5 km of the site to the north, east, and south, therefore the site is considered to have local importance to common amphibians.

3.3.5 Hedgehog

Hedgehog *Erinaceus europaeus* is a species of principle importance under Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC Act, 2006).

There were no signs of hedgehogs, i.e., droppings, within the site. Hedgehogs are widespread throughout the south-west. They utilise grassland areas for foraging and hedgerows for shelter and commuting through the wider landscape and have a range of approximately 2 km. The site is considered to be of local importance to hedgehogs.

3.3.6 *Otter*

Otters *Lutra lutra* are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

The site is unlikely to be used by otters as it does not contain suitable habitat. The site is considered to be of low local value to otters.

There were no otters or otter signs observed on the small river adjacent to the southern boundary of the site, including spraints, footprints, and runs. There were no features suitable for use as a holt such as large burrows, or holes amongst tree roots or stumps along the stretch adjacent to the site, or within a 10 m buffer.

Otters have extensive ranges which can include up to 20 km of waterways, therefore otters may periodically forage or commute along the small river to the south of the site boundary.

4 **Assessment, recommendations and mitigation**

4.1 **Designated sites**

4.1.1 *Impacts*

The Exe Estuary and East Devon Pebblebed Heaths SPAs are located within 10 km of the site. It is considered by East Devon District Council that housing and tourism developments within 10 km of these sites have a potential cumulative adverse effect on the protected sites through an increase in recreational disturbance.

Construction works could result in the pollution of the Exe Estuary, e.g., from spillage of chemicals into the Wotton Brook, in extreme circumstances.

4.1.2 *Mitigation*

A standard Habitat Mitigation Contribution per house or holiday unit has been set by East Devon District Council to deliver mitigation to off-set negative impacts from recreational disturbance to the European designated sites.

It is recommended that that a Construction Environmental Management Plan (CEMP) detailing pollution controls measure be provided as part of a reserve matters application. Measures may include the use of fencing, e.g., Heras fencing, to exclude sensitive areas, i.e., the watercourse, the storage of materials on hardstanding, and the provision of spill kits etc.

4.2 Habitats

4.2.1 Impacts

The proposed development could result in the loss of up to 0.21 ha of well-managed, modified grassland, and associated planting, considered to result in no more than a minor adverse impact on a local scale as these habitats are ubiquitous within the surrounding area.

The hedgerow along the western boundary would be retained.

4.2.2 Mitigation

The proposals are relatively small-scale and do not lend themselves to habitat creation. It is recommended that the gaps in the western hedgerow are planted up with native species such as hazel *Corylus avellana*, blackthorn *Prunus spinosa*, hawthorn, and guelder rose *Viburnum opulus*, to improve the overall value of the hedgerow to wildlife.

4.3 Bats

4.3.1 Impacts

(a) Buildings

As it is considered unlikely the buildings are used by bats, their proposed removal would have no impact on bats and would not require a European protected species licence (EPSL).

(b) Habitats

It is likely that bats forage and commute along the small river adjacent to the southern boundary, and the eastern and western boundaries of the site. The construction of one or two new dwellings has the potential to have an adverse effect on foraging and commuting bats on the site through an increase in light levels.

4.3.2 Mitigation

Lighting design should follow guidance in the Institute of Lighting Professionals Guidance Note 08/18, to ensure that light levels along the southern, western, and eastern boundaries remains below 0.5 lux or no more than current levels.

4.3.3 Enhancements

It is recommended that an integrated bat tube should be installed on the proposed new dwelling(s) if the final design is suitable. If the final design is not suitable, then external bat boxes (such as the Beaumaris Bat Box Midi or similar design) should be installed. These should be located on a gable end towards the apex of the southern or eastern elevation, and away from lighting and close to tall vegetation.

The location and design of the bat tubes/boxes should be approved by an ecologist at the design stage.

4.4 Nesting birds

4.4.1 Impacts

The trees and shrubs around the boundaries of the site would be retained.

The proposals would result in the loss of the planting within the grassland, including several fruit trees, and a small conifer.

Habitat clearance and the removal/demolition of Building 3 during the nesting season could result in the damage or destruction of active bird nests.

4.4.2 Mitigation

The gapping up of the western boundary hedgerow described in section 4.2.2 would provide increased foraging, sheltering, and nesting habitat for birds and mitigate any loss of habitat.

Works should be programmed to commence outside of the bird nesting season, which is generally considered to be between 1st March and 31st August, inclusive. No works should commence during the bird nesting season unless a competent ecologist has undertaken a careful, detailed check of Building 3, and any shrubs and trees to be removed, for active birds' nests immediately before works commence. The ecologist would then be required to provide written confirmation that no birds would be harmed, or that appropriate measures to protect active bird nests have been implemented.

4.4.3 Enhancements

The proposed dwelling(s) should have built-in bird boxes. The boxes should be appropriate for a variety of bird species, including house sparrow *Passer domesticus*, starling *Sterna vulgaris*, swift *Apus apus* and tits. Bird boxes should be located on the northern elevation of the properties, to avoid excessive sun and prevailing winds, and away from doors and windows. The style and location of the bird nesting boxes should be approved by an ecologist at the design stage.

4.5 Reptiles

4.5.1 Impacts

The loss of up to 0.21 ha of modified grassland is considered unlikely to affect common reptiles, due to its small size and regular management.

The compost heap located in the south-east corner of the site would not be impacted by the proposed development.

The dismantling of the rock pile near the western boundary has the potential to accidentally injure or kill common reptiles if present.

4.5.2 *Mitigation*

The modified grassland should continue to be managed between 70 and 100 mm to dissuade reptiles from sheltering within the grassland and being at risk of killing or injury during site clearance.

The rock pile should be carefully dismantled by hand. Any reptiles found should be relocated to a safe place away from the development works (e.g., to the denser vegetation around the grassland to the south of the southern boundary small river).

4.6 **Amphibians**

4.6.1 *Impacts*

The removal of the rock pile could result in the accidental injury of killing of common amphibians if present.

4.6.2 *Mitigation*

The method for dismantling the rock pile and relocating animals found in section 4.5.2 would also apply for common amphibians.

4.7 **Hedgehogs**

4.7.1 *Impacts*

Whilst no signs of hedgehogs were found during the survey, they could occasionally forage and commute across the site.

4.7.2 *Enhancements*

It is recommended that a single 'hedgehog doorway' is cut into the wooden fencing at both the western and northern boundaries of the site to enable hedgehogs to commute freely. Hedgehog doorways comprise a hole of approximately 13 cm by 13 cm cut into the bottom of fence.

4.8 **Otters**

4.8.1 *Impacts*

Otters preferentially forage and commute at night. The proposed development could potentially increase light levels across the southern area of the site and affect the small river.

4.8.2 *Mitigation*

The lighting recommendations in section 4.3.2 would also mitigate any impacts on otters.

4.9 **General Measures for Wildlife**

4.9.1 *Impacts*

During the pre-construction, and construction phases of the proposed development there would be potential for a variety of wildlife to become trapped in excavations.

4.9.2 *Mitigation*

General measures to protect wildlife should be followed. All trenches or large excavations should be covered at night to prevent wildlife falling in and failing to escape. If this is not possible then a strategically placed plank would provide a means of escape. Excavations should be checked daily prior to works recommencing.

5 **Conclusions**

The proposed development could result in the loss of up to 0.21 ha of modified grassland, associated semi-mature fruit trees, and shrubs, considered to result in no more than a minor adverse ecological impact at a local scale.

Planting of native species trees and shrubs to gap-up the western boundary hedgerow would provide additional habitat and food sources for nesting birds and foraging and shelter for small mammals. This would mitigate for the loss of the semi-mature fruit trees and shrubs within the grassland.

The development could affect commuting and foraging bats, nesting birds, common reptiles, common amphibians, and commuting hedgehogs, if present. However, by providing the mitigation and enhancement measures recommended, the proposal is considered unlikely to have a significant adverse ecological impact.

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Appendices

A Photographs



Plate 1. Access track



Plate 2. Hardstanding



Plate 3. Modified grassland



Plate 4. Compost Heap



Plate 5. Rock pile and gabions



Plate 6. Western boundary hedgerow and fence

Land at Meadowgate, Lymstone – Preliminary Ecological Appraisal



Plate 7. Southern boundary bank and adjacent small river



Plate 8. Building 1



Plate 9. Building 2



Plate 10. Building 3



Plate 11. Building 4



Plate 12. Building 5