

# GOULD ECOLOGY LTD

**Ecological Consultants**

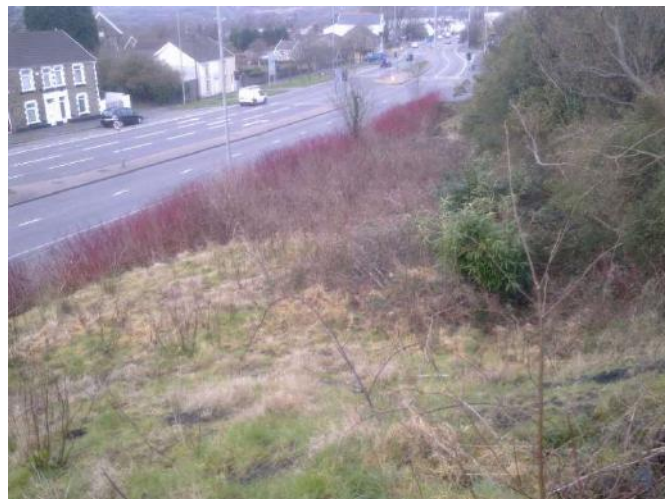
**Proposed New Development on**

**Land off Goole Road  
Fforestfach  
Swansea  
SA5 5DX**

**Preliminary Ecological Desk Study**

**July 2022**

***(Version 1 - Draft)***



## Document Information

<b>Report Type</b>	Preliminary Ecological Desk Study		
<b>Project Details</b>	<b>Site Location</b>	<b>Commissioned By</b>	<b>Date</b>
New development comprising flats and amenity area	Land of Goole Road, Fforestfach, Swansea SA5 5DX  Central Grid Reference SS 62900 96036	Calon Construction	June 2022

<b>Works</b>	<b>Personnel</b>
Desk - based study only	Richard Gould ACIEEM MA BSc

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### Disclosure

*"The information which we have prepared and provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. I confirm that the opinions expressed are our true and professional bona fide opinions"*

Signed



Richard Gould

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## Executive Summary

**Project Details:** Preliminary Ecological Desk Study for a proposed development of flats and amenity areas on land off Goole Road, Fforestfach, Swansea SA5 5DX.

**Site Description:** The site is a sloping plot of land adjacent to Carmarthen Road which is dominated by dense vegetation including Japanese knotweed, bracken, scrub and trees.

**Survey Methods:** This report is based upon a desk study only, including a search for designated sites, priority habitats and species records from SEWBRc and an assessment of overhead imagery, maps and photographs.

**Key Findings:** The site lay within 1.5km of the Penplas SSSI and within 5km of several sites of international or national importance for waders and waterfowl. The Cadle Heath Nature Reserve occurs 340m north of the site.

The site potentially provided a small area of foraging habitat for bats. The bat roost suitability of trees at the site would need to be confirmed during a site visit.

Habitats at the site were potentially of value to hedgehog, reptiles and nesting birds.

The site was considered likely to have *negligible* value to dormice. The likelihood of badger occurring within the site was considered likely to be low.

Large stands of Japanese knotweed occur within the plot.

### **Appraisal Summary:**

In the worst case, the project could result in the small scale loss of habitat of value to wildlife at the local scale, as well as adverse impacts to bats (if any suitable roost features occur in trees), badger, hedgehog, nesting birds and reptiles.

In addition Japanese knotweed could be spread off site during the construction phase.

### **Recommendations:**

#### **Further Survey**

An Extended Phase 1 Habitat Survey is recommended in order to confirm the site conditions and requirements for further survey and mitigation.

#### **Mitigation**

Mitigation requirements would need to be confirmed following the recommended further survey work. As a minimum, it is likely that development at the site would need to include construction working methods to protect hedgehog and nesting birds, and to avoid spreading Japanese knotweed off site. If reptiles are found to be present, mitigation may require retention and management of a designated habitat area.

#### **Ecological Enhancement**

The following methods for ecological enhancement could be incorporated into the scheme design:

- Installation of new bat boxes and bird nest boxes - either integrated into the new buildings and /or on trees or structures in the vicinity;
- Use of a high proportion of native and wildlife friendly species should be used within planting schemes. This could include the planting of climbers beside walls and fences, planting of native shrubs and trees and/or creation of wildflower beds or planting of herbs of value to pollinators;
- Installation of habitat features of value to wildlife, including habitat piles, hedgehog houses, invertebrate refuges;
- Creation of a small pond, scrape, bog garden or marshy area;
- Ongoing management arrangements for habitat areas in the long term.

## 1 Introduction and background

- 1.1 In June 2022, Gould Ecology were commissioned to undertake an Preliminary Ecological Desk Study in relation to a proposal to develop new flats and amenity facilities on land off Goole Road, Fforestfach, Swansea SA5 5DX
- 1.2 The works would include the creation of new flats, access roads and amenity areas.

### *Site Location*

- 1.3 The site was located between Carmarthen Road and Middle Road within Fforestfach, Carmarthen, as shown in Figure 1, below.

**Figure 1: Site Location (1:25 000 Scale)**



### *Personnel*

- 1.4 The study was conducted by Richard Gould, ACIEEM MA BSc.
- 1.5 Richard is an ecological consultant with over 17 years' experience. He is an Associate member of the Chartered Institute for Ecology and Environmental Management and is licensed to survey bats in Wales (*NRW Licence No. S0903049/2*). Richard has extensive experience conducting Bat Surveys, Extended Phase 1 Habitat surveys, Phase 2 protected species surveys and Ecological Impact Assessments.

### *Report aims*

1.6 The aims of this report were to:

- Provide a preliminary appraisal of ecological constraints that could potentially affect the project (relating to designated sites, habitats and protected or priority species).
- Identify potential opportunities for ecological enhancement measures that could be delivered within the design of the project;
- Provide recommendations for further survey, and outline requirements for ecological mitigation.

### *Key Terminology*

1.7 The following Key Terms are used within this report:

- *'Ecological feature'* is the term used to denote any habitat, species or site under consideration within the ecological appraisal.
- *'Construction Zone'* - the area in which works are taking place - including those areas used for vehicle access and parking, materials storage, temporary buildings and compounds.
- *'Zone of Influence'* - the area in which ecological features may be affected by the proposed works. This may often extend beyond the construction zone, and will vary according to the feature described.
- *'Ecological impact'* is the term used to denote actions (associated with the project) resulting in changes to an ecological feature. For example - the action of removing a hedgerow.
- *'Effect'* - the outcome on an ecological feature from an impact. For example - the effect on dormouse populations of the removal of a hedgerow.

## **2 Legislative and Planning context**

2.1 Wildlife and Biodiversity in Wales are protected to varying degrees through legal statute and planning policy.

2.2 The following key wildlife legislation is relevant to this project:

- **The Conservation of Species and Habitats Regulations 2017 as amended by the Conservation of Species and Habitats Regulations (Amendment) (EU Exit) 2019.** Species protected under this legislation are known as European Protected Species (EPS).
- **The Wildlife & Countryside Act (1981, as amended);**
- **The Environment (Wales) Act (2016), in conjunction with the Wellbeing of Future Generations (Wales) Act (2015), the Nature Recovery Plan for Wales (2015) and the Planning (Wales) Act (2015);**
- **The Protection of Badgers Act (1992).**



- 2.3 A number of **Sites, Habitats and Species** are included within the legislation. The following paragraphs summarise the key aspects relating to each, with particular reference to those relevant to development proposals. A more detailed summary is provided in Appendix C, and for further clarification, it is recommended that the legislation is referred to directly, and (if necessary) legal advice is sought.

#### ***Designated Sites***

- 2.4 ***Designated Sites*** are sites which are protected for their importance to biodiversity. These include:
- **Special Areas of Conservation (SACs), Special Protected Areas (SPAs) and Marine Protected Zones (MPZs)** - sites of international importance, protected under UK legislation (*The Conservation of Habitats and Species Regulations 2017 as amended*);
  - **Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs)** - sites of national importance, protected under UK legislation (*Wildlife and Countryside Act (1981)*).
  - **Sites of Interest for Nature Conservation (SINCs) and Local Nature Reserves (LNRs)** are of importance at the regional or local level, and are protected within planning policy guidance.

#### ***Priority Habitats and Species***

- 2.5 A number of ***Priority Habitats and Species*** are listed as being of principle importance to wildlife conservation in Wales within *Section 7 of the Environment (Wales) Act (2016)*. In general, projects which would cause adverse impacts to priority habitats or species would not be granted planning permission without appropriate mitigation.
- 2.6 The Section 7 lists of Priority Habitats and Species for Wales can be downloaded from <https://www.biodiversitywales.org.uk/Environment-Wales-Act>.

#### ***Protected Species***

- 2.7 A range of **legally protected species** are included within different pieces of legislation, which offer varying forms of protection. Many protected species are also priority species, but also have specific legal protection from particular actions.
- 2.8 Commonly occurring examples of protected species include:
- **Bats** (*Conservation of Species and Habitats Regulations and Wildlife and Countryside Act (WACA), 1981, as amended*);
  - **Dormice** (*Conservation of Species and Habitats Regulations & WACA*);
  - **Otter** (*Conservation of Habitats and Species Regulations & WACA*);
  - **Great crested newt** (*Conservation of Species and Habitats Regulations and WACA*);
  - **Water Vole** (*Wildlife and Countryside Act, 1981 - Full protection*)
  - **Marsh Fritillary Butterfly** (*Wildlife and Countryside Act, 1981 - Full Protection, Conservation of Species and Habitats Regulations 2017 - protection of core habit areas*);

- **Reptiles**- slow worm, grass snake, common lizard and adder - (*Wildlife and Countryside Act, 1981 - Partial protection*). Rare and locally occurring species (Smooth snake, Sand Lizard) have additional protection under the *Conservation of Species and Habitats Regulations*.
- **Badgers** (*The Protection of Badgers Act, 1992*). Includes protection of badger setts from digging or disturbance;
- **Nesting Birds** (*Wildlife and Countryside Act, 1981*) Protected from disturbance when active, additional protection is given to certain rare or sensitive species listed in Section 1 of the Act).
- **Certain rare plants and invertebrates** are also protected within the *Wildlife and Countryside Act, (1981)*.

2.9 This list is not exhaustive, and there are many more protected species which may occur within specific locations in the country and/or in particular habitats. Where relevant, any legislative constraints around other species are described within the report text.

### ***Licensing***

- 2.10 Any action which might breach the legislation in relation to protected species would risk causing a criminal offence (e.g. destroying a bat roost). In some cases it is possible to gain a licence from Natural Resources Wales (NRW) to permit otherwise unlawful actions.
- 2.11 There are two main forms of licence (in the context of development) - a ***survey licence*** held by individuals to permit certain survey techniques for protected species and a ***development or derogation licence*** for a particular project (e.g. a development) which might cause an offence - (e.g. to disturb a bat roost). Projects requiring development licences must meet certain criteria, and applications must contain a detailed method statement prepared by an ecologist to ensure that effective mitigation measures are delivered.

### ***Invasive Species***

- 2.12 A number of **invasive plant species** are listed within the Wildlife and Countryside Act (Schedule 9, part II), which includes the commonly occurring **Japanese Knotweed** and **Himalayan balsam**, as well as a number of other terrestrial and aquatic plants. In the context of development, these must not be caused to spread off site.

### ***Planning Policy***

- 2.13 Local planning policy is informed by National Planning Policy, which includes provision for protection of wildlife and biodiversity under Technical Advice Note (TAN) 5. This is implemented through the local development plan and supplementary planning guidance. A summary of planning policy guidance relating to biodiversity can be found in Appendix D.



### 3 Methodology

#### *Study Area and Scope*

- 3.1 The study related to the site area shown in the 'Existing Site Plan - 1798 - 4-S by W. Griffiths architects (04/28/22)
- 3.2 The appraisal included consideration of all those **designated sites, priority habitats, protected species and priority species** which occur, or potentially occur, within the *zone of influence* of the project.
- 3.3 The *zone of influence* for the project was considered to comprise the site area, but also included consideration of potential ecological effects to adjacent habitats or sites, functionally connected habitats (e.g. those linked by watercourses or hydrology), or to mobile species occurring in the wider area.

#### *Desk Study Methods*

- 3.4 Aerial photographs (Google Earth Pro) and Ordnance Survey maps were used to gain an overview of the study area and surrounding habitats.
- 3.5 A data search from South-East Wales Biological Records Centre (SEWBRc) was ordered, which included details of designated sites, priority habitats and protected species records within 2km of the site.
- 3.6 Details of statutory designated sites within 2km of the site were obtained using the Multi-Agency Geographic Information Centre (MAGIC) Interactive Map.

#### *Value criteria*

- 3.7 In order to inform the significance of any ecological impact, ecological features within the study area were valued according to their importance on a geographic scale (where this could be determined without site visit/ further survey).
- 3.8 Determination of value was based on a range of criteria, discussed within CIEEM (2018) '*Guidelines for Ecological Impact Assessment in the United Kingdom*'. The following paragraphs describe the terminology used for valuation, with an indicative guide to their application:
  - *Negligible* - Negligible ecological value at any scale - e.g. areas of hardstanding, bare ground, road surfaces etc;
  - *Site/ Zone of influence only* - Features which contribute to the biodiversity of the site or immediate surrounding area - e.g. habitats supporting commonly occurring or non-priority species;
  - '*District*' - Habitats and species of importance to the district, but not the County or Region. May include local wildlife sites or habitats containing non-priority species assemblages which are distinctive or notable at the local level;
  - '*Regional*' - Habitats and species of importance at the county or the regional level, which may include features listed on Local Biodiversity Action Plans and Section 7 lists, as well as SINCs and County Wildlife Sites;
  - *National* - Habitats and species of national importance - this may include SSSIs and National Nature Reserves, as well as sites of importance to priority or protected species or species assemblages;

- *International* - Sites containing habitats or species of international importance, including those covered by international legislation, such as Special Areas of Conservation or Special Protected Areas, Biosphere Reserves or Marine Protected Areas, as well as sites supporting populations of priority species of international importance.

### ***Appraisal Methods***

- 3.9 The proposed project plan was considered in relation to the desk study results relating to designated sites, habitats and protected species to provide a preliminary indication of potentially adverse impacts that could be caused.
- 3.10 Where it was possible to do so without further survey, an indication of the significance of these effects was provided (with reference to CIEEM, 2018).

## **4 Results - Desk Study**

### ***Site Overview and Setting***

- 4.1 The site was located within an area dominated by residential and commercial development, adjacent to the busy Carmarthen Road.
- 4.2 Habitats in the surrounding area included urban development with areas of green spaces, parkland and trees, as shown in Figure 2, below.

*Figure 2: Overhead plan showing the site in relation to surrounding habitats*



**Designated sites**

- 4.3 Table 1 (below) summarises the statutory designated sites occurring within 2km of the project site, which include Special Areas of Conservation (SACs), Special Protection Areas (SPAs), and Sites of Special Scientific Interest (SSSIs).
- 4.4 Internationally or nationally designated sites with a primary designation for bats and birds occurred within 10km are also shown.

**Table 1: Designated Sites**

<b>Name of Designated Site</b>	<b>Distance from Development Site</b>	<b>Reason for designation</b>
Penplas Grasslands SSSI	1.5km north	Lowland unimproved grassland pasture
Blackpill SSSI	4.3km south	An overwintering and passage site for a larger number of waders. Counts for Ringed Plover and Sanderling exceed 1% of both British and Western European populations, making the Bay of international importance in this respect.
Burry Inlet and Loughour Estuary SSSI	5.2km west (nearest point)	Saltmarsh, sand and mud flat habitats, wader and wildfowl populations
Burry Inlet SPA	5.2km west (nearest point)	Wetland of international importance for waterfowl.
Burry Inlet Ramsar Site	5.2km west (nearest point)	Wetland of international importance for waterfowl.
Carmarthen Bay and Estuaries SAC	5.2km west (nearest point)	<i>Annex 1 Habitats (primary):</i> Shallow inlets and bays Intertidal mudflats and sandflats; Atlantic salt meadows; Estuaries; Glasswort and other annuals colonising mud and sand; Subtidal sandbanks. <i>Annex 1 Habitats (qualifying):</i> N/A <i>Annex II Species (primary):</i> Twaite shad <i>Annex II Species (qualifying):</i> Alice shad; River lamprey Sea lamprey, Otter

- 4.5 The Penplas grasslands SSSI occurred within 1.5km from the site, but the intervening area contains a significant area of developed land.
- 4.6 The site lay within 5km of several sites of national or international importance to waders and waterfowl, but was separated from these features by significant areas of developed land.

### *Non-Statutory / Local Sites*

- 4.7 In addition to the statutory designated sites listed above, the Cadle Heath Local Nature Reserve occurs 340m to the north, and the following Sites of Importance for Nature Conservation (SINCs) occur within 2km:
- Main Swansea - Fishguard Railway Line (642m);
  - Penyfodau Fawr To Llewitha (884m);
  - Portmead Common (914m);
  - Mynydd Bach-Y-Glo (916m);
  - Mynydd Garn goch Common (1328m);
  - Valley Wood (1144m);
  - Mynydd Cadle (1428m);
  - Penlan Slopes (1544m);
  - Cockett Wheels & Park (1863m);
  - Dunvant Brickworks (2000m).
- 4.8 The Cadle Heath Nature Reserve contains wet heath, marshy grassland and semi-improved neutral grassland habitats, as well as ponds and scrub. Marsh fritillary butterfly and southern marsh orchid have been recorded.

### *Habitats*

- 4.9 The following paragraphs provide an indication of habitats potentially present at the site (based upon historical overhead photography and recent photographs), as well as any priority habitats that potentially occur within the zone of influence (based upon existing records provided by SEWBReC)

### *Site Area*

- 4.10 Overhead imagery and photographs indicate that the site area comprises a large area of dense bracken and Japanese knotweed with areas of rough grassland and scattered trees, shrubs and scrub.
- 4.11 Habitats at the site potentially have value at the scale of the *site* or possibly *district* scale (depending on the extent and quality of grassland, scrub and tree habitat mosaic).
- 4.12 Areas of Japanese knotweed are likely to have low ecological value, and would be subject to constraints relating to Schedule 9 invasive species (see below).



*Figure 3: Overhead photograph of site*



*Figures 4 and 5: Images of site*



*Figures 6, 7, 8 and 9: Google Street-View Images showing habitats within the site - Japanese knotweed, bracken, bramble scrub and trees.*



#### *Habitats in the Vicinity*

- 4.13 Habitats in the immediate surrounding area comprised hard surfaces and residential development - likely to have *lower* ecological value.

#### *Priority habitats in the wider area*

- 4.14 Patches of semi-improved neutral grassland, semi-improved acid grassland and marshy grassland habitats occurred within 1km. The nearest areas of priority habitat occur within the Cadle Heath Nature Reserve, 340m to the north.



### ***Protected and Priority Species Accounts***

#### ***Bats***

##### *Existing Records*

- 4.15 There were 13 records for bats within 2km of the site area. These comprised unidentified species, common pipistrelle, soprano pipistrelle, noctule and lesser horseshoe.
- 4.16 All bat records within 1km of the site were common pipistrelle. An individual common pipistrelle bat was recorded emerging from a roost 324m from the site, other records within 1km of the site comprised flight passes by small numbers of bats.
- 4.17 A single noctule bat was recorded 1.6km from the site and a lesser horseshoe bat was recorded within unused buildings 1.9km from the site.
- 4.18 All of the unidentified bat records were over 1km from the site.

##### *Habitat Suitability*

- 4.19 No structures with potential suitability for bat roosting appear to occur within the site, area, and trees appear to be small and shrubby. However, the bat roost suitability of any trees would need to be confirmed during a site visit.
- 4.20 The site is located in an area of lower suitability for bats, and likely to be subject to significant levels of night time lighting (street lights occur along the adjacent Carmarthen Road). However, the site could provide a small area of foraging habitat for local bats (probably pipistrelle species only).

#### ***Dormouse***

##### *Existing Records*

- 4.21 There were no records for dormice within 2km of the site.

##### *Habitat Suitability*

- 4.22 Although bramble and trees can potentially have value to dormice, the site is relatively isolated and set within a developed location. It does not appear to be well connected to habitats of high value to dormice.
- 4.23 The risks of dormice occurring within the site are likely to be negligible.



### ***Otter and Water vole***

#### *Existing Records*

- 4.24 There were 9 records for otter within the search area, all of which were over 1km from the site.
- 4.25 There was 1 record for water vole within a water-course 1.1km north-west of the site.

#### *Habitat Suitability*

- 4.26 No watercourses or other habitats of value to otter or water vole occur on the site or its vicinity, and the risk of either of these species occurring within the site is likely to be *negligible*.

### ***Badger***

#### *Existing Records*

- 4.27 There were 2 records for badger within 2km of the site. The nearest record was 1.5km from the site.

#### *Habitat Suitability*

- 4.28 The habitats in the vicinity of the site were highly developed and likely to have low value to badger. The setting and isolation of the site from habitats in the wider area would potentially reduce the likelihood of badger setts occurring within the site.
- 4.29 However, badger can create setts adjacent to busy roads and in residential areas (under some circumstances). A site visit would be required in order to confirm the presence or absence of badger setts at the site.

### ***Priority Mammals***

#### *Existing Records*

- 4.30 There were 79 records of hedgehog within 2km of the site, with the nearest record occurring 185m west of the site. There were 9 further records within 500m of the site.

#### *Habitat Suitability*

- 4.31 Habitats at the site are suitable for hedgehog, and numerous records occur in the surrounding area. Therefore, hedgehog could potentially occur within the site.
- 4.32 Other priority mammal species were considered unlikely to occur.

## ***Birds***

### *Existing Records*

- 4.33 There were over 200 priority / red-listed bird species recorded within 2km of the site. Those recorded within 1km of the site included house sparrow, song thrush, dunnock, bullfinch, starling, redwing, barn owl, red-kite, linnet, kestrel, skylark, reed bunting, and marsh tit.

### *Habitat Suitability*

- 4.34 The dense vegetation within the site could support nesting birds during the breeding season.
- 4.35 The site would be unlikely to support an important assemblage of bird species, nor any waders, waterfowl or upland birds, but could potentially support red-listed/ priority species such as house sparrow and amber listed species such as dunnock, wren, bullfinch and song thrush (*RSPB Birds of Conservation Concern 5, 2021*).

## ***Reptiles and Amphibians***

### *Existing Records*

- 4.36 There were 14 records for common lizard, 5 records for slow worm, 14 records for grass snake and 1 record for adder within 2km.
- 4.37 The majority of the reptile records were over 1km from the site (i.e. not within the residential area of Fforestfach. However common lizard were recorded 250m north-west of the site. In addition, common lizard and slow worm have been recorded within the Cadle Heath Nature reserve, 600m north of the site.
- 4.38 There were 2 records for common toad (both over 1km from the site), 5 records for palmate newt (nearest record 715m from site) and 14 records for common frog (nearest record 180m from the site).

### *Habitat Suitability*

- 4.39 The mixture of rough grassland and scrub at the site (as well as areas of rubble such as that which can be seen Figure 5, above) are potentially suitable for reptile species - particularly common lizard. The site provides habitats of value for basking, foraging, refuge and hibernation. The slope of the bank is towards the south-west, providing sun-warmed areas.
- 4.40 Habitats at the site appear to have low suitability for amphibians, as the site does not appear to be well connected to any ponds or water-bodies. However, small numbers of common species (such as common frog) could potentially occur.
- 4.41 Habitat conditions at the site should be assessed during a site visit, and if found to be suitable, further reptile survey may be required.

### ***Invertebrates***

#### *Existing Records*

- 4.42 There were 195 records for priority invertebrate species within 2km of the site. The nearest records were made at Swansea Community Farm, 250m from the site and included small blue butterfly and buff ermine, cinnabar and small emerald moths.
- 4.43 In addition, Marsh fritillary butterfly have been recorded in Cadle Heath Nature Reserve, 340m north of the site.

#### *Habitat Suitability*

- 4.44 Native trees, scrub and grassland habitats at the site could support a moderate assemblage of invertebrates. Habitats at the site are not suitable for marsh fritillary butterfly.

### ***Plants***

#### *Existing Records*

- 4.45 There were no records for priority or protected species within the vicinity of the site. Native bluebell have been recorded in the wider area.
- 4.46 There were several records for Japanese knotweed and Himalayan balsam (Schedule 9 Invasive Species) within the search area, with the nearest records 416m from the site.

#### *Site Records*

- 4.47 Large stands of Japanese knotweed (a Schedule 9 listed invasive species) can be seen to occur at the site (Images 6 and 8).

### ***Summary of Key Results***

#### *Designated Sites*

- 4.48 The site lay within 1.5km of the Penplas SSSI and within 5km of several sites of international or national importance for waders and waterfowl. The Cadle Heath Nature Reserve occurs 340m north of the site.

#### *Habitats*

- 4.49 Habitats at the site appeared to comprise Japanese knotweed, bracken, rough grassland, bramble and scrub with occasional trees.

#### *Protected and Notable Species*

- 4.50 The site potentially provided a small area of foraging habitat for bats. The bat roost suitability of trees would need to be confirmed during a site visit.

- 4.51 The site was considered likely to have *negligible* value to dormice.
- 4.52 Habitats at the site were potentially of value to hedgehog, weasel, reptiles and nesting birds. The risk of badger setts occurring within the site is likely to be low, but this should be confirmed by a site visit.

#### *Invasive Species*

- 4.53 Large stands of Japanese knotweed occur within the plot.

## **5 Survey Limitations**

- 5.1 This appraisal is based upon a desk study. No site visit was undertaken, and all results should be taken as preliminary indications only.
- 5.2 Overhead photographs and street-view imagery does not necessarily provide up to date information. In particular, they may not show any recent work that has been undertaken at the site or its vicinity.
- 5.3 Existing species records do not necessarily reflect species abundance. Records may be skewed by recording effort in a particular area, and differences in detectability of various species. Absence of records does not necessarily indicate that a species is absent from an area.

## **6 Preliminary Appraisal**

### **Overview of Key Project Actions**

- 6.1 The proposals would include the development of new flats within the site, along with amenity areas and upgraded access. A proposed layout plan is shown in Appendix A.

### **Impacts to Designated Sites**

- 6.2 Due to the distance from any designated site and the intervening areas of development, adverse impacts to designated sites are considered unlikely to occur.

### **Impacts to Habitats**

- 6.3 The proposals would potentially cause adverse impacts to habitats at the scale of the *site* or *district* due to small scale loss of an area of rough grassland, scrub and trees. The value of these habitats should be confirmed based upon a site visit, but it is likely that habitat loss could be suitable compensated by appropriate habitat creation / enhancement of retained areas of the site.

### ***Impacts to Species***

- 6.4 Under certain conditions, the proposals could potentially cause adverse impacts to bats, badger, nesting birds and reptiles - all of which are protected under statutory legislation in the UK.
- 6.5 In addition, bats, hedgehog, and certain bird, reptile and amphibian species, are *priority* species which are protected within the planning system under the Environment (Wales) Act, 2016.
- 6.6 Therefore, further survey works are likely to be required in order to confirm presence/absence of these species at the site, or mitigation proposals would need to be developed which protect these features during construction and in the long term.

### ***Invasive Species***

- 6.7 Significant areas of Japanese knotweed occur at the site.
- 6.8 Development at the site would risk transporting Japanese knotweed off-site (potentially a legal offence under the Wildlife and Countryside Act, 1981).
- 6.9 This could be caused by transport of soil containing roost fragments from the site, or by root fragments becoming stuck to vehicle tracks, wheels or footwear or equipment. Methods for preventing the spread of Japanese knotweed of site will need to be included within the construction method statement, and measures for controlling the plant in the long term may be necessary.

### ***Ecological Impact Summary***

6.10 Table 2, below, summarises the potentially occurring ecological impacts that could be associated with the project, with an indication of required actions to address these.

***Table 2: Summary of Potential Ecological Impacts***

<b>Feature</b>	<b>Potential Impact</b>	<b>Recommended Actions</b>
Rough grassland, scrub and trees	Loss of habitats potentially of value at the <i>site</i> or <i>district</i> scale	Habitat Survey to map extent of habitat areas on site.  Creation of new wildlife habitat within site design
Bat Roosts	Loss of bat roosts within trees at the site (Legal offence)	Survey to determine bat roost suitability of trees at the site
Bat Foraging Habitat	Loss of habitat potentially of value to local bats	Creation of new wildlife habitat within site design
Badger	Disturbance of badger setts (Legal offence)	Further survey to check for badger setts
Hedgehog	Killing or injury during site clearance (Priority species).  Loss of habitat in the long term	Construction methods to include precautionary working methods such as careful dismantling of suitable habitat features  Creation of new wildlife habitat within site design
Nesting Birds	Disturbance of nesting birds (Legal offence)	Vegetation clearance conducted outside of bird nesting season
Reptiles	Killing / Injury during site clearance/ excavation works (Legal offence)  Loss of reptile habitat in the long term	Further reptile survey to inform mitigation requirement  Presence of reptiles within the site would require retention of a designated habitat area and protection of individuals during works.
Japanese knotweed	Spreading the plant off-site (Legal offence)	Construction working methods to include Japanese knotweed management and measures to prevent spread of the plant off-site

## 7 Recommendations

### Further Survey

- 7.1 In order to inform the impact assessment, a site visit / extended Phase 1 Habitat Survey is recommended in order to update and confirm the findings of this desk study report.
- 7.2 The survey should include an assessment of trees for their bat roost suitability, assessment of habitat suitability for dormice and reptiles and a check for badger setts / evidence of badger.
- 7.3 Requirements for Phase 2 surveys would be determined following the extended Phase 1 Habitat Survey, which could include further reptile survey.

### Mitigation

- 7.4 Mitigation requirements would need to be confirmed following the recommended further survey work.
- 7.5 As a minimum, it is likely that development at the site would need to include construction working methods to protect hedgehog and nesting birds, and to avoid spreading Japanese knotweed off site.
- 7.6 If reptiles are found within the site, designated areas of suitable habitat would need to be created or retained on site (or reptiles trapped and transported to a nearby receptor site).
- 7.7 In addition, habitat creation at the site would be required in order to compensate for loss of existing habitats and/or to enhance the site for wildlife in the long term.

### *Ecological Enhancement*

- 7.8 The proposed site layout (as shown in Appendix A) provides opportunities for creating wildlife habitats and delivering ecological enhancements at the site. The following methods could be incorporated into the scheme design:
  - Installation of new bat boxes and bird nest boxes - either integrated into the new buildings and /or on trees or structures in the vicinity;
  - Use of a high proportion of native and wildlife friendly species should be used within planting schemes. This could include the planting of climbers beside walls and fences, planting of native shrubs and trees and/or creation of wildflower beds or planting of herbs of value to pollinators;
  - Installation of habitat features of value to wildlife, including habitat piles, hedgehog houses, invertebrate refuges;
  - Creation of a small pond, scrape, bog garden or marshy area;
  - Ongoing management arrangements for habitat areas in the long term.



- 7.9 Appendix E contains examples of the ecological enhancements and suggested species for wildlife-friendly planting.

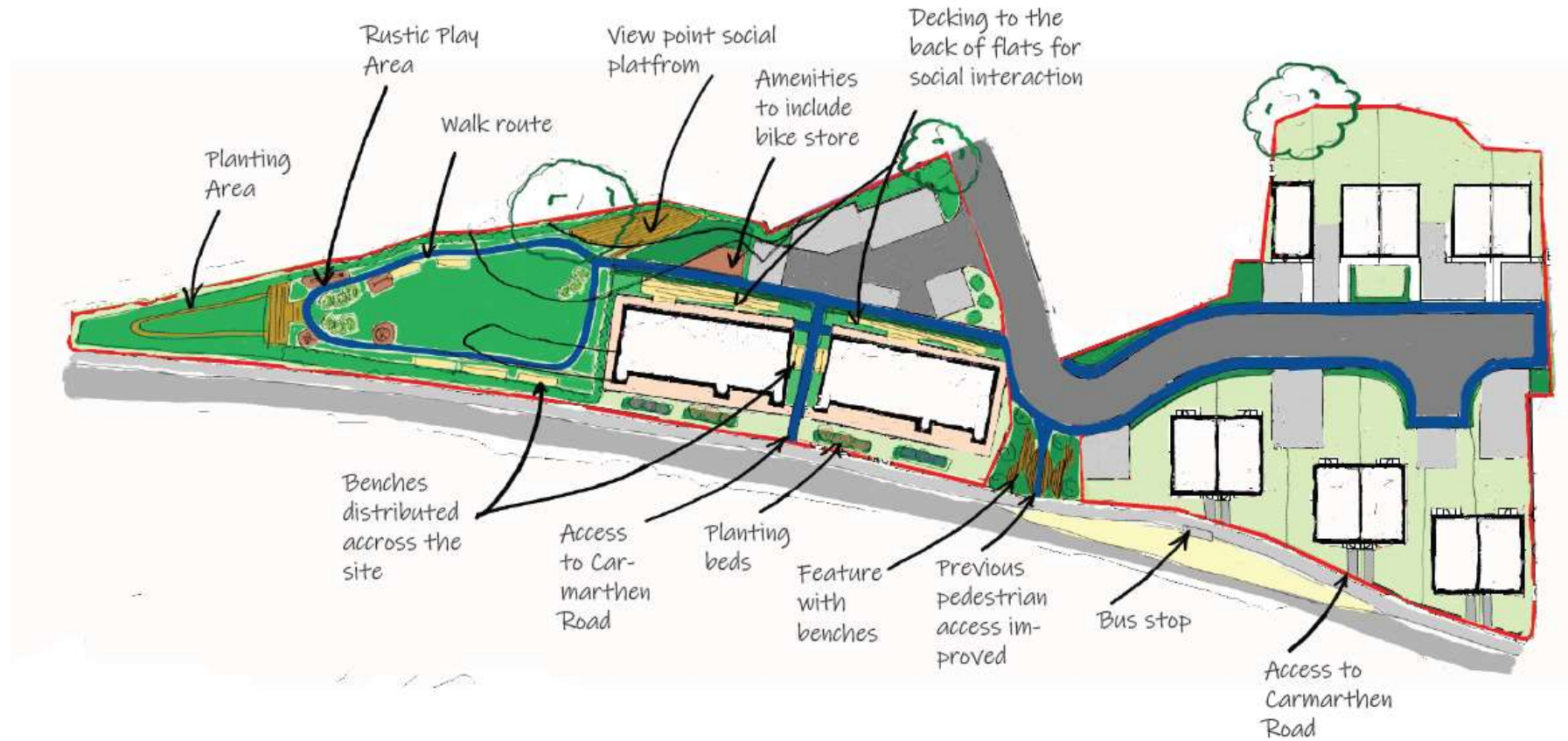
## **8 Conclusions**

- 8.1 The site potentially supports protected or priority species, but it is likely that any adverse ecological impacts could be avoided or suitably mitigated with the implementation of safe working methods and incorporation of habitat features within the scheme design.

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<http://www.biodiversitywales.org.uk/>

Appendix A: Overhead Plan of Proposals



**Appendix B: Habitat Creation / Ecological Enhancement****Small Trees / hedging**

- Willow species (e.g. *Salix cinerea*)
- Birch (*Betula pendula*, *Betula pubescens*)
- Rowan (*Sorbus aucuparia*)
- Hawthorn (*Crataegus monogyna*)
- Blackthorn (*Prunus spinosa*)
- Hazel (*Corylus avellana*)
- Dogwood (*Cornus sanguinea*)
- Guelder rose (*Viburnum opulus*)
- Wayfaring tree (*Viburnum lantana*)
- Elder (*Sambucus nigra*).

**Climbers for growing on fences**

- Rose species e.g. Dog rose (*Rosa canina*, *Rosa arvensis*)
- Wild honeysuckle (*Lonicera periclymenum*)
- Wild clematis (*Clematis vitalba*)
- Ivy (*Hedera helix*)
- Passion flower (*Passiflora* species)
- Jasmine (*Jasminum* species)
- Wysteria species.

**Perennial or self-seeding herbs (good for bees and pollinators)**

- Yarrow (*Achillea millefolium*)
- Michaelmas daisy (*Aster novi-belgii*)
- Ox-eye daisy (*Leucanthemum vulgare*)
- St John's wort (*Hypericum perforata*)
- Chives (*Allium schoenoprasum*)
- Foxglove (*Digitalis purpurea*)
- Lavender (*Lavandula officinalis*)
- Rosemary (*Rosemarinus officinalis*)
- Marigold (*Calendula officinalis*)
- Marjoram / Oregano (*Oreganum* spp.)
- Honesty (*Launaria annua*)
- Thyme (*Thymus* spp.)
- Borage (*Borago officinalis*)
- Vervain / Verbena species
- Welsh poppy (*Meconopsis cambrica*)
- Mints (*Mentha* spp.)
- Lungwort (*Pulmonaria officinalis*)
- Orpine *Sedum telephium*
- Comfrey *Symphytum officinale*
- *Echinacea purpurea*
- Snowdrop *Galanthus* spp,
- Native bluebell *Hyacinthoides non-scriptus*
- Autumn & Spring flowering Croci

**Integrated Bat Box Examples**

*Schwegler 1FR Bat Tube building*



*Vivara Pro Build-In Bat Tube*



*Integrated Bat Boxes within building*



**Bird Box Examples**

*Schwegler 1B Bird Box*



*Schwegler 2H Open-Front Bird Box* *Build-In Brick Nest Box*



**Bee/Insect Box Examples**





## Habitat Pile Examples

*Wood pile*



*Stone pile*



*Log pile*

