

Preliminary Ecological Appraisal (PEA) Report

Project: Penley Hall Industrial Park, Penley, Wrexham, LL13 0LQ

Client: Range Solutions

Date: March 2018

Reference: 060318



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REPORT DETAILS

Reference no.	060318
Version	001
Status	FINAL

QUALITY ASSURANCE

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Date of review	7 th March 2018

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EXECUTIVE SUMMARY

The contents of this report detail the findings of a Preliminary Ecological Appraisal (PEA) at Penley Hall Industrial Park, Penley, Wrexham, LL13 0LQ, to inform a planning application for the erection of 1 no. industrial unit. The site is centred on approximate SJ 41465 40003.

The application site, set between rural and suburban environments, is composed of hardstanding, previously-disturbed ground and scattered scrub/ trees. No built structures are present on the site (**Plan 1**).

No features offering any degree of bat roosting potential are present on the site. A mature oak tree located off-site at SJ 41480 40016 provides 'moderate' bat roosting potential (**Plan 1; T1**). The site as a whole offers limited foraging and commuting habitat for bats. Records of one (1) common bat species were obtained within 1km of the site. No further survey with regard to bat species is deemed necessary, however a sensitive lighting scheme is recommended, along with bat box provision as an enhancement.

The scattered scrub/ immature trees on site provide 'low' nesting potential for passerine bird species (**Plan 1; T4**). No active/ disused birds' nests were found during the PEA. A small array of birds species have been recorded within 1km of the site. A sensitive revegetation works scheme must be followed and bird box provision is recommended as an enhancement.

Three (3) significant standing waterbodies (**WB1 – WB3**) were identified during the desktop study, within a 250m zone of influence. **WB1** scored a 'good' HSI result. **WB2** and **WB3** are separated from the site by the A539, considered a dispersal barrier for great crested newts (*Triturus cristatus*). The terrestrial habitat present on the site itself is deemed as being moderate-quality for amphibian species, although it is located amidst industrial surrounds. A large number of GCN records were obtained within 1km of the site. No further survey with regard to GCN is deemed necessary, however Reasonable Avoidance Measures (RAM's) detailed in a method statement for GCN in **Section 4** of this report are considered necessary to mitigate against the potential disturbance, injuring or killing of GCN (if present) during the development.

The site offers 'low' potential for reptile species, despite the presence of some favourable reptile habitats, given the disturbed nature of the site, its small size, industrial location and lack of connectivity with the wider landscape. No reptile records were obtained within 1km of the site. No further survey with regard to reptile species is deemed necessary and reptiles are not considered a constraint to the proposals.

A sensitive landscaping scheme for the site incorporating new, native tree planting would be a welcome enhancement.

No evidence of other protected species was noted during the survey and no adverse impacts upon protected species or habitats of ecological merit are envisaged, provided the provisions detailed within this report are adhered to.

1. INTRODUCTION

1.1 COMMISSION AND PROPOSALS

- Pearce Environment Ltd were commissioned by Range Solutions to undertake a Preliminary Ecological Appraisal (PEA) at Penley Hall Industrial Park, Penley, Wrexham, LL13 0LQ (hereafter referred to as 'the site'). The site is centred on approximate Ordnance Survey Grid Reference (OSGR) SJ 41465 40003.
- The findings of this report have been used to inform a planning application for the proposed erection of an industrial unit (**Appendix 1**).

1.2 AIMS

- This report sets out the findings of a desk-based study and site-based study undertaken by Pearce Environment Ltd during February and March of 2018.
- The aims of this report are to:
 - i. Determine the habitat types within and immediately adjacent to the boundary of the site in relation to the proposed development footprint;
 - ii. Identify habitats and species constraints pertinent to the development proposals, in accordance with statutory legislation and guidance given in Planning Policy Wales¹, with specific focus on great crested newts and nesting birds;
 - iii. Determine the need for any additional species surveys, where necessary;
 - iv. Detail mitigation and compensation methods, Reasonable Avoidance Measures (RAM's) and/ or licensing requirements, where necessary; and
 - v. Identify opportunities for the proposed development to provide enhancements and add to the biodiversity resource within the site.

1.3 BACKGROUND

- There are no known historical ecological reports relating to the application site.

¹ Planning Policy Wales (Edition 9, November 2016)

2. METHODOLOGY

- This section summarises the methodologies used during the ecological studies undertaken to inform the proposed development, in line with the aims set out in **Section 1** of this report.

2.1 DESK STUDY

- The desk study is an important part of the ecological assessment as it provides contextual information, such as the sites' proximity to designated areas and known records of protected/ notable species (**Table 2.1**).
- This information is used to supplement the findings of a Preliminary Ecological Appraisal (PEA) and supports the recommendations and conclusions set out in this report.

Table 2.1 Summary of resources used and information requested during the desk study (2018)

Organisation/ Resource	Information Assessed (search distance from site boundary)
MAGIC website ²	- International statutory designations (2km) - National statutory designations (2km) - Significant standing water bodies (250m)
North Wales Environmental Information Service (COFNOD)	- Protected/ UK BAP species records (1km) - Statutory designations (1km) - Non-statutory designations (1km)
Freely-available online data sets (NBN Atlas ³ and LERC Wales Aderyn ⁴)	Protected/ UK BAP species records (1km)

- The search areas described above and resources used are considered to be sufficient to assess the potential for the proposal to affect protected species and designations of conservation concern. All pertinent information obtained during the desk study is referenced within **Section 3**, **Section 5** and **Appendix 3** of this report.

2.2 PRELIMINARY ECOLOGICAL APPRAISAL (PEA)

- This level of survey does not aim to provide a complete floral and faunal inventory present on site but to identify field signs of, or habitats with, the potential to support protected species, thereby determining the need for further species survey(s).
- The main habitat types and plant species present were identified and mapped in **Plan 1**, summarised in **Section 3** and illustrated using photographs included within this report, according to the guidelines set out by the Chartered Institute of Ecology and Environmental Management (CIEEM)⁵.

² Multi-Agency Geographic Information for the Countryside website (www.magic.gov.uk/)

³ National Biodiversity Network, 2017 (<https://records.nbnatlas.org/explore/your-area>)

⁴ Aderyn. LERC Wales' Biodiversity Information & Reporting Database (<http://aderyn.lercwales.org.uk/public/search>)

⁵ Guidelines for Preliminary Ecological Appraisal (2013). CIEEM. Technical Guidance Series, 1-8.

- The initial PEA of the site was undertaken during a daytime visit on 6th March 2018. This visit was carried out at a temperature of 8°C and in overcast conditions. This time of year is considered to be outside of the optimal period for undertaking a PEA and it was taken into consideration that roosting bats are likely absent at this time, and vegetation may have significantly died back. It does, however, coincide with the beginning of the bird nesting season.
- The survey was performed by Jonathan Molesworth BSc (hons) GradCIEEM, an ecologist with almost 3 years' experience and holder of Natural England (NE) and Natural Resources Wales (NRW) licenses for great crested newts (licence numbers 2017-31597-CLS-CLS and 77860:OTH:SA:2017), a 1st class degree in Biology from the University of Liverpool, and membership with the Chartered Institute of Ecology and Environmental Management (CIEEM: *membership number 15105*). Jonathan is also a qualified tree climber, and is a member of the Shropshire Mammal Group and Shropshire Bat Group.

2.3 LIMITATIONS

- All aspects of the site and immediate surrounds were fully accessible during the survey.
- Whilst we make every effort to meet the client brief, no site visit can ensure prediction of the natural environment such as movement of species in response to variables such as weather and seasonality.
- As with any survey, it is a documentation of what the surveyor observes on the specific survey day and their interpretation of those observations.

2.4 SPECIES SURVEYS

Bats

Preliminary Bat Roost Assessment: Trees

- An assessment from the ground of any suitable tree(s) on or adjacent to the site was undertaken to determine their potential to support roosting bats. All trees examined were categorised based on the number and types of features known to be suitable to support roosting bats, summarised in section 6.2.4 and classified in Table 4.1 (**Appendix 2**) of '*Bat Conservation Trust's Good Practice Guidelines*'⁶. These features include cracks and splits in limbs, cavities, woodpecker holes, loose bark and thick-stemmed ivy. Where appropriate, these features were assessed using binoculars.
- Recommendations for further survey requirements are based on guidelines summarised in Table 7.3 of '*Bat Conservation Trust's Good Practice Guidelines*' (**Appendix 2**).

⁶ Collins J. (Ed.) (2016) *Bat Surveys for Professional Ecologist: Good Practice Guidelines* (3rd Ed.) The Bat Conservation Trust, London.

Great Crested Newts

- A desk based study was undertaken using OS maps and online mapping resources to identify any waterbodies within 250m of the site boundaries.

Habitat Suitability Index (HSI)

- Those waterbodies identified within the search area not considered to be separated from the application site by major dispersal barriers were assessed for their potential to support great crested newts (*Triturus cristatus*) using the Habitat Suitability Index (HSI), developed by Oldham et al. (2000)⁷. This assessment uses a scoring system, derived from several criteria including pond area, water quality, fish/ waterfowl presence and the value of the surrounding, terrestrial habitat. Waterbodies with high scores are considered more likely to support GCN than those with lower scores.
- This tool has been developed to provide a quantitative measure of the suitability of a waterbody to support GCN and should not be used as a substitute for presence/ absence surveys where they are required.
- HSI scores relating to the suitability of the waterbodies assessed to support GCN are described in **Table 2.2**.

Table 2.2 Pond suitability for great crested newts determined using HSI scoring system

HSI Score	Waterbody Suitability to Support GCN
<0.5	Poor suitability
0.5 – 0.59	Below average suitability
0.6 – 0.69	Average suitability
0.7 – 0.79	Good suitability
>0.8	Excellent suitability

- Appropriate biosecurity measures were taken during waterbody visits, where necessary.

Nesting Birds

- An assessment from the ground of all trees/ boundary vegetation located on or immediately adjacent to the site was undertaken using the PEA, to identify the presence of habitat/ features suitable for nesting birds.
- A search for active/ disused birds' nests was undertaken, where appropriate.

Reptiles

- A thorough site walkover was undertaken to assess the habitat suitability for common reptile species. A terrestrial hand search was carried out during the PEA for reptiles basking or seeking refuge beneath debris.

⁷ Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). *Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus)*. Herpetological Journal 10 (4), 143-155.

Badgers

- A thorough site walkover was undertaken during the PEA to determine the presence of badger (*Meles meles*). Field signs such as setts, foraging scrapes, latrines, paths and badger paw prints were searched for. Where present, an assessment of excavations was made, taking into account the shape of the entrance, the quantity of spoil, the presence of fresh bedding and the presence of badger hair/ badger claw marks.

Invasive Weeds

- A search for signs of invasive species of plant such as Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and giant hogweed (*Heracleum mantegazzianum*) was undertaken during the PEA.
- Appropriate biosecurity measures were undertaken, where appropriate.

Other Species

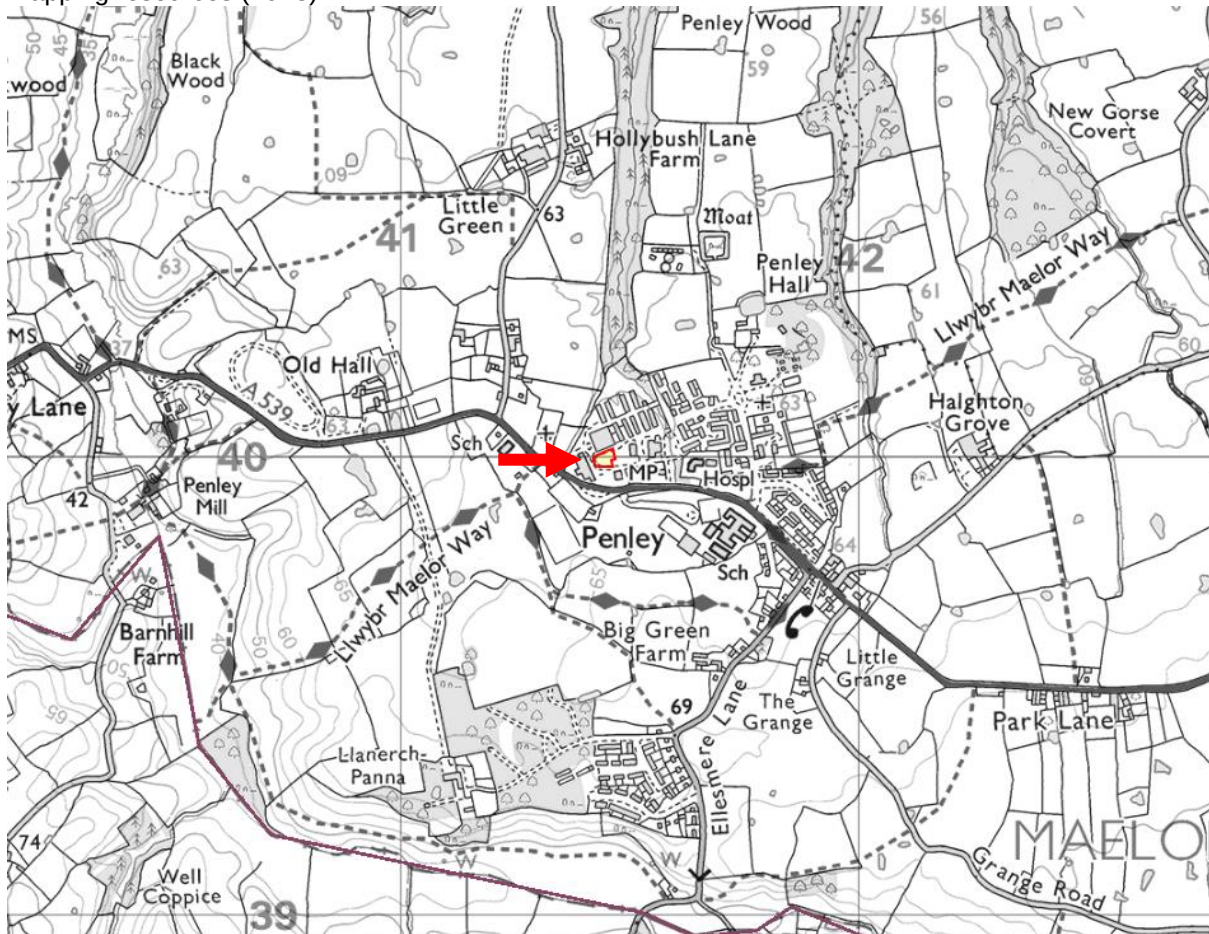
- Observations of any other notable flora and fauna were noted during the PEA.

3. RESULTS AND RECOMMENDATIONS

3.1 SITE DESCRIPTION

- The application site is set on the fringe between rural and suburban environments, located in the village of Penley, approximately 12.7km southeast of Wrexham and a short distance north of the English/ Welsh border (**Figure 3.1**).

Figure 3.1 Site location and survey area (outlined in red), reproduced using freely-available online mapping resources (2018)



- The site is directly surrounded by industrial units in all directions, beyond which lies residential housing to the east, a narrow swathe of woodland to the north, and a mosaic of pasture/ arable fields and scattered farmsteads to the west and south (**Figure 3.2**).
- The site itself (~0.3 acres) consists of a small plot within an industrial park. The following range of broad habitats are present on the site (**Plan 1**):
 - Hardstanding;
 - Previously-disturbed ground; and
 - Scattered trees/ scrub.
- Vehicular access is gained through the industrial park, leading off the A539, with an existing carpark area in the northeast corner of the site (**Image 3.3**).

Figure 3.2 Aerial view of the site (outlined) and near surrounds, reproduced using freely-available online mapping resources (2018)



Image 3.3 Access into the industrial park leads off the A539



3.2 BROAD HABITATS

Hardstanding

- The northeast corner of the site is constituted by an existing carpark area, composed of hardcore (**Image 3.4**). The areas immediately outside of the site boundaries consist of concrete/ asphalt/ hardcore.

Image 3.4 Looking west, showing carpark area in the northeast corner of the site and immediate surrounds



- All areas of hardstanding are all considered to be of low ecological value.

Previously-Disturbed Ground

- The main body of the site consists of previously-disturbed ground, some of which remains bare earth, but most of which has become populated with ruderal vegetation (**Image 3.5 – Image 3.8**). Dominant flora include spear thistle (*Cirsium vulgare*) and cuckoo flower (*Cardamine pratensi*), with rare tussocks of soft rush (*Juncus effusus*) at the western extent, where the ground is noticeably damper.

Scattered Scrub/ Trees

- Several small stands of scattered scrub and immature trees exist throughout the site (**Image 3.5; Image 3.7; Image 3.8**). This is dominated by bramble (*Rubus fruticosus*), with occasional immature crack willow (*Salix fragilis*) and oak (*Quercus spp.*) trees.
- No active/ issued birds' nests were found in the scattered scrub/ trees during the PEA.

Image 3.5 A typical view of the site, looking south



Image 3.6 Typical ground flora found on the site



Image 3.7 Immature willow and oak trees, intermixed with bramble



Image 3.8 The western half of the site, looking east, also showing large log pile and large oak tree located of-site (in the distance, indicated)



- A large, mature oak tree is located ~12m east of the site boundary at SJ 41480 40016, with an intervening carpark, formed from hardcore (**Image 3.8**). One (1) passerine birds' nest was noted within this tree during the survey. This tree is considered a sufficient distance from the site not to be considered pertinent to the study.
- *The immature, scattered trees on site were not subject to a PRA owing to their lack of maturity and/ or presence of any suitable bat roost features.*

3.3 OTHER OBSERVATIONS

- The site has no formal boundaries.
- A large pile of recently-ringed cord wood is present at the western extent of the site. It is understood that this portion of the site is under current use as an area for processing logs (A Roberts, *verb. comms.*, 06/03/2018).
- A hand search of a debris on the site (large stones, logs etc.) during the PEA did not identify the presence of any herptiles (amphibian and reptile species) seeking refuge beneath such features (**Image 3.9**).

Image 3.9 No herptiles were found during a hand search of debris



- A single grey wagtail (*Motacilla cinerea*) was observed in the immediate surrounds of the site.
- No further observations pertinent to this study were made.

3.4 DESK STUDY RESULTS

Statutory Designations

- A desk based study was undertaken to identify the presence of statutory designations, which include:

International recognised statutory designations

- Special Protection Areas (SPAs)
- Special Areas of Conservation (SACs)
- Ramsar Sites

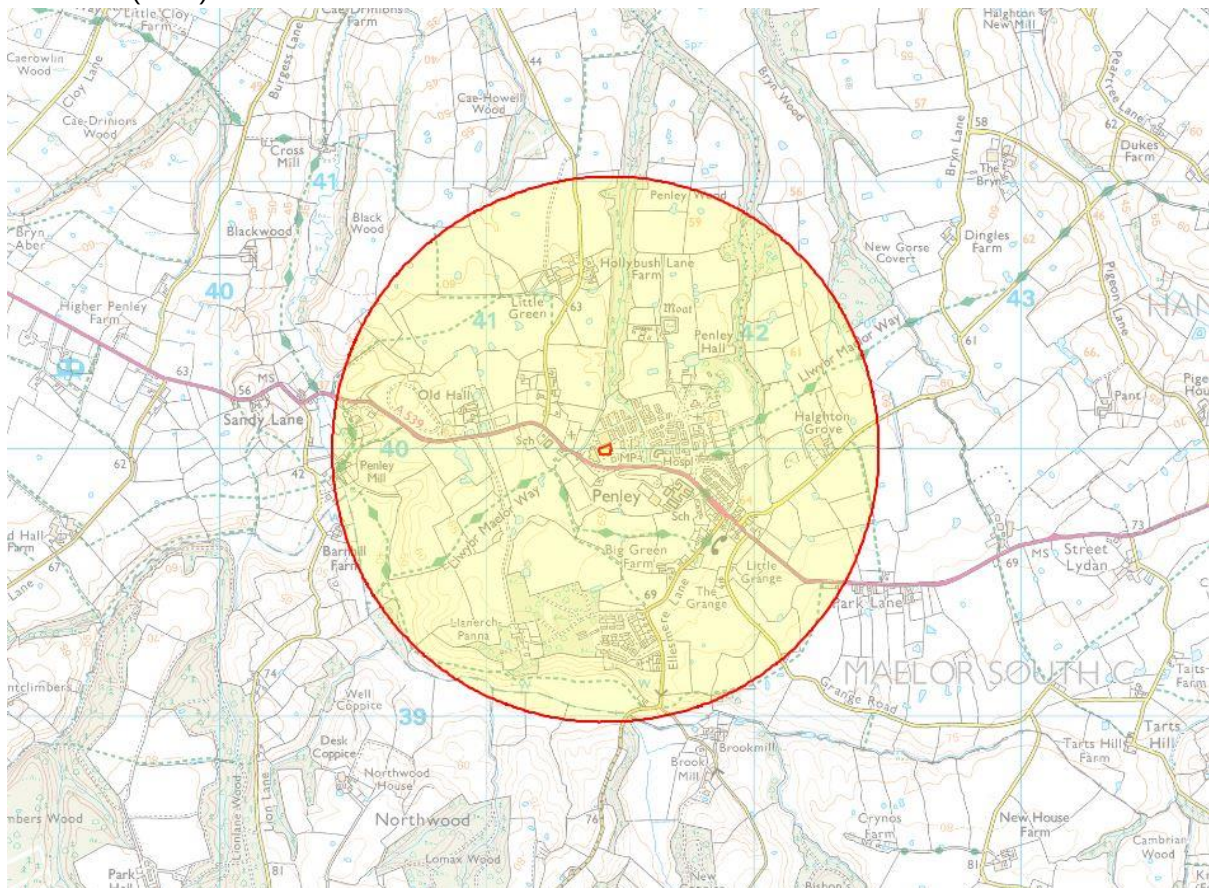
National recognised statutory designations

- Sites of Special Scientific Interest (SSSIs)
- National Nature Reserves (NNRs)

Local level statutory designations

- Local Nature Reserves (LNRs)
- A review of information available from freely-available online resources did not identify the presence of any statutory designations of conservation concern within 1km of the site (**Figure 3.10**). An extended search within 2km of the site did not identify any additional statutory designation.

Figure 3.10 Proximity of statutory designations to the site, reproduced using freely-available online resources (2018)



- Owing to the absence of statutory designations within 1km of the site and the small scale/ localised nature of the proposals, no negative impacts upon such designations are anticipated as a result of the proposed development.

Non-Statutory Designations

- A COFNOD search identified the presence of fourteen (14) non-statutory designations within 1km of the site (**Table 3.11; Appendix 3**). Four (4) of these are Wildlife Sites whilst the remaining ten (10) are constituted by stands of ancient woodland.

Table 3.11 Non-statutory designations within 1km of the site

Site Name	Distance from site (km)	Grid Reference	Description
W408: Penley Wood and Lees Wood	0.17	SJ 417 410	This designation consists of a large area of ancient woodland running along two stream valleys, along with grassland pasture. Both the woodland ground flora and grassland sward are highly diverse.
W420: Llanerch-Panna and Penley Bank	0.52	SJ 412 393	This designation, set within the grounds of an old hospital, contains woodland, grassland and scrub habitats, supporting a reasonably diverse flora.
W412: New Gorse Covert	0.95	SJ 424 405	This designation consists of a broad-leaved plantation wood, set within the fork of two streams. The strips of woodland are diverse both in structure and species composition.
W421: Brook Mill Grassland	1.0	SJ 419 390	This designation consists of neutral grassland and scrub, set near to a stream.

- Owing to the small scale/ localised nature of the proposals and location of the application site (in the centre of a built-up industrial park), no negative impacts upon such designations are anticipated as a result of the proposed development.

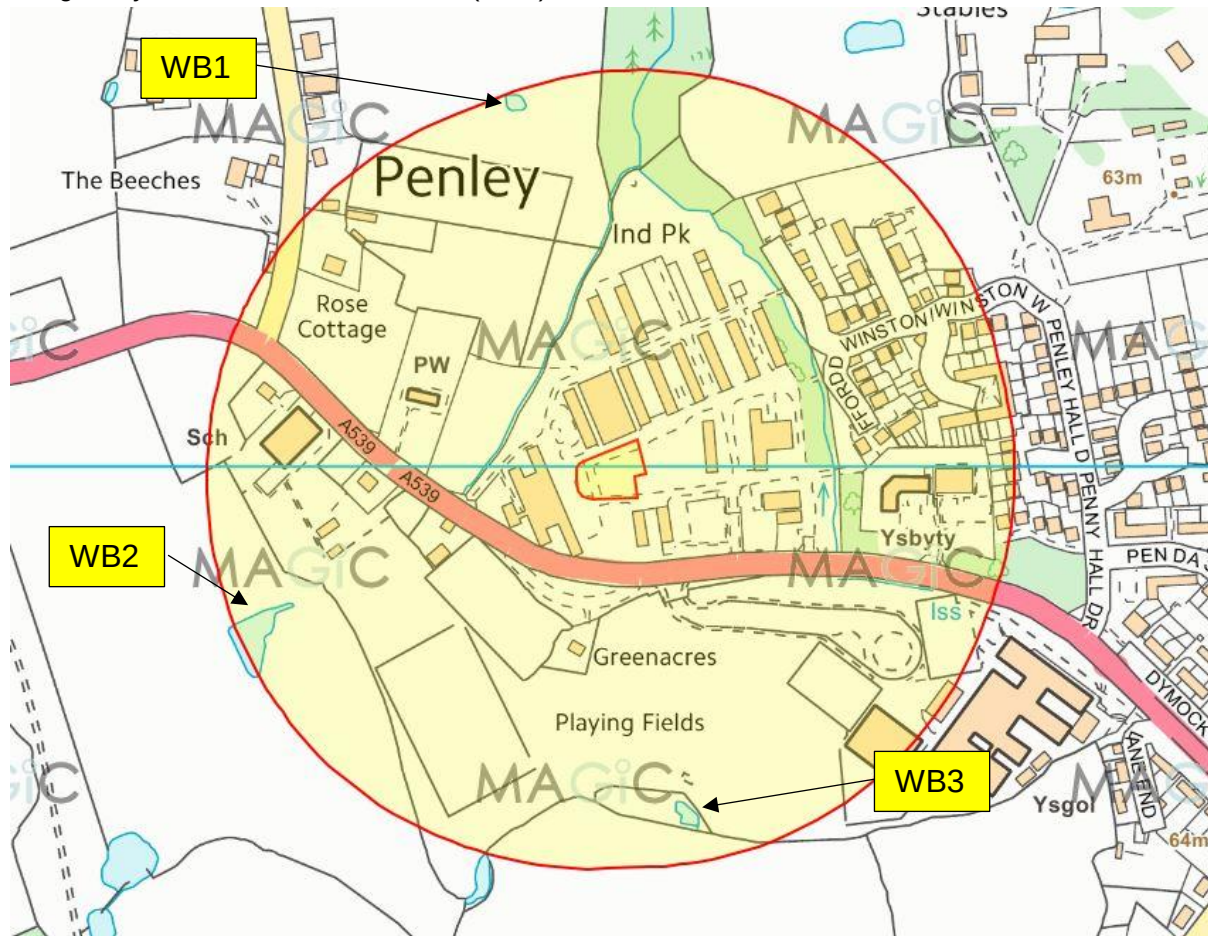
Habitats of Importance

- An assessment of the surrounding habitats using OS maps and online mapping resources, in addition to a walkover of the site and surrounds, identified the presence of three (3) significant bodies of standing water (**WB1 – WB3**) within a 250m zone of influence (**Figure 3.12**).
- No further habitats of importance were identified during the desk study.

3.5 SPECIES RECORDS

- A database search of a 1km radius surrounding the site during the course of the desk study returned 184 species records (**Appendix 3**).

Figure 3.12 Proximity of standing waterbodies within 250m of the proposed application site, reproduced using freely-available online resources (2018)



- Protected species previously recorded within 1km of the site (excluding bird species) include common pipistrelle (*Pipistrellus pipistrellus*), Eurasian badger (*Meles meles*), European otter (*Lutra lutra*) and great crested newt (*Triturus cristatus*).
- A small array of bird species (including those listed under Schedule 1 and Schedule 2) have been recorded in the local area. These include kestrel (*Falco tinnunculus*), house sparrow (*Passer domesticus*), common swift (*Apus apus*), swallow (*Hirundo rustica*), curlew (*Numenius arquata*), bullfinch (*Pyrrhula pyrrhula*) and woodcock (*Scolopax rusticola*).
- Invasive (Schedule 9) species recorded within 1km of the site include Japanese knotweed (*Fallopia japonica*), rhododendron (*Rhododendron ponticum*), Canadian waterweed (*Elodea canadensis*), Himalayan cotoneaster (*Cotoneaster simonsii*), New Zealand Pigmyweed (*Crassula helmsii*), montbretia (*Crocsmia pottsii x aurea*) and shore horsetail (*Equisetum fluviatile x arvense*).
- Other notable species include common frog (*Rana temporaria*), common toad (*Bufo bufo*), smooth newt (*Lissotriton vulgaris*), brown hare (*Lepus europaeus*) and American mink (*Neovison vison*).

Detailed species records lists can be supplied upon request

3.6 PRELIMINARY ROOST ASSESSMENT (PRA)

- A daytime inspection was undertaken on the 6th March 2018 to assess the potential of the tree(s) on the site to support roosting bats. A full description of those features considered suitable for roosting bats are described and illustrated using site photographs provided below.

Scattered Trees

- The immature, scattered trees on site were not subject to a PRA owing to their lack of maturity and/ or presence of any suitable bat roost features.
- A large, mature oak tree at SJ 41480 40016 is deemed to provide 'moderate' bat roosting potential by virtue of significant deadwood throughout the crown, woodpecker holes, rotten pruning wounds and several other small cavities. This tree is, however, located ~12m east of the development footprint and as such, is not considered pertinent to this study.

Foraging/ Commuting Habitat

- The site itself provides limited foraging and commuting habitat for bat species owing to the lack of large trees, linear features (such as hedgerows) or significant swathes of vegetation. A large band of woodland to the east and north of the site is considered to provide far greater opportunities for commuting and foraging bats.

3.7 SPECIES CONSTRAINTS

- Potential species constraints are detailed below, informed by the findings of the desk study combined with observed field signs or actual presence of protected species identified during the Preliminary Ecological Appraisal (PEA).

Bats

- There are no trees or built structures located on the site itself which offer any degree of bat roosting potential.
- An oak tree located off-site offers 'moderate' bat roosting potential.
- The site as a whole offers limited commuting and foraging habitat for bats, owing to its small size and shortage of trees/ linear features.
- One (1) common species of bat has previously been recorded within 1km of the site.

Legislation

- All species of British bat are listed as a European Protected Species (EPS) on Schedule 2 of the Conservation Regulations (Annex IV(a) to the Habitats Directive). This affords them strict protection under Regulation 43 of the Conservation of Habitats and Species Regulations 2017, making it an offence to:
 - i. Deliberately capture, injure or kill a bat;
 - ii. Deliberately disturb in a way that would significantly affect their local distribution or abundance, or affect their ability to survive, breed or rear young;
 - iii. Deliberately damage or destroy a roost; or
 - iv. Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or part thereof;
- Additional protection for bats is also afforded under the Wildlife and Countryside Act 1981 (as amended), making it an offence to intentionally or recklessly disturb bats whilst they are occupying a structure or place which is used for shelter or protection, or to obstruct access to this structure or place.

Recommendations

- No further survey with regard to bats is deemed necessary.
- It is recommended that the mature oak tree that exists off-site at SJ 41480 40016 is retained in the future, if possible, in order to maintain a degree of bat roosting potential within the immediate surrounds of the site.
- Any future external lighting will be of the Passive Infra-Red type, set on a short timer and orientated towards the ground. This is based on guidance from the BCT⁸.

⁸ *Bats and Lighting in the UK* (2009). Bat Conservation Trust.

- The provision of a minimum of one (1) Schwegler 1FFH bat box, or equivalent, is recommended as an enhancement for roosting bats on the site. This may be installed onto the new building/ unit, provided it is installed at a height of no less than 4m and orientated in a south or southwest direction (**Image 3.13**).

Image 3.13 An example of a Schwegler 1FFH bat box



- Bat boxes must be retained for the lifetime of the development and their exact location may be discussed with a suitably-qualified ecologist.

Great Crested Newt

- A desk based assessment using OS maps and online mapping resources, in combination with the site visit, identified three (3) significant bodies of standing water (**WB1 – WB3**) within 250m of the site, as illustrated in **Figure 3.12**.

WB1

- **WB1** (SJ 41382 40245), situated ~222m north of the application site, is a small (<200m²), natural pond located in the middle of a grazed pasture field and set underneath a large, mature oak tree (**Image 3.14**). **WB1** has gently-sloping grassy banks, poached by cattle in several places, and is populated by soft rush throughout the margins and dominating a large percentage of the southern portion (**Image 3.15**). Semi-submerged terrestrial grasses are present in shallow and margin areas. Several immature trees/ bushes surround this waterbody, including willow (*Salix spp.*), hawthorn (*Crataegus monogyna*) and dog rose (*Rosa canina*). The flora in and surrounding **WB1**, in conjunction with aerial mapping images showing **WB1** as being dry, suggest that this waterbody is ephemeral in nature.

Image 3.14 WB1, located underneath an oak tree in a grazed pasture field



Image 3.15 A typical view of **WB1**, showing domination by soft rush



WB2/ WB3

- **WB2** (SJ 41203 39886) and **WB3** (SJ 41497 39766), situated ~221m southwest and ~212m south of the application site, respectively, are separated from the site by the A539, a kerbed and drained road which is considered a significant dispersal barrier to great crested newts. Therefore, no further survey with regard to these waterbodies was deemed necessary.
- A Habitat Suitability Index (HSI) was run for **WB1** (Table 3.16). It was determined that this waterbody offers 'good' suitability for GCN.

Table 3.16 HSI assessment of **WB1**

Waterbody Reference	WB1
SI1 – Location	1
SI2 – Pond Area	0.4
SI3 – Permanence	0.5
SI4 – Water Quality	0.67
SI4 – Shade	1
SI6 – Fowl	0.67
SI7 – Fish	1
SI8 – Pond Count	1
SI9 – Terrestrial Habitat	0.33
SI10 – Macrophyte Cover	0.9
HSI score	0.70
Suitability	Good

- The site is considered to offer moderate-quality terrestrial habitat for GCN owing to the presence of potential refuge/ hibernation habitat on site (debris, log piles) and scattered scrub. However, the site is very small in size and is surrounded by a built-up and highly disturbed industrial park.
- 61 records for GCN were obtained within 1km of the site. The nearest of these originates from 308m northeast of the site, with a pond 336m confirmed as containing a small breeding population of GCN in 2004.

Legislation

- Great crested newts are listed as a European Protected Species (EPS) on Schedule 2 of the Conservation Regulations (Annex IV(a) to the Habitats Directive). This affords them strict protection under Regulation 43 of the Conservation of Habitats and Species Regulations 2017, making it an offence to:
 - Deliberately capture, injure or kill a GCN;
 - Deliberately disturb GCN wherever they are occurring, in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, or in the case

of hibernating or migratory species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong;

- iii. Deliberately take or destroy the eggs of a GCN; or
- iv. Damage or destroy a breeding site or resting place of a GCN.
- Additional protection for all native species of amphibian is also afforded under the Wildlife and Countryside Act 1981 (as amended), making it an offence to intentionally or recklessly disturb GCN whilst they are occupying a structure or place which is used for shelter or protection, or to obstruct access to this structure or place.

Recommendations

- Given the small size of the site the industrial/ highly disturbed surrounds and the small scale and localised nature of the proposals, the proposed works are not considered licensable. Therefore, no further survey with regard to GCN is deemed necessary.
- However, owing to the moderate-quality of the terrestrial GCN habitat present on the application site, the 'good' suitability of **WB1** for GCN and the existence of local GCN records, Reasonable Avoidance Measures (RAM's) detailed in a method statement for GCN outlined in **Section 4** of this report are considered necessary to minimise the risk of killing, injuring or disturbing GCN during the development, if present.
- A site visit by a suitably-qualified ecologist during the course of the development works is recommended, to ensure compliance with the prescribed RAM's.

Nesting Birds

- The scattered scrub/ immature trees on site provide overall 'low' bird nesting potential.
- No birds' nests were found during the PEA.
- A small array of bird species records were retrieved within 1km of the site.

Legislation

- All wild birds, their nests and eggs are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended), this makes it an offence to:
 - i. Intentionally kill, injure or take any wild bird;
 - ii. Take, damage or destroy the nest of any wild bird while it is in use or being built;
 - iii. Take, damage or destroy the egg of any wild bird; or
 - iv. To have in one's possession, or control, any wild bird (dead or alive) or egg or any part of a wild bird or egg.
- In addition, further protection is afforded to those wild bird species listed on Schedule 1, prohibiting any intentional or reckless disturbance to these species while

it is nest building, or at a nest containing eggs or young, or to recklessly disturb the dependent young of such a bird.

Recommendations

- Any devegetation works are to be timed to occur outside the bird breeding season (this is February – August inclusive). In the event that works are required within this time period then inspections for nests should be undertaken immediately prior to the start of any works. Should any active nest be found, works shall cease and a 5m buffer is to be formed until subsequent checks by a suitably-qualified ecologist prove the absence of nesting birds.
- A minimum of one (1) Schwegler Woodcrete 1B nest boxes, or equivalent, is to be provided as an enhancement for common passerine bird species on the site (**Image 3.17**). This is to be installed onto either the proposed new building/ unit or the mature oak tree near to the application site, at a height of no less than 2m and orientated in a southerly or westerly direction.

Image 3.17 Examples of Schwegler 1B nest boxes



- Bird boxes must be retained for the lifetime of the development and their exact location

Reptiles

- The site is considered to provide 'low' potential for reptiles, despite the presence of a limited amount of feeding, basking and refuge habitat, given its disturbed nature, small size and industrial/ built up surroundings.
- Furthermore, the site is geographically isolated from the wider environment.
- No records for reptile species were obtained within 1km of the site.

Legislation

- All species of native UK reptile, including common lizard (*Zootoca vivipara*), slow-worm (*Anguis fragilis*), grass snake (*Natrix natrix*) and adder (*Vipera berus*), receive some

degree of protection from harm under the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:

- i. Intentionally kill or injure any UK native reptile; or
 - ii. Sell, barter, exchange, transport for sale or advertise to sell or to buy any UK native reptile.
- Full protection under both the Conservation of Habitats and Species Regulations 2017 and Wildlife and Countryside Act, 1981 (as amended) is afforded to sand lizard (*Lacerta agilis*) and smooth snake (*Coronella austriaca*).

Recommendations

- No further survey with regard to reptile species is deemed necessary and reptiles are not considered a constraint to the proposals.

Badger

- During the detailed PEA, no badger sett(s) or field signs indicating use of the site by badger(s) were identified.
- No additional badger evidence was noted throughout the near surrounds.
- 21 records for badger were obtained within 1km of the site, the nearest of which originates within 500m of the site.

Legislation

- Badgers and their setts are specifically protected under the Protection of Badgers Act of 1992. Under this legislation it is an offence to:
 - i. Wilfully kill, injure or take, or attempt to kill, injure or take, a badger;
 - ii. Possess a dead badger or any part or derivative of a badger;
 - iii. Cruelly ill-treat a badger;
 - iv. Dig for a badger;
 - v. Damage a badger sett or any part of it;
 - vi. Destroy a badger sett;
 - vii. Obstruct access to, or any entrance of, a badger sett;
 - viii. Cause a dog to enter a badger sett; or

- ix. Disturb a badger when it is occupying a badger sett.

Recommendations

- No further survey with regard to badgers is deemed necessary and this species is not considered a constraint to the proposals.

Other Species

- No invasive plant species were found on or adjacent to the application site.
- No further species pertinent to this study were found and no field signs of other protected or notable species were observed during the PEA.

Further Enhancements

- A sensitive landscaping scheme incorporating new, native tree planting surrounding the proposed new building/ unit would be a welcome enhancement for the site.

4. METHOD STATEMENT (Great Crested Newt)

4.1 IMPACT OF THE WORKS

- The digging of excavations, devegetation, removal of debris and general disturbance synonymous with the erection of 1 no. industrial unit and associated infrastructure.

4.2 REASONABLE AVOIDANCE MEASURES (RAM's)

- The following sensitive working methodologies are recommended to ensure impacts upon GCN, if present, are avoided during the period of the proposed works:
 - An experienced Ecological Clerk of Works (ECW) shall be appointed to ensure RAM's are enforced;
 - A copy of this method statement must be kept on site (we suggest having a laminated copy in the site office/ compound);
 - A careful hand search for GCN will be undertaken by the appointed ECW prior to removal of any potential refugia on site;
 - Phased removal of vegetation (ruderal vegetation, scrub etc.) must be carried out in temperatures exceeding 5°C – with the first cut at 200mm and the second below 100mm – to allow GCN to disperse naturally, if present;
 - Any excavations will be back-filled on the same day as excavation, or checked by the ECW immediately prior to backfilling;
 - A means of escape, such as a wooden ramp, will be provided in all excavations that cannot be backfilled on the same day or alternatively, all excavations should be well-covered with plywood;
 - Any compound is to be sited upon existing areas of hardstanding on the site;
 - No piles of loose construction materials are to be created during works – all material will be kept on hardstanding, stored on pallets, removed immediately from the site or checked by an ECW prior to being removed;
 - In the event GCN are discovered, works will halt and Pearce Environment Ltd will be contacted for advice;
 - Contractors are not to handle GCN unless informed to do so by the ECW.
- Should protected/ notable species be discovered during the works, all works should halt and advice from Pearce Environment will be sought.
- Subject to the implementation of the RAM's described above, no significant impacts upon protected/notable species potentially present on site are considered likely to arise.

5. CONCLUSIONS

5.1 SUMMARY OF THE SITE'S ECOLOGICAL SIGNIFICANCE

- The application site, set between rural and suburban environments, is composed of hardstanding, previously-disturbed ground and scattered scrub/ trees. No built structures are present on the site.
- No features offering any degree of bat roosting potential are present on the site. A mature oak tree located off-site at SJ 41480 40016 provides 'moderate' bat roosting potential. The site as a whole offers limited foraging and commuting habitat for bats.
- The scattered scrub/ immature trees on site provide 'low' nesting potential for passerine bird species. No active/ disused birds' nests were found during the PEA.
- Three (3) significant standing waterbodies (**WB1** – **WB3**) were identified during the desktop study, within a 250m zone of influence. **WB1** scored a 'good' HSI result. **WB2** and **WB3** are separated from the site by the A539, considered a dispersal barrier for GCN. The terrestrial habitat present on the site itself is deemed as being moderate-quality for amphibian species, although it is located amidst industrial surrounds.
- The site offers 'low' potential for reptile species, despite the presence of some favourable reptile habitats, given the disturbed nature of the site, its small size, industrial location and lack of connectivity with the wider landscape.
- No other habitat features or evidence of pertinent protected species were identified during the survey (**Table 5.1**).

Table 5.1 Summary of the status of protected/ notable species and sites on, and within 1km of, the site

Species/ Group	Local Records	Suitable Habitat on Site	Field Signs	Recommendations
Habitats/ Designations	Yes: 14 non-statutory within 1km	N/A	N/A	Sensitive landscaping scheme would be a welcome enhancement
Invasive Plants	Yes: numerous Sch. 9 species within 1km	N/A	No	<i>No further action required</i>
Bats	Yes: common pip within 1km	No: no features on site with bat roosting potential although mature oak tree with 'moderate' bat roosting potential located off-site + limited foraging/ commuting habitat	No	Retain nearby oak tree in the future (if possible), sensitive lighting scheme + bat box provision as an enhancement

Species/ Group	Local Records	Suitable Habitat on Site	Field Signs	Recommendations
Nesting Birds	Yes: small assemblage within 1km	Yes: 'low' nesting potential in scattered scrub/ immature trees	No	Sensitive devegetation works scheme + bird box provision as an enhancement
Barn Owl	No: none within 1km	No	No	<i>No further action required</i>
Badgers	Yes: within 1km	No: limited opportunities for sett building + poor foraging habitat	No	<i>No further action required</i>
Amphibians (including GCN)	Yes: GCN, common toad + common frog within 1km	Yes: moderate-quality habitat on site + 3X ponds within 250m (WB1 – WB3)	No	Works to follow RAM's detailed in a GCN method statement in Section 4
Reptiles	No: none within 1km	No: moderate-quality habitat but small in size, highly disturbed + poor connectivity to the wider landscape	No	<i>No further action required</i>
Otter	Yes: within 1km	No	No	<i>No further action required</i>
Water Vole	No: none within 1km	No	No	<i>No further action required</i>
Dormice	No: none within 1km	No	No	<i>No further action required</i>
White-clawed Crayfish	No: none within 1km	No	No	<i>No further action required</i>
Other Notable Specie	Yes: hare + mink within 1km	No	No	<i>No further action required</i>

- Subject to the implementation of those provisions and working methodologies given in this report, no detrimental effects regarding protected/ notable species are considered likely to arise.
- Should the development proposals be altered significantly, such that changes to the working area and/ or duration of the works arise, then a re-assessment of the likely impacts arising by a suitably experienced ecologist will be required.

6. BIBLIOGRAPHY

Planning Policy Wales (Edition 9, November 2016)

Multi-Agency Geographic Information for the Countryside website, 2017 (www.magic.gov.uk/).

National Biodiversity Network, 2017 (<https://records.nbnatlas.org/explore/your-area>).

Aderyn. *LERC Wales' Biodiversity Information & Reporting Database*
(<http://aderyn.lercwales.org.uk/public/search>)

Guidelines for Preliminary Ecological Appraisal (2013). CIEEM. Technical Guidance Series, 1-8.

Collins J. (Ed.) (2016) *Bat Surveys for Professional Ecologist: Good Practice Guidelines* (3rd Ed.) The Bat Conservation Trust, London.

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). *Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus)*. Herpetological Journal 10 (4), 143-155.

Shropshire Environmental Network website, 2017
(<https://shropshire.gov.uk/environment/biodiversity-ecology-and-planning/shropshire-environmental-network/>)

Bats and Lighting in the UK (2009). Bat Conservation Trust.

PROPOSED DEVELOPMENT

Unit 20 Unit 21 Unit 22 Unit 23 Unit 24

100' Loading/Unloading zone

10' 20' 30' 40' 50' 60' 70' 80' 90' 100'

Scale 1" = 100'

1/1/2020

City of San Diego

Unit	Area (sq. ft.)	Volume (cu. yd.)
Unit 20	1,000	100
Unit 21	1,000	100
Unit 22	1,000	100
Unit 23	1,000	100
Unit 24	1,000	100

Appendix 2 Tables 4.1 and 7.3 from *Bat Surveys for Professional Ecologist: Good Practice Guidelines*⁹

Table 4.1 Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.

Suitability	Description Roosting habitats	Commuting and foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions^a and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation^b). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.^c	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^a and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions ^a and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

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

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

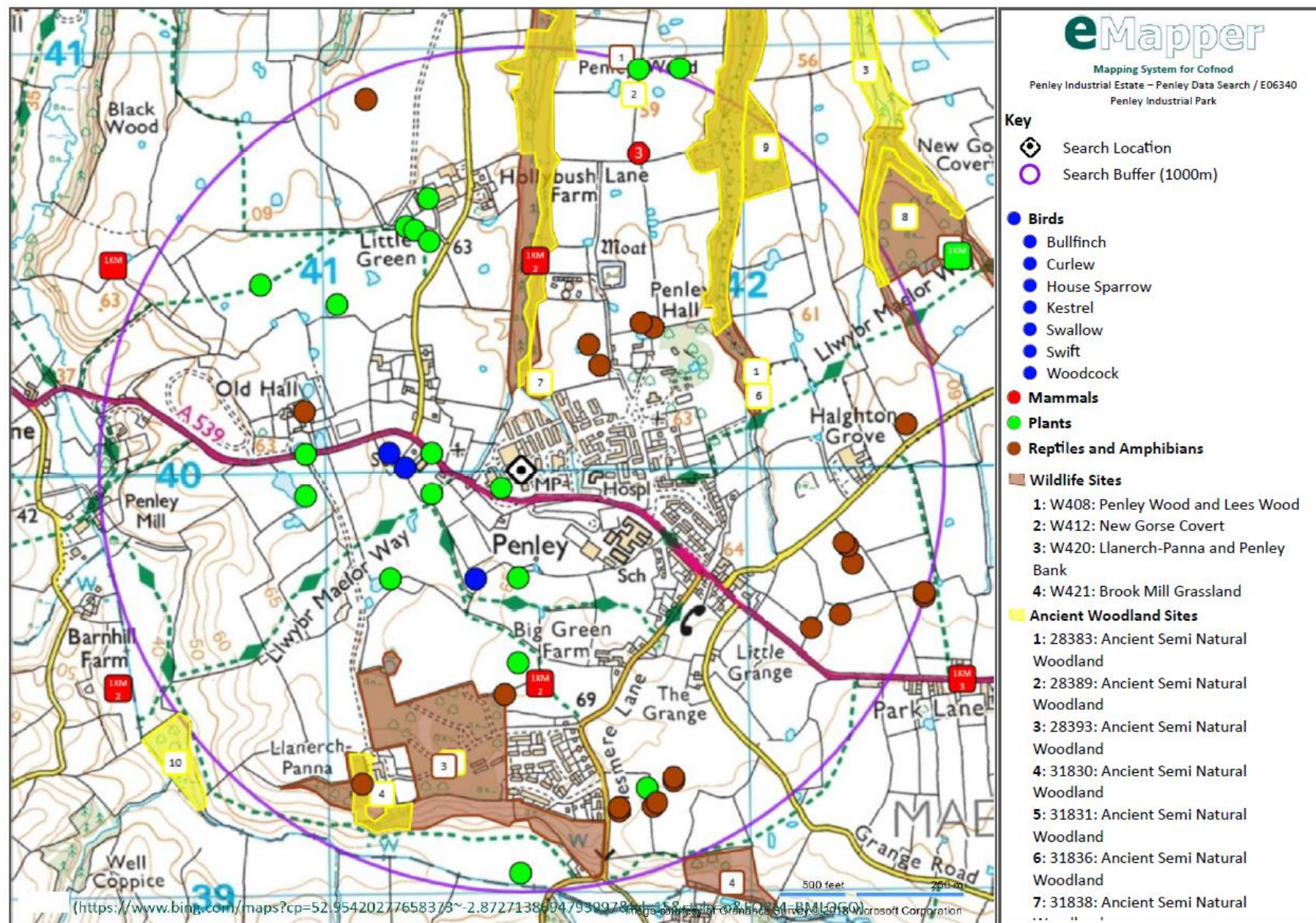
^c This system of categorisation aligns with BS 8596:2015 Surveying for bats in trees and woodland (BSI, 2015).

Table 7.3 Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).

Low roost suitability	Moderate roost suitability	High roost suitability
One survey visit. One dusk emergence or dawn re-entry survey^a (structures). No further surveys required (trees).	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey.^b	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn.^b

⁹ Collins J. (Ed.) (2016) *Bat Surveys for Professional Ecologist: Good Practice Guidelines* (3rd Ed.) The Bat Conservation Trust, London.

Appendix 3 COFNOD 1km Protected/ Notable Species and Sites Map (*public version: with confidential species records removed*)



Plan 1 Phase 1 Habitat Plan

This plan has been prepared using the site location map provided by the client

This plan is indicative, locations of all features are approximate and not drawn to scale



KEY

Application site	
Building	
Scattered scrub	
Disturbed land	
Hardstanding/ bare ground	
Scattered tree	

PROJECT Penley Industrial Park

TITLE Phase 1 Habitat Plan

CLIENT Range Solutions

DRAWN BY JM 07/03/2018
VERSION 01

PearceEnvironment LTD



TARGET NOTES

T1 – Mature oak tree at SJ 41480 40016 (located off-site, ~12m east of the development footprint) with 'moderate' bat roosting potential

T2 – Existing carpark area, formed from hardcore

T3 – Area of site used for processing logs, with large pile of ringed cord wood present during the survey

T4 – Immature willow and oak trees