

**DAVID CLEMENTS ECOLOGY LTD**

**PLOT E, PENCOED TECHNOLOGY PARK  
PRELIMINARY ECOLOGICAL ASSESSMENT**

**December 2023**

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## SUMMARY

- The application site lies within Pencoed Technology Park, Bridgend, South Wales. The main habitat present is semi-improved neutral grassland with scattered trees, bound by hedgerows and fence.
- The site does not contain or lie adjacent to any statutory sites of biodiversity interest, such as SSSIs, NNRs or LNRs etc, however, there are three SSSIs within 2km, the nearest being Coedymwstwr Woodlands SSSI, 1761m to the west.
- The site does not contain or lie immediately adjacent to any non-statutory sites of biodiversity interest. However, there are eight Adopted Sites of Importance for Nature Conservation (SINCs) within 1km of the site, the nearest Ruthin Fach Farm SINC, 418m to the south-east.
- The site, is proposed for an employment development comprising 16 units in 3 blocks with associated parking for 25 cars and 32 bicycles.
- The hedgerows at the site boundaries qualify under ‘Section 7’ of the Environment (Wales) Act 2016 as ‘habitats of principal importance’ for biodiversity conservation in Wales.
- The site supports bluebell (*Hyacinthoides non-scripta*) a ‘priority’ (ie ‘species of principal importance for the conservation of biodiversity in Wales’, as listed under Section 7 of the Environment (Wales) Act 2016) or nationally rare or scarce plant species.
- Specially protected fauna species are likely to comprise common nesting birds, common reptiles and amphibians. Bats are also likely to forage over the site and it is possible that badger and otter traverse the site adventitiously on occasion. The hedgerows H2 and H3 contains hazel and are connected to the wider environs so could provide suitable habitat for dormouse.
- Resident ‘Section 7’ (ie ‘Priority’) fauna species are likely to comprise nesting bird species, hedgehog and polecat.

### *Evaluation*

- The site as a whole is currently assessed as being of no greater than Local value for wildlife, although the hedgerows are assessed as being of High Local value as they are Section 7 ‘habitats of principal importance’.

### *Implications of the Development Proposals*

- The main impact of the development would comprise the loss of the majority of grassland habitat SNG1, although this habitat is considered to be of no greater than local value. The development does, however, offer an opportunity for ecological enhancement.
- Based on the information currently available, the habitats on site which would be lost to facilitate the development are of no greater than Local value, and therefore the impacts are unlikely to have significance beyond the local context and would be of low significance. It is understood that the hedgerows, which are of High Local value, will be retained and protected. In addition, an appropriate buffer either side of the retained hedgerows should also be protected.
- The increase in disturbance from noise and potentially lighting during construction and once the commercial units were operational could affect the activity of a range of nocturnal fauna, potentially including foraging bats, as well as other mammals, birds, and invertebrates such as moths. It should be possible to minimise such impacts through appropriate mitigation, however.

- Ecological enhancements must be included as part of the development to incorporate green infrastructure which seeks to deliver a net benefit for biodiversity. Appropriate mitigation measures are recommended along with opportunities for the enhancement of the site for wildlife.
- On current evidence, the development of this site in the manner proposed is not considered likely to be unacceptably constrained by biodiversity and nature conservation issues.

## 1.0 INTRODUCTION

### Report prepared by:

1.1 David Clements Ecology Ltd (DCE), Penarth, Glamorgan

### On behalf of:

1.2 Fabco Holdings Ltd

### Instructed by:

1.3 Mango Planning & Development Ltd

### Site Name

1.4 Plot E, Pencoed Technology Park

### OS Grid Reference

1.5 Centre of site: SS 96974 80671

### Elevation & Aspect

1.6 The site lies at approximately 30m ASL.

### Location

See Plan 1

1.7 The lies within Pencoed Technology Park, Bridgend, South Wales.

### Brief Description of Site

1.8 The main habitat present is semi-improved neutral grassland with scattered trees, bound by hedgerows and fence.

### Site Context

1.9 The site lies in a semi-rural location approximately 1.4km south-east of the town of Pencoed, approximately 112m north of the M4 motorway and approximately 115m south of the Ewenny Fach river. The site is bounded by hedgerows to the north, north-east and west with a fence forming the south and south-east site boundary, beyond which is Felindre Meadows, the spine road which provides access off Felindre Road to the east. Further developed plots, including Sony to the north, and vacant undeveloped plots within the Pencoed Technology Park surround the site, with further agricultural land in the wider environs to the north, east and south and the town of Pencoed in the west.

### Designated Wildlife Sites in the Vicinity

See Plan 1 & Appendix 1

### Statutory Sites

Data from South East Wales Biodiversity Records Centre (SEWBReC)

1.10 The site does not contain or lie immediately adjacent to any statutory sites of biodiversity interest, such as Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) or Local Nature Reserves (LNRs) etc, however, there are three SSSIs within 2km:

- Coedymwstwr Woodlands SSSI, 1761m to the west, a fine example of a mixed deciduous woodland on limestone with a rich, ungrazed ground flora. The wood

has an added speleological interest with bats recorded as inhabiting the main cave system – a rare occurrence in Mid Glamorgan;

- Brynna a Wern Tarw SSSI, 1733m to the north, of special interest for its extensive area of mixed, species-rich lowland grassland, including significant areas of marshy and dry neutral grassland, and for the association of these habitats with others including broad-leaved woodland and heath; and
- Breigam Moor SSSI, 1917m to the south-east, is of special interest for its marshy grassland, most of which is base-enriched, with an extensive area of fen-meadow vegetation.

### ***Non-statutory Sites***

Data from South East Wales Biodiversity Records Centre (SEWBRc)

1.11 There are eight adopted non-statutory Sites of Importance for Nature Conservation (SINCs) within 1km of the site:

- Ruthin Fach Farm SINC, 418m to the south-east.
- Ffynnon y Dera SINC, 445m to the south-west.
- Coed Mawr SINC, 621m to the south-east.
- North of Cae Coed SINC, 757m to the south-east.
- South of Tyla Gwyn SINC, 955m to the south-west.
- Cae Coed SINC, 966m to the south-west.
- Mynydd Ruthin SINC, 974m to the south-east.
- Land to East of Mynydd Ruthin SINC, 988m to the south-east.

The data search also noted that there are SINCs notified by Rhondda Cynon Taf County Borough within the search area, however, SEWBRc do not hold the SINC citations for these sites. The details of these RCT SINC sites has been requested from RCTBC's Ecologist but a response had not been received at the time of writing.

There are also five Ancient Semi Natural Woodland sites, three Restored Ancient Woodland sites, two Plantation on Ancient Woodland sites and one B-line within 1km of the site, the closest of these is a parcel of Ancient Semi Natural Woodland 418m away.

### **Site Development Proposals**

See Fig 1

1.12 The site, is proposed for an employment development comprising 16 units in 3 blocks with associated parking for 25 cars and 32 bikes.

### **Purpose of Surveys**

1.13 The present survey comprises a baseline Extended Phase 1 ecological assessment (also known as a Preliminary Ecological Appraisal or PEA) carried out in order to establish the present ecological interests of the site and an assessment of the likely ecological impacts of the proposed development. Recommendations are made regarding suitable mitigation and compensation measures, together with any requirements for further, additional survey where necessary.

**Existing Records**

Data from South East Wales Biodiversity Records Centre (SEWBRcC)

- 1.14 In addition to original survey, a data trawl was carried out with the local environmental records centre (LERC) in order to obtain access to any existing ecological information or records from the site. Data was provided via Aderyn, which is the main repository for biodiversity and wildlife records in the region. Relevant records are referred to in the descriptive text (Ref: 6342/0234-112, SEWBRcC, May 2023).

**Survey Methods**

See Appendix 2

- 1.15 The site was subject to an Extended Phase 1 ecological survey in suitable weather conditions on 23<sup>rd</sup> and 24<sup>th</sup> May 2023, carried out in accordance with the recommendations of the Chartered Institute of Ecology and Environmental Management (CIEEM 2013) and based on a custom modification of the Phase 1 Habitat Survey methodology developed by the former Nature Conservancy Council (JNCC 2010). The habitats and features of the site were assessed against the criteria set out at Appendix 2.

**Survey Constraints**

- 1.16 The survey was carried out in May within the optimal survey season for many species of plants and animals.



## 2.0 SURVEY RESULTS

### A Habitats & Vegetation See Plan 2

A2.1 Lists of the plant species recorded are given at Appendix 2.

*Priority & Notable Habitats* See Appendix 1

A2.2 The site supports hedgerows which qualify under Section 7 of the Environment (Wales) Act 2016 (EWA) as ‘habitats of principal importance for conservation in Wales (also referred to as ‘priority habitats.’

*Protected, Priority & Notable Plant Species* See Appendix 1

A2.3 The site supports bluebell (*Hyacinthoides non-scripta*) a ‘priority’ (ie ‘species of principal importance for the conservation of biodiversity in Wales’, as listed under Section 7 of the Environment (Wales) Act 2016) or nationally rare or scarce plant species.

There are also records for bluebell (*Hyacinthoides non-scripta*) within 2km of the site, the nearest recent record 789m away.

*Invasive Non-native Plant Species* See Appendix 1

A2.4 No invasive non-native plant species, as listed on Schedule 9 of the Wildlife & Countryside Act 1981, the spread of which is prohibited in the open countryside, have been recorded from the site to date.

There are however records for Himalayan balsam and Japanese knotweed within 1km of the site, the closest record is for the former approximately 828m away.

**Description of the Habitats & Vegetation** See Plan 2

#### *Hedgerows*

A2.5 There are three species-rich intact hedgerows which form the boundaries of the site and separate the fields.

Hedgerow H1 forms the west site boundary and is 3-4m tall and 5m wide, with a stock proof fence. The dominant woody species are hawthorn (*Crataegus monogyna*) and blackthorn (*Prunus spinosa*), with abundant bramble (*Rubus fruticosus* agg.), frequent field rose (*Rosa* sp.) and occasional field maple (*Acer campestre*). There are also eight trees growing within the hedge, five of which are field maple and three pedunculate oak (*Quercus robur*). The trees are approximately 6-8m tall and have diameter at breast height (dbh) of 30cm or less. The ground flora of hedge H1 contains frequent dog’s mercury (*Mercurialis perrenis*), hart’s tongue fern (*Phyllitis scolopendrium*), cleavers (*Galium aparine*) and nettle (*Urtica dioica*), with occasional bluebell, red campion (*Silene dioica*), ground ivy (*Glechoma hederacea*), common sorrel (*Rumex acetosa*) and cuckoo pint (*Arum maculatum*).

Hedgerow H2 forms the north site boundary and also enclose a small area of dense scrub. The hedge is approximately 4-5m tall and 5m wide with a stock proof fence. Hazel (*Corylus avellana*) is the dominant woody species with abundant blackthorn and bramble, frequent field rose and rare occurrences of holly (*Ilex aquifolium*), ash (*Fraxinus excelsior*) and elder (*Sambucus nigra*). The ground flora comprises abundant

nettle and cleavers, with frequent ground ivy and red campion and occasional cuckoo pint and creeping thistle (*Cirsium arvense*).

Hedgerow H3 intersects the two fields of the site and has been maintained at a height of approximately 1.5-2m tall and 3m wide. The dominant woody species is blackthorn, with abundant hazel and bramble, frequent field rose and occasional field maple. The ground flora comprises abundant nettle, with frequent red campion, creeping thistle, meadow buttercup (*Ranunculus acris*), germander speedwell (*Veronica chamaedrys*) and common sorrel, with occasional clumps of meadowsweet (*Filipendula ulmaria*), and occasional cow parsley (*Anthriscus sylvestris*), hogweed (*Heracleum sphondylium*) and common vetch (*Vicia sativa*).

### ***Blackthorn Scrub***

- A2.6 There is a small parcel of blackthorn scrub in the north of the site, enclosed by hedgerow H2. The ground flora is dominated by nettle, with abundant cleavers and wavy bitter-cress (*Cardamine flexuosa*), frequent perennial rye grass (*Lolium perenne*) and occasional red campion.

### ***Scattered Trees***

- A2.7 There are five semi-mature scattered pedunculate oak trees with the east field of the site. The trees are all a similar age approximately 5-6m tall with dbh 15cm.

One oak tree in the east corner of the field is enclosed within a stockproof fence, with blackthorn, hazel and bramble forming a shrub layer.

Three oak trees in the north corner of the field, are also enclosed by a stockproof fence, again with blackthorn, hazel and bramble forming a shrub layer.

One other oak tree is in the southern corner of the field in a triangle formation with the other trees mentioned above. This tree is not enclosed by a fence and there is no shrub layer.

### ***Semi-improved Neutral Grassland***

- A2.8 There are two fields of semi-improved neutral grassland, SNG1 to the west of the site and SNG2 to the east, both had a sward height of approximately 30-40cm at the time of survey.

The grassland SNG1 comprises abundant Yorkshire-fog (*Holcus lanatus*), creeping bent (*Agrostis stolonifera*), and false oat-grass (*Arrhenatherum elatius*), with frequent crested dog's tail (*Cynosurus cristatus*), perennial rye-grass, rough meadow grass (*Poa trivialis*) and hairy sedge (*Carex hirta*), occasional meadow foxtail (*Alopecurus pratensis*), soft brome (*Bromus hordeaceus*), soft rush (*Juncus effusus*) and hard rush (*Juncus inflexus*), and rare occurrences of oval sedge (*Carex ovalis*). There appears to be a depressed area in the north of this field in which the abundance of rushes, meadow foxtail and crested dog's tail is higher than the rest of the field. Creeping buttercup (*Ranunculus repens*) and white clover (*Trifolium repens*) are abundant in the sward, with frequent occurrences of ribwort plantain (*Plantago lanceolata*), common mouse ear (*Cerastium fontanum*), forget-me-not species (*Myosotis* sp), meadow buttercup and docks (*Rumex* sp.), with occasional red clover (*Trifolium pratense*) and dandelion (*Taraxacum officinalis* agg). At the site entrance where the ground is eroded, black meddick (*Medicago lupulina*) is abundant, common vetch occurs frequently along the fence line and dove's-foot crane's-

bill (*Geranium molle*) occurs frequently at the edge. Meadowsweet also occurs in occasional clumps at the edges of the field which, along with the occurrence of some rush and sedge species, give it some characteristics of a wet meadow.

The grassland SNG2 comprises abundant Yorkshire-fog, sweet vernal grass (*Anthoxanthum odoratum*) and creeping bent, with frequent perennial rye-grass, frequent rough meadow grass at the edge and occasional cock's-foot (*Dactylis glomerata*). Meadow buttercup, white clover and ribwort plantain are abundant in the sward, with frequent common mouse-ear, red clover, dandelion, creeping buttercup and eyebright (*Euphrasia* sp.), frequent meadowsweet at the edge and frequent oxeye daisy (*Leucanthemum vulgare*) at the southern edge along the fence line. There are also occasional occurrences of greater plantain (*Plantago major*), common vetch, daisy (*Bellis perennis*) and dove's-foot crane's bill, with rare occurrences of common cat's-ear (*Hypochaeris radicata*).

### ***Hard Standing***

- A2.9 The entrance to the site off Felindre Meadows is surfaced with tarmac with pavements on both sides extending beyond the site.

### ***Fence***

- A2.10 A pole and wire fence forms the southern site boundary.

## **B Fauna**

- B2.1 Fauna species recorded from the site are listed at Appendix 2.

### ***Protected, Priority & Notable Fauna Species***

See Appendix 1

- B2.2 No protected species are currently recorded from the site. There is, however, suitable habitat for nesting birds, common reptiles, dormouse and for foraging and commuting bats.

No resident 'priority species', ie those listed on Section 7 of the Environment (Wales) Act 2016 as being of 'principal importance for the conservation of biodiversity in Wales', are recorded from the site to date. It is, however, possible that species such as hedgehog may occur as suitable habitat is present.

No nationally rare or scarce fauna species are recorded from the site to date.

### **Description of the Fauna**

#### ***Bats***

- B2.3 All species of bat and their roosting sites are protected under the Conservation of Habitats & Species Regulations 2017 (the 'Habitats Regulations' – See Appendix 1). The roosting places used by bats are also protected against unauthorised disturbance or obstruction under the amended Wildlife & Countryside Act 1981. Several bats are listed as priorities for conservation under Section 7 of the Environment (Wales) Act 2016.

There are seventeen recent records of bats from within a 2km radius of the site, the nearest roost record is for a brown-long eared bat roosting on the beam of a mill

approximately 825m from the site and there are two further roost records for common pipistrelle and a pipistrelle species approximately 1800m away. The other records within 2km are for bat activity or injured bats taken into care which included soprano pipistrelle, common pipistrelle, Nyctalus bat species, Myotis bat species, lesser noctule and lesser horseshoe, the nearest record 1330m from the site.

The trees present on site are of no greater than 30cm dbh, and do not appear to provide any suitable roosting features for bats. The site is, however, likely to be used by foraging bats and the hedges could provide linear features used by commuting bats.

### ***Otter***

- B2.4 Otter is also a 'Habitats Regulations species' afforded legal protection which is similar to that of bats (see above). It is also a 'Section 7' listed species.

There are seven recent records for otter within 2km of the site, the nearest being 1117m from the site. There are also records for otter along the Ewenny Fach river but the nearest is over 1600m from the site.

Targeted otter surveys conducted by DCE Ltd (2020) of a nearby site, found evidence of otter along a stretch of the Ewenny Fach watercourse, which included the finding of a semi-fresh spraint. The Ewenny Fach runs approximately 115m north of the site.

The site does not provide suitable habitat for otter; however, as it is a highly mobile species, it is possible that this species could enter the site adventitiously on occasion.

### ***Dormouse***

- B2.5 Dormouse is also a 'Habitats Regulations species' afforded legal protection which is similar to that of bats (see above). It is also a 'Section 7' listed species.

There are four recent records for dormouse within 2km of the site, the nearest record 1685m from the site. The hedgerows H2 and H3 contains hazel and are connected to the wider environs so could provide suitable habitat for dormouse.

However, targeted dormouse surveys, conducted by DCE Ltd (2020) of a nearby site, found no evidence of dormouse. It is considered unlikely that this species occurs in the site.

### ***Badger***

- B2.6 Badger is fully protected in the UK under the terms of the Protection of Badgers Act 1992, which includes its nesting sites (see Appendix 1). Current interpretation of the Act also infers a degree of protection to areas which are of key significance to foraging badgers.

There are nine records for badger within 2km, the nearest for a road fatality 860m from the site. The nearest record for a sett is approximately 1km from the site and most of the other records are for fatalities on the M4 motorway.

No evidence of badger activity was noted during the survey. It is possible that badger may traverse the site occasionally on an adventitious basis, but it is not considered that the habitats of the site are suitable for sett construction. The dense vegetation of the hedgerows on site could provide cover for this species however no push-throughs or evidence of badger were noted during the survey.

***Other ‘Section 7’ Listed Mammals***

B2.7 Hedgehog is recorded from numerous locations within 2km of the site, the nearest record being for a road fatality approximately 730m away. This species could occur on the site itself while foraging or commuting, and could possibly nest in dense vegetation at the base of the hedgerows.

Polecat has been recorded once in the last 10 years within a 2km radius of the site. The hedgerows on site could provide suitable habitat for this species, which often utilise existing rabbit burrows for their dens.

***Other Mammals***

B2.8 A range of common and ubiquitous mammals is likely to occur on the site. These are likely to comprise a mixture of resident synanthropic species such as brown rat and house mouse, and visitor species such as fox and grey squirrel.

Numerous rabbits were seen within the grassland and the hedgerows during the survey. A fox scat was also noted near the north gate entrance to the grassland SNG1.

***Birds***

B2.9 Nearly all bird species are protected against killing or injury as individuals, and this protection extends to their nests, eggs and young. A number of especially rare species are subject to enhanced protection and may not be disturbed whilst nesting without authorisation (‘Schedule 1 species’ – see Appendix 1). Many bird species are listed as being of ‘red list’ (ie high) or ‘amber list’ (ie medium) conservation status either in Wales and/or in the wider UK (RSPB 2022; 2021), with several of these also being listed as being of ‘principal importance’ for conservation in Wales.

A reasonably wide range of bird species are recorded from within a 2km radius of the site. The hedgerows and scrub of the site are likely to support nesting species of ‘principal importance’ including bullfinch, dunnock, house sparrow, linnet, reed bunting and song thrush, and the grassland could also support skylark, a ground nesting species, although provide sub-optimal habitat due to the small size of the fields.

There are also several records for Schedule 1 species within 2km of the site, including kingfisher, 205m away on the Ewenny Fach river (the nearest record), barn owl, black-necked grebe, brambling, Cetti’s warbler, crossbill, goshawk, green sandpiper, hen harrier, hobby, little ringed plover, merlin, osprey, peregrine, red kite and wood sandpiper, however, the site does not provide suitable breeding habitat for these species.

The following bird species were recorded near the site peripheries or flying overhead during the survey: magpie, carrion crow, blackbird, wren, great tit, robin, house sparrow and green woodpecker. Skylark was not recorded; it is unlikely that this species breeds on the site.

***Reptiles***

B2.10 Four native reptile species occur in South Wales, comprising common lizard, slow-worm, adder and grass snake. These four species are all afforded so-called ‘partial protection’ under the amended Wildlife & Countryside Act 1981, which prohibits the deliberate killing or injury of individuals. However, there is no direct protection

extended to the habitats which support these species. All four common reptiles are listed as ‘Section 7’ species in Wales.

There are recent records for grass snake, slow-worm, common lizard and adder within 2km of the site, the nearest record is for a grass snake 980m away. The hedgerows on the site provide suitable commuting corridors for common reptiles.

### *Amphibians*

- B2.11 Five native amphibian species occur in South Wales, comprising common frog, common toad, smooth newt, palmate newt and great crested newt (GCN). The latter species is a nationally rare and declining ‘Habitats Regulations’ species afforded full protection under UK legislation, which also extends to the habitats which support it. The other four species are not afforded any direct statutory protection, other than with respect to trade. Common toad is listed as a ‘Section 7’ species in Wales (see Appendix 1).

There are records for smooth newt, common frog, common toad and palmate newt within 2km of the site. The hedgerows and the semi-improved neutral grassland immediately adjacent to the hedgerows provide suitable terrestrial habitat for adults of these species. Previous survey work of a nearby plot by DCE in 2020 found common toad to be present. There are no standing water bodies suitable for breeding use by any amphibian species on the site, however, there are six waterbodies within 250m, see Plan 3. The nearest waterbody is a balancing pond less than 10m north-east of the site, likely to have been created as a Sustainable Urban Drainage (SuDS) system as part of one of the new developments within the technology park. However, this was dry at the time of survey and is likely to only hold water at times of high rainfall.

There are also records of the specially protected great crested newt, the nearest just over 1.6km from the site. As there are six waterbodies within 250m of the site, the terrestrial habitats present could be suitable for this species, as noted for common amphibians above. However, targeted eDNA surveys, conducted by DCE Ltd (2020), of ponds from a nearby site found no evidence of GCN, nor were any individuals seen in their terrestrial phase in targeted refugia surveys. In addition, no GCN, or any other species of amphibian, were recorded during their terrestrial life phase during a refugia survey of Plot F at the Technology Park (DCE 2021). It is considered unlikely that this species occurs on site.

### *Invertebrates*

- B2.12 Upwards of 37,000 species of terrestrial and freshwater invertebrates are recorded in Britain, including around 29,000 insect species, occurring in every available habitat. About 40 invertebrate species are afforded full statutory protection in the UK, and many other species are accorded varying levels of conservation significance (see Appendix 1).

There are thirty recent invertebrate records within 2km of the site, including some rare, scarce and declining species, some of which are considered to be of ‘principal importance’ for conservation in Wales, and it is likely that at least some of these also occur on the site. There do not appear to be any records of such species to date from the site itself, however and there is no reason to expect any rare or notable species to occur.

**3.0 ECOLOGICAL ASSESSMENT OF THE SITE**

See Plan 3

- 3.1 There is currently no nationally accepted system for the categorising of sites or features of biodiversity significance below the level of national value, criteria for which are set out by the former Nature Conservancy Council (1989, as amended by JNCC 2019 *et seq*). However, guidance for the identification of non-statutory sites of county significance (ie SINC)s is available in this instance (WBP 2008).

For the purposes of this study the habitats and features of the site have therefore been evaluated and graded in accordance with the categories set out in Appendix 2.

***High Local Value***

- 3.2 The hedgerows at the site boundaries are assessed as being of High Local value for wildlife as they are ‘habitats of principal importance’ under Section 7 of the Environment (Wales) Act 2016 (EWA) and provide suitable habitat and/or commuting corridors for a range of species such as nesting birds, common reptiles and amphibians.

***Local Value***

- 3.3 The rest of the site is currently assessed as being of no greater than Local value for wildlife.

## 4.0 IMPACTS OF DEVELOPMENT

### Development Proposals

- 4.1 The site is proposed for an employment development comprising 16 units within three blocks, with associated parking and landscaping (see Figure 1 below). The majority of the grassland SNG1 would be lost as a result of the development. However, the north section of grassland SNG1, the grassland SNG2, the blackthorn scrub and the hedgerows would be retained as part of the development.



Fig 1: Development Proposals

### Potential Impacts of Development

- 4.2 The main impact of the development would comprise the loss of the majority of grassland habitat SNG1, although this habitat is considered to be of no greater than local value. The development does, however, offer an opportunity for ecological enhancement.

There would also be an increase in disturbance from noise and potentially lighting during construction and once the commercial units were operational, if unmitigated.



### **Significance of Development Impacts**

- 4.3 Based on the information currently available, the habitats on site which would be lost to facilitate the development are of no greater than Local value, and therefore the impacts are unlikely to have significance beyond the local context and would be of low significance. It is understood that the hedgerows, which are of High Local value, are to be retained and protected.

Any increase in artificial lighting at night could affect the activity of nocturnal fauna, potentially including foraging bats, as well as other mammals, and invertebrates such as moths, however, any negative impacts can be reduced through mitigation.

### **Mitigation & Compensation Measures**

- 4.4 No mitigation or compensation measures are currently considered necessary in respect of the proposed habitat loss, given the affected habitats are of no greater than local value. Appropriate mitigation for protected species is set out in *Section 5: Recommendations*.

Appropriate ecological enhancements must be included as part of the development to incorporate green infrastructure which seeks to deliver a net benefit for biodiversity. In addition, the site design must address ecosystem resilience by maintaining or improving habitat connectivity of the site with the wider environs.

### **Summary: Acceptability of Development Proposals**

- 4.5 On current evidence, the development of this site in the manner proposed is not considered likely to be unacceptably constrained by biodiversity and nature conservation issues. Recommendations for mitigation and ecological enhancements are provided.

## 5.0 RECOMMENDATIONS

### Statutory Obligations

5.1 Any development must seek to avoid causing adverse impacts to protected species which may occur on the site.

- Nesting birds
- Otter and badger
- Hedgehog
- Dormouse
- Common reptiles and amphibians

**Nesting Birds:** The hedgerows on site which provide suitable nesting bird habitat, along with an appropriate buffer, should be retained and protected from the development.

**Otter & Badger:** Although the habitats on site are not considered to be suitable for otter and badger, given that there are records of these species in the vicinity and that they are both mobile species, it is possible that they may traverse the site occasionally on an adventitious basis.

To minimise the risk of harm to these species, the following precautions should be followed during development works: gaps underneath site fencing of at least 250mm high to allow passage by otter, badger and other fauna; no night-time working or lighting of the site at night, any trenches to be covered overnight or otherwise left with a means of escape; and any exposed pipes/trenches to be checked each morning before starting construction activities.

**Hedgehog:** As the hedgerows on site could provide nesting habitat for hedgehog, the following precautions should be followed to minimise risk of harm to this species.

Any open pipework with an outside diameter of greater than 120 mm must be covered at the end of each workday to prevent hedgehogs and other small mammals entering/becoming trapped. In addition, any trenches >0.5m in depth will either be covered at night or will be left with a gently sloped plank (or similar) running from the bottom to the surface to act as an escape ramp for any fauna which may fall in.

Any fencing required within the site boundary, both during and post-construction, should allow access underneath for small animals, such as hedgehogs to move through the site. Gaps of 130mm x 130mm should be provided every 3m in the boundary fencing, and in exterior boundary enclosure to provide selective passage for hedgehogs.

**Dormouse:** The hedgerows H2 and H3 contain hazel and could provide suitable habitat for dormouse, although the nearest record is more than 1.6km from the site. It is understood that all hedgerows on site are to be retained and protected, and therefore this species should not be affected by the proposed development.

**Common Reptiles & Amphibians:** The hedgerows and the semi-improved neutral grassland immediately adjacent to the hedgerows provide suitable terrestrial habitat for common reptiles and amphibians. There are also several waterbodies within 250m of the site which could provide suitable breeding habitat for amphibians. The hedgerows along with an appropriate buffer, should be retained and protected from development to minimise the risk of harm to these species. Clearance of the grassland habitat SNG1 should

be carried out when reptiles are active from April to September with vegetation cleared in two stages towards the area of retained habitats in the north and east to allow any reptiles and amphibians present to disperse. It is considered unlikely that the specially protected great crested newt is present within the site, as the nearest record is more than 1.6km away and recent surveys of nearby sites have not found any evidence of the species (DCE 2021; DCE 2020).

### **Other Recommendations**

- 5.2 Careful consideration should be given to the use of artificial lighting within the developed site, as this can adversely affect activity by a variety of fauna, particularly foraging bats, nesting birds and invertebrates. Lighting of the constructed site should be designed in accordance with the guidance provided by the Bat Conservation Trust (2023) to minimise nocturnal light levels received by the retained habitats and new habitats, of value to wildlife.

The hedgerows at the site boundaries along with an appropriate buffer should be retained and protected, with nocturnal light levels minimised in order to maintain these as ‘dark corridors’ for nocturnal species.

### **Enhancement Measures**

- 5.3 The retained grassland areas should continue to be managed as a meadow with periodic grazing and cutting with arisings removed, to encourage the development of a more species-rich sward. These areas could also be enriched by the planting or reseeded with wildflower grassland species (see Appendix 4).

Consideration could also be given to the installation of bat-boxes and bird-boxes in suitable locations around the site. These should be located on suitable trees and buildings within the site and sited in such a manner that unauthorised persons and predators such as cats cannot access them. Bat-boxes should be at least 4m (preferably 4-5m) and bird-boxes at least 2m (preferably 2-3) above ground-level. The entrances to bat-boxes should not be illuminated at night, nor obscured by overhanging boughs or canopy vegetation etc. Bat and bird boxes should preferably be of ‘woodcrete’ or similar long-lasting construction rather than timber, since these are much more robust and longer-lived than traditional wooden boxes and require less after-maintenance. Suitable examples are shown at Appendix 5.

### **General Provisions**

- 5.4 All trees and hedges to be retained should be treated in accordance with BS5837 (2012) *Guidance on the Treatment of Trees in Relation to Design, Demolition & Construction*, with the appropriate designation and fencing of Root Protection Zones (RPZs) etc.

Any new plantings of trees or shrubs should be primarily of native species which are indigenous to the location. Any new grassland areas should seek to reproduce those which would naturally occur in the vicinity and should comprise at least 15-20% of appropriate native broadleaved herbs sown within a matrix of non-competitive, fine-leaved native grass species, see Appendix 4. All native planting or seed stock should be of Welsh, or at least UK, provenance.

The services of an appropriately qualified and licensed ecologist should be available on an ‘on-call’ basis throughout the entire development period in order to deal promptly with any protected species or other ecological matters which may arise during the clearance and

construction works.

**Further Surveys**

5.5 No additional surveys are currently considered necessary.

## 6.0 REFERENCES

**Bat Conservation Trust (BCT 2023)** *Guidance Note GN08/23: Bats and Artificial Lighting at Night. Institution of Lighting Professionals.* <https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>

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**David Clements Ecology Ltd. (2021)** *Plot F, Pencoed Technology Park, Pencoed. Ecological Assessment.* Unpublished report.

**Chartered Institute of Ecology & Environmental Assessment (CIEEM 2013)** *Guidelines for Preliminary Ecological Appraisal.* CIEEM, Winchester.

**Joint Nature Conservation Committee (JNCC 2019)** *Guidelines for the Selection of Biological SSSIs, Parts 1 & 2 (online).* JNCC, Peterborough (<https://jncc.gov.uk/our-work/guidelines-for-selection-of-sssis/>).

**Joint Nature Conservation Committee (JNCC 2010)** *Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit.* JNCC, Peterborough.

**Nature Conservancy Council (NCC 1989)** *Guidelines for the Selection of Biological SSSIs.* NCC Peterborough.

**Royal Society for the Protection of Birds (RSPB 2021)** *Birds of Conservation Concern 5: The Population Status of Birds in the United Kingdom, Channel Islands & the Isle of Man.* RSPB, Sandy, Beds.

**Royal Society for the Protection of Birds (RSPB 2022)** *Birds of Conservation Concern: The Population Status of Birds in Wales, 4<sup>th</sup> Edition.* RSPB, Sandy, Beds.

**Wales Biodiversity Partnership (WBP 2008)** *Wildlife Sites Guidance Wales: A Guide to Develop Local Wildlife Systems in Wales.* Wales Biodiversity Partnership/Welsh Assembly Government.

## APPENDIX 1: STATUTORY & POLICY FRAMEWORK FOR BIODIVERSITY

The following sets out a brief review of the key legal and key policy elements affecting wildlife species in Wales. It is not intended to be comprehensive and only the most recent and relevant articles are mentioned.

The review sets out our interpretation and understanding of key elements of the legislation and policy insofar as they apply to typical planning and development operations, based on our experience. The interpretations given below are for guidance only, however, and do not constitute legal advice. In all cases the reader is advised to consult the original legal and policy documents for the definitive wordings, and where necessary to obtain qualified legal advice.

### **The Conservation of Habitats & Species Regulations 2017 ('Habitats Regulations')**

The Habitats Regulations were originally enacted to implement the obligations of *EU Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora & Fauna* (the 'EU Habitats Directive') into British law, and in so doing created the highest tier of legal protection for wildlife species in UK, the so-called 'European Protected Species' (EPS). These species include, *inter alia*:

- All species of bats
- Hazel dormouse ('dormouse')
- Eurasian Otter ('otter')
- Great crested newt
- Natterjack toad
- Sand lizard
- Smooth snake

The Regulations also cover a small number of very rare plant species such as lady's-slipper orchid.

The requirements of the Habitats Regulations were given continuance following the UK's withdrawal from the EU ('Brexit') in 2019 by the *Conservation of Habitats & Species (Amendment) (EU Exit) Regulations 2019*, and therefore continue to apply unchanged at the time of writing. EPSs are hereafter referred to as 'Habitats Regulations Species' (HRS) to reflect this change in the legislative framework.

In summary, and *inter alia*, all HRS animal species are protected as individuals against deliberate killing, injury, capture or disturbance, at all stages of their lives, and in addition, the places used for breeding or resting by these species may not be damaged or destroyed. Breeding and resting places are also afforded protection against deliberate disturbance, or the blocking of access, under the amended *Wildlife & Countryside Act 1981* (see below). HRS plant species may not be picked (in any part), collected, uprooted or destroyed at any point in their life cycle.

The main exceptions to these provisions are either that the activities were authorised by the relevant statutory body (in this case, Natural Resources Wales – NRW) and, where required, were carried out under a licence ('derogation') obtained in advance. Offences which occur as an incidental result of some other otherwise lawful activity (ie 'accidental' or 'unintentional' offences) are not exempt under the Regulations but may be viewed more leniently where (a) they could not reasonably have been foreseen, (b) the activity causing the offence ceased as soon as the presence of HRS, or their habitats, became apparent, and (c) NRW were informed immediately and appropriate expert advice sought to evaluate and remediate the situation.

### **Bats**

The legal protection covers any place or feature which is used for resting during the day ('day roosts') and also any places which are used for hibernation in winter. Places which are used for short periods of resting at night ('night roosts'), or as customary stations for the handling and processing of food ('feeding perches'), are not usually accorded the same level of importance as day roosts and hibernation sites, although they are in fact still subject to the Regulations and in some cases may be deemed important enough to be accorded full protection.

### **Dormouse**

Protection is usually considered to extend to any habitat, such as woodland, scrub, hedgerows and bramble stands etc, where dormouse occurs and where nests may therefore be present. The continuity of the habitats occupied by dormouse with other areas of similar connecting habitat may also be a matter for statutory consideration under the Regulations.

### **Otter**

Protection is usually considered to extend to any watercourse or waterbody which is used by otter, and which may therefore contain nests or resting places ('holts'). It also extends to any areas of terrestrial habitat away from watercourses and waterbodies where these also contain holts, and the connectivity of such places with the occupied aquatic habitats may also be a matter for statutory consideration under the Regulations.

### **Great crested newt**

Protection is usually considered to extend to any watercourse or waterbody which is occupied by great crested newt (GCN), and which may therefore be used for breeding. It also extends to any terrestrial habitats used by GCN during its non-aquatic phases, especially those places which are used for hibernation in winter or sheltering during adverse weather conditions. Typically the latter will be physically connected to a breeding pond (or ponds) but may lie anything up to

2km away. At minimum, a terrestrial hinterland of 10m width around the edges of a breeding pond will be considered to be protected where this contains habitats which are suitable for terrestrial use by GCN.

### ***Protected Sites***

The Habitats Regulations also set out to protect certain rare and valuable habitat types, such as ancient semi-natural woodland, heathland, bogs and species-rich grasslands etc. This is done through the identification and designation of specifically protected sites known as Special Areas of Conservation (SACs). SACs are subject to the highest level of legal protection against damage, destruction, degradation or harmful uses or activities which is available in the UK. All such sites are also designated as Sites of Special Scientific Interest (SSSIs) under the Wildlife & Countryside Act 1981 (see below).

### **The Wildlife & Countryside Act 1981 (WCA)**

This much amended and complex piece of legislation is the means by which protection is afforded at the next tier of species below the HRSs and is the primary source of protection in respect of birds. Species afforded protection under the WCA include, *inter alia*:

- All species of birds
- Water vole
- Red squirrel
- Common reptiles (ie slow-worm, common lizard, grass snake, adder)
- Marsh fritillary butterfly
- Pearl mussel
- Various plants, ferns, mosses, liverworts, lichens & fungi

### ***Birds***

In summary, all wild birds are protected against deliberate killing, injury or capture, and this protection extends to their eggs and young. It is also illegal to destroy, damage or remove the nest of any bird either while it is in use or being built. For certain rare species which are listed on Schedule 1 of the Act the protections go even further: it is illegal to disturb any Schedule 1 bird species, either deliberately or unintentionally ('recklessly'), while it is building a nest or actually nesting, or to disturb the dependant young of any such bird. Exceptions to these general principles affect some specific game, food or pest species, but only under certain specified and defined conditions and usually in accordance with a licence issued in advance by NRW.

Actions which cause an adverse impact to birds or their nests which arise as an incidental result of some otherwise lawful activity, such as the trimming or removal of hedges, trees or scrub for example, would not constitute an offence provided that the activity could not have reasonably been avoided. As a general result of the provisions of the WCA therefore, the deliberate destruction, removal or clearance of habitats containing nesting birds would almost invariably constitute an offence because the impacts to birds could reasonably have been foreseen and avoided, for example by carrying out the clearance activities at a time when birds are not nesting.

Except under certain specified conditions, the clearance or removal of nests or nesting habitats is generally not illegal if it is carried out at a time of year when no birds are nesting or if it can otherwise be shown that no nesting birds are present at the time (eg by means of advance survey).

Activities which might adversely affect Schedule 1 birds such as barn owl, kingfisher or birds of prey can be undertaken provided a licence has been obtained in advance from NRW and appropriate mitigation measures are put in place.

### ***Animals Other than Birds***

Animals other than birds, such as water vole, red squirrel, marsh fritillary and pearl mussel for example, are listed on Schedule 5 of the Act, and are afforded protection which is generally similar to that of HRSs. The individual animals may not be deliberately killed, injured or captured, in any of their life stages, and it is also illegal to destroy or damage any places which these animals use for shelter or protection, or to disturb an animal using such a place or obstruct access to it, whether deliberately or unintentionally.

As with birds, impacts to Schedule 5 animals which arise as an incidental result of an otherwise lawful activity do not constitute an offence provided those impacts could not have reasonably been foreseen and avoided.

### ***Water Vole & Red Squirrel***

In the case of nest-making animals such as water vole and red squirrel, protection will normally be taken to extend to the entirety of any suitable, or potentially suitable, nesting or sheltering habitats which are occupied by a residential population of the species concerned. The connectivity of these habitats with other similar habitats in the wider vicinity may also be a matter for statutory consideration.

### ***Marsh Fritillary Butterfly & Pearl Mussel***

For species which do not make nests, protection will normally be taken to extend to the entirety of any habitats which are suitable, or potentially suitable, for breeding or sheltering and which are occupied by a residential population of the species concerned. The connectivity of these habitats with other similar habitats in the wider vicinity may also be a matter for statutory consideration.

### ***Common Reptiles***

Slow-worm, common lizard, grass snake and adder are afforded so-called ‘partial protection’ under the WCA. The animals themselves may not be deliberately killed or injured, but they may be captured and the habitats which support them are not afforded any direct protection in themselves.

As with other Schedule 5 animals, adverse impacts which arise as an incidental result of an otherwise lawful activity do not necessarily constitute an offence provided those impacts could not reasonably have been foreseen and avoided. Under current interpretation this is taken to mean that the destruction or clearance of habitats which are known to support common reptiles, or where such reptiles could reasonably be expected to occur, without the implementation of measures to minimise or avoid causing incidental death or injury to reptiles, would be likely to constitute an offence.

### ***Protected Plants***

About 180 species of plants, ferns, mosses, liverworts, lichens and fungi are afforded protection under Schedule 8 the WCA. These may not be intentionally picked (in any part), uprooted or destroyed, unless authorised under licence. As with Schedule 5 animals, adverse impacts which arise as an incidental result of an otherwise lawful activity do not necessarily constitute an offence provided those impacts could not reasonably have been foreseen and avoided.

### ***Protected Sites***

The WCA also sets out mechanisms for the protection and conservation of habitats and features of high biodiversity value through the identification and designation of specifically protected sites. These include Sites of Special Scientific Interest (SSSIs), National and Local Nature Reserves (NNRs/LNRs) and National Parks etc. Such sites are subject to wide-ranging legal protection against damage, destruction, degradation, exploitation or other harmful activities or uses.

### **The Protection of Badgers Act 1992 (PBA)**

Badger is protected primarily in relation to animal welfare and cruelty, as a result of illegal persecution. Badgers are protected against intentional killing, injury, ‘cruel ill-treatment’ or capture in all of their life stages. Their nesting burrows (‘setts’) may not be destroyed, damaged, dug into or obstructed and it is illegal to disturb a badger while occupying a sett, either deliberately or ‘recklessly’ (ie unintentionally as a result of failure to take due care). The PBA is also taken to confer a degree of protection to foraging areas which are critical to the support of a badger family-group (‘clan’) where the loss of this would otherwise result in their starvation. As with other protected species, adverse actions which arise as a result of an otherwise lawful activity do not constitute an offence provided those impacts could not reasonably have been foreseen and avoided. A number of specified exemptions are provided in connection with certain legal farming and fox-hunting activities which may impact badgers.

The protection of setts only applies to those which are in ‘current use’ and not to those which are abandoned. However, many badger setts are occupied only intermittently throughout the year and therefore ‘current use’ should not be taken to imply *continuous* use.

Actions to remove badger setts on development sites may be undertaken under a licence issued by NRW and in accordance with agreed mitigation measures, and licences may also be issued to allow the removal or exclusion of badgers from sites. Such operations may not occur during the breeding (‘close’) season, however, which is usually taken to be between December to June inclusive, due to the risk of trapping lactating females and young below ground.

### **Environment (Wales) Act 2016 (EWA)**

Section 7 of the EWA contains the most recent lists of species and habitats which are considered to be of ‘principal importance for the conservation of biodiversity in Wales’. These lists replaced those which were previously given under s.42 of the *Natural Environment & Rural Communities Act 2006*, which in turn replaced the ‘Priority Species’ listed under the UK Biodiversity Action Plan of 1995 and its Welsh equivalent. Species listed under s.7 of the EWA include many of those afforded protection under the articles described above, including otter, dormouse, water vole, nesting birds, common reptiles and great crested newt, for example, as well as additional species such as:

- W. European hedgehog (‘hedgehog’)
- Atlantic salmon (‘salmon’)
- Hornet robberfly
- Brown hare
- Brown & sea trout
- Shrill carder bee
- Harvest mouse
- Garden tiger moth
- Flat sedge
- Polecat
- Cinnabar moth
- Wild chamomile
- European eel (‘eel’)
- Small heath butterfly
- Common toad

and many other plant and animal species which are not otherwise specifically afforded statutory protection for wildlife conservation reasons (although they may in some cases be afforded some element of protection for other reasons, such as animal welfare or cruelty).

Section 7 of the EWA also identifies a number of habitat-types which are of ‘principal value for conservation in Wales’. These include:

- Lowland mixed deciduous woodland
- Hedgerows
- Lowland meadows
- Upland flushes, fens & swamps



- Purple moor-grass & rush-pastures (in Wales, often referred to as ‘rhos pastures’)
- Reedbeds
- Blanket bog
- Sand dunes
- Rivers & ponds

Although not protected as such, the EWA requires statutory authorities to take such ‘Section 7’ species and habitats into account when considering the management and development of sites in Wales, and to take “*all reasonable steps*” to maintain and enhance their populations. The presence of such species and habitats is a ‘material consideration’ on sites where planning permission is sought for development. **Planning Policy Wales (2021)** (PPW, 11th Edition) requires Local Planning Authorities (LPAs) to have regard to the presence of ‘Section 7’ species and habitats and to avoid adverse impacts as a result of development wherever possible. Developments which are considered essential in the public interest must seek to minimise adverse impacts and incorporate appropriate mitigation/compensation measures where adverse impacts cannot be avoided.

#### **Sites of Importance for Nature Conservation (SINCs)**

SINCs comprise so-called ‘third-tier’ sites which have been identified as having biodiversity conservation value at the sub-national (ie regional, county, county-borough or local) level. They are usually identified by the LPA, often in collaboration with other local conservation bodies such as the county Wildlife Trust and may appear under range of different names (eg ‘Wildlife Site’, ‘County Wildlife Site’ etc). Such sites are not specifically protected in law (ie they are ‘non-statutory’) but they are recognised as a ‘material consideration’ on sites where planning permission is sought for development. As with ‘Section 7’ habitats, PPW (2021) requires LPAs to avoid adverse impacts as a result of development wherever possible, and developments which are considered essential in the public interest must incorporate appropriate mitigation/compensation measures where adverse impacts cannot be avoided.

#### **Invasive Non-native Species**

Schedule 9 of the **Wildlife & Countryside Act (1981)** sets out lists of plant and fauna species which are subject to statutory regulation in Britain. These currently include plants such as Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and wall cotoneaster (*Cotoneaster horizontalis*), and animals such as signal crayfish, aquarium terrapin, Asian hornet and copyu. The lists are updated regularly.

The import, sale, transport, cultivation and keeping of these species is generally forbidden except under a specially issued licence, and it is illegal to allow these species to escape or spread into the wild, either deliberately or by accident. This includes any part and all life-stages of the species concerned. Earthworks which might accidentally result in the transfer of Schedule 9 plant material to another location or which encourages it to spread either within or off the site, for example, is forbidden. Any works on a site which might involve contamination by, and potential spread of, any of the listed species must be carried out under an approved method statement designed to prevent them being accidentally dispersed off of or within the site, and which preferably results in their complete elimination wherever this is possible.

## APPENDIX 2: DEFINITIONS OF SITE VALUE

### International Value

Site carrying an internationally recognised designation such as Ramsar Site, World Heritage Site, Special Protection Area, Special Area of Conservation, Biosphere Reserve or Biogenetic Reserve, or:

**Habitats:** site supporting nationally significant areas of habitats of defined international community interest.

**Species:** site supporting nationally significant populations of species of defined international community interest.

### National Value

Site meeting published Site of Special Scientific Interest (SSSI) designation criteria (NCC 1989; JNCC 2019 *et seq*), whether so designated or not.

**Habitats:** site supporting nationally significant areas of habitats of defined national rarity or interest.

**Species:** site supporting nationally significant populations or communities of UK Red Data Book, Nationally Notable or protected species (other than badger).

### County Value

Site identified as a County Wildlife Site (CWS), Site of Importance to Nature Conservation (SINC) or similar at the county level (ie greater than district, borough or city level); meeting published CWS designation criteria (where these exist), but falling short of SSSI designation criteria, whether designated as a CWS or not.

**Habitats:** site supporting good examples of nationally threatened habitats, or extensive areas of habitats which are rare or unique in the county.

**Species:** site supporting large or strong populations or communities of nationally rare or protected species (other than badger), or of species which are rare in the county and uncommon nationally.

### District Value

Sites failing to meet County Value criteria, but nevertheless supporting habitats, species or communities which appreciably enrich the ecological resource of the county, especially by virtue of their size or extent.

**Habitats:** sites supporting habitats uncommon in the county, small but unmodified fragments of nationally threatened habitats, or comprising extensive areas or systems of semi-natural habitats.

**Species:** sites supporting nationally rare species, or strong populations or communities of regionally uncommon species, which would not otherwise be present (ie they are critically dependant on the site characteristics).

### Local Value

Habitats which fail to meet District Value criteria, but which appreciably enrich the ecological resource of the locality. This category can be further divided into:

- **High Local Value:** just failing to meet District Value Criteria; supporting species which are notable or uncommon in the county; or species which are uncommon, local or habitat-restricted nationally, and which might not otherwise be present in the area.
- **Local Value:** sites which are of ecological value only in the context of their immediate surroundings. Rare or uncommon species may occur but are not restricted to the site or critically dependent upon it for their survival in the area.

Sites failing to meet any of the above can be considered as being of '**Negligible**' ecological value.

### APPENDIX 3: SPECIES RECORDED FROM THE SITE

#### Plant Species

All species recorded by DCE 2023, unless otherwise indicated:

Species	Common Name	Indicator Species					PIL	Other comments
		W	NG	CG	AG	MG		
<b>Trees &amp; Scrub</b>								
<i>Acer campestre</i>	field maple	W						
<i>Corylus avellana</i>	hazel							
<i>Crataegus monogyna</i>	hawthorn							
<i>Fraxinus excelsior</i>	ash							
<i>Ilex aquifolium</i>	holly							
<i>Prunus spinosa</i>	blackthorn							
<i>Quercus robur</i>	pedunculate oak							
<i>Rosa</i> sp	wild rose							
<i>Rubus fruticosus</i> agg	bramble							
<i>Sambucus nigra</i>	elder							
<b>Herbaceous Plants</b>								
<i>Agrostis capillaris</i>	common bent							
<i>Agrostis stolonifera</i>	creeping bent							
<i>Alopecurus pratensis</i>	meadow foxtail							
<i>Anthoxanthum odoratum</i>	sweet vernal-grass							
<i>Anthriscus sylvestris</i>	cow parsley							
<i>Arrhenatherum elatius</i>	false oat-grass							
<i>Arum maculatum</i>	cuckoopint							
<i>Bellis perennis</i>	daisy							
<i>Bromus hordeaceus</i>	soft brome							
<i>Cardamine flexuosa</i>	wavy bitter-cress							
<i>Carex hirta</i>	hairy sedge							
<i>Carex ovalis</i>	oval sedge					MG		
<i>Cerastium fontanum</i>	common mouse-ear							
<i>Cirsium arvense</i>	creeping thistle							
<i>Cirsium vulgare</i>	spear thistle							
<i>Cynosurus cristatus</i>	crested dog's-tail							
<i>Dactylis glomerata</i>	cock's-foot							
<i>Euphrasia</i> sp.	eyebright							
<i>Festuca rubra</i>	red fescue							
<i>Filipendula ulmaria</i>	meadowsweet					MG		
<i>Galium aparine</i>	cleavers							
<i>Geranium molle</i>	dove's-foot crane's-bill							
<i>Glechoma hederacea</i>	ground ivy							
<i>Hedera helix</i>	ivy							
<i>Heracleum sphondylium</i>	hogweed							
<i>Holcus lanatus</i>	yorkshire fog							
<i>Hyacinthoides non-scripta</i>	bluebell	W						WCA
<i>Hypochaeris radicata</i>	common cat's-ear		NG					
<i>Juncus effusus</i>	soft rush							
<i>Juncus inflexus</i>	hard rush							
<i>Leucanthemum vulgare</i>	oxeye daisy		NG					
<i>Lolium perenne</i>	perennial rye-grass							
<i>Medicago lupulina</i>	black medick			CG				
<i>Mercurialis perennis</i>	dog's mercury	W						
<i>Myosotis</i> sp	forget-me-not species							

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Species	Common Name	Indicator Species						Other comments
		W	NG	CG	AG	MG	PIL	
<i>Phyllitis scolopendrium</i>	hart's-tongue fern							
<i>Plantago lanceolata</i>	ribwort plantain							
<i>Plantago major</i>	greater plantain							
<i>Poa trivialis</i>	rough meadow-grass							
<i>Primula sp</i>	primrose species							
<i>Ranunculus acris</i>	meadow buttercup							
<i>Ranunculus repens</i>	creeping buttercup							
<i>Rumex acetosa</i>	common sorrel						PIL	
<i>Rumex crispus</i>	curled dock							
<i>Rumex obtusifolius</i>	broad-leaved dock							
<i>Senecio jacobaea</i>	common ragwort							
<i>Silene dioica</i>	red campion							
<i>Taraxacum officinalis</i> agg	dandelion							
<i>Trifolium pratense</i>	red clover		NG					
<i>Trifolium repens</i>	white clover							
<i>Urtica dioica</i>	common nettle							
<i>Veronica chamaedrys</i>	germander speedwell							
<i>Vicia sativa</i>	common vetch							
<b>Contributing Species for SINC designation</b>		<b>W</b>	<b>NG</b>	<b>CG</b>	<b>AG</b>	<b>MG</b>	<b>PIL</b>	<b>QS = 0</b>
<b>Totals recorded on site</b>		<b>3</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>CS = 10</b>

(**Bold**) = SINC Qualifying species

**SINC Indicator Species**

AM = arable field margin, NG = neutral grassland, AG = acid grassland, CC = calcareous grassland, MG = marshy grassland, W = woodland, PI = Post-industrial/Disturbed ground.

QS = 'Qualifying Species'

CS = 'Contributory Species'

**Fauna Species**

All records DCE 2023, unless otherwise indicated:

Birds	SOCC Lists		S7	Status on Site	SINC value	Notes
	UK	Wales				
Blackbird				Pr		
Carrion crow				N		Overhead
Magpie				Po		
Robin				Pr		
Sparrow, house	R	A	X	Po	BCS/WCS	
Tit, Great				Pr		
Woodpecker, Green				Po		
Wren	A			Pr		

(**Bold**) = Schedule 1 – Specially protected

Red List = High conservation significance in UK/Wales (RSPB 2021; 2022)

Amber List – Moderate conservation significance in UK/Wales(RSPB 2021; 2022)

S7 = 'Species of Principal Conservation Concern in Wales (EWA 2016)

**SINC Indicator Species**

Breeding Birds:

BQS = 'Qualifying species'

BCS = 'Contributory species'

Wintering/Passage Birds:

WQS = 'Qualifying species'

WCS = 'Contributory species'

**Breeding Status on Site**

C = Confirmed breeding

Pr = Probably breeding

Po = Possibly breeding

N = Not breeding/Visitor

APPENDIX 4 – EXAMPLES OF WILDLIFE-FRIENDLY PLANTING SPECIES

GRASSLANDS

New or existing low-fertility topsoil should be lightly harrowed and raked to create a moderately fine tilth. No fertiliser should be added to any of these areas. Areas should be seeded either by hand (broadcasting) or by using a light tractor-mounted spinner or drill with drills at 5cm centres, 5mm maximum depth, immediately after preparation which should ideally occur in late summer (ie Aug-Sep). The seed rate should be 4g/m<sup>2</sup> (ie 40kg/ha). The seed mixture in new soil areas should comprise an 80:20 mix of native grass to native wildflower seed. A minimum of any six broadleaved species should be included, in equal quantities, up to a maximum of 15 species. Legumes should be supplied as low fertility non-fodder strains only.

All seed material should be of Welsh, or at least UK, native origin. Seed suppliers should be signatories to the *Flora Locale* Code of Practice for collectors, growers and suppliers of native plants and seed.

Semi-natural ‘Meadow’ Mixtures

For creating a more ‘traditional’ meadow with a tall sward

**Grasses**

<i>Agrostis capillaris</i>	Common bent	Low fertility strains only, eg ‘Arletta’, ‘Tracenta’
<i>Alopecurus pratensis</i>	Meadow foxtail	≤5% of mixture
<i>Anthoxanthum odoratum</i>	Sweet vernal-grass	≤5% of mixture
<i>Cynosurus cristatus</i>	Crested dog’s-tail	
<i>Festuca rubra</i> ssp <i>rubra</i>	Red-fescue	Low fertility strains only, eg ‘Boreal’, ‘Franklin’
<i>F. rubra</i> ssp <i>commutata</i>	Chewing’s fescue	Low fertility strains only, eg ‘Agram’, ‘Banner’, ‘Koket’, ‘Wintergreen’, ‘Lifalla’, ‘Raymond’, ‘Wilma’
<i>F. rubra</i> ssp <i>littoralis</i>	Slender red fescue	Low fertility strains only, eg ‘Dawson’, ‘Logro’, ‘Merlin’, ‘Oriflame’, ‘Lovisa’, ‘Bornado’, ‘Garance’
<i>Phleum bertolonii</i>	Small cat’s-tail	≤5% of mixture

**Broadleaved herbs**

<i>Achillea millefolium</i>	Yarrow	<i>Plantago media</i> *	Hoary plantain
<i>Centaurea nigra</i>	Common knapweed	<i>Potentilla anserina</i>	Silverweed
<i>Centaurea scabiosa</i> *	Greater knapweed	<i>Potentilla repens</i>	Creeping cinquefoil
<i>Daucus carota</i>	Wild carrot	<i>Primula veris</i>	Cowslip
<i>Galium mollugo</i>	Hedge bedstraw	<i>Prunella vulgaris</i>	Self-heal
<i>Galium verum</i> *	Lady’s bedstraw	<i>Ranunculus acris</i>	Meadow buttercup
<i>Hypericum perforatum</i>	St John’s-wort	<i>Rhinanthus minor</i>	Yellow rattle
<i>Hypochaeris radicata</i>	Cat’s-ear	<i>Rumex acetosa</i> <sup>†</sup>	Common sorrel
<i>Knautia arvensis</i> *	Field scabious	<i>Sanguisorba minor</i> *	Salad burnet
<i>Lathyrus pratense</i>	Meadow vetchling	<i>Silene dioica</i>	Red campion
<i>Leontodon autumnalis</i>	Autumn hawkbit	<i>Silene vulgaris</i>	Bladder campion
<i>Leontodon hispidus</i>	Rough hawk-bit	<i>Trifolium campestre</i>	Hop trefoil
<i>Leucanthemum vulgare</i>	Ox-eye daisy	<i>Trifolium dubium</i>	Least trefoil
<i>Lotus corniculatus</i> <sup>†</sup>	Bird’s-foot trefoil	<i>Trifolium pratense</i> <sup>†</sup>	Red clover
<i>Luzula campestris</i>	Common wood-rush	<i>Veronica chamaedrys</i>	Germander speedwell
<i>Medicago lupulina</i>	Black medick	<i>Vicia cracca</i>	Tufted vetch
<i>Origanum vulgare</i> *	Wild marjoram	<i>Vicia sativa</i> <sup>†</sup>	Common vetch
<i>Plantago lanceolata</i>	Ribwort plantain	<i>Vicia sepium</i> <sup>†</sup>	Bush vetch

\* Prefer calcareous soils

<sup>†</sup> Low-fertility non-fodder strains only

For the first year of growth, mowing should take place at 6-8 weeks after sowing, with the cuttings collected and disposed of off-site. This should be repeated at two-monthly intervals, with the last cut being made in October. In the second and subsequent years, the grass should be mown twice each year, with a first cut to 50mm in April and a second cut to 100mm in September. All cuttings should be collected and removed for off-site disposal.

### Flowering Lawn Mixture

Allowing regular maintenance to create a relatively short sward

#### Grasses

<i>Agrostis capillaris</i>	Common bent
<i>Cynosurus cristatus</i>	Crested dog's-tail
<i>Festuca rubra</i>	Red-fescue
<i>Phleum bertolonii</i>	Small cat's-tail

#### Broadleaved Herbs

<i>Galium verum</i>	Lady's bedstraw	<i>Prunella vulgaris</i>	Self-heal
<i>Leontodon hispidus</i>	Rough hawkbit	<i>Ranunculus acris</i>	Meadow buttercup
<i>Leucanthemum vulgare</i>	Oxeye daisy	<i>Rumex acetosa</i>	Common sorrel
<i>Lotus corniculatus</i>	Birds-foot trefoil	<i>Trifolium pratense</i>	Red clover
<i>Primula veris</i>	Cowslip		

A sward of this type may take longer to form a dense turf than more conventional grass lawns. Once established the lawn should be mown regularly (as any other lawn) to a sward height of between 25-40mm. Reduce mowing in April to allow cowslip to flower and from late June to allow further flowering of the other species - next cut once the sward again becomes untidy. Cuttings should be collected and removed from site.

### TREES & SHRUBS

All planting stock should be of native species which are indigenous to the region and of Welsh, or at least UK, provenance.

#### Semi-natural Woodlands

<b>Canopy Species</b>		<b>Percentage</b>
<i>Quercus robur</i>	Pedunculate oak	40
<i>Quercus petraea</i>	Sessile oak	40
<i>Acer campestre</i>	Field maple	20
<b>Understorey</b>		
<i>Corylus avellana</i>	Hazel	30
<i>Crataegus monogyna</i>	Common hawthorn	30
<i>Betula pendula</i>	Silver birch	)
<i>Cornus sanguinea</i>	Dog wood	)
<i>Ilex aquifolium</i>	Holly	)
<i>Malus sylvestris</i>	Crab apple	)
<i>Prunus avium</i>	Wild cherry	) 40
<i>Prunus spinosa</i>	Blackthorn	)
<i>Rosa canina</i>	Common dog-rose	)
<i>Sorbus aucuparia</i>	Rowan	)
<i>Taxus baccata</i>	Yew	)
<i>Viburnum opulus</i>	Guelder rose	)

Planting should be carried out using 600mm bare-rooted transplants in spiral plastic guards (rabbit/vole protection) where appropriate. Standard tree aftercare should be applied.

## Hedgerows

<b>Canopy Species</b>		<b>Percentage</b>
<i>Crataegus monogyna</i>	Common hawthorn	30
<i>Prunus spinosa</i>	Blackthorn	10
<i>Corylus avellana</i>	Hazel	20
<i>Acer campestre</i>	Field maple	)
<i>Cornus sanguinea</i>	Dogwood	)
<i>Euonymus europaeus</i>	Spindle	)
<i>Ilex aquifolium</i>	Holly	) 40
<i>Prunus avium</i>	Wild cherry	)
<i>Quercus robur</i>	Pedunculate oak	)
<i>Rosa canina</i>	Common dog-rose	)
<i>Sambucus nigra</i>	Elder	)
<i>Sorbus aucuparia</i>	Rowan	)
<i>Viburnum opulus</i>	Guelder rose	)

### **Climbers**

<i>Clematis vitalba</i>	Traveller's-joy	) Alternate at 3m intervals
<i>Lonicera periclymenum</i>	Honeysuckle	)
<i>Solanum dulcamara</i>	Bittersweet	)
<i>Tamus communis</i>	Black bryony	)

Ideally plant in late autumn, after mid-November, although anytime between October and March is appropriate if the ground is not frozen. Plant 60-125mm high whips in trenches (300mm depth x 600mm width) in two lines 300mm apart to form a staggered, double row. Whips in each line should be 450mm apart, giving a total of five plants per running metre. Use a spiral guard to protect the whip from rabbits with a cane to support them. Back fill with a mixture of the topsoil excavated from the pit, mixed with organic matter.

Newly planted hedges are vulnerable to damage by wind, drought and severe weather for the first 2-3 years. Keep moist and mulch with a 50-75mm layer of composted bark to stop weed growth and retain moisture in the soil.

## **Wildlife-friendly Plants for Formal Landscaping & 'Pollinator Plantings'**

The species listed below are primarily non-native species which are commonly found in gardens and formal landscape areas, and which are considered 'wildlife-friendly'. Those native species which are included are aesthetically pleasing and suitable for formal planting schemes. The herbaceous species listed are particularly suitable for 'pollinator plantings'

### **Woody Species**

<i>Viburnum x bodnantense</i>	Bodnant viburnum	<i>Syringa vulgaris</i>	Lilac
<i>Ceanothus</i> spp	Californian lilac	<i>Mahonia</i> spp	Mahonia
<i>Pyracantha</i> spp	Firethorn	<i>Philadelphus</i> spp	Mock orange
<i>Viburnum tinus</i>	Laurustinus	<i>Amelanchier canadensis</i>	Serviceberry
<i>Chaenomeles japonica</i>	Japanese quince	<i>Jasminium officinale</i>	White jasmine

### **Herbaceous Species**

<i>Arabis alpina</i>	Alpine rock-cress	<i>Sedum telephium</i>	Orpine
<i>Angelica archangelica</i>	Angelica	<i>Centaurea montana</i>	Perennial cornflower
<i>Lunaria annua</i>	Annual honesty	<i>Lunaria rediviva</i>	Perennial honesty
<i>Aubretia deltoidea</i>	Aubretia	<i>Helianthus decapetalus</i>	Perennial sunflower
<i>Sedum 'Purple Emperor'</i>	Autumn Stonecrop	<i>Phlox paniculata</i>	Phlox
<i>Borago officinalis</i>	Borage	<i>Limnanthes douglasii</i>	Poached-egg plant
<i>Eschscholtzia californica</i>	California poppy	<i>Echinacea purpurea</i>	Purple coneflower
<i>Erigeron canadensis</i>	Canadian Fleabane	<i>Verbena bonariensis</i>	Purple-top vervain
<i>Iberis sempervirens</i>	Candytuft	<i>Silene dioica</i>	Red campion
<i>Helleborus niger</i>	Christmas rose	<i>Centranthus ruber</i>	Red valerian
<i>Malva sylvestris</i>	Common mallow	<i>Rosmarinus officinalis</i>	Rosemary
<i>Papaver rhoeas</i>	Common poppy	<i>Salvia officinalis</i>	Sage
<i>Cosmos bipinnatus</i>	Cosmos	<i>Hebe recurva</i>	Shrubby veronica
<i>Oenothera biennis</i>	Evening primrose	<i>Antirrhinum majus</i>	Snapdragon
<i>Myosotis sylvatica</i>	Wood forget-me-not	<i>Saponaria officinalis</i>	Soapwort
<i>Tagetes</i> spp	French marigold	<i>Mentha spicata</i>	Spear mint

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<i>Echinops ritro</i>	Globe thistle	<i>Crocus chrysanthus</i>	Spring crocus
<i>Verbascum thapsus</i>	Great mullein	<i>Helianthus annuus</i>	Sunflower
<i>Anemone blanda</i>	Grecian windflower	<i>Lobularia maritime</i>	Sweet alyssum
<i>Aptenia cordifolia</i>	Heart-Leaf Ice-plant	<i>Monarda didyma</i>	Sweet bergamot
<i>Althaea rosea</i>	Hollyhock	<i>Hesperis matronalis</i>	Sweet rocket
<i>Hyssopus officinalis</i>	Hyssop	<i>Dianthus barbatus</i>	Sweet William
<i>Sedum spectabile</i>	Ice plant	<i>Coreopsis</i> spp	Tickseed
<i>Phacelia tanacetifolia</i>	Lacy phacelia	<i>Nicotiana affinis</i>	Tobacco plant
<i>Aster x versicolor</i>	Late Michaelmas-daisy	<i>Cheiranthus cheiri</i>	Wallflower
<i>Lavandula angustifolia</i>	Lavender	<i>Eranthis hyemalis</i>	Winter aconite
<i>Helleborus orientalis</i>	Lenten rose	<i>Alyssum saxatile</i>	Yellow alyssum
<i>Leucanthemum vulgare</i>	Ox-eye daisy	<i>Lysimachia vulgaris</i>	Yellow loose-strife
<i>Origanum vulgare</i>	Marjoram		

**Sources:** *Plants for wildlife friendly Gardens* (Natural England), *Planting Gardens for Birds* (RSPB), *Gardening for Bats* (Bat Conservation Trust) and *Starting a Butterfly Garden* (School Garden Company).



APPENDIX 5:

EXAMPLES OF NON-INTEGRATED BIRD BOXES FOR TREES AND BUILDINGS

Suspended Designs



Schwegler 1B  
General box



Schwegler 2H open-front  
'robin' box



Schwegler 5  
'large owl' box



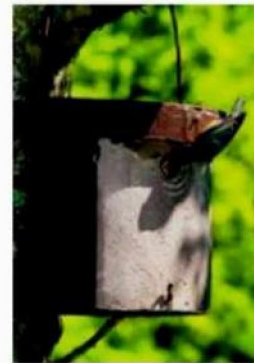
Schwegler 1CGA  
'small owl' box



Schwegler 20  
'starling' box



Schwegler 28 'kestrel' box



Schwegler 5KL 'nuthatch' box

Surface-mounted Designs



Schwegler 1MR general box



Vivara Pro open-front  
'robin' box



Vivara Pro ova open-front  
'robin' box



Vivara Pro 'starling' box



Vivara Pro 28/32mm  
general box



Vivara Pro 28/32mm  
oval general box

EXAMPLES OF SURFACE-MOUNTED BAT BOXES

Tree-mounted boxes



Schwegler 2F General Box



Schwegler 1FD Nursery Box



Schwegler 1FS Nursery Box (Large)



Schwegler 1FW Winter Box  
(Very large box)



Schwegler 2FN  
Noctule Box



Schwegler 2F DFP  
Daubenton's Bat Box



Miramar General Box

Tree or building-mounted boxes



Schwegler 1FF General Box



Schwegler 1FQ Decorative Box



Schwegler 1FFH General Box



Schwegler 1FE



Vivara Woodstone Low Profile Box



NHBS Cavity Box  
(Brown Long-Eared Bat Box)



NHBS Crevice Box



Beaumaris wall box

Photographs of the Site, May 2023



Grassland SNG1 looking north-west



Grassland SNG2 looking north-east



Grassland SNG1 looking north



Blackthorn scrub



South site boundary of SNG2 looking north-east



South site boundary of SNG1 looking west



Oak tree in east of grassland SNG2



Three oak trees in north of grassland SNG2



Oak tree in south of grassland SNG2



Site entrance at south of grassland SNG1



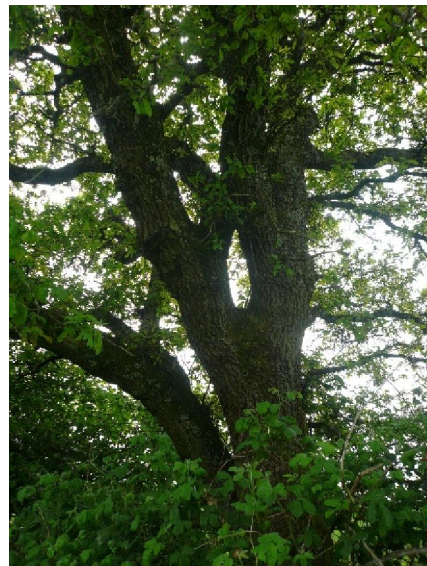
Hedgerow H1 looking north-west



Hedge bank of H1



Tree within hedgerow H1



Tree within hedgerow H1



Hedgerow H2 at north of grassland SNG1



Hedgerow H2 looking east and north of grassland SNG1



Hedgerow H2 looking west across grassland SNG1



Hedgerow H3 looking south-east from grassland SNG1



Hedgerow H3 looking south from grassland SNG2



Hedgerow H2 at north of grassland SNG2



Hedgerow H2 north of area of blackthorn scrub

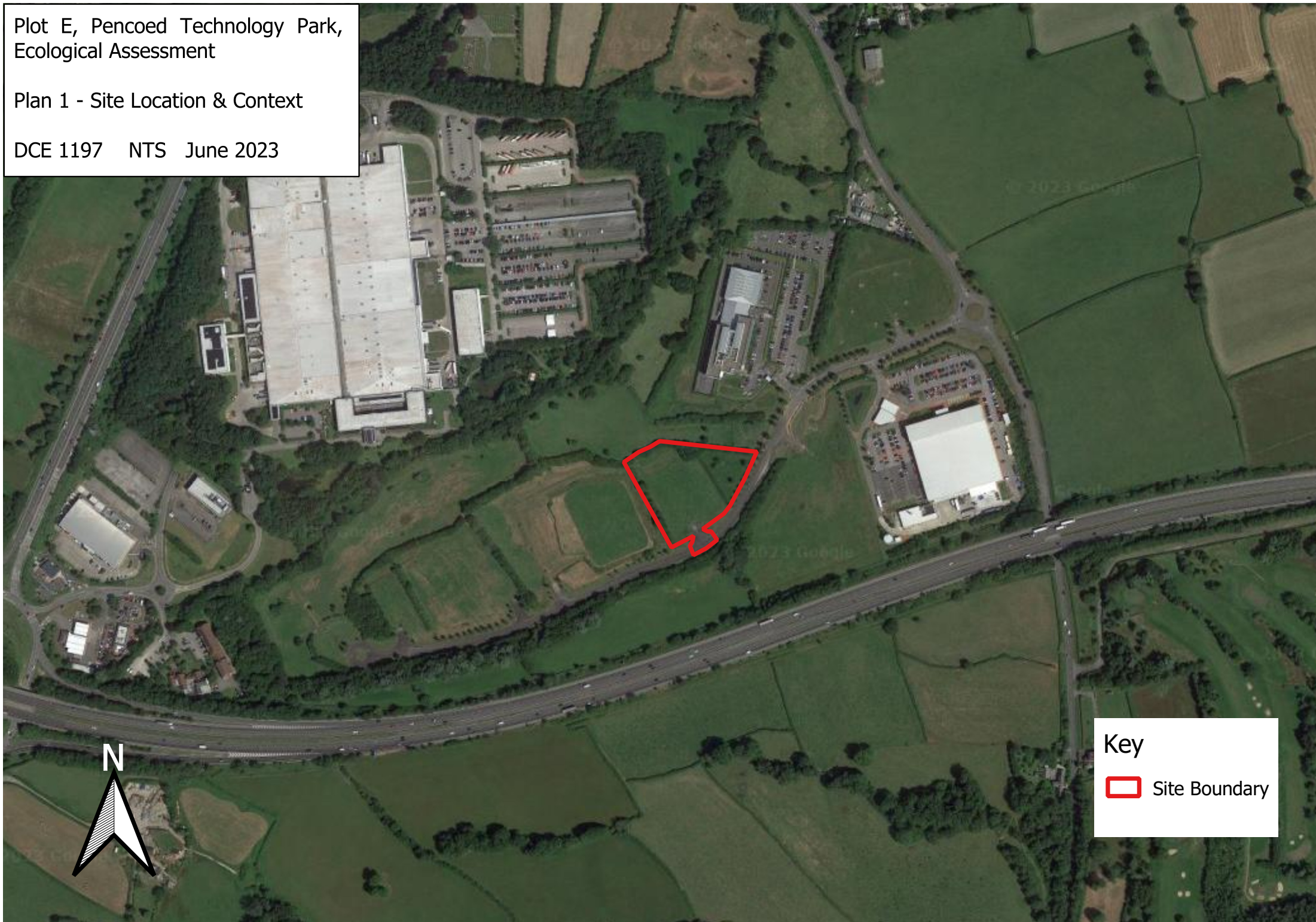


Gap at south of H3 allowing access between fields

Plot E, Pencoed Technology Park,  
Ecological Assessment

Plan 1 - Site Location & Context

DCE 1197 NTS June 2023



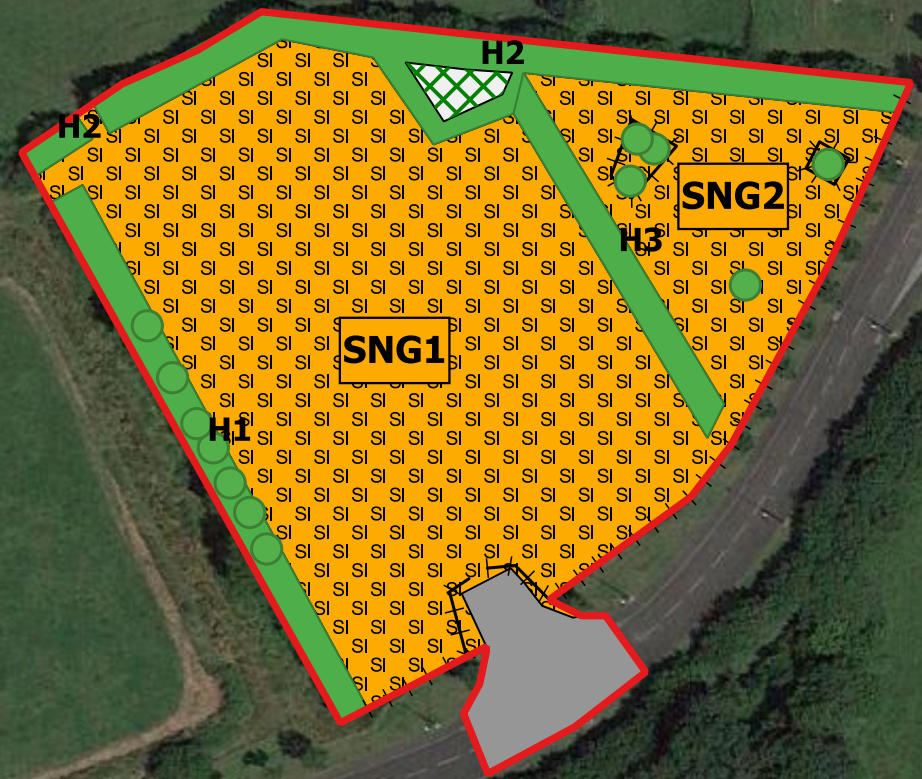
Key

 Site Boundary

Plot E, Pencoed Technology Park,  
Ecological Assessment

Plan 2 - Habitats & Vegetation

DCE 1197 NTS June 2023



**Key**

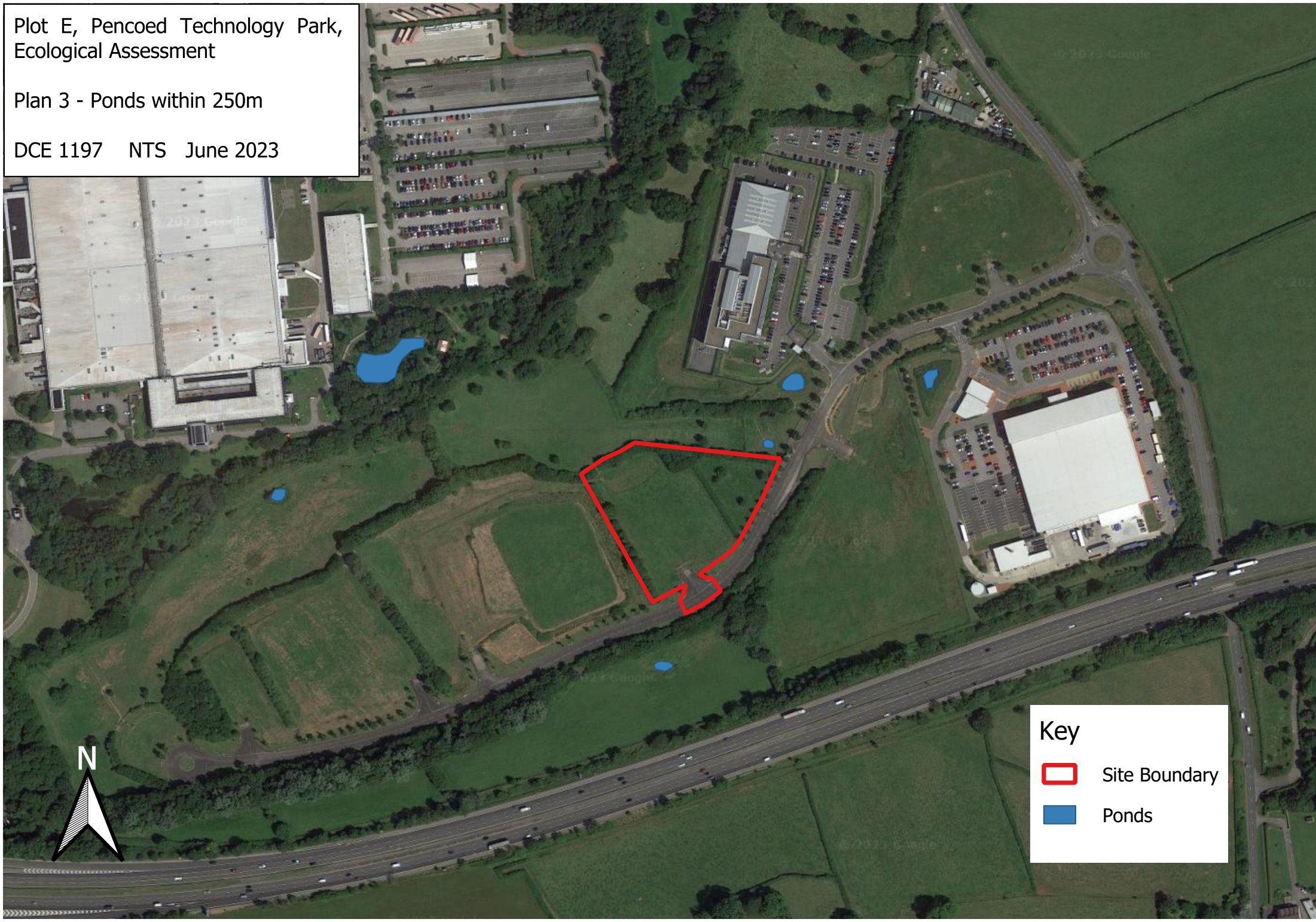
- Site Boundary
- Hedgerow
- Blackthorn Scrub
- Trees
- Semi-improved Neutral Grassland
- Hard Standing
- Fence





Plot E, Pencoed Technology Park,  
Ecological Assessment

Plan 3 - Ponds within 250m

DCE 1197 NTS June 2023



Key

-  Site Boundary
-  Ponds







Plot E, Pencoed Technology Park,  
Ecological Assessment

Plan 4 - Ecological Evaluation

DCE 1197 NTS June 2023



**Key**

-  Site Boundary
-  High Local Value
-  Local Value
-  Negligible Value