



Ecological Appraisal Report:

Land at Tyn Y Caeau, Margam, Port Talbot. SA13 2NW

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Prepared by Wendy J Larcombe on behalf of I&G Ecological Consulting

Contact:

Glyn Lloyd-Jones glyn.igecol@gmail.com 07973 685423

Iestyn Evans iestyn.igecol@gmail.com 07733 214829

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Summary

I & G Ecological Consulting were commissioned to undertake an updated ecological appraisal of an area of land approximately 1.4 hectare in size, located at on the outskirts of the village of Margam near Port Talbot.

The land within the site boundary consists predominantly of Semi-improved grassland, Mature Native and non-native trees, House and outbuildings and associated garden planting, partially bounded by outgrown hedges/ tree lined boundaries.

No signs of European protected species were observed, however a number of non-native invasive species were encountered on the site.

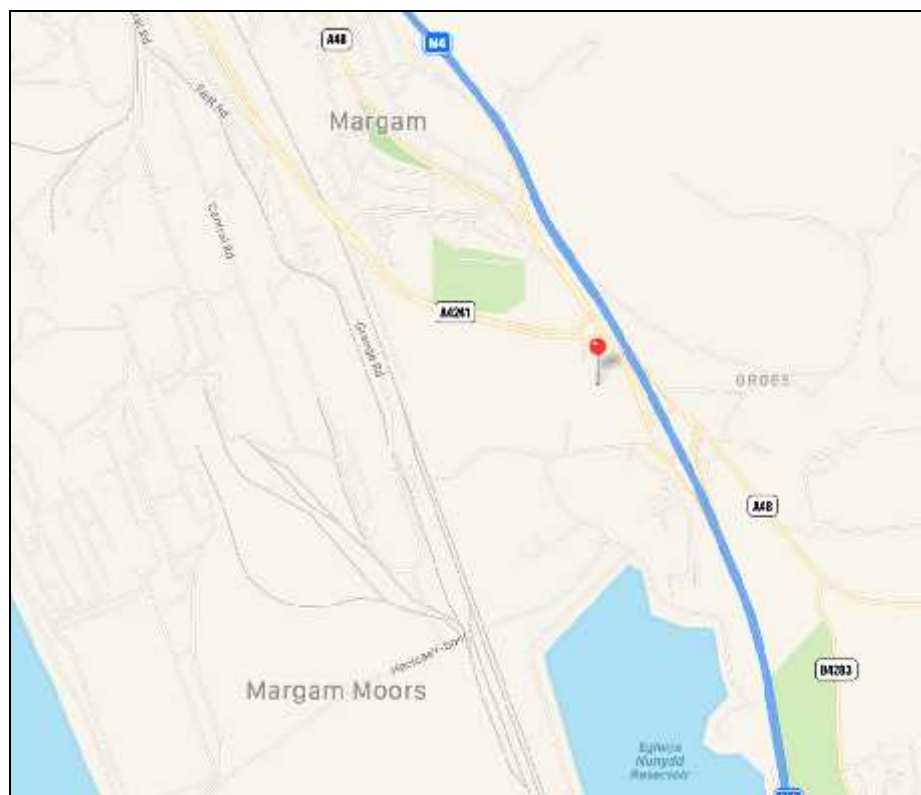


Figure 1. Location of site Grid Ref: SS 79284 86418

1. INTRODUCTION

- 1.1.1 I & G Ecological Consulting were commissioned to undertake an ecological appraisal of an area of land at Tyn Y Caeau, Margam, Neath Port Talbot. The site is approximately 1.42 hectares in size. The report is to inform an application for Planning Permission for a Commercial Truck Stop development. Documents consulted: Drainage Strategy Report (HCE 6/5/20 and associated Notes) in relation to Mitigation & Enhancement.
- 1.1.2 This report presents the findings of both a desk study and a site appraisal undertaken in December 2019. The report outlines the ecological constraints/opportunities associated with the site.
- 1.1.3 The survey was conducted during sub-optimal conditions as vegetation survey can be limited outside of the main flowering season for grassland and hedgerow habitats.

2. METHODOLOGY

- 2.1.1 Both a desk-based survey and an ecological site survey were undertaken to establish the ecological conditions on site.
- 2.1.2 A field botanical survey was carried out using survey methods that were based on standard Phase 1 Habitat survey techniques. The CIEEM Guidelines for Preliminary Ecological Appraisal were also followed and adhered to.

2.2 *Badgers*

- 2.2.1 The surrounding habitat was assessed for its suitability for badgers which includes the presence of setts, well-worn paths and runs, snagged hair, latrines, footprints and foraging. Any such incidental signs of badgers were recorded if they were encountered.

2.3 *Otters*

- 2.3.1 The surrounding habitat was assessed for its suitability to support otters. The area was searched for otter field signs such as spraint marking, slides, hovers or footprints.

2.4 *Dormouse*

- 2.4.1 The habitats on site, particularly the hedgerows were assessed for their suitability to support dormice.

2.5 *Birds*

- 2.5.1 The habitats on site were assessed for their suitability for breeding birds, including trees, scrub and grassland.

2.6 Bats

- 2.6.1 Habitats on site were assessed for their suitability to support bats, particularly any trees on site that could have bat roosting potential or opportunities.

2.7 Reptiles

- 2.7.1 The habitats on site were assessed for their suitability to support reptiles.

2.8 Amphibians

- 2.8.1 The habitats on site were assessed for their suitability to support amphibians.

2.9 Water Voles

- 2.9.1 The surrounding habitats on site were assessed for their suitability to support water voles.

2.10 Marsh Fritillary

The surrounding habitats on site were assessed for their suitability to support marsh fritillary butterfly and their food plant Devil's bit scabious *Succisa pratensis*.

2.11 Non-Native Invasive Species

- 2.11.1 Any pernicious weeds under Schedule 9, Section 14 of the Wildlife and Countryside Act 1981 (as amended) were also noted and mapped during the site survey. These species include Japanese Knotweed (*Fallopia japonica*) and Himalayan Balsam (*Impatiens glandulifera*).

3. RESULTS

3.1 Desk study

- 3.1.1 A data search was requested from the South East Wales Biological Records Centre for the planning application site and surrounding area of up to 2km. The species information was returned to I&G Ecology on 11th May 2020. The closest record to the site is for a number of birds including Dunnock (*Prunella modularis*), Song Thrush (*Turdus philomelos*) and Reed Bunting (*Emberiza schoeniclus*) all at 47m. There are large number of records for invertebrates, mostly lepidoptera but also a number of Hymenoptera. A number of protected and notable species records were returned within 1km of the site centre. The records will not be listed here, but the most significant, those which are considered to potentially be affected by development of the site, will be briefly summarised. However, the full data are available upon request to those nominated on the request form, as some data may be classified as sensitive.

- 3.1.2 The significant findings from the data search are summarised below: -

3.1.3 Birds

The data search returned almost 500 entries of birds which are categorised as priority species within 2km of the site. Several species were recorded at 47m from site including



including Dunnock (*Prunella modularis*), Song Thrush (*Turdus philomelos*) and Reed Bunting (*Emberiza schoeniclus*). Barn Owl (*Tyto alba*) at 95m, House Sparrow (*Passer domesticus*) at 230m and Bullfinch (*Pyrrhula pyrrhula*) also at 230m.

3.1.4 Mammals

The data search returned over 100 records of mammals within 2km of the site, most significantly these included:-

- ☐ 44 entries for Bats (*Pipistrelle* species, *Myotis* species, Lesser and Greater Horseshoe, Brown long-eared, Natterer's, Brandt's, Whiskered) closest record being 77m from the site *Pipistrellus pipistrellus*.
- ☐ 2 entries for Polecat (*Mustela putorius*), closest being recorded at 180m from site.
- ☐ 1 entry for Otter (*Lutra lutra*), being recorded at 1212m from the site.
- ☐ 1 entry for Weasel (*Mustela nivalis*) at 878m
- ☐ 11 records of Hedgehog (*Erinaceus europaeus*), closest recorded 641m from the site.
- ☐ 7 entries for Badger (*Meles meles*), the closest being 230m from site.
- ☐ 5 entries for Hare (*Lepus europaeus*), the closest being at 1749m from site.

3.1.5 Invertebrates

The data search returned c.160 records of invertebrates, which were mostly for moths, butterflies and bees. The closest records include Oak Hook-tip (*Watsonalla binaria*), Dusky Thorn (*Ennomos fuscantaria*) and Blood-vein (*Timandra comae*) all at 172m from site.

3.1.6 Plants

The data search returned very few records of plants within 2km of the site. There are 14 records for Bluebell (*Hyacinthoides non-scripta*), the closest being at 230m from the site. Other records include Fen Orchid (*Liparis loeselii*) at 1707m and Welsh Mudwort (*Limosella australis*) at 1931m (1942 record).

3.1.7 Reptiles

The data search returned a 65 records of reptiles within 2km of the site.

- ☐ 22 entries for Slow-worm, closest being recorded at 491m from site.
- ☐ 30 entries for Common Lizard (*Zootoca vivipara*), closest being 566m.
- ☐ 11 entries for Grass Snake (*Natrix Helvetica*) at 625m.
- ☐ 2 entries for Adder (*Viper berus*), closest being at 1349m from site (1974 record) and 1914m (2012).

3.1.8 Amphibians

The data search returned 16 records of amphibians within 2km of the site.



- 4 Common Frog (*Rana temporaria*) 1349m from site
- 5 Common Toad (*Bufo bufo*) closest being recorded at 1226m from the site.
- 3 entries for Great Crested Newt (*Triturus cristatus*), closest recorded at 1193m.
- Palmate Newt (*Lissotriton helveticus*) at 1914m from the site.

3.1.9 INNS

A wide range of INNS species were returned including plants, crustacea, birds, insects, molluscs and flowering plants. Of those, the following are more likely to be encountered on site;

- 7 entries for Japanese Knotweed (*Fallopia japonica*), closest is at 47m from site centre
- 3 entries for *Crocasmia pottsii* x *aur.* 230m being closest
- 5 Entries for Grey Squirrel (*Sciurus carolinensis*), 944m being closest

3.1.10 Statutory Designated Sites

The data search showed that there were a number of Nationally or Internationally important sites (e.g. SSSIs, SACs or SPAs) which lie within the search buffer.

SSSI : Eglwys Nunydd Reservoir (715m) – Described in Citation as: “The largest sheet of fresh water in the county. On the site of Margam moors which, before being reclaimed for the Abbey Steel Works, was a notable site for wildfowl. The reservoir attracts large numbers of wintering waterfowl and passage migrants. Notable species including Great Crested and Little Grebes, Mallard, Gadwall and Coot now breed”

SSSI: Margam Moors (1370m) – Described in Citation as: “The last remaining example of the once extensive coastal levels in West Glamorgan. Bounded to the seaward by dunes and to landward by high ground, the meadows provide an agriculturally-managed freshwater habitat which hosts many species of plant on the edge of their geographical range, and nationally important invertebrates.

Mesotrophic marsh, fen meadow and ditch communities support Flowering-rush *Butomus umbellatus*, Frogbit *Hydrocharis morsus-ranae*, Arrowhead *Sagittaria sagittifolia*, Cyperus Sedge *Carex pseudocyperus* and Brown Sedge *C. disticha* on the edge of their range, with others such as Lesser Water-plantain *Baldellia ranunculoides*, Tubular Water-dropwort *Oenanthe fistulosa* and Marsh Helleborine *Epipactis palustris* of local interest”.

3.1.11 Locally Designated (Non-Statutory)

There are 3 Wildlife Sites/SINCS designated:

MARGAM COUNTRY PARK (513m)
JUNCTION 38 WETLAND COMPLEX (239m)
EGLWYS NUNYDD (598m)

3.1.12 NRW Priority Areas

There are a good number of Priority Areas of habitat surrounding the site and are categorised thus (from SEWBSec/Aderyn data results table)

Ancient Semi Natural Woodland		13	Priority Area
Restored Ancient Woodland Site		10	Priority Area
Plantation on Ancient Woodland Site		7	Priority Area
Ancient Woodland Site of Unknown Category		6	Priority Area
NRW Priority Area (Woodland - PAWS)		6	Priority Area
NRW Priority Area (Lowland Wetland)		1	Priority Area

3.1.13 CCW Phase 1 Survey

Information obtained from the Phase 1 Survey of Wales (CCW.1997), was also used to provide an indication of the broad habitat types previously recorded in the local area. The survey mapped the areas of existing grassland as either improved, or poor semi-improved grassland. It should be noted that whilst the CCW data-set is useful to indicate broad habitat types locally, it is not suitable for site specific assessment. The data set was gathered over a period of years (1979 – 1997) and habitats will have changed in the interim period depending on land use, management, development works etc.

3.2 Site Appraisal

3.2.1 On site survey

3.2.2 The site survey was undertaken on 20th January 2020 by a suitably qualified ecologist. Where possible, the habitats were cross referenced to any UK priority habitats or local habitat designations adopted by the Local Authority (e.g. SINCS).

3.2.3 The land within the site boundary comprises of Semi-improved Pasture, mature trees, buildings (with associated garden planting) bounded by hedgerows/tree-lines. The site is located immediately adjacent to the A48 at Margam, and is surrounded by a mixture of industrial processing plants; agricultural pasture and woodland (see Fig. 2).



Figure 2. Area surveyed (from Google maps)

3.2.4 The site comprises of a former dwelling and outbuildings, within a single parcel of grassland. Habitats recorded within red line boundary were as follows:-

3.3 Semi-improved Grassland

3.3.1 Much of the site is comprised of Semi-improved Grassland, which appears to be managed by mowing. Dominant species of grass include Cock's-foot, Creeping Bent, False Oat and Yorkshire Fog with forbs including Meadow Buttercup, Broadleaved plantain, Common Knapweed. Aerial images (Google) show that this part of the field is managed by mowing (as can be seen in Fig. 2 above). It is possible that regular and/or late mowing reducing the likelihood of seeing plants which would normally indicate more species-rich grassland. Species visibility may also be compromised by the out-of-season survey.

3.3.2 The field margins contain species associated with woodland edge and hedgerows including Hedge Woundwort, Herb Robert, Lesser Celandine and Cuckoo Pint, with large patches of Winter Heliotrope (Non-native Invasive) in several locations. See Figs. 3 and 4



Figures 3 & 4 Semi-improved grassland and Winter heliotrope

3.4 Boundary Features (Hedgerow/stone walls/Tree-lines)

- 3.4.1 The site is virtually bounded by outgrown hedgerows. The southern boundary is essentially a gappy hedge dominated by Hawthorn with occasional Ash, Holly and Elder. The eastern boundary along the roadside consists of a row of unmanaged native trees. North and western boundaries include stone walls in poor condition (see Fig. 5).

There are also scattered mature trees following the line of the access track in the northern section of the site. Trees are the subject of a separate Tree Survey and so will not be described further here, save for in relation to protected species.



Figures 5 & 6. Unmanaged hedgerow forming southern boundary, fallen stone wall along western boundary



3.5 Garden

- 3.5.1 The rear and side garden of the property are overgrown with dense Bramble but garden shrubs such as Magnolia and Apple/Crab Apple, trees including Pine and Ash saplings, and other planting are still evident. Density of scrub precluded full survey. See Figs. 7 & 8.



Figures 7 & 8. Rear and side gardens overgrown with Bramble

3.6 Buildings

- 3.6.1 The main building on site is a large two-storey house with a number of annexes (see Figs. 9 & 10). There are also a number of small out-buildings, one built of stone with dense Ivy cover, another of brick construction under a slate roof (see Figs 11 & 12). The buildings were not accessed for the purpose of this survey and are likely to be the subject of a separate bat and nesting bird survey in the future. They will not be discussed further in this report, except in Recommendations for further survey.



Figures 9 & 10 Main building



Figures 11 & 12 Outbuildings

3.7 Scrub (including overgrown garden)

- 3.7.1 There are a number of outgrown garden shrubs and trees to the south and west of the house, which are now under dense Bramble, which restricted access to the periphery of this area.

3.8 Invasive Non-Native Species

- 3.8.1 **Japanese Knotweed** is present in a number of clumps along the tree-line of the roadside boundary, particularly to the north of the access track. Japanese Knotweed is also present in the garden to the south of the house, as well as *Buddleia davidii* in this location. Winter Heliotrope is present in large clumps by the access gate and also under the trees along the western boundary.
- 3.8.2 There may well be other INNS present in the scrub/garden area such as *Crocasmia*, but access was limited to viewing from the immediate rear of the house.



3.9 Badger

- 3.9.1 The grassland is suitable for Badger foraging. There is also potentially suitable habitat for setts within the overgrown garden area, but access was restricted due to density of scrub. No evidence of badger activity was found within the grassland or hedgerows, however fairly defined mammal tracks were observed running across the grassland which may be a regular badger route. No definite exit was found through the hedge; otherwise this would have been searched for snagged hairs (see Fig. 13).



Figure 13. Mammal tracks within grassland

3.10 Bats

- 3.10.1 There are a number of mature trees within site and around boundary which have features likely to support bat roosts. The hedgerows are likely to provide flight lines and foraging opportunities for generalist species such as pipistrelle. *Nyctalus* species such as Noctule may utilise the grassland for foraging.

3.11 Otters

- 3.11.1 There are no watercourses on site or in close proximity to the site. The large water body of Eglwys Nunnedd is less than 1km away to the south, and Margam Moors are within 1.5km. No evidence of Otter activity was noted on site, and the data search returned only 1 record within 2km.

3.12 Reptiles

- 3.12.1 The grassland sward is relatively uniform but is tussocky in places and there is a variety of vegetation types, heights and densities particularly around the periphery of the site and therefore the site appears to have the structural complexity that reptiles require to provide suitable ecotone areas for basking and cover.

3.13 Amphibians

- 3.13.1 There are no watercourses or open water within or adjacent to the site, therefore the site is considered unsuitable for breeding populations of amphibians. The grassland and scrub may harbour terrestrial phase amphibians.

3.14 Hazel Dormouse

- 3.14.1 The unmanaged hedgerows present on site were considered to provide some food potential to support dormice as they contained berry/nut producing species such as Bramble, Hazel Oak and Hawthorn, all of which dormice will utilise.
- 3.14.2 The density of Bramble and other scrub in the Garden area precluded full access, however this density of vegetation and connectivity to boundary tree-lines would provide arboreal cover and access to suitable habitat in the wider vicinity, particularly along the A48/M4 corridor to the south.
- 3.14.3 Retention and improved management of these hedgerows is considered desirable due to their connectivity to other hedgerows and woodland pockets in close proximity to the site.

3.15 Water Voles

- 3.15.1 There are no watercourses on or adjacent to the site, therefore, the habitat present was considered to be unsuitable to support Water Voles.

3.16 Birds

- 3.16.1 Although only a small number of bird species were observed during the survey, (Robin, Jackdaw and Magpie), the site provides suitable nesting and foraging habitat for species such as Blackbird, Thrush, Finches and House Sparrows.

3.17 Marsh Fritillary

- 3.17.1 There is no suitable habitat to support Marsh Fritillary butterfly due to the lack of preferred food plant species, uniform sward height and regular mowing.

4. ECOLOGICAL ASSESSMENTS

4.1.1 The following values have been provided to assess the importance of an ecological feature value within a geographical context, as recommended within the CIEEM Guidelines for Ecological Impact Assessment (2016) and the CIEEM Guidelines for Ecological Report Writing (Dec.2015). See Table 1 below:

4.1.2 Table 1: Ecological Value Assessments

Importance	Examples of features
International & European	European designated or proposed sites such as Ramsar Sites, Special Protection Areas, Special Areas of Conservation, World Heritage sites or Biosphere Reserves; or otherwise meeting criteria for European or International designation. Sites supporting populations of European important species. Species listed within the Annex's of The Conservation of Habitats & Species Regulations 2010
National	Nationally designated sites such as Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs), areas of key habitats and species within the UK Biodiversity Action Plan. Sites supporting viable breeding populations of Red Data Book (RDB) species (excluding scarce species), or supplying critical elements of their habitat requirements. Species listed within the schedules of the Wildlife & Countryside Act 1981.
Regional	Sites containing viable areas of threatened habitats and species listed in a regional Biodiversity Action Plan, sites exceeding Site of Importance for Nature Conservation (SINC) criteria. Sites supporting viable populations of Nationally Scarce species or those included in the Regional Biodiversity Action Plan on account of their rarity, or supplying critical elements of their habitat requirements.
High Local	Sites meeting the criteria for a county, vice county or metropolitan area designation (such as SINC), which may include amenity and educational criteria in urban areas. Ancient semi-natural woodland. Designated Local Nature Reserves. Sites containing viable areas of any key habitat type or species identified in the Local Biodiversity Action Plan (LBAP). Sites supporting viable breeding populations of species known to be county/metropolitan rarities e.g. featuring in county 'red data book' or LBAP, or supplying critical elements of their habitat requirements.
Moderate Local	Undesignated sites or features considered appreciably to enrich the habitat resource within the context of the Borough or District, or included in the Borough or District LBAP. Amenity and educational functions will be recognised in urban areas. Sites with viable breeding populations of species listed as rare in the District or Borough LBAP or supplying critical elements of their habitat requirements.
Low Local	Undesignated sites or features considered appreciably enriching the habitat resource within the context of the Parish or neighbourhood.
Negligible	Low-grade and widespread habitats.

4.1.3 Table 2: Impact level Criteria

Severe	Permanent impacts
Major	Loss of feature and/or quality and integrity of feature; severe damage to key characteristics, features or elements.
Moderate	Loss of feature, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements.
Minor	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements
Negligible	Very minor loss or detrimental alteration to one or more characteristics, features or elements
Neutral	No impacts

4.2 Priority Habitats and Species

4.2.1 UK BAP priority habitats and species were those that were identified as being the most threatened and requiring conservation action under the UK Biodiversity Action Plan (UK BAP). As a result of devolution, conservation action is now focused at a country-level rather than a UK-level, and the UK BAP was succeeded by the UK Post-2010 Biodiversity Framework in July 2012. The UK list of priority species, however, remains an important reference source and has been used to help draw up statutory lists of priority species and habitats in the four countries of the UK.

4.2.2 The Environment Wales Act (2016) (EWA) Section 6 places a duty on public authorities to 'seek to maintain and enhance biodiversity' and seek to 'promote the resilience of ecosystems'. The duty replaces the section 40 duty in the Natural Environment and Rural Communities Act 2006 (NERC Act 2006), in relation to Wales, and applies to those authorities that fell within the previous duty. Section 7 lists both Priority Species and Habitats of Principle Importance for the purpose of maintaining and enhancing biodiversity in relation to Wales.

4.3 Assessments on the Habitats & Species Identified During the Survey

4.4. Habitats

4.4.1 Semi-improved Neutral Grassland

Despite the habitat survey being undertaken in January, a number of grassland species were evident including Common Knapweed, Vetch sp. and Self Heal. Without further survey at the appropriate time of year, the grassland cannot be assessed against S7 or SINC criteria. Therefore, habitat value cannot be accurately assessed, but is predicted to be **Moderate Local**. Loss of this habitat, without mitigation, is considered to be **Moderate**.

4.4.2 Hedgerows & Tree-line

The hedgerows were considered to have some ecological interest for breeding birds and small mammals, however lack of management reduces its value as habitat cover and as food sources for local wildlife. The tree-line is currently unmanaged, and whilst not particularly dense, will provide opportunities for a range of birds, mammals (including bats) and invertebrate species. It's connectivity to other hedgerows and habitat will be of value to local wildlife. Overall, the hedgerows value was assessed as: **Low Local**. Loss or damage to the hedgerows and trees, without mitigation, would be **Major to Moderate**.

4.4.3 Stone walls

The walls are in a poor state of repair, but as such, they will provide refuge for Amphibians, Reptiles, small mammals and a range of invertebrates. Their value was assessed as **Low Local**. Loss of this habitat, without mitigation, is considered to be **Moderate**.

4.4.4 Scrub

The scrub is dense and of considerable area (1200m²) and it connects to treelined boundaries of the adjacent fields. It will provide food, nesting and shelter for a range of animals including reptiles, amphibians, invertebrates and small mammals. It may also provide dense enough cover for a Badger Sett. Its value was assessed as **Low Local** and without mitigation its loss would be considered **Minor**.

4.5 Species

4.5.1 The field survey identified the on-site habitats as having the potential to support the following species groups; Breeding Birds, Bats, Dormice, Reptiles, Badger, Invertebrates and Amphibians (terrestrial phase).

4.5.2 During the field survey, no bird species, which are listed under the LBAP and UK BAP as being associated with the on-site habitats, were recorded. The survey concluded that the site consisted of suitable habitat which could support priority species such as Dunnock, House Sparrow and Bullfinch. The grassland and out-buildings may also provide forage and nesting opportunities for Barn Owl.

4.6 Ecosystem Resilience

4.6.1 Area loss can cause populations of organisms to decline due to a decrease in habitat size. The area to be developed consists of four habitat types: Semi-improved Neutral Grassland, scrub, scattered trees, boundary features (Broadleaved Tree-lines, stone walls and hedgerow). If the site is cleared without any mitigation for development the impact is expected to be **Moderate – Major**, depending on the outcome of further surveys and/or Appropriate Assessment.

5. CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER SURVEY

5.1 Semi-improved Neutral Grassland

- 5.1.1 The proposed layout looks to conserve a considerable area in the centre of the circular roadway. This is where the most flowering species were evident. Further survey of the grassland will be required to ascertain if it would be classed as S7/SINC habitat.
- 5.1.2 A proportion of the grassland will be lost due to lorry parking bays. It is proposed that the remaining areas are augmented with wildflower planting (either seed or plug plant, as suitable) and subsequently managed by way of a “conservation cut” (cut and collect max. twice a year – spring and late summer, or as advised by plant supplier).

5.2 Native hedgerow and Tree-line

- 5.2.1 From the “General site layout Plan”, within the Drainage Strategy Report (HCE May 2020) provided at the time of writing, it appears that the hedgerows, scattered trees and tree-lined boundaries will remain intact; utilising access existing entrance off A48.
- 5.2.2 If it is deemed necessary, e.g. for Highways safety, to widen the visibility splay, then the loss of at least a section of the road-side hedgerow/tree-line is likely to be necessary for access to the site.
- 5.2.3 This partial loss of hedgerow can be partly offset by new hedgerow planting within the landscape scheme, coupled with improved management of remaining hedgerows, including gapping-up/interplanting, particularly along the southern boundary. Consideration should be given to laying this length of hedgerow to improve screening and enhancement of biodiversity resource.
- 5.2.4 Any new planting should be with trees and shrubs of local provenance and should seek to replicate the species mix present in the existing hedgerow. Landscaping should include berry bearing species such as Guelder Rose, Rowan, Elder and Spindle (native varieties).
- 5.2.5 Retention and protection of remaining hedgerow and tree-line is recommended; the use of Root Protection Zones and appropriate working methodology as well as proximity of development boundary must be considered.

5.3 Other boundary features – stone walls

- 5.3.1 It is recommended that stone walls along the western and northern boundaries are left in situ/undisturbed as they provide habitat for a range of animals and birds. If the installation of secure perimeter fencing is required, then careful removal under guidance of on-site ecologist would be recommended, details of which could be included in any future Reptile Mitigation Method Statement, for example.

5.4 Birds

- 5.4.1 All nesting birds are protected under Section 1 of the Wildlife and Countryside Act of 1981. Therefore, vegetation clearance should be planned outside the nesting bird season. Removal of bird habitat will be mitigated for by replacement quality habitat within the development landscaping scheme.

5.5 Bats

- 5.51 There are numerous mature trees within the site boundary to the east. If any works to such trees are necessary (such as crown reduction, crown lift etc.) then the tree must be assessed for suitability for bats, and if suitability is deemed high, a bat survey will then be undertaken.

Details of proposed modifications to the buildings have not been provided to inform this report, therefore it is recommended that the buildings be assessed for bat potential and subsequent emergence (dawn/dusk) surveys undertaken by competent licenced surveyors following current guidelines (Bat Conservation Trust *Bat Surveys for Professional Ecologists, Good Practice Guidelines 3rd Edn.*)

5.6 Dormice

- 5.6.1 The hedgerow, scrub and treeline, although not optimal habitat, will provide commuting routes for Dormice. Proposed site layout (as noted at 5.2) looks to retain existing hedgerows, however, if trees or sections of hedge are to be removed, a Working Methodology for Dormice is recommended.
- 5.6.2 The hedges should be enhanced by interplanting with species which provide food sources for Dormice (i.e. Berry and Nut producing trees, Honeysuckle).

5.7 Reptiles & Amphibians

- 5.7.1 The site is deemed suitable for reptiles, in particular Slow Worm and Common Lizard. The local area has considerable records for reptiles (c.60 entries returned for most common species less than 1km from site centre). It is recommended that a reptile survey is undertaken to determine presence/absence and estimation population size class in order to inform a Reptile Mitigation Method, which will detail working methods and timing in order to minimise harm. Mitigation for potential habitat loss will also need to be considered.
- 5.7.2 The construction of a new shallow Attenuation pond is proposed as part of the Drainage plan, situated in the northern most corner of the site. This will provide opportunities for breeding Amphibians, which currently have no such waterbody on site. Native planting around the pond will provide additional habitat niches and nectar sources for birds, small mammals and invertebrates.

5.8 Biodiversity and Resilience of Ecosystems Duty (Section 6 Duty)

- 5.8.1 The Environment (Wales) Act 2016 introduced an enhanced biodiversity and resilience of ecosystems duty (Section 6 Duty) applicable to Local Authorities. This duty filters through to all those participating in the Planning process.
- 5.8.2 Planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means development should not cause any significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversity.
- 5.8.3 It is therefore recommended, that in order to mitigate for loss of hedgerow, a similar length section of new native hedgerow should be incorporated into the development. However, in order to *enhance* the site for biodiversity, additional hedgerow should be planted, and it is suggested that this forms a part of the boundaries of the new properties, particularly to the north which is likely to be the rear garden boundary.
- 5.8.4 The addition of Swales and Rainwater garden planting as detailed on Drainage Plan/General Notes HCE Ltd will provide enhanced resources for a range of pollinators and odonata. Planting must be native species wherever possible and must not contain any non-native invasive species which are listed on Schedule 9 (WCA, 1981 as amended).



6. LEGISLATION

6.1 Otters and the Law

6.1.1 The otter is a European Protected Species (EPS). It is against the law to damage or destroy an otter breeding site or resting place, or deliberately to capture, kill, injure or disturb an otter.

6.1.2 Otters are fully protected by the following pieces of legislation:

- The Conservation of Habitats and Species Regulations 2017 (regulation 42) fully protects otters, making it **an offence to:-**
 - *Intentionally or deliberately capture, injure or kill an Otter.*
 - *Damage or destroy a breeding or resting place of an Otter, or intentionally or recklessly damage or destroy any structure or place used for shelter or protection*
 - *Intentionally or recklessly disturb an Otter in a place used for shelter or protection, or deliberately disturb Otters in such a way as to be likely significantly to affect (i) the ability of any significant group of Otters to survive, breed, rear or nurture their young, or (ii) the local distribution or abundance.*
 - *Intentionally or recklessly obstruct access to a place used for shelter or protection.*
 - *Possess an Otter (alive or dead), or any part of an Otter*
- Schedule 5 of the Wildlife and Countryside Act 1981 (as amended by the CROW [Countryside Rights of Way] Act 2000) fully protects otters, making it **an offence to:-**
 - *Intentionally or recklessly disturb any otter while it is occupying a structure or place which it uses for shelter or protection*
 - *Intentionally or recklessly obstructs access to any structure or place used by an otter for shelter or protection*
 - *Sell, offer or expose for sale any otter*

6.1.3 For any disturbance to occur a derogation or **EPS licence** must be gained from Natural Resources Wales. To gain an EPS Licence from Natural Resources Wales (NRW), NRW must be satisfied that;

- i. granting the licence would not be detrimental to the Favourable Conservation Status (fcs) of the populations of species concerned within its natural range.
- ii. the derogation (licence) is in the public interest of Health and Safety or for other reasons of over-riding public interest, including those of a socio-economic nature or will have a benefit of primary importance to the environment.
- iii. there is no satisfactory alternative to the derogation which would allow the described development to proceed but which would avoid or reduce the need for any adverse impact to the species.

6.1.4 Otters are also protected by;

- Natural Environment and Rural Communities Act 2006 and now the Environment (Wales) Act 2016.
- Annex II Habitats Directive (protection through Special Areas of Conservation)
- UK Biodiversity Action Plan Priority Species and Species of Principal Importance in Wales

6.2 Bats and the Law

6.2.1 Bats are protected by the following pieces of legislation:

- Schedule 5 and 6 of the Wildlife and Countryside Act 1981 (as amended by the CROW [Countrywide Rights of Way] Act 2000)
- The Environmental Damage (Prevention & Remediation) Regulations 2009 – A protected species and its habitat is protected under this legislation as well as others.
- The Conservation of Habitats and Species Regulations 2017 (regulation 42) fully protects all bats and their roosts, making it **an offence** *to deliberately kill, injure or capture* (take) bats; *to deliberately disturb bats; damage or destroy bat roosts or resting places* (this is considered an “Absolute Offence” as damage and destruction may detrimentally effect the Continuous Ecological Functionality of that roost / resting place); possess or transport a bat or any part of a bat; sell (or offer for sale) or exchange bats or parts of bats.
- For any disturbance to occur a derogation or **EPS licence** must be gained from Natural Resources Wales. To gain an EPS Licence from Natural Resources Wales (NRW), NRW must be satisfied that;
 - i. the licence would not be detrimental to the Favourable Conservation Status (fcs) of the populations of species concerned within its natural range.
 - ii. the derogation (licence) is in the public interest of Health and Safety or for other reasons of over-riding public interest, including those of a socio-economic nature or will have a benefit of primary importance to the environment.
 - iii. there is no satisfactory alternative to the derogation which would allow the described development to proceed but which would avoid or reduce the need for any adverse impact to the species.

6.2.2 Bats are also protected by;

- Appendix III of the Bern Convention
- Appendix II of the Bonn Convention (including the Convention's Agreement on the conservation of Bats in Europe)

- Natural Environment and Rural Communities Act 2006 and now the Environment (Wales) Act 2016.
- All bats are listed in Annex IV of the EC Habitats Directive and the British species listed in Schedule 2 of the Habitats Regulations 1994 (as amended) and are therefore designated as *European Protected Species*. These *protected* species are afforded enhanced protection and more stringent licensing provisions than those protected by the Wildlife and Countryside Act (WACA) alone.

6.3 The Hazel Dormouse and the Law

6.3.1 The hazel dormouse is a European Protected Species (EPS). It is against the law to damage or destroy a dormouse breeding site or resting place (summer or hibernation nest), or deliberately to capture, kill, injure or disturb a dormouse.

6.3.2 Dormice are fully protected by the following pieces of legislation:

- The Conservation of Habitats and Species Regulations 2017 (regulation 42) fully protects dormice, making it **an offence to:-**
 - *Intentionally or deliberately capture, injure or kill a dormouse.*
 - *Damage or destroy a breeding or resting place of a dormouse, or intentionally or recklessly damage or destroy any structure or place used for shelter or protection*
 - *Intentionally or recklessly disturb a dormouse in a place used for shelter or protection, or deliberately disturb dormouse in such a way as to be likely significantly to affect (i) the ability to survive, breed, rear or nurture their young, and includes in the case of animals of a hibernating or migratory species, to hibernate or migrate or (ii) the local distribution or abundance.*
 - *Intentionally or recklessly obstruct access to a place used for shelter or protection.*
 - *Possess a dormouse (alive or dead), or any part of a dormouse*
- Schedule 5 of the Wildlife and Countryside Act 1981 (as amended by the CROW [Countryside Rights of Way] Act 2000) fully protects dormice, making it **an offence to:-**
 - *Intentionally or recklessly disturb any dormouse while it is occupying a structure or place which it uses for shelter or protection*
 - *Intentionally or recklessly obstructs access to any structure or place used by a dormouse for shelter or protection*
 - *Sell, offer or expose for sale any dormouse*

6.3.3 For any disturbance to occur a derogation or **EPS licence** must be gained from Natural Resources Wales. To gain an EPS Licence from Natural Resources Wales (NRW), NRW must be satisfied that;

- i. granting the licence would not be detrimental to the Favourable Conservation Status (fcs) of the populations of species concerned within its natural range.
- ii. the derogation (licence) is in the public interest of Health and Safety or for other reasons of over-riding public interest, including those of a socio-economic nature or will have a benefit of primary importance to the environment.
- iii. there is no satisfactory alternative to the derogation which would allow the described development to proceed but which would avoid or reduce the need for any adverse impact to the species.

6.3.4 Dormice are also protected by;

- Natural Environment and Rural Communities Act 2006 (England) and the Environment (Wales) Act 2016.
- Annex II Habitats Directive (protection through Special Areas of Conservation)
- UK Biodiversity Action Plan Priority Species and Species of Principal Importance in Wales

6.4 Reptiles and the Law

- 6.4.1 All of the UK native reptiles are protected by law. The common species of reptiles found in this locality are common lizard, slow-worm, adder and grass snake. It is illegal to intentionally kill or injure these species under Section 9 (1) of the Wildlife and Countryside Act 1981 (as amended).
- 6.4.2 All native UK reptiles are considered of 'principle importance' under Section 7 of the Environment (Wales) Act 2016. This places a duty on every public authority, in exercising its functions, to have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.
- 6.4.3 Under the National Planning Policy Framework (NPPF April 2012), the presence of any Protected Species (which includes all reptiles species) are a material planning consideration. The ODPM 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and Their Impact within the Planning System, provide additional advice and support the NPPF.

6.5 Amphibians and the Law

- 6.5.1 All of the UK native amphibians are protected by law. The common species of amphibians in this locality are common frog, common toad, smooth newt and palmate newt. It is illegal to intentionally kill or injure these species under Section 9 (1) of the Wildlife and Countryside Act 1981 (as amended).
- 6.5.2 The common toad is considered of 'principle importance' under Section 7 of the Environment (Wales) Act 2016. This places a duty on every public authority, in exercising its functions, to have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.



- 6.5.3 Under the National Planning Policy Framework (NPPF April 2012), the presence of any Protected Species (which includes the Common Toad) are a material planning consideration. The ODPM 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and Their Impact within the Planning System, provide additional advice and support the NPPF.

6.6 Birds and the Law

- 6.6.1 All species of bird are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended). Protection was extended by the Countryside and Rights of Way (CROW) Act 2000. Under the above legislation it is an offence to intentionally:
- kill, injure or take any wild bird;
 - take, damage or destroy the nest of any wild bird while that nest is in use or being built; or
 - take or destroy an egg of any wild bird.
- 6.6.2 Certain species are listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) and receive protection under Sections 1(4) and 1(5). The protection was extended by the Countryside and Rights of Way (CROW) Act 2000. There are special penalties where the offences listed above are committed for any Schedule 1 species and it is also an offence to intentionally or recklessly:
- disturb any such bird when it is building its nest or while it is in or near a nest containing dependant young; or
 - disturb the dependant young of any such bird.

6.7 Badgers and the Law

- 6.7.1 The protection of Badgers Act 1992 makes it illegal to kill, injure or take a badger, or interfere with a sett. In addition, they are listed on Schedule 6 of the Wildlife & Countryside Act 1981, which prohibits certain methods of killing and capture.

6.8 Water Voles and the Law

- 6.8.1 Water voles are listed under Schedule 5 of the Wildlife & Countryside Act 1981, receiving full protection since 2008. The Wildlife & Countryside Act 1981 (as amended), lists the following offences:-
- Intentionally kill, injure or take water voles (Section 9 (1)).
 - Possess or control live or dead water voles or derivatives (Section 9 (2)).
 - Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection (Section 9 (4) (a & c)).

- Intentionally or recklessly disturb water voles whilst occupying a structure or place used for that purpose (Section 9 (4) (b)).
- Sell water voles or offer or expose for sale or transport for sale (Section 9 (5)).
- Publish or cause to be published any advertisement which conveys the buying or selling of water voles (Section 9 (5)).

6.9 Environment Act (Wales) 2016

- 6.9.1 This act has replaced the section 40 duty in the Natural Environment and Rural Communities Act 2006 (NERC Act 2006), in relation to Wales, and applies to those authorities that fell within the previous duty. It came into force in May 2016.
- 6.9.2 Section 6 of the Act places a duty on public authorities to ‘seek to maintain and enhance biodiversity’ so far as it is consistent with the proper exercise of those functions. In so doing, public authorities must also seek to ‘promote the resilience of ecosystems’. Under Section 6 public authorities will be required to report on the actions they are taking to improve biodiversity and promote ecosystem resilience.
- 6.9.3 Section 7 of the Act places a duty on public authorities to take steps to maintain and enhance biodiversity. This section replaces the duty in section 42 of the NERC Act 2006. The Section 7 Priority Species under this act is a list of the living organisms of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales. The Section 7 Priority Habitats is a list of the habitats of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales.

7. REFERENCES

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9. Representative Species List of Key Habitats

Neutral Semi-improved Grassland

Species	Frequency
Broad-leaved Dock – <i>Rumex obtusifolius</i>	O
Common Knapweed – <i>Centaurea nigra</i>	O
Common Sorrel – <i>Rumex acetosa</i>	F
Creeping Bent - <i>Agrostis stolonifera</i>	D
Creeping buttercup – <i>Ranunculus repens</i>	F
Creeping Thistle – <i>Cirsium arvense</i>	O
Dandelion – <i>Taraxacum officinale</i>	A
False Oat Grass - <i>Arrhenatherum elatius</i>	O
Germander speedwell – <i>Veronica chamaedrys</i>	F
Herb Robert – <i>Geranium robertianum</i>	F
Hogweed - <i>Heracleum sphondylium</i>	O
Ribwort Plantain – <i>Plantago lanceolata</i>	A
Selfheal – <i>Prunella vulgaris</i>	LF
Sheep's Fescue – <i>Festuca ovina</i>	LF
Vetch spp. – <i>Vicia</i> sp.	R
Wild Parsnip – <i>Pastinaca sativa</i>	O
Yorkshire Fog - <i>Holcus lanatus</i>	D
Edge Habitat	
Cleavers – <i>Galium aparine</i>	F
Burdock sp. – <i>Arctium</i> sp.	R
Lesser Celandine – <i>Ficaria verna</i>	A
Common Nettle – <i>Urtica dioica</i>	LA
Creeping Cinquefoil – <i>Potentilla reptans</i>	LF
Herb Robert – <i>Geranium robertianum</i>	F
Wavy bittercress - <i>Cardamine flexuosa</i>	R
Willowherb spp. – <i>Epilobium</i> spp.	F
Cuckoo Pint – <i>Arum maculatum</i>	O

Hedgerow & Tree-line (including ground flora)

Species	Frequency
Ash – <i>Fraxinus excelsior</i>	F
Beech – <i>Fagus sylvatica</i>	R
Bramble – <i>Rubus fruticosus</i> agg.	A
Elder – <i>Sambucus nigra</i>	O
Hawthorn - <i>Crataegus monogyna</i>	D
Holly - <i>Ilex aquifolium</i>	F
Ivy – <i>Hedera helix</i>	F
Sycamore - <i>Acer pseudoplatanus</i>	A

10. SEWBRc Data Search

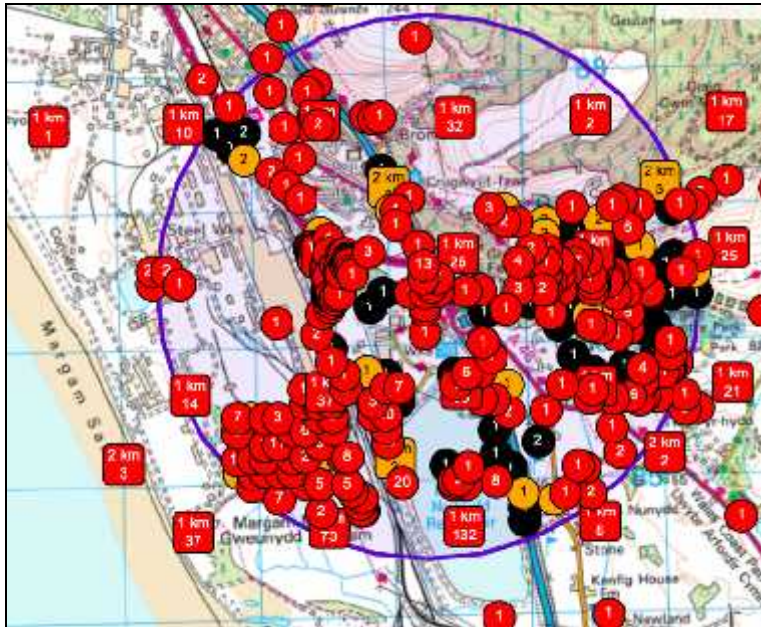


Figure 9. SEWBRc Protected Species Data Search 11 May 2020



Figure 10. SEWBRc Protected Sites Data Search 11 May 2020

Phase 1 Habitat Plan



Key: see below

Colour Code	Phase 1 Habitat Code	Description
	B2.2	Neutral Grassland (semi-improved)
	J1.4	Introduced shrub
	J4	Bare Ground
	J2.2.2	Species Poor Hedgerow (defunct)
	J2.5	Wall
	J3.6	Building
	A2.1	Dense Continuous Scrub
	A3.1	Scattered broadleaf trees