



Ecological Appraisal Report:

Land adjoining
Cillefwr Industrial Estate
Llanllwch
Carmarthen
SA31 3GA

September 2023

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Summary

I & G Ecological Consulting Ltd were commissioned to undertake an ecological appraisal of land adjoining Cillefwr Industrial Estate, Llanllwch, Carmarthen. The survey is to support an application for planning permission for a proposed Employment Use site and associated infrastructure.

The land runs to about 2.5 ha and consists predominantly of semi-improved grassland, with an area of marshy grassland either side of the Tawelan Brook. The site is bounded by hedgerows.

No signs of European protected species were observed within the site boundary. Himalayan balsam is present on site.



Figure 1. Location of site Grid Ref: SN 38974 19271 (from Apple maps)

1. INTRODUCTION

- 1.1.1 I & G Ecological Consulting Ltd were commissioned to undertake an ecological appraisal of land adjoining Cillefwr Industrial Estate, Llanllwch, Carmarthen. The survey is to support an application for planning permission for a proposed Employment Use site and associated infrastructure.
- 1.1.2 This report presents the findings of both a desk study and a site appraisal undertaken in September 2023. The report outlines the ecological constraints and opportunities associated with the site.
- 1.1.3 The survey was conducted during optimal conditions.

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 West Wales Biodiversity Information Centre for the planning application site and surrounding area of up to 2km. The species information was returned to I&G Ecology on 25th September 2023. A number of protected and notable species records were returned within 2km of the site centre (Fig.17). 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 99 entries of birds which are categorised as priority species within 2km of the site. Records within 500m are for kingfisher and red kite, with lesser spotted woodpecker, willow tit, grasshopper warbler and reed bunting just beyond.

3.1.4 Mammals

The data search returned 140 records of mammals within 2km of the site centre. Most significantly these included: -

- 74 entries for bats including nathusius, common pipistrelle and soprano pipistrelle, lesser & greater horseshoe, noctule, daubentons, brown long eared, natterer's, barbastelle and whiskered.
- 41 entries for hedgehog, the closest 233m away.
- 7 entries for otter, the closest 883m away, but previous surveys by I&G have shown otter on this reach of the Tawelan Brook and in the upstream and downstream reaches
- 9 entries for badger, the closest 485m away

3.1.5 Invertebrates

The data search returned 6 records for butterfly within 2km of the site. 1 record for brown-hairstreak 800m away, with records for wall, grayling, small blue and pearl bordered fritillary beyond 1km.

3.1.6 Plants

There are 46 records within 2km of the site most for bluebell, the closest 216m away. Cornflower, tubular water dropwort and sea barley are also noted.

3.1.7 Reptiles

The data search returned 5 records of reptiles, for adder (991m), slow worm and common lizard.

3.1.8 Amphibians

The data search returned 7 records for common & toad, the nearest 379m away

3.1.9 Non-native Invasive species

The data search returned 89 records of INNS. The closest is for buddleja 350m away, with cherry laurel, least duckweed, montbretia and Japanese knotweed within 1km.

3.1.10 Statutory Designated Sites

Special Area of Conservation

Afon Tywi / River Tywi (1507m)

Carmarthen Bay and Estuaries / Bae Caerfyrddin ac Aberoedd (1664m)

Site of Special Scientific Interest

Afon Tywi (1507m)

Cors Goch, Llanllwch (1873m)

Maesyprior (1604m)

3.1.11 Non-statutory Sites

The site lies within a B-Line (Fig. 18).

3.1.12 NRW Priority Areas

An area of Lowland Wetland lies to the west and Woodland PAWS to the east and south (Fig. 18).

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 data search maps show the area of marshy grassland at the bottom of the site adjacent to the river. The rest of the site is blank indicating the fields were surveyed as 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 the 25th September 2023 by a suitably qualified ecologist. Where possible, the habitats were cross-referenced to any important UK priority habitats or local habitats adopted by the Local Biodiversity Action Plan.

3.2.3 The land within the red line survey boundary (Fig. 2) comprises of semi-improved grassland bordered by hedgerows, which lie immediately outside the boundary fences. Two incomplete hedgerows split the field into two parcels. A small area of marshy grassland lies either side of the Tawelan Brook.

The site lies to the west of Johnstown and is sandwiched between the main Carmarthen – Fishguard railway line and the A40 dual carriageway to the north and south. The western boundary abuts the B4312 and the eastern boundary borders farmland.



Fig 2. Area surveyed (from Apple maps)

Habitats recorded within red line boundary were as follows: -

3.3 Semi-improved Grassland

- 3.3.1 The site is composed of 2 sheep grazed sloping paddocks to the east of the access (TN1&2; Fig 3&4). Both fields are botanically similar with the main body of grassland composed of Yorkshire fog, bents and crested dogtail. Areas of impeded drainage on the lower southern slope support soft rush. Forbs include creeping buttercup, dock, sorrel, thistle and clover. Towards the boundaries and lower down the slope's smooth hawksbeard, autumn hawkbit, meadow buttercup and yarrow occur. Near the internal hedgerows, thistle, nettle and dock dominate. Himalayan balsam is colonising from the railway embankment in the SE corner.



Fig. 3 upper field



Fig. 4 Lower field



Fig. 5

Marshy Grassland & Riparian Corridor

- 3.4.1 An area of level ground either side of the Tawelan Brook (TN3) supports marshy grassland (TN4; Fig 6&7). The marshy grassland lies in the river floodplain and shows signs of nutrient enrichment. Yorkshire fog dominates with abundant soft rush and frequent nettle. More characteristic herbs include water mint, hemlock water dropwort, angelica, meadowsweet and greater birds-foot trefoil. Alder and willow saplings are establishing in the absence of suitable grazing pressure.



Fig. 6



Fig. 7

3.4.2 The strip alongside the Tawelan Brook is treelined with alder for most of its length (TN3; Fig 8). Open sections towards the footbridge have margins of reed sweet grass (Fig. 9). The stream was bank full and coloured on the day of survey so instream vegetation was not assessed.



Fig. 8



Fig. 9

3.5 Hedgerows, Banks and Tree lines

- 3.5.1 A tree-lined bank separates the two fields (TN5; Fig. 10). Large hawthorn and hazel dominate, with mature oak, grey willow and holly. The bank flora is impoverished, much of the bank is bare from sheep trampling and grazing, with banks of nettle, dock, thistle and ground ivy. Red campion occurs occasionally.



Fig. 10

- 3.5.2 The lower bank separates the field from the marshy grassland at the bottom of slope (TN6; Fig. 11). Blackthorn dominates, with mature oak and large hazel. A single mature dead ash is present. The grazed and trampled bank is again mainly bare, with patches of bracken, nettle and ground ivy.



Fig. 11

- 3.5.3 The site is bordered by hedgerow alongside the A40 and B4312, but these lie on the roadward side of the highway fence. These appear to have been planted as part of the road scheme and consist of a mix of species including alder, hazel, ash, sycamore, elder, hawthorn, field maple, oak and cherry (TN8; Fig 12). Ground flora includes campion, ivy, ground ivy, musk mallow, yarrow, foxglove and male & hart's tongue fern.



Fig. 12

A row of mature oak and occasional hazel and hawthorn border the southern boundary, but these again are situated on the railway embankment side of the railway fence (TN9; Fig. 13).



Fig. 13

Land adjacent to Cillefwr Industrial Estate, Llanllwch, Carmarthen

3.6 Badgers

- 3.6.1 There is no evidence of badger setts or foraging within the site boundary.

3.7 Bats

- 3.7.1 The hedgerow trees are mature with potential to support bat roosts. The site is well connected to the wider environment and the tree lines and hedgerows will provide flight lines and foraging opportunities

3.8 Otters

- 3.8.1 The Tawelan Brook provides suitable habitat for otters, offering foraging, commuting and resting habitat. Flows were elevated at the time of survey and no signs were obvious, but previous survey work undertaken by I&G Ecological Consulting Ltd on the catchment has demonstrated otter use of this stretch.

3.9 Reptiles

- 3.9.1 The fields are open and sunny. The main body of the site has low reptile interest. The river corridor marshy grassland may provide habitat for species such as slow worm, common lizard and grass snake.

3.10 Amphibians

- 3.10.1 It is likely that pockets of standing water sufficient to provide for frog spawning will be present during wet periods of the spring along the river corridor. The wider site will provide terrestrial phase foraging and hibernation opportunities.

3.11 Hazel Dormouse

- 3.11.1 There are no records of dormouse within the search buffer. The mix of hedge-banks and adjacent woodland provide suitable habitat for dormouse though the hedge structure is sub-optimal. The site is well connected to hedgerows and woodland in the general area.

3.12 Water Voles

- 3.12.1 The Tawelan Brook provides suitable habitat for water vole (Fig. 14). There are no records within the near vicinity of the site.



Fig. 14

3.13 Birds

3.13.1 The trees and hedgerows will provide forage and shelter/nesting opportunities for a range of species.

3.14 Invertebrates

3.14.1 There is no evidence of devil's bit scabious on site and the habitat structure is unsuitable to support marsh fritillary.

3.15 Non-native Invasive Species

3.15.1 There is an area of Himalayan balsam spreading in from the railway embankment (TN3; Fig. 4) and scattered plants throughout the river corridor and marshy grassland (TN6; Fig.7).

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.
- 4.2.3 The Carmarthenshire Local Biodiversity Action Plan (LBAP) aims to maintain and enhance biodiversity which covers a range of selected habitats and species which reflect both national and local priorities; develop effective local partnerships; monitor progress in achieving local biodiversity targets.

4.3 Assessments on the Habitats & Species Identified During the Survey

4.4. Habitats

4.4.1 Hedgerow

The hedgerows are gappy and grazed, but provide flight lines and feeding opportunities for bats, and nesting habitat for birds. The oak trees are mature and in good health, and have high biodiversity value. They provide an important landscape feature and dispersal route.

Overall, the value of this habitat within the development parcel has been assessed as: **High Local**. Loss or damage to this habitat would be **Major**, without mitigation.

4.4.3 Grassland

The semi-improved grassland is relatively species poor especially in the upper section of the main field. Interest increases lower down the slopes and towards the boundaries. The site will provide feeding habitat for a range of bird and invertebrate species.

Overall, the value of the habitat within the development parcel has been assessed as: **Low Local**. Loss of this habitat, without mitigation, is considered to be **Minor**.

4.4.4 Marshy Grassland & Riparian Corridor

The marshy grassland and riparian corridor provide habitat for a range of species including otter, a feature of the Tywi SAC which the brook drains to. It also provides flood storage for both surface and fluvial flooding.

Overall, the value of the habitat within the development parcel has been assessed as: **High Local**. Loss of this habitat, without mitigation, is considered to be **Major**.

4.5 Species

- 4.5.1 The field survey identified the on-site habitats as having the potential to support the following species which are also listed under UK BAP: Breeding Birds, Otter, Water vole, Reptiles & Amphibians and Bats.

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 has been cleared. If the site is cleared without any mitigation for development the impact is expected to be **Major**, due to the potential loss of hedgerow, marshy grassland and riparian corridor habitat.

5. CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER SURVEY

- 5.1 The combination of desk and field surveys undertaken at the proposed development site identified that the area to be developed is a mixture of habitats, well connected with the wider environment. The hedge-banks, riparian corridor and marshy grassland have high local value and the grassland low local value. The proposals are set out in the plan below (Fig. 16).

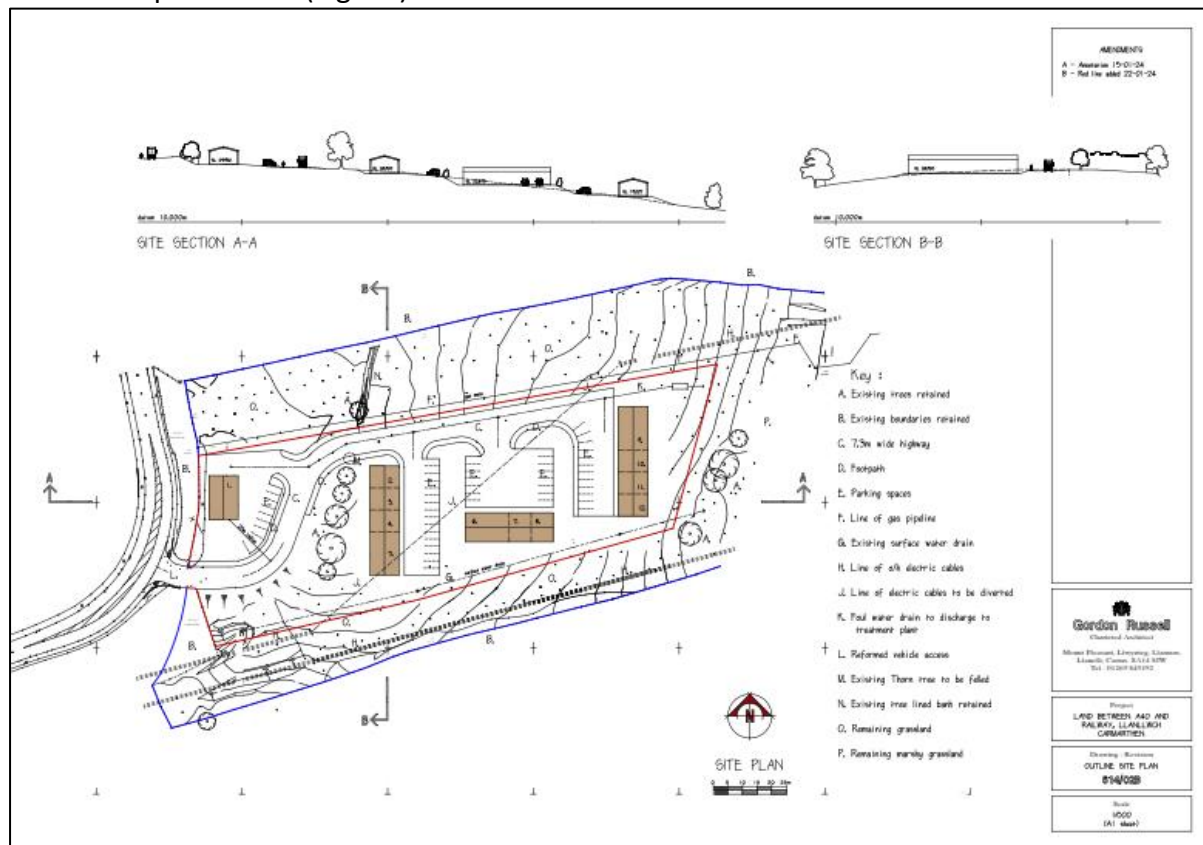


Fig. 16

5.2 Hedgerows

- 5.2.1 The hedgerows and tree lines will provide cover for nesting birds and foraging opportunities for a range of species including bats and birds. All hedgerows and mature trees should be retained.
- 5.2.2 Any diseased trees that require felling should be replaced with whips of oak and sycamore. These should be staked and protected and allowed to develop into hedgerow trees. The dead ash should be retained for habitat if it presents no risk.
- 5.2.3 Protection of trees and hedgerows through the use of Root Protection Zones and appropriate working methodology as well as proximity of the development boundary must be considered. This applies particularly to the proposed roadway.
- 5.2.4 There is the opportunity to increase the value of the hedgerows through laying and appropriate planting with species of local provenance. If grazing is to continue on the site then the hedges should be fenced with a 2m buffer either side of the bank.

- 5.2.5 Vegetation clearance should be planned outside the nesting bird season.

5.3 Grassland

- 5.3.1 About 50% of the grassland will be lost to the development and associated infrastructure. A focussed management of the surrounding grassland will continue to improve the biodiversity value of the semi-improved grassland on site.
- 5.3.2 A layered level of management with more intensive mowing adjacent to infrastructure, grading into more natural areas towards the boundaries and retained habitat should result in an enhanced habitat for a range of species especially pollinators, invertebrates and small mammals.
- 5.3.3 The remainder of the field should ideally be managed as a hay meadow, with an annual cut and removal of the vegetation. No inorganic fertiliser should be spread on the fields. Species richness will increase over time as nutrient levels drop.

5.4 Marshy Grassland & Riparian Corridor

- 5.4.1 There are no plans to develop this area of the site.
- 5.4.2 No storage or tipping of materials and waste should be allowed within this area. The boundary above the hedge-line should be fenced out to prevent inadvertent impact.
- 5.4.3 The river and marshy grassland area is susceptible to indirect impacts from silt run-off, polluting materials and spillages. Safeguards need to be built into a CEMP for the project to protect the watercourse and adjacent habitats. The stream drains to the afon Tywi SAC downstream and will provide supporting habitat for key species.
- 5.4.4 In the absence of grazing or cutting, this area is likely to succeed to floodplain woodland over time. This will benefit species such as otter, but result in some loss of interest for the marshy grassland component. If floodplain woodland (a scarce resource) is an acceptable climax habitat, then this process could be accelerated by the planting of black poplar in the floodplain, sourced from local sites.

5.5 Bats

- 5.5.1 The hedgerows provide important foraging habitat and flight lines for bats. Any mature trees which require felling or management in order to accommodate the development will be subject to inspection and assessment for suitability for use by bats, by a licenced bat surveyor following current guidelines (Bat Conservation Trust). The installation of a number of bat boxes suitable for species such as pipistrelle and brown long-eared on trees within the hedgerow is recommended. The new build structures also provide opportunities for the incorporation of bat roost features.
- 5.5.2 Site lighting has the potential to impact upon bats. A lighting plan should be agreed, with low level cowled lighting and the retention of dark corridors along the boundary features.

5.6 Birds

- 5.6.1 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.

5.7 Reptiles

- 5.7.1 The main body of the site has low reptile potential, but open and sunny areas associated with the riparian zone may support grass snake, common lizard and slow worm. There are no plans to develop this area of the site.

5.8 Otter & Water Vole

- 5.8.1 There is potential for water vole along the watercourse, however there are no records for the species in the surrounding area. The floodplain area is out-with the proposed development area, so direct impacts are unlikely. Measures outlined above are likely to be protective of any water vole interest of the site.
- 5.8.2 Otter are known to be in the upstream and downstream reach from previous survey work. It is likely that they will utilise this stretch of the brook for commuting and feeding, and given its relatively undisturbed nature there is potential for them to rest-up in the area. The floodplain area is out-with the proposed development area, so direct impacts are unlikely. Measures outlined above are likely to be protective of the otter interest of the site.

5.9 Invasive Non-native species

- 5.9.1 The lower field contains Himalayan balsam in a discrete location adjacent to the railway line and scattered through the floodplain grassland. An Invasive Species Management Plan needs to be put in place to prevent their spread elsewhere on and off site and to progress towards their control and elimination.
- 5.9.2 Materials and machinery brought onto the site should be clean and free from INNS.

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

- 5.10.1 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.
- 5.10.2 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.
- 5.10.3 The proposals have the potential to incorporate a variety of biodiversity enhancements to improve the local environment.

- 5.10.4 There is scope to erect bat and bird boxes on the new builds, and on the trees in the hedgerows and adjacent woodland.
- 5.10.5 Any requirement for surface water management should be via an appropriately constructed SUDs scheme that incorporates natural habitats such as ditches and ponds
- 5.10.6 The creation of a reptile and amphibian hibernaculum in an open location close to the floodplain should be considered.
- 5.10.7 A Biodiversity Enhancement plan should be produced outlining proposals to improve biodiversity on site.

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 [Countrywide 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 [Countryside 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.

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9. Representative Species List

	Target note								
	TN1/2	TN4	TN6	TN7	TN8	TN9			
Common bent <i>Agrostis capillaris</i>	A								
Creeping Bent <i>A stolonifera</i>	F								
Crested dogstail <i>Cynosurus cristatus</i>	F								
Yorkshire fog <i>Holcus lanatus</i>	D	D							
Reed sweet <i>G. maxima</i>		O							
Soft rush <i>Juncus effusus</i>	O	A							
Angelica <i>Angelica sylvestris</i>		F							
Birds foot trefoil <i>Lotus corniculatus</i>	O								
Greater birds-foot trefoil <i>Lotus oendunculatus</i>		O							
Creeping buttercup <i>Ranunculus repens</i>	F	F							
Meadow buttercup <i>Ranunculus acris</i>	O								
White clover <i>Trifolium repens</i>	F								
Red Clover <i>Trifolium pratenses</i>	O								
Dandelion <i>Taraxacum officinale</i>	O								
Broad leaved dock <i>Rumex obtusifolius</i>	F		F						
Clustered dock <i>Rumex conglomeratus</i>		O							
Cut leaved dead nettle <i>Lamium hydridum</i>	O								
Enchanter's nightshade <i>Circaea lutetiana</i>		R							
Fleabane <i>Pulicaria dysenterica</i>		R							
Foxglove <i>Digitalis purpurea</i>					O				
Ground ivy <i>Glechoma hederacea</i>	O		F	F	F				
Autumn hawkbit <i>Scorzoneroide autumnalis</i>	O								
Smooth hawksbeard <i>Crepis capillaris</i>	O								
Hemlock waterdropwort <i>Oenanthe crocata</i>		O							
Hogweed <i>Heracleum sphondylium</i>		F							
Ivy <i>Hedera helix</i>					F				

Musk mallow <i>Malva moschata</i>					R				
Marsh woundwort <i>Stachys palustris</i>		O							
Meadowsweet <i>Fillipendula ulmaria</i>		F							
Common mouse ear <i>Cerastium fontanum</i>	F								
Nettle <i>Urtica dioica</i>	O	F	F	F	F				
Broadleaf Plantain <i>Plantago major</i>	O								
Ragwort <i>Jacobaea vulgaris</i>	R								
Red campion <i>Silene dioica</i>			O		F				
Common sorrel <i>Rumex acetosa</i>	F								
Creeping thistle <i>Cirsium arvense</i>	F								
Spear thistle <i>Cirsium vulgare</i>	F								
Water mint <i>Mentha aquatica</i>		O							
Water pepper <i>Persicaria hydropiper</i>		O							
American willowherb <i>Epilobium ciliatum</i>		O							
Broad leaved willowherb <i>Epilobium montanum</i>		O							
Yarrow <i>Achillea millefolium</i>	O				F				
Himalayan balsam <i>Impatiens glandulifera</i>		F				O			
Alder <i>Alnus glutinosa</i>		F			O				
Ash <i>Fraxinus excelsior</i>				O	F				
Blackthorn <i>Prunus spinosa</i>				D	F				
Bramble <i>Rubus fruticosus agg</i>					O	O			
Wild cherry <i>Prunus avium</i>					F				
Elder <i>Sambucus nigra</i>					O				
Field maple <i>Acer campestre</i>					A				
Hazel <i>Corylus avellana</i>			A	A	A	O			
Holly <i>Ilex aquifolium</i>			O		O				
Hawthorn <i>Crataegus monogyna</i>			A		A	O			
English oak <i>Quercus robur</i>			F	A	A	D			
Sycamore <i>Acer pseudoplatanus</i>					F				
Grey willow <i>Salix cinerea</i>		O	F		F				

Dog rose <i>Rosa canina</i>					O				
Bracken <i>Pteridium aquilinum</i>				F					
Hart's tongue Fern <i>Asplenium scolopendrium</i>					F				
Common male fern <i>Dryopteris felix mas</i>					F				
Lady Fern <i>Athyrium felix femina</i>		O							

10. WWBIC Data Search

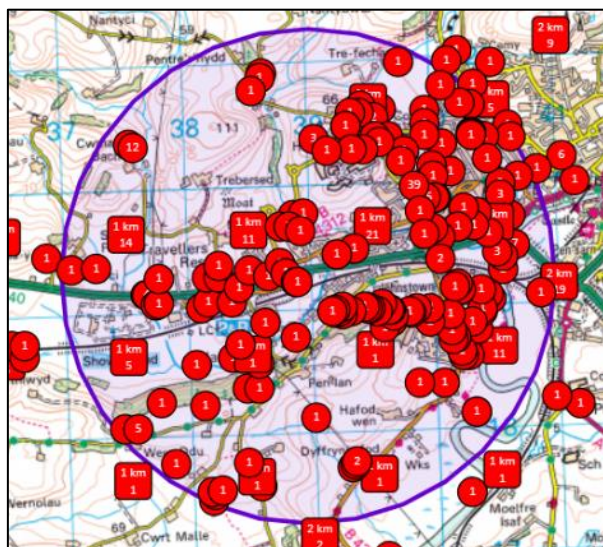
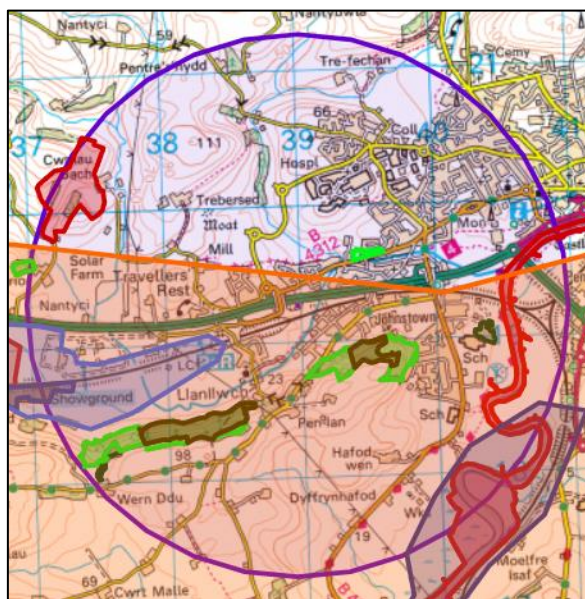


Fig. 17. Protected Species Data Search



Site Type	Key	Number of sites	Category	Intersection Area	Percentage of search area	Display clipped	Display full
Special Area of Conservation		2	International - Statutory	224,090 m ²	1.79%	Off	On
Site of Special Scientific Interest		3	National - Statutory	409,373 m ²	3.28%	Off	On
National Nature Reserve		1	National - Statutory	9,542 m ²	< 0.01%	Off	On
Wildlife Trust Reserve		1	Local - Non-statutory	16,892 m ²	0.14%	Off	On
Ancient Semi Natural Woodland		3	Priority Area	24,247 m ²	0.19%	Off	On
Restored Ancient Woodland Site		6	Priority Area	182,309 m ²	1.46%	Off	On
Plantation on Ancient Woodland Site		4	Priority Area	146,676 m ²	1.17%	Off	On
NRW Priority Area (Woodland - PAWS)		4	Priority Area	146,676 m ²	1.17%	Off	On
NRW Priority Area (Coastal Saltmarsh)		1	Priority Area	342,350 m ²	2.74%	Off	On
NRW Priority Area (Lowland Wetland)		1	Priority Area	562,640 m ²	4.50%	Off	On
B-Lines		1	Local - Non-statutory	7,268,117 m ²	58.16%	Off	On

Fig. 18. Protected Sites & Priority Areas Data Search

Fig. 19 Phase 1 Habitat Plan.



Colour	Code	Description
SI	B1.2	Semi-improved neutral grassland
	B5	Marshy grassland
	G2	Running water
	J2.1	Hedgerow
	INNS	Himalayan balsam