



Preliminary Ecological Assessment



Project: Heol Y Glo, Tonna (Option 1)

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1. Introduction

This assessment is to inform a full application for the Development of 9 No. affordable apartments, highways arrangements, access, parking, landscaping, drainage and all other associated works. The proposed development site a small area of land to the east of Heol Y Flo, Tonna. The site is centred at SS 78178 99239.

This report will assess the potential of the land within the site boundary to support protected habitats and species and the implications that any future development proposals could have on them.

1.1 Site Description

The proposed development site sits to the east of the town of Tonna, Neath Port Talbot. Residential housing is present to the west and an allotment area to the north. Open fields are present to the east but a bus depot sits directly to the south of site.

A railway line is present approximately 175m to the north at its closest point. The River Neath flows approximately 260m to the north of the development site as well. The Neath Canal appears to run between the river and railway to the north of the site. Wenalt Wood lies approximately 50m to the very south east corner of the site.

1.2 Survey Constraints

The optimal time period to carry out ground-based visual assessments of trees for bat roosting potential is between December to March inclusive, when broad-leaved trees are devoid of leaves and features are more readily visible. It should be noted that ground based assessments are inherently constrained and potential roosting features present upon the skyward facing surfaces of limbs and branches will most likely be missed.

The site visit was completed during October which is a suboptimal time to undertake habitat assessments. However a broad categorisation of habitat types was still possible during the visit.

1.3 Surveyor Experience

Aislinn Harris is a full member of Chartered Institute of Ecology and Environmental Management (CIEEM). Aislinn is an ecologist with 12 years experience undertaking a wide range of flora and fauna surveys. All survey work is undertaken following JNCC Phase 1 Survey Guidelines and CIEEM Guidelines for Preliminary Ecological Appraisal (2nd Ed 2017). Aislinn is a licenced bat ecologist Great crested newt and dormouse ecologist with a wide variety of experience undertaking ecological surveys.

2. Desktop Study

A data search was undertaken via Aderyn (LERC Reference: 0223-570) for the proposed development site and surrounding area. A 2km buffer zone was searched and records returned within 500m of site are noted below:

- Un-identified Pipistrelle - record indicates roosting behaviour but isn't clear,
- Bird species including Song Thrush, Spotted Flycatcher, King fisher, Red Kite, Wood Warbler
- Red Kite and House Sparrow
- Hedgehog - closest record approximately 100m away to the north. However the comments on the record call the sighting a road kill perhaps indicating it was along the B4434 instead.
- Polecat - closest record approximately 100m to the north,
- Otter - closest record approximately 100m to the north of site,
- Badger - closest record approximately 100m to the north,

Records of note returned for the rest of the buffer zone are detailed below:

- Grass snake
- Commuting/foraging Common Pipistrelle & Noctule bat,
- Brown Banded Carder Bee
- Skylark

2.1 Protected Sites

A data search for species records was undertaken for the proposed development site and surrounding area. The search also considered statutory and non-statutory protected sites.

Statutory Protected Sites

There are no statutory designated sites within 2km of the proposed development site.

Non-Statutory Protected Sites

There are a number of Sites of Importance for Nature Conservation (SINCs) returned within 2km of the development site. The site appears to sit within the NPT Watercourse SINC. Remaining SINC sites in the area and an approximate distance from the development site are below:

- TENNANT CANAL (1048m)
- NEATH CANAL (139m)
- CATWG WETLAND (1663m)
- SARN HELEN (741m)
- FFYNNON DAWEL (1273m)
- CILFREW MEADOW (1164m)
- NEATH ESTUARY (1886m)
- Gnoll Country Park (1058m)

A single Regionally Important Geodiversity Site (RIGS) is present within the search area. The Aberdulais RIGS is located approximately 1km to the west of the site. Coed Gawdir Wildlife Trust Reserve is located approximately 1.3km to the north of site.

There are many areas of Ancient Semi Natural Woodland (ASNW) within 2km of the site. These woodlands have been identified as Priority Areas by Natural Resources Wales (NRW) as they comprise mostly broadleaved native trees and shrubs believed to have been in existence for over 400 years. The nearest ASNW lies approximately 85m to the south east and forms part of Wenalt Wood. Other areas of SANW are present in the wider landscape.

The remainder of Wenalt Wood to the south of the development site is designated as Restored Ancient Woodland (RAW). The designation boundary appears to encompass a small section of the proposed development site to the south west. RAW Sites are areas of woodland which are predominantly broadleaved and are believed to have been continually wooded for over 400 years. They will have gone through a phase when canopy cover will have been more than 50% non-native conifer tree species and now have a canopy cover of more than 50% broadleaf.

2.2 Potential Impacts to Protected Sites

Given the localised nature of the development proposals it is considered highly unlikely any impacts to the statutory designated sites within the local area will be experienced.

3. Phase 1 Survey

3.1 Habitats

A walkover survey of the site was completed on the **15th August 2022**. All areas of the site were accessible. A species list can be found in Appendix 1, photographs of the site can be found in Appendix 2 and a map of the habitats found within the site is provided in Appendix 3.

The majority of the proposed development site is considered to be **concrete hardstanding**. The hardstanding is used for car parking and bus storage at present. A stand of **bramble scrub** is present along the eastern edge of the hardstanding. Small stands of **Japanese knotweed** were noted within the scrub.

A single **mature tree** is present along the centre line of the site.

An area of **tall ruderal vegetation** is present to the south west of the hardstanding. The area is likely to previously have been grassland but it has succeeded into tall ruderal vegetation likely due to a lack of management. Species noted include nettle, knapweed, creeping thistle, cocksfoot, yorkshire fog and hedge bindweed.

Japanese Knotweed is listed under Schedule 9 to the Wildlife and Countryside Act 1981 with respect to England, Wales and Scotland. As such it is an offence to plant or otherwise cause Japanese knotweed to grow in the wild. Under the Environmental Protection Act 1990, Japanese Knotweed is classified as controlled waste. Himalayan balsam is listed under Schedule 9 to the Wildlife and Countryside Act 1981 with respect to England and Wales. As such, it is an offence to plant or otherwise allow this species to grow in the wild.

3.2 Great Crested Newts

Great crested newts (*Triturus cristatus*) are a European protected species and are protected under the Conservation of Habitats and Species Regulations 2017. In summary, they are protected from:

- Deliberate capture, killing and injuring,
- Deliberate disturbance of a breeding site or resting place,
- Deliberate taking or destroying of eggs,
- Damage or destruction of a breeding site or resting place.

Great crested newts (GCN) are listed on schedule 5 of The Wildlife & Countryside Act 1981 which protects them from intentional or reckless disturbance or obstruction when using a structure or place for shelter and / or protection. It is also an offence to sell, offer or expose for sale a great crested newt. Great crested newt and common toad are listed in section 7 of the Environment (Wales) Act 2016 which makes them key species to sustain and improve biodiversity.

There are no records for the presence of Great crested Newt (GCN) within 2km of the proposed development site.

There are no ponds within or directly adjacent to the development site. When reviewing aerial images and OS maps there do not appear to be any ponds within 500m of the development site. The habitat within the site is considered broadly unsuitable for use by GCN. The hardstanding provides no cover from predation. The tall ruderal vegetation could be used by GCN during their terrestrial life stages. However, given the small size of these habitat types, lack of local GCN records and lack of local aquatic habitat which GCN could use it is considered highly unlikely that GCN are present. **No further recommendations are made for this species.**

3.3 Dormouse

The dormouse (*Muscardinus avellanarius*) is a European protected species and is protected under the Conservation of Habitats and Species Regulations 2017. In summary, they are protected from:

- Deliberate capture, killing and injuring,
- Deliberate disturbance of a breeding site or resting place,
- Damage or destruction of a breeding site or resting place.

Dormouse is listed on schedule 5 of The Wildlife & Countryside Act 1981 which protects them from intentional or reckless disturbance or obstruction when using a structure or place for shelter and / or protection. It is also an offence to sell, offer or expose for sale a native dormouse. Dormouse is listed in section 7 of the Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

There are no records for the presence of Dormouse within 2km of the proposed development site. The majority of habitat within the proposed development is not considered to be unsuitable for use by Dormouse. The tall ruderal vegetation and hardstanding provide no cover from predation or foraging habitat. The scrub along the eastern edge of the site could be suitable for Dormouse. This vegetation has good habitat connectivity to the wider wooded landscape.

The site is considered to have good habitat connectivity to the wider landscape. Wenalt wood is present to the south and the riparian habitat of the River Neath is present to the north. However, given the lack of local records for Dormouse and the small amount of habitat suitable for use by such species within the site boundary their presence within the site is considered to be highly unlikely. **No further recommendations are made for this species.**

3.4 Bats

All British bats are a European protected species and are protected under the Conservation of Habitats and Species Regulations 2017. In summary, they are protected from:

- Deliberate capture, killing and injuring,
- Deliberate disturbance of a breeding site or resting place,
- Damage or destruction of a breeding site or resting place.

Schedule 5 of The Wildlife and Countryside Act (1981) also protects all species of British bat and their roosting locations. British bats are protected from intentional or reckless disturbance and or obstruction of their roosting places. Barbastelle, bechstein, noctule, brown long eared, common pipistrelle, soprano pipistrelle, greater horseshoe and lesser horseshoe bats are also listed in section 7 of the Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

The nearest recorded bat roost relates to a historical record from 2002 of small numbers of an unidentified Pipistrelle species of batt Tonna Hospital to the north west. Records of commuting and foraging Common Pipistrelle, Noctule and Daubentons bats are available approximately 700m away from site.

Tree Assessment

A single tree is present within the site boundary. No gaps or cracks suitable for bat roosting use are present within the tree.

Habitat Assessment

The habitats within the site boundary are considered to have very limited potential for use by bat species. The tall ruderal vegetation and band of bramble scrub along the eastern edge could be used by a very small number of common bat species for foraging purposes. The proposed development site does sit between a residential area and large expanse of woodland, local bat species are likely to commute southwards across the site is present.

Further survey work for bat species within the area is not recommended in this instance. However **a wildlife friendly lighting strategy will be required to ensure commuting use of the site throughout the year by nocturnal species can continue.**

3.5 Otters

The common otter (*Lutra lutra*) is a European protected species and is protected under the Conservation of Habitats and Species Regulations 2017. In summary, they are protected from:

- Deliberate capture, killing and injuring,
- Deliberate disturbance of a breeding site or resting place,
- Damage or destruction of a breeding site or resting place.

Otter are listed on schedule 5 of The Wildlife & Countryside Act 1981 which protects them from intentional or reckless disturbance or obstruction when using a structure or place for shelter and / or protection. It is also an offence to sell, offer or expose for sale an otter. Otter is listed in section 7 of the Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

There are numerous records for the presence of otter within 2km of the proposed development site. The records are mainly associated with the River Neath and for field signs of the animal. Otters tend to prefer secluded locations for their holts to help prevent them being disturbed by other animals. It is accepted that otters can travel long distances from river corridors to find acceptable holt sites.

The habitats within the site boundary are considered to be unsuitable for use by otter. The site offers limited sheltering potential as the hardstanding and tall ruderal vegetation have no shelter. **It is considered highly unlikely that this species occurs on site.**

3.6 Badger

Badgers are protected under the Protection of Badgers Act 1992. In summary they are protected from:

- Taking, killing or injuring;
- Cruelty;
- Interfering with a badger sett;
- The selling and possession of badgers;
- Marking or ringing.

Badgers are also listed on schedule 6 of the Wildlife and Countryside Act 1981 as amended.

Badgers tend to have a variety of setts with different uses and functions within the territory for the family unit. In general there is usually a main sett which the family will use the most. There are then annex, subsidiary and or outlier setts which depending on family structures and environmental pressures may be used at different times of the year. As female badgers tend to have their cubs over winter the disturbance and damage of badger setts is prohibited between December and June inclusive. NRW are the licensing body for any actions which may contravene the above legislation.

There are a small number of records for the presence of badger within 1km of the proposed development site. The closest record is approximately 150m to the north of site, however the record is given to a 4 figure grid reference. A road traffic collision record is present approximately 300m away along the A465.

Badgers favour a dry sloping site for digging their setts preferably within woodland or even under a large hedgerow bank. Badgers are creatures of habit and tend to follow regular pathways between their setts and foraging grounds. No evidence of the presence of badger such as hairs snagged on fencing, latrines, digging or evidence of regular pathways was found within the proposed development site. No evidence of sett creation was found within and around the site.

It is thought highly unlikely that badger is present within the site boundary and no further recommendations are made for this species.

3.7 Birds

All breeding birds are protected under schedule 1 of the Wildlife and Countryside Act (1981) as amended. Under this Act it is an offence to:

- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built.
- Intentionally take or destroy the egg of any wild bird.

Enhanced protection is afforded to species listed on Schedule 1 of the Act, this additional protection makes it an offence to:

- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Species of bird listed under Schedule 1 (WCA1.1) of the WCA 1981 returned from the data trawl within 1km and include Kingfisher, Red Kite, Hobby, Goshawk

Red Kite, Redwing and Brambling. Other notable bird species listed under Section 7 (S7) of the Environment (Wales) Act 2016 within 2km of the site include House Sparrow, Song Thrush, Spotted Flycatcher, Wood Warbler and Lapwing. **Compensation measures for the loss of bird nesting and foraging habitat will be required.**

3.8 Reptiles and Amphibians

Reptiles such as the slow worm, common lizard, adder and grass snake are protected under the Wildlife and Countryside Act 1981(as amended). They are protected from killing, injuring and sale. They are protected from killing, injuring and sale. They are also listed in section 6 of The Environment (Wales) Act 2016.

The four widespread species of amphibian i.e. the smooth and palmate newts, common frog and common toad, are protected under the Wildlife and Countryside Act 1981 (as amended). This section prohibits sale of these species. Common Toad is listed in section 6 of The Environment (Wales) Act 2016.

The closest amphibian record to the proposed development site is for Common Frog approximately 200m away. Reptile records returned from the data trawl include a small number of Grass Snake records with the closest approximately 600m away.

Reptiles prefer a mosaic of habitats with diverse vegetation structure creating open areas and nearby cover to provide protection from predators and the elements. The concrete hardstanding does not provide cover from predation for common reptiles. The tall ruderal vegetation is considered likely for use by reptiles for commuting and foraging purposes. The tall ruderal vegetation is also likely to be used by common amphibian species including Common Frog and Common Toad during their terrestrial life stages

Consideration has been given to the need to undertake reptile surveys within the site to support any future planning applications for the site. The proposed layout appears to retain a good portion of the tall ruderal habitat to the south of the new access road. Suitable habitat within the site boundary is limited, therefore a reptile survey is not recommended in this instance. Instead it is suggested that a small population (less than 5) of reptiles is assumed within the tall ruderal vegetation and **a suitable reptile mitigation strategy be designed and agreed to inform the development proposals**. The reptile mitigation strategy will need to include enhancement measures for reptiles to ensure they can recolonise the site post development.

3.9 Other Mammals

Other notable mammal species listed under S7 of the Environment (Wales) Act 2016 which returned records within 2km include Hedgehog (100m).

Hedgehog is considered likely to be present within the site at least on occasion. Hedgehog is considered to be a species of principal importance, for the purpose of maintaining and enhancing biodiversity in relation to Wales. As such consideration must be given to this species in any plans proposed for the site.

3.10 Invertebrates

Numerous records for various types of invertebrate returned from the data trawl within 1km.

The habitats of the site were assessed for their potential to support invertebrates using the Invertebrate Habitat Potential Assessment (IHPA) as found in CIEEM Inpractice Issue 112, June 2021. The IHPA protocol has been produced to allow ecologists without specialised entomological expertise to identify key habitats and features likely to support important invertebrate assemblages. Full details of habitat types can be found in Appendix 5.

Habitat Element	Grade
Decaying Wood – H1	E – Negligible/Absent
Rotational Management – H2	D - Minor
Nectar Resources – H3	D - Minor
Wet Substrates – H4	C - Moderate
Other Water Habitats – H5	C - Moderate
Structural Patchwork – H6	D - Minor
Still Air (S) – H7	D - Minor
Still Air (H) – H8	E – Negligible/Absent
Connectivity – H9	C – Moderate
Ecoclimes – H10	D - Minor
Bare Earth – H11	E - Minor

Based on the Invertebrate Habitat Potential Assessment (IHPA) the site, in its current state, is considered to have potential to support common and widespread generalist species of invertebrate only.

4. Recommendations and Mitigation

It is proposed to develop the site although exact details of the proposals are not available at the present time. Outline plans indicate the creation of a new access road and single building within the site boundary. The building will house a small number of residential flats. The site is being proposed for allocation for development within the Local Development Plan. **Consideration to ecological mitigation and compensation that development of the site may require is needed.**

It is anticipated that the majority of the habitats within the site boundary habitats will be lost as part of any future development proposals. Broad recommendations are made below to help inform the design process. **Once the development proposals are progressed and the considerations to development within the site are addressed, further ecological input will be required.** Our general recommendations are:

- Measures suitable for reptiles must be included within the design to allow movement across the site post development. A reptile mitigation strategy should include, but not be limited to:
 - Habitat clearance measures such as sensitive timings of works and a two stage vegetation cut and destructive searching of roots if required.
 - Habitat clearance will aim to push any reptiles which may be present into the south west of the site and the remaining tall ruderal vegetation that sits outside of the development boundary.
- The bramble scrub areas have potential for use by nesting birds. Any scrub removal must be completed outside of the bird nesting season of March to August inclusive. If this is not achievable an ecologist must inspect any scrub with the potential for birds to be present for active birds' nests prior to removal works beginning. If an active nest is identified a buffer zone of at least 5m around the nest must be observed until the chicks have fledged. Only then can the vegetation be removed. Greater buffer zones around nests may be required depending on the species and habitat the nest is within.
- An invasive non native species management strategy will be required to eradicate Japanese knotweed from the proposed development site boundary. The invasive non native species management strategy will also need to detail measures to be implemented to prevent the spread of both species during and after any development works.

- Careful consideration must be given to the use of lighting and glazing of units within the developed site, as this can adversely affect activity by a variety of fauna, particularly foraging bats, nesting birds and invertebrates. Light spillage into adjacent semi-natural habitats including the small woodland to the east must be avoided and brightness kept to the lowest permissible level in the areas adjacent to such habitats.
- All lighting must meet recommendations in the BCT Guidance Note 08/23 Bats and Artificial Lighting at Night. It will be important to prevent light spill along the periphery of the site.

The Environment Act (Wales) 2016 places a duty on competent authorities such as Neath Port Talbot County Borough Council to conserve and enhance biodiversity. The below bullet points are some simple measures that could be achieved to enhance the biodiversity of the site:

- The provision of bird boxes of varying design in suitable locations within the development site. These could include integrated boxes built into buildings as well as small and large holed boxes on the mature trees retained during works.
- The provision of bat boxes in suitable locations within the development site. These could include integrated boxes built into buildings as well as small and large holed boxes on the mature trees retained during works.
- The use of native species within the soft landscaping works on the site. Suitable long term management of soft landscaping also helps ensure spaces are useful to wildlife. Hedgerow and tree planting in public spaces create habitat for wildlife and an attractive space for people.
- All fencing around the site will be hedgehog friendly in design. A friendly design is considered to allow passage of small animals across the site. Close board or mesh fencing should provide either a continuous gap between the bottom of the fence and ground of approximately 13cm or 13cm by 13cm gaps cut every 3m along fencing.
- The creation of green corridors around the periphery of the development site must be considered. A sensitive site design which ensures plot boundaries are off set from the adjacent retained and natural vegetation would be beneficial to a range of wildlife and create a greener setting for the development. The sensitive management of buffer zones to ensure wilder, longer areas of habitat are created would benefit wildlife.

Appendix 1 – Plant Species Recorded

Species	Common Name
Trees & Scrub	
<i>Crataegus monogyna</i>	hawthorn
<i>Fraxinus excelsior</i>	Ash
<i>Corylus avellana</i>	Hazel
<i>Rubus fruticosus</i>	Bramble
Herbaceous Plants	
<i>Cirsium arvense</i>	creeping thistle
<i>Epilobium spp.</i>	willowherb species
<i>Urtica dioica</i>	Nettle
<i>Dactylis glomerata</i>	cock's-foot
<i>Artemis vulgaris</i>	Mugwort
<i>Hedra helix</i>	Ivy
<i>Ranunculus repens</i>	Creeping buttercup
<i>Trifolium sp</i>	Clover sp
<i>Taraxacum officinale</i>	Dandelion
<i>Agrostis stoloniferous</i>	Creeping bent
<i>Geranium robertianum</i>	Herb Robert
<i>Heracleum sphondylium</i>	Hogweed
<i>Fallopia japonica</i>	Japanese knotweed
<i>Centaurea nigra</i>	Knapweed
<i>Calystegia sepium</i>	Hedge bindweed

Appendix 2 – Site Photographs



Scrub bank to the east of site leading northwards



Site Looking north east



Site Looking south east



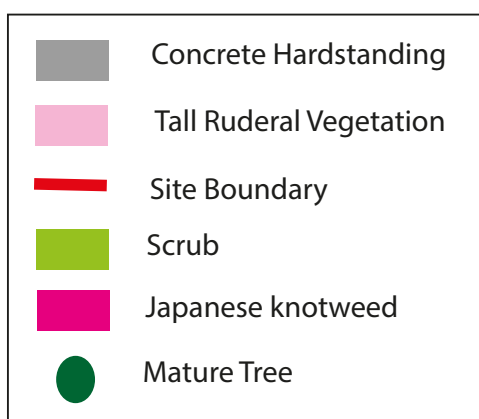
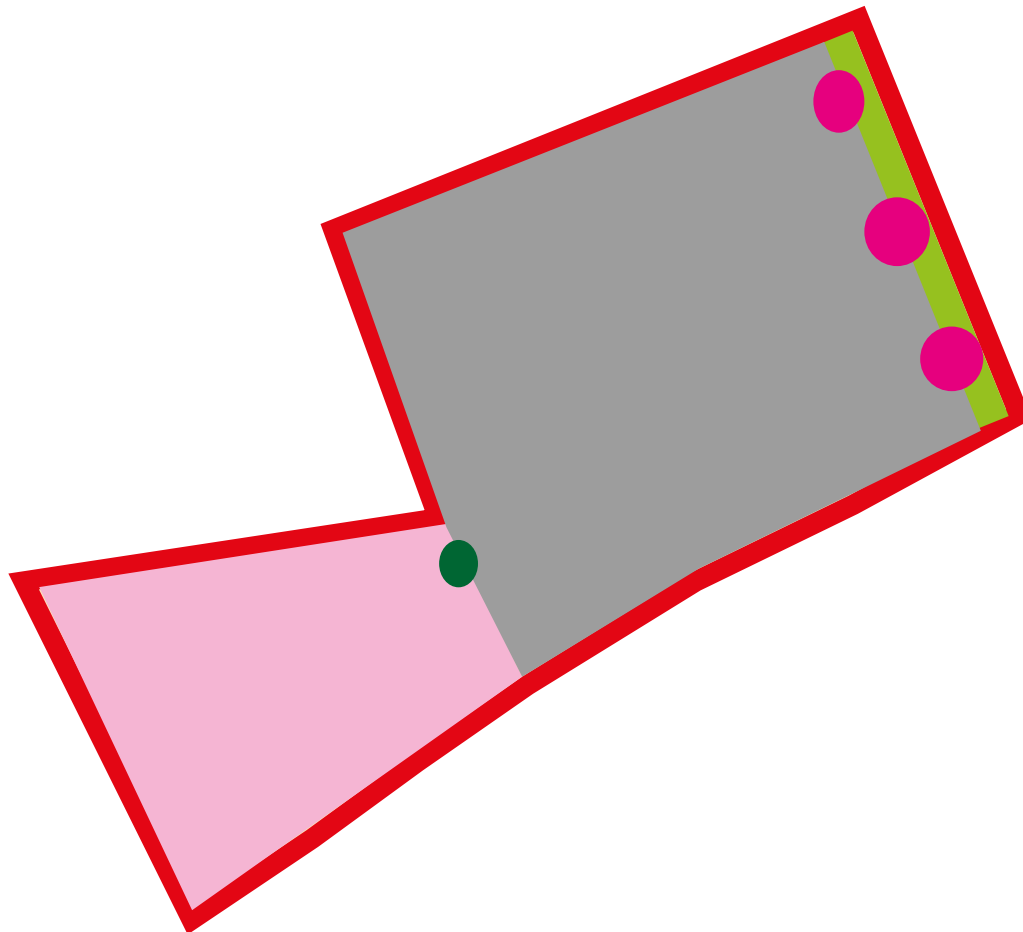
South western portion of site looking northwards

Appendix 3– Site Habitat Map

HEOL Y GLO, TONNA (OPTION 1)

Habitat Map

October 2022



Appendix 4 - Aerial View of Site Location



Appendix 5 – Invertebrate Habitat Potential Assessment

Table 1. Summary of the 11 habitat elements assessed by IHP survey.

Habitat element	No.	Comments
Decaying Wood	HE1	In all its forms; from decaying wood on/in large trees to woodland floor debris
Rotational Management	HE2	Planned or serendipitous; and whether for nature conservation or other purposes
Nectar Resources	HE3	As a proxy for nectar- and pollen resources, as assessment of pollen resources is impracticable on a walk-through survey
Wet Substrates	HE4	Including marginal, marshy, muddy and seasonally inundated habitats, as well as flushes
Open Water Habitats	HE5	The open water element of rivers, lakes, ponds, streams, ditches, etc.
Structural Patchwork	HE6	Habitat mosaics, including, but by no means restricted to open mosaic habitats on previously developed land
Still Air (S)	HE7	Suntraps and still-air microclimates in open situations; the term 'still air' is used in preference to 'wind breaks' as many rigid wind breaks are likely to produce turbulent air in their lee
Still Air (H)	HE8	Humid still-air microclimates in sheltered and shaded situations
Connectivity	HE9	Landscape-scale connectivity between the site and external habitats
Ecoclines	HE10	A graded transition between two or more broad habitats
Bare Earth	HE11	Unshaded bare or sparsely vegetated well-drained substrate, regardless of soil type