



PROPOSED DEVELOPMENT:

**LAND AT THE SUMMIT CENTRE,
BEDLINOG,
TREHARRIS**

PRELIMINARY ECOLOGICAL ASSESSMENT

NOVEMBER 2021

Step Up Skips

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STEP UP SKIPS

Proposed Development: Land at The Summit Centre, Bedlinog, Treharris

Preliminary Ecological Assessment

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Drawings

Drawing number	Title
None currently available	

NON-TECHNICAL SUMMARY

A preliminary ecological assessment was undertaken of a site on land owned by the Taff Bargoed Development Trust at The Old Drift Mine in Trelewis in south Wales in support of a planning application to use it to store skips.

The work involved a phase 1 habitat survey to categorise the habitats present, an assessment of the site's ability to provide suitable habitats for protected species, in particular bats, and recommendations for further survey and actions as necessary.

There are no statutorily designated sites within 2km of the site notified for biological reasons.

There are five Sites of Importance for Nature Conservation (SINCs) within 2km of the site.

Habitats on the site included:

- Scrub; and
- Bare ground;

No invasive non-native species were observed on the site.

There are no buildings on the site and therefore no potential man-made bat roosting habitat. None of the trees on the site provides potential roost features as they are all immature and/or small.

The denser scrub at the rear of the site provides habitat for breeding birds.

The habitats on the edges of the site provide potential for reptiles.

No evidence of, or potential for, any other protected species was recorded within the site boundary.

Mitigation in respect of reptiles and breeding birds will be required.

It is considered that no further ecological surveys are required.

1 INTRODUCTION

1.1 OBJECTIVE

The objectives of this report are to:

- identify the habitats present on the site;
- identify the potential for protected species to be present on site;
- determine the presence of protected sites on or adjacent to the site;
- using the information gathered to determine whether there may be any impacts (both positive and negative) on protected species present;
- provide recommendations for further survey as necessary; and
- suggest outline mitigation and enhancement ideas and principles

1.2 METHODOLOGY

To achieve the objectives set out above, field based assessments of habitats and protected species were undertaken, with the results being assessed for any impacts (adverse and / or positive).

The impact assessment was undertaken by ecological feature rather than by section i.e. each subject is discussed and assessed separately and summarised in conjunction with the others.

1.3 SITE DESCRIPTION

Photos are at **Appendix A**.

The site is approximately 0.15ha in extent and is located on land owned by the Taff Bargoed Development Trust on the site of the former Trelewis Drift Mine between Trelewis and Bedlinog in Merthyr Tydfil County Borough in south Wales (centred on NGR ST 10279938) (**Figures 1 & 2**).

The site is largely comprised of bare ground (crushed stone and soil) (Plate 1) with a 3m high bund along the site's rear (western) boundary. The bund is covered in dense bramble scrub over tall ruderal vegetation (Plate 2). The southern boundary is vegetated with open willow scrub over semi-improved grassland and tall ruderal vegetation (Plate 3).

The boundaries of the site are all fences, both stock net and post and rail.

The site is bounded to the north by former colliery buildings now used for various commercial purposes and the Summit indoor climbing centre, to the east by an area of broadleaved woodland on a west facing slope, to the south by an area of scrub and reedbeds (Plate 4) treating mine water and to the east by an area of scrub and immature woodland.

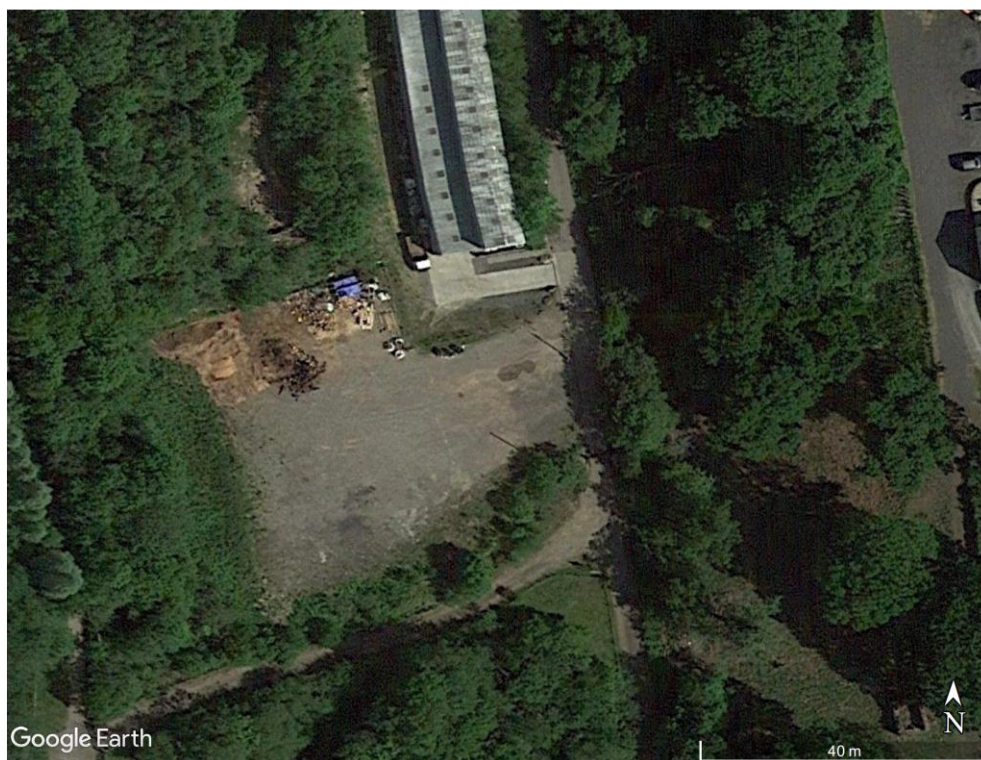
The whole site is located in a valley running north to south with the access coming via a private road off the B4255 linking Trelewis to Bedlinog. The valley vegetation is dominated by bracken, gorse stands, scrub and small woodlands. The Afon Bargoed Taf (Plate 5) river flows north to south down the centre of the valley.

Figure 1 – location of the proposed Brynbach Farm development site (arrowed red)



(Image courtesy of Google Earth)

Figure 2 – detailed view of the proposed Brynbach Farm development site (approximate boundary in red)



(Image courtesy of Google Earth)

1.4 PROPOSED DEVELOPMENT

It is understood that the development proposal is to use the site as a store for skips on a temporary basis.

1.5 STUDY AREA

The field survey looked at the red line development area itself and up to 20m from the site boundaries where possible.

The biological records data search used a 2km search buffer around the central point of the site; parameters included statutorily and non-statutorily designated sites, European protected species, UK protected species and species of local conservation concern.

1.6 PREVIOUS SURVEYS

None known.

1.7 CONSTRAINTS

There may be records that remain either undigitised or unsubmitted to the local records centre. Lack of records in no way demonstrates or proves absence.

There were no other constraints to the survey.

2 REGULATORY FRAMEWORK

2.1 INTERNATIONAL

European Union legislation requires that member states designate sites for the protection of habitats and species included in the annexes of both Council Directive 92/43/EC on the Conservation of Natural Habitats and of Wild Flora and Fauna (the Habitats Directive) and Council Directive 79/409/EEC on the Conservation of Wild Birds (the Birds Directive). This legislation is implemented in the UK by the Conservation of Habitats and Species Regulations 2017 (as amended) (“the Habitat Regulations”). This results in sites being designated as Special Areas of Conservation (SACs) and Special Protection Areas respectively (SPAs).

Following the UK’s exit from the European Union on 31st January 2020, the law responsible for continuing to implement this legislation through the transition period is The Conservation of Habitats and Species (Amendment) (EU EXIT) Regulations 2019. All legislation within the Conservation of Habitats and Species Regulation 2017 still apply within the UK under the amendment to the 2017 regulations until otherwise notified.

2.2 NATIONAL (UK)

The Wildlife and Countryside Act 1981 (as amended) allows sites to be designated as Sites of Special Scientific Interest (SSSI) for one or all of the following categories:

- Flora;
- Fauna;
- Habitat; and
- Geological importance.

European designated sites are automatically designated as SSSIs prior to their designation.

The relevant legislation includes:

- The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (as amended);
- The Conservation of Habitats and Species Regulations 2019 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- Countryside and Rights of Way Act 2000;
- Wild Mammals (Protection) Act 1996;
- The Protection of Badgers Act 1992; and
- The Hedgerow Regulations 1997.

2.3 NATIONAL (WALES)

2.3.1 The Environment (Wales) Act 2016

The Environment (Wales) Act 2016 sets out the requirement for the ‘sustainable management of natural resources’ together with new ways of working to achieve this. Part 1 of the Environment Act sets out Wales’ approach to planning and managing natural resources at a national and local level with a general purpose linked to statutory ‘principles of sustainable management of natural resources’ defined within the Act.

Section 6 – Biodiversity and resilience of ecosystems duty

Section 6 under Part 1 of the Environment (Wales) Act 2016 introduced an enhanced biodiversity and resilience of ecosystems duty (the S6 duty) for public authorities in the exercise of functions in relation to Wales.

The S6 duty requires that public authorities must seek to maintain and enhance biodiversity so far as consistent with the proper exercise of their functions and in so doing promote the resilience of ecosystems.

Section 7 - Biodiversity lists and duty to take steps to maintain and enhance biodiversity

This section replaces the duty in section 42 of the Natural Environment and Rural Communities Act (2006) (NERCA 2006). The Welsh Ministers will publish, review and revise lists of living organisms and types of habitat in Wales, which they consider are of key significance to sustain and improve biodiversity in relation to Wales.

The Welsh Ministers must also take all reasonable steps to maintain and enhance the living organisms and types of habitat included in any list published under this section, and encourage others to take such steps.

Part 1 of the Act, including Sections 6 and 7, came into force on May 21, 2016.

Other elements of NERCA 2006 may still apply.

2.3.2 The Wellbeing of Future Generations Act 2015

The Wellbeing of Future Generations Act became law in April 2015 and is concerned with improving the social, economic, environmental and cultural well-being of Wales.

It will make the public bodies in Wales listed in the Act think more about the long-term, work better with people and communities and each other, look to prevent problems and take a more joined-up approach.

To help public bodies achieve the same vision, the Act puts in place seven well-being goals. Linked to the goals a set of National Indicators are currently under development to help measure whether we are achieving the goals including the Resilient Wales goal.

Resilient Wales' goal

'A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example climate change).'

The Well-being of Future Generations Act recognises the importance of nature and its biodiversity. The resilient Wales' goal will help with nature recovery objectives in Wales.

The Act establishes a statutory Future Generations Commissioner for Wales to support the public bodies listed in the Act to work towards achieving the well-being goals.

The Act also establishes Public Services Boards (PSBs) for each local authority area in Wales. PSBs are tasked with improving the economic, social, environmental and cultural well-being of its area by working to achieve the well-being goals.

2.3.3 Other

Planning Policy Wales (Welsh Government, 2018) and Planning Policy Wales Technical Advice Note 5: Nature Conservation and Planning (Welsh Assembly Government, September 2009) set out the protection given to wildlife (sites, habitats and species) by the planning system operational in Wales.

2.4 LOCAL AND REGIONAL

The proposed development is wholly within Merthyr Tydfil County Borough Council (MTCBC) area of responsibility. Therefore, all policies adopted by that Planning Authority will apply, including policies which may not be specific to nature conservation or the natural environment but that may apply or be relevant and should be considered during the planning process. Specifically policies:

- EnW1 Nature Conservation and Ecosystem Resilience;
- EnW2 Internationally and Nationally Protected Sites and Species;
- EnW3 Regionally Important Geological Sites, Sites of Importance for Nature Conservation, Local Nature Reserves and Priority Habitats and Species;
- EnW4 Environmental Protection; and
- EnW5 Landscape Protection.

2.5 PLANNING FRAMEWORK

The proposed development will be undertaken wholly under the auspices of the Town and Country Planning Act 1990 (as amended).

3 DESK STUDY

3.1 SUMMARY

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

There are five non-statutorily designated Sites of Importance for Nature Conservation (SINCs) within 1km of the site.

There are no species records from the site but there are records immediately adjacent to, and in very close proximity to, it.

3.2 BACKGROUND

A desk study provides background information on historical and current biological data which can identify ecological constraints, mitigation, and biodiversity enhancement opportunities.

3.3 METHODOLOGY

The South East Wales Biodiversity Records Centre (SEWBReC) was consulted in order to provide biological information on the presence of species and sites on or adjacent to the site.

The biological records search covered a search radius of 2000m from the centre of the development site for internationally protected sites, UK protected sites, locally notified sites, protected and priority species, other species of conservation concern and locally important species.

The Multi-Agency Geographical Information System (MAGIC) website (www.magic.gov.uk) was also consulted.

3.4 CONSTRAINTS

There were no constraints to the data search.

3.5 RESULTS

3.5.1 Statutorily protected sites

Not applicable.

3.5.2 Non-statutory designations

There are five Sites of Importance for Nature Conservation (SINCs) within 2km of the proposed development site (**Figure 3**).

All except the Lower Lliw Corridor & Llan Confluence SINC are at distance from the site whereby they will not be affected by the proposed development and will therefore not be considered further in this report.

3.5.3 Species: SEWBreC data search

The data search contains 497 species records within 2000m of the site including priority and protected species, species of local conservation concern, locally important species and invasive non-native species from a range of taxa including mammals, birds, amphibians, reptiles and invertebrates. .

There are no records from the development site. The closest records are of common frog (*Rana temporaria*), common toad (*Bufo bufo*), forest cuckoo bee (*Bombus sylvestris*), bee orchid (*Ophrys apifera*), common lizard (*Zootoca vivipara*) and cinnabar moth (*Tyria jacobaeae*), 36m, 42m, 45m, 50m and 58m from the development site respectively.

A summary list of the species found in the data search buffer is at **Appendix B**.

3.6 PREVIOUS SURVEYS

None known.

4 STATUTORILY PROTECTED SITES

Not applicable.

5 NON-STATUTORY SITES

5.1 SUMMARY

There are 5(no.) Sites of Importance for Nature Conservation (SINCs) listed within the data search results See **Table 1** & **Figure 3** for details.

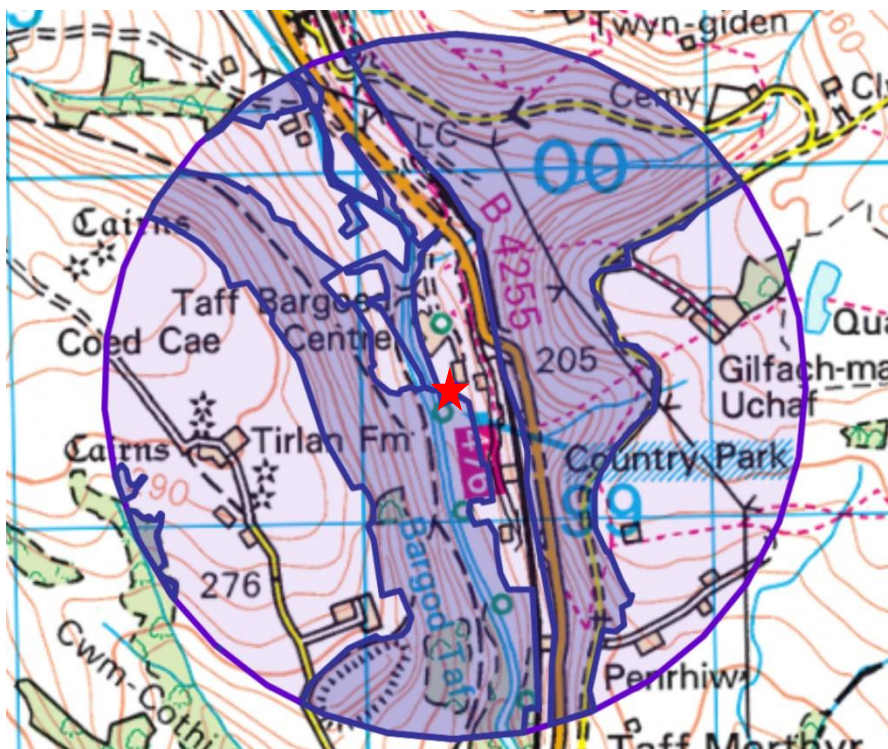
Table 1 - non-statutorily designated sites within 2km of the proposed Crofty Road development site:

Site	Designation (& reference)	Reason for designation	Distance away (m)
Lower Cwm Bargod	SINC (54)	Large and diverse site on valley sides above the Afon Bargod Taf, comprising semi-natural woodland, including a large area of ancient woodland, bracken slopes, small areas of heathland, and an old colliery spoil tip supporting acid grassland. Other habitats present include small areas of neutral grassland, marshy grassland, scrub and some gritstone outcrops. Also includes a section of the Afon Bargod Taf, along with some adjacent reed beds and two lakes that form part of the Parc Taf Bargod. The spoil heap supports a diverse range of plants. Climbing corydalis occurs in the bracken slopes	22
Afon Bargoed Taf	SINC (59)	Major river system flowing through the eastern part of the County Borough. The river passes through former industrial areas in its lower reaches, and includes some sections that have been canalised. The upstream reaches, in contrast, are bordered by woodland and agricultural land. The SINC covers all sections of the Bargod Taf which do not fall in other SINCs along the route, comprising three discrete sections. Includes adjacent bankside habitats, particularly semi-natural woodland along with semi-improved neutral and acid grasslands, bracken stands and swamp. Large mature trees are frequent along the banks, and these may support roosting bats. Otter occurs throughout the length of the river which is known to be of value to a wide variety of birds, fish, bats and reptiles	41
Gelligaer Common	SINC (40)	A very extensive upland common that continues within the neighbouring authority of Caerphilly County Borough. Comprises mainly acid grassland and grass-heath with areas of dry heath and bracken slopes with scattered trees to the south and west. There are also scattered marshy grasslands, species-rich acid flushes and areas of western gorse scrub. Also included are some adjacent fields supporting species-rich neutral and acid grassland and small remnants of mature oak woodland. Several ponds and small streams are also present. The site supports numerous localised plant species, with a regionally scarce plant occurring in the acid grasslands	137
Cwm Fedw	SINC (31)	Large area of grassland and wet woodland on ffridd slopes beside the course of the Nant-y-Fedw and running down into Cwm Bargod. Mainly semi-improved acid grasslands on the upper slopes, with semi-improved neutral grasslands and marshy grasslands on the lower slopes. The marshy grasslands are mainly rush-pastures, with a small area of	897

Site	Designation (& reference)	Reason for designation	Distance away (m)
		fenmeadow also present. There is ancient semi-natural woodland along the course of the Nant-y-Fedw. The site also contains bracken slopes, acid flushes and small areas of both wet and dry heathland	
Coed Cefn-Fforest & Cwm Cothi	SINC (46)	Large area of semi-natural broadleaved woodland, much of it ancient semi-natural woodland on the valley bottom and valleysides of Cwm Cothi. Site also includes wet heathlands, marshy grasslands and bracken slopes, as well as smaller areas of neutral grassland, acid grassland and acid flushes, and some small disused quarries and revegetated colliery spoil. The marshy habitats support numerous species of interest	908

Of these sites, the development has a potential to result in direct adverse impacts on 2(no.) of them: The two sites are The Lower Cwm Bargod SINC and the Afon Bargod Taf SINC. The development only has the potential to impact on the aquatic elements of these sites, principally the Afon Bargod Taf. This is because the habitats surrounding the development site are on third party land and will remain completely unaffected by the development. The only potential impacts could be indirect and result from pollution incidents and therefore the aquatic elements of the SINC sites, the Afon Bargod Taf, will be considered further in this report

Figure 3 – location of non-statutorily designated sites within 2km of the proposed development site (starred red)



5.2 AFON BARGOD TAF SINC

The Lower Cwm Bargod SINC is a largely terrestrial site which has the Afon Bargod Taf flowing through it. This latter site is a SINC in its own right. As it is anticipated that any potential impacts of the development are limited to the water environment, the two sites will be discussed as one, with only the aquatic elements considered.

5.2.1 Afon Bargod Taf SINC - evaluation

This site is a river flowing from north to south from the hills above Bedlinog to its confluence with the Afon Taf at Quakers Yard. The river channel is approximately 25m to the west of the development site. The channel is approximately 4m wide with the river being relatively shallow, approximately 0.5m; it should be noted that the river responds rapidly, increasing and reducing depth, to rainfall events. The river flows over a stone and gravel substrate.

The river provides habitat to brown trout (*Salmo trutta*) amongst other fish species, otter (*Lutra lutra*) and a range of mammals, invertebrates and birds.

It is considered to be of a **high regional (county)** level ecological importance.

5.2.2 Afon Bargod Taf SINC - impact characterisation

It is considered that there will be no direct impacts on the site from the clearance and construction phases of the development as it is separated from the it by some distance.

The most likely form of indirect adverse impacts is from pollution resulting from fuels, oils and lubricants entering the stream adjacent to the development site during the operational period.

5.2.3 Afon Bargod Taf SINC - impact assessment without mitigation

It is considered that there would be a **possible minor short term adverse** impact at a **local (site)** level as a result of pollution incidents.

5.2.4 Afon Bargod Taf SINC - mitigation measures

Mitigation will be required and will include (but not be limited to) the following measures.

- A minimum 5m buffer will be maintained between all watercourses and any clearance, construction or other development activities. This buffer will be fenced (or otherwise demarcated) to prevent access by plant, machinery and site personnel prior to any works commencing on site with evidence of the demarcation (photos and / or site plans) being supplied to the LPA prior to the works commencing
- There will be no vegetation removal within 5m of the bank of any watercourse bordering the development site; All vegetation removal and disturbance within 10m of a watercourse may only be undertaken following a check of the affected area and under ecological supervision;
- There will be no working within 5m of a watercourse without an appropriate permit to work and the appropriate statutory consents;
- All work on the proposed development site will be undertaken in accordance with relevant NRW / Environment Agency guidance on working in proximity to a watercourse;
- The free flow of water along the watercourse will be ensured at all times;
- There will be no lighting of the watercourse at all;
- Works within 5m of any the watercourses must not start any earlier than 1 hour after sunrise and must finish no later than 1 hour before sunset;

- There will be no access for personnel, plant and machinery into any watercourse unless required as part of the development; in this eventuality, access will be in accordance with an approved method statement, by permit only and strictly monitored;
- To prevent accidental discharge of sediment and other contaminants, the development site will be either bounded on its northern boundary by sediment fencing or siltation ponds (or other sediment trapping devices e.g. silt busters) will be provided at appropriate locations to prevent sediment runoff during the construction phase of the development. These will be put in place prior to any earthworks commencing;
- Designated areas will be provided for parking, washing facilities, refuelling, storage of fuels, oils, lubricants and materials e.g. cement, concrete, none of which will be within 10m of the watercourse;
- Drip trays will be placed under all stationary and parked plant, machinery and vehicles during the construction period;
- Storage of fuels and other liquids will only be in bunded (to 110% capacity) containers;
- All plant, machinery and vehicles will be inspected for leaks and malfunctions on a daily basis;
- All plant and machinery will be washed down after leaving the previous contract site and before entering the compound / work site for the first time;
- Relevant construction activities will cease during high rainfall periods to ensure mitigation measures are not overwhelmed;
- Spill kits and other pollution restricting measures e.g. hay bales will be provided along with relevant and appropriate training for personnel as necessary);
- Activity specific permits linked to risk assessments and a risk register will be required before any works which might adversely impact on watercourses;
- All watercourses will be subject of visual monitoring of water quality at least twice per day during the construction phase: at start and close of the working day; more detailed monitoring may be required should it be necessary; and
- Dust suppression measures will be employed as necessary during spells of dry weather to ensure no dust is emitted from the site.

During the operational phase of the development:

- No vehicles, plant or machinery will be stored permanently on the site;
- Should there be a requirement to store vehicles, plant &/or machinery on the site on a temporary basis, all such equipment will be provided with drip trays to prevent pollution from fuels, oils and lubricants. All trays will be checked on a minimum two day rotation and emptied as necessary with all waste oils being removed from site for recycling &/or disposal by an approved contractor;
- No skips will be stored permanently on the site;
- All skips will be washed out with all residues being removed before arrival at the site; and
- There will be no washing of skips or any other equipment on the site;

5.2.5 Afon Bargod Taf SINC - impact assessment with mitigation

It is considered that there would be a **very unlikely minor short term adverse** impact at a **local (site)** level as a result of pollution incidents.

5.2.6 Afon Bargod Taf SINC – significance of the impact

Without mitigation:

It is anticipated that the significance of the impacts due to the development will be **slight**.

With mitigation:

It is anticipated that the significance of the impacts due to the development will be **neutral**.

6 PHASE 1 HABITAT SURVEY

6.1 SUMMARY

A number of habitats were recorded within the survey area. These included:

- Scrub; and
- Bare ground.

Habitats off site included:

- Watercourses

There was no potential for any protected species to be present on the site except breeding birds and reptiles.

Where present, features of interest were recorded for which there is no appropriate categorisation. These have been identified as Target Notes (TN) and numbered and noted below.

The habitats are shown on **Figure 3** below.

6.2 BACKGROUND

The Phase 1 habitat survey was carried out to assess the existing habitats, identify any protected habitats or species that may be present, determine the impact of the proposed works on them, and identify any mitigation measures that may be necessary. This was done by undertaking both a desk study and field survey.

The survey was undertaken on the 28th September 2021.

Phase 1 habitat survey is a way of recording the basic habitat data to form a baseline level of knowledge of the ecology of a site and provide recommendations for future surveys if considered necessary.

6.3 METHODOLOGY

6.3.1 Desk study:

Refer to section 3 above.

6.3.2 Field survey:

Hugh Dixon MCIEEM BSc (Hons), an experienced surveyors from Celtic Ecology and Conservation Ltd, carried out a habitat assessment and mapping exercise in September 2021 using the Phase 1 habitat survey technique. Features of note are assigned Target Notes and referenced accordingly. Nomenclature follows Stace (1997)¹.

6.4 CONSTRAINTS

None.

¹ Stace, C (1997). *New Flora of the British Isles* (2nd Ed.). Cambridge University Press

6.5 RESULTS

6.5.1 Habitats

The following habitats were found on the site and are mapped at **Figure 3** below:

- Scrub; and
- Bare ground.

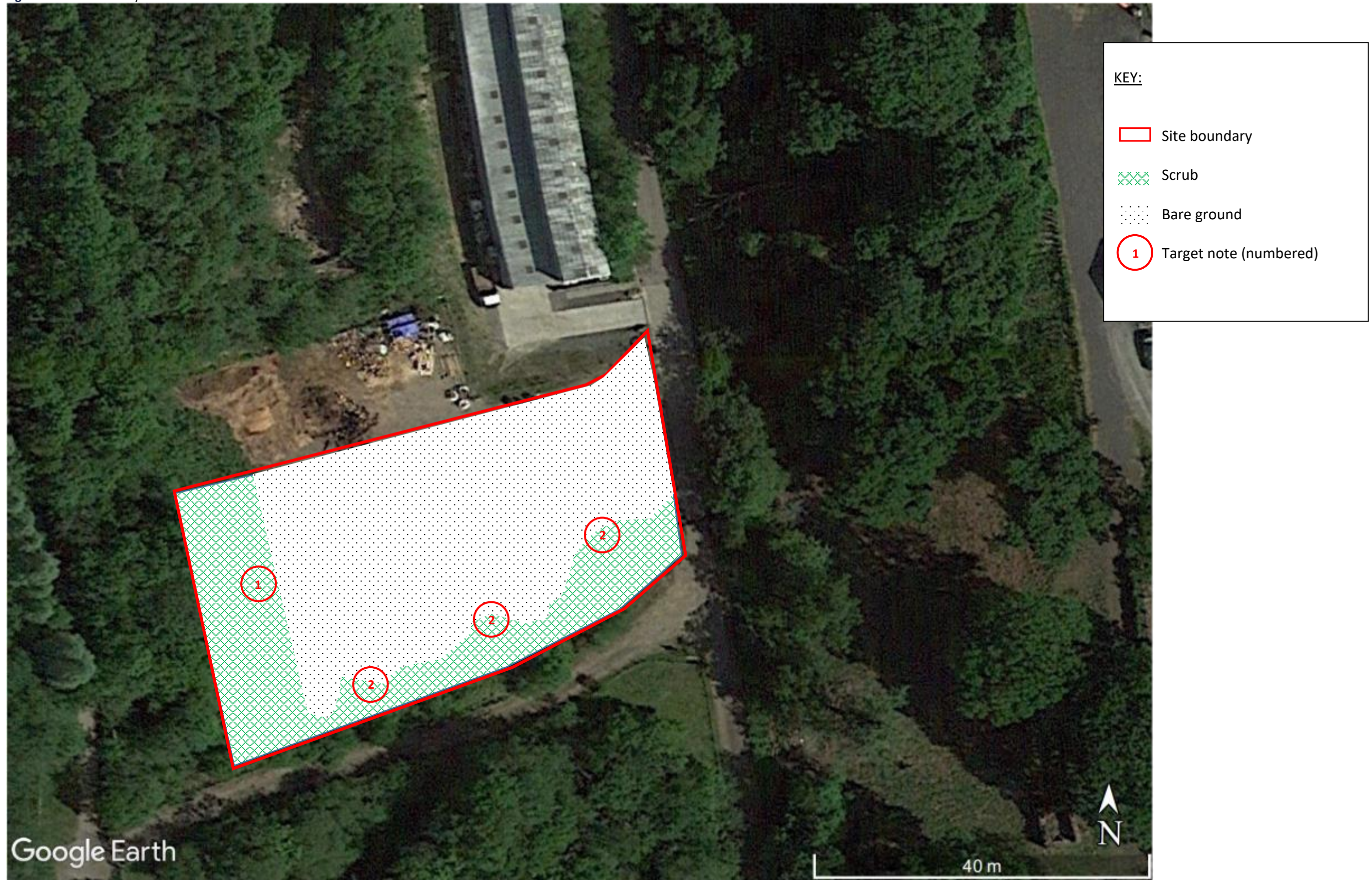
Habitats off site included:

- Watercourses

Target notes are summarised here and at **Appendix C** below.

Photos are at **Appendix A**.

Figure 3 – habitat survey results.



(Image courtesy of Google Earth)

6.5.1.1 Scrub

This habitat varies on the site between more open willow and bramble scrub to those with a closed, dense, low canopy of bramble over a mosaic of tall ruderal vegetation. This habitat is of use to breeding birds and possibly messages on the newt population in the area, and therefore it will be considered further in this report.

6.5.1.2 Bare ground

This habitat is comprised of crushed concrete and stone and bare soil. There is an extremely sparse scattering of pioneer species, mostly ribwort and greater plantains.

Despite this thin vegetation, this habitat has no ecological value and will not be considered further in this report.

6.5.2 Protected species assessment

6.5.2.1 Bats

The data search revealed the presence of foraging species including serotine (*Eptesicus serotinus*), common and soprano pipistrel (*Pipistrellus pipistrellus* & *P. pygmaeus* respectively) and noctule (*Nyctalus noctula*) bats in the area. There are records of day roosting and maternity sites within 2km of the site. No records were returned for the proposed development site.

There are no man-made structures on the site and therefore no man-made roosting sites. There are no tree roosting opportunities as the trees are all immature and of size where they do not provide potential roost features for bats.

Bats should be assumed to forage over the site.

This species group will not be considered further in this ecological assessment.

6.5.2.2 Dormouse

There are no records within the data search results for this species and therefore, despite the outwardly suitable habitat, it will not be considered further in this report.

6.5.2.3 Great crested newt

There are no records within the data search results with there being no suitable breeding habitat on the development site for this species. Therefore, while the terrestrial habitat may be suitable for this species, as the vegetated areas will not be affected by the proposed development, it will not be considered further in this report.

6.5.2.4 Otter

There are records within the data search results (the closest being approximately 250m to the south west. Otters are known to use the Afon Bargod Taf. There is habitat on the development site that this species could use for sheltering purposes.

As it is therefore likely that this species will use the Afon Bargod Taf, this species will be considered further in this report.

6.5.2.5 Badger

There are records of this species within the data search results 300m to the south west. While the bare ground habitats on the development site are unsuitable for this species, the adjacent scrub dominated bund could be used for sett building and the adjacent scrub for foraging purposes. However, no evidence of this species was observed on or close to the development site.

Given the lack of records and the lack of evidence from the site, it will not be considered further in this report.

6.5.2.6 Water vole

There are records of this species within the data search results 900m to the south. While the scrub and bare ground habitats on the development site are unsuitable for this species, adjacent habitats could be used, for example the reedbed to the south. No evidence was recorded from the site.

Given the lack of records, the lack of evidence from the site and the unsuitability of the site for this species, it will not be considered further in this report.

6.5.2.7 Hedgehog

There were records of this species in the data search results, with the closest being from approximately 250m away. The habitats on the site are useable by this species, for foraging and sheltering purposes. No evidence of it was observed anywhere on the site. As these habitats will not be affected by the proposed development, this species will not be considered further in this report.

It is anticipated that while it is not required, should there be a need for close boarded fencing or other forms of solid boundaries around the site, provision for this species will be made in the form of holes 150mm high x 200mm long at no more than 10m intervals along the bottom of existing and new fences and walls to allow hedgehogs to pass through. (This will have the added benefit of allowing other fauna to move around freely as well).

6.5.2.8 Birds

There are no records from the development site, but there are multiple records for members of this group within the data search with the closest being a long tailed tit's nest within 20m of the site's south western corner.

The scrub vegetation within the site boundaries could be used for nesting purposes by any bird species. The bare ground habitats are small and overlooked by dense scrub and mature trees on all sides which could be used by predators thereby reducing its suitability.

As none of the suitable habitat, such that it is, will be adversely affected by the proposed development and the site is already used by the client for the storage of skips, this group will not be considered further in this report.

6.5.2.1 Amphibians

There are records of common frog (*Rana temporaria*) and common toad (*Bufo bufo*) within 50m of the development site. There is no suitable breeding habitat for this group on the development site although the scrub habitats might be used during the terrestrial phases of amphibians life cycles.

As the scrub vegetation will be retained in its entirety, the lack of records and suitable breeding habitat, this group will not be considered further in this report.

6.5.2.2 Reptiles

There were records of a common lizard (*Zootoca vivipara*) within 20m of the sites south western corner. There are further records of lizards and slow worms (*Anguis fragilis*) within the data search results. It should be assumed that adder (*Vipera berus*) and grass snake (*Natrix helvetica*) will be found in the area as the habitats are considered to be optimal.

The vegetated fringes of the bare ground on the development site provides some habitat suitable for basking. The scrub overed bund provides shelter and hibernation opportunities. As the vegetated areas will remain unaffected by the development, and the affected habitats are considered to be generally unsuitable, this group will therefore not be considered further in this report.

6.5.3 Other features

No evidence of any other protected species was observed on the site.

No invasive non-native species were observed on the site. Japanese knotweed (*Fallopia japonica*) is known to be present within the area.

7 HABITATS - EVALUATION, IMPACT CHARACTERISATION AND ASSESSMENT

7.1 SCRUB

7.1.1 Continuous scrub - evaluation

This habitat is dominated by willow (*Salix* sp.) and bramble and is found to the west and south of the development site. The species are native, common and widespread. This habitat is used for nesting, foraging and commuting and dispersal by a range of fauna, including breeding birds and dormice. Badgers, hedgehogs and other small mammals use it for sheltering and foraging. However, the areas of scrub on the site are small and surrounded by other areas of scrub and woodland.

It is considered that the scrub habitats on the site are of a **low** ecological importance at a **local (site)** level.

7.1.2 Continuous scrub - impact characterisation

It is anticipated that this habitat will be retained as part of the development and will remain unaffected by it.

7.1.3 Continuous scrub - impact assessment without mitigation

It is considered that there will be a **no adverse** impacts on this habitat at a **local (site)** level.

7.1.4 Continuous scrub - mitigation measures

Mitigation is not required. However, measures to protect this habitat will be put in place and include (but not be limited to) the following:

- Protection of vegetated areas by either fencing or the placement of boulders no less than 1.5 m away from retained vegetation (including grass strips); and
- No storage of skips, plant, machinery or vehicles within 2m of any retained vegetation.

7.1.5 Continuous scrub - impact assessment with mitigation

It is considered that there will be **no adverse** impacts on this habitat as a result of the proposed development.

7.1.6 Continuous scrub – significance of the impact

Without mitigation:

It is anticipated that the significance of the impacts due to the development will be **neutral**.

With mitigation:

It is anticipated that the significance of the impacts due to the development will be **neutral**.

8 SPECIES - EVALUATION, IMPACT CHARACTERISATION AND ASSESSMENT

8.1 OTTER

8.1.1 Ecology

Otters (*Lutra lutra*) are one of Great Britain's largest land mammals. Territories must therefore be large provide enough foraging and shelter, both for everyday use and breeding. Territories may comprise up to forty kilometres of waterway including rivers, streams, ditches, wetlands, lakes, ponds and reservoirs, which the otter will defend. Although mainly nocturnal, otters will emerge during daylight to patrol their territories and hunt. Prey is comprised mainly of fish; however, they will take anything they can catch without risk to themselves, particularly amphibians and birds.

There are usually a number of places of shelter (holts) along territories. These are supplemented by the use of lying up sites which are used in addition to the main holts. Holts can take many forms: holes in banks, cavities in the root systems of riparian trees, under fallen timber, areas of dense scrub, and even areas of long grass. Breeding holts tend to be located away from rivers and potential disturbance. Otters can breed at any time of the year; the kits remain with the bitch for up to a year.

Otters have been recorded regularly on watercourses throughout south Wales.

8.1.2 Legislation

8.1.2.1 Conservation of Habitats & Species Regulations 2019

Prior to the 31st January 2020, European Union legislation required that member states designate sites for the protection of habitats and species included in the annexes of both Council Directive 92/43/EC on the Conservation of Natural Habitats and of Wild Flora and Fauna (the Habitats Directive) and Council Directive 79/409/EEC on the Conservation of Wild Birds (the Birds Directive). This legislation was implemented in the UK by the Conservation of Habitats and Species Regulations 2017 ("the Habitat Regulations"). This results in sites being designated as Special Areas of Conservation (SACs) and Special Protection Areas respectively (SPAs).

Following the UK's exit from the European Union on 31st January 2020, the law responsible for continuing to implement this legislation through the transition period is The Conservation of Habitats and Species (Amendment) (EU EXIT) Regulations 2019. All legislation within the Conservation of Habitats and Species Regulation 2017 still apply within the UK under the 2019 amendment until otherwise notified.

With regards to otters, the offences are as follows:

- Deliberately capture, injure or kill any otter
- Deliberately disturb a otter
- Damage or destroy a breeding site or resting place of an otter

Disturbance is defined as that which is likely:

- to impair their ability –
 - To survive, to breed or reproduce, or to rear or nurture their young, or
 - In the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- To affect significantly the local distribution or abundance of the species to which they belong

Working in protected sites or disturbing protected species is possible as long as consent has been issued by Natural Resources Wales (NRW).

It is possible to undertake damaging activities under the auspices of a European Protected Species Licence issued by Natural Resources Wales which provides a derogation from the Regulations, meaning that an otherwise illegal operation carried out under licence is lawful.

8.1.2.2 *Wildlife & Countryside Act 1981*

The Wildlife & Countryside Act 1981 (as amended) is the legislation for England and Wales for nature conservation, making it an offence to:

- Intentionally or recklessly disturb an otter in a place of shelter;
- Intentionally or recklessly obstruct access to a place of shelter;
- Intentionally destroy, damage or otherwise disturb a place of shelter (whether otters are present or not); and
- Intentionally or recklessly kill, injure or take (capture) an otter.

8.1.2.3 *The Environment (Wales) Act, 2016*

The Environment (Wales) Act 2016 requires that all public authorities, when carrying out their functions in Wales, seek to “maintain and enhance biodiversity” where it is within the proper exercise of their functions. In doing so, public authorities must also seek to “promote the resilience of ecosystems”. This ensures that biodiversity is an integral part of the decisions that public authorities take in relation to Wales. It also links biodiversity with the long-term health and functioning of our ecosystems, therefore helping to align the biodiversity duty with the framework for sustainable natural resource management provided in the Act.

In Wales, this legislation replaces and enhances the Natural Environment and Rural Communities Act (2006) which sought to raise the profile of biodiversity and to make sure that it is considered in all local authority decisions by ensuring that “Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.”

Other elements of NERC 2006 may still apply.

8.1.3 **Otter - evaluation**

Otters are found in every river catchment in Wales and the UK. They are known to use the Afon Bargod Taf and it is probable that they will be utilising the section of the river adjacent to the development site for foraging, commuting and dispersal purposes.

The scrub habitats are suitable for lying up sheltering purposes.

No evidence of this species was observed during the field visit.

Overall the site appears to be generally of a **moderate** ecological value to this group at a **local (site) level**.

8.1.4 **Otter - impact characterisation**

In the absence of mitigation, otters could be killed, injured and / or disturbed and their places of shelter destroyed, damaged or disturbed during vegetation removal. However, all the vegetated habitats will be retained and therefore there will be no adverse impacts on otters from the development.

8.1.5 Otter - impact assessment without mitigation

It is considered that in there will be **no adverse** impacts on otters at a **any** level.

8.1.6 Otter - mitigation measures

As there will be no vegetation removal, mitigation will not be required.

However, the vegetated areas of the site will be checked by a suitably experienced ecologist for the presence of otters no more than 24 hours in advance of any clearance commencing. Should any evidence of otters be observed during this inspection or at any other time during the clearance, the ecologist will advise on the next way forward; it may be necessary to consult with Natural Resources Wales (NRW). A development licence from NRW may be required prior to commencing or continuing any site clearance work. All clearance will be supervised by a suitably experienced and licensed ecologist.

8.1.7 Otter - impact characterisation with mitigation

It is considered that in there will be **no adverse** impacts on otters at a **any** level.

8.1.8 Otter - significance of the impact

Without mitigation

It is considered that the significance of the impact could be **neutral**.

With mitigation

It is considered that the significance of the impact could be **neutral**.

8.2 BREEDING BIRDS

8.2.1 Summary

A full breeding bird survey or assessment was not undertaken as it should be assumed that all the scrub vegetation areas will be used by birds for nesting purposes.

Ground nesting species are highly unlikely to utilise the areas of bare ground as these are very small, disturbed frequently and overlooked by taller vegetation which could be used as predator perches around it reduce its potential to be used.

8.2.2 Ecology

Most British avian species are found breeding during the spring and summer months, between April and August, although some, such as pigeons, and doves will frequently breed at all times of year, as they are not dependent on small, soft-bodied invertebrates to provide food for their chicks. Some other species, such as barn owl have also been recorded breeding in the winter months, in years when winters have been mild, and small mammal prey plentiful, although such breeding attempts are unusual, with chicks frequently failing to fledge. The breeding season can be extended for most species if the weather is mild, and food plentiful.

Contrary to common belief, whilst some bird species, such as crows and rooks, nest high in trees, often more than 10m high, the majority of British breeding birds will nest within 2m of the ground (or on the ground) within dense scrub or within holes and other natural and manmade cavities in rocks and walls.

Most bird species take considerably less than 60 days from egg-laying to chick fledging, whilst others, such as barn owl, can take more than 90 days. Many, but not all British species will make multiple breeding attempts if environmental conditions and food availability allow.

8.2.3 Legislation

In Britain, all naturally occurring avian species are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended). The legislation protects all birds, their nests and eggs, and it is an offence to:

- Intentionally kill, injure or take a wild bird;
- Intentionally take, damage or destroy the nest of any wild bird whilst it is in use or being built; and
- Intentionally take or destroy the egg of any wild bird.

In addition, birds listed on Schedule 1 of the Act, such as the red kite (*Milvus milvus*), are afforded further protection, and it is an offence to:

- Intentionally or recklessly disturb the bird whilst nest building or while at (or near) a nest with eggs or young; and
- Disturb the dependant young of such a bird.

8.2.4 Methodology

8.2.4.1 Habitat assessment

Given the time of year the assessment was undertaken, signs looked for included:

- Availability of nesting habitat;
- Availability of foraging habitat;
- Territorial displays by birds;
- Courtship displays;
- Territory establishment and holding behaviour;
- Nests; and
- Food carrying.

8.2.5 Constraints

There were no constraints to the assessment.

8.2.6 Results

8.2.6.1 Habitat assessment

The site is a very small area of bare ground bounded by scrub to the south and west. The species present in the habitats are widespread and common. The site is used on an infrequent basis by the skip company and on a regular basis by a tree surgeon.

All tree and shrub habitats on the site were suitable for nesting and foraging purposes, providing a variety of nesting sites and food sources.

It is considered that the site does not provide suitable habitat for ground nesting species as the site is small and overlooked by shrubs and tall mature trees that could be used by predators.

It is unlikely that the site will be used by wintering birds e.g. woodcock (*Scolopax rusticola*), as the areas of shrub vegetation are relatively small and surrounded by areas prone to disturbance.

8.2.7 Breeding birds – evaluation

Birds should be considered to be of **high national** importance as a result of the legislation protecting them.

All the trees and shrubs on the site should be assumed to be used by birds during the breeding season. Within the context of the site, it is considered that birds are of a generally **low local (site)** ecological importance.

8.2.8 Breeding birds - impact characterisation

It is anticipated that the vegetation on the site will be retained as part of the development.

However, if the removal of vegetation from the site to facilitate the development was to be undertaken during the breeding season, there is the potential for birds to be disturbed, killed or injured and / or their nests to be disturbed, damaged or destroyed.

8.2.9 Breeding birds - impact assessment without mitigation

As the vegetation on the site will be retained and remain unaffected, it is considered that there will be **no adverse** impacts at **any** level.

8.2.10 Breeding birds - mitigation measures

Mitigation will not be required. However, the measures proposed to ensure that scrub is retained will prevent any accidental incursion into nesting habitat by vehicles, plant &/or machinery.

8.2.11 Breeding birds - impact characterisation with mitigation

It is considered that there will be **no adverse** impacts at **any** level on breeding birds as a result of the proposed development.

8.2.12 Breeding birds - significance of the impact

Without mitigation

It is considered that the significance of the impact is **neutral**.

With mitigation

It is considered that the significance of the impact is **neutral**.

9 CONCLUSION AND RECOMMENDATIONS

Overall the site is of a **negligible** ecological value at a **local level** due to its small size, the history of clearance and use and the dominance of the bar ground habitat.

The only ecological interest is that provided by the scrub and proximity of the adjacent scrub, woodland and reedbeds.

The bare ground habitats present on and adjacent to the site have no ecological interest at all and do not provide any protected (or other) species with suitable habitat.

It is considered that no other or further ecological surveys are required.

It is recommended that to prevent harm to the Afon Bargod Taf, measures should be put in place to prevent any pollution incidents associated with the development, principally fuels, oils, lubricants and sediment.

None of the vegetated habitats present on the site will be removed or otherwise adversely affected. Indeed, they will be protected and buffered, thereby ensuring the continuation of a locally valuable ecological resource. This is unlike most of the previous instances of development at the site which have resulted in the entire site being cleared of vegetation. The retention of all vegetation will also ensure that there is no disturbance to the soil that could otherwise release buried pollutants.

The bare ground habitat present on the site is the only habitat to be adversely affected; however, it does not provide a resource exploitable by any of the section 7 species identified in the biological records data search results.

It has been advised to Celtic Ecology and Conservation Ltd. that the number of vehicle movements will be very limited, likely to be one or two trips to the site each month. It is therefore considered that the potential adverse impacts of these movements are in fact so small as to be immeasurable when set against the number of movements of vehicles to and from the climbing centre, the coach company located at the site, and the local businesses, particularly local arboricultural companies, which already use the B4255. So while it is understood that vehicles can have adverse impacts on the environment as described in the comments associated with the refusal, it is considered that the number of movements as described to the author is highly unlikely to have a measurable effect. This low number of movements will also ensure that there will be no adverse impacts as a result of vibration, dust or noise.

There will be no lighting of the site, and therefore there will be no adverse impacts on nocturnal species.

It is reiterated that there will be no cleaning of skips, plant, machinery or vehicles on the site. This will all be managed at the waste transfer station already in operation in Treharris. No more than 40 skips will ever be stored on the site, with it anticipated that this number will never be reached due to skips being in use.

It should be noted that should evidence of any European Protected Species or badger be found on the site, all relevant work will cease immediately and consultation made with NRW. One or all of the following may be required: further surveys, mitigation and / or a licence. In the event that other protected species are observed, consultation will be made with the local planning authority immediately, and appropriate measures designed and implemented.

An ecologist should be "on call" for the duration of project in the event that a protected species is found.

10 REFERENCES

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APPENDIX A - PHOTOS

PHASE 1 HABITAT SURVEY PHOTOS

Plate 1 – Bare ground



Plate 2 – Scrub covered bund



Plate 3 – Southern boundary vegetation



Plate 4 – Reedbeds to south



Plate 5 - Afon Bargod Taf



APPENDIX B - SEWBRc DATA SEARCH SPECIES SUMMARY

Scientific Name	Common Name	Taxon	Category
<i>Acanthis cabaret</i>	Lesser Redpoll	Birds	Priority Species
<i>Accipiter gentilis</i>	Goshawk	Birds	Priority Species
<i>Actitis hypoleucos</i>	Common Sandpiper	Birds	Species of Conservation Concern
<i>Aegithalos caudatus</i>	Long-tailed Tit	Birds	Species of Conservation Concern
<i>Alauda arvensis</i>	Eurasian Skylark	Birds	Priority Species
<i>Alcedo atthis</i>	Kingfisher	Birds	Priority Species
<i>Anas crecca</i>	Teal	Birds	Species of Conservation Concern
<i>Anas platyrhynchos</i>	Mallard	Birds	Species of Conservation Concern
<i>Anthus pratensis</i>	Meadow Pipit	Birds	Species of Conservation Concern
<i>Anthus trivialis</i>	Tree Pipit	Birds	Priority Species
<i>Apus apus</i>	Swift	Birds	Species of Conservation Concern
<i>Ardea cinerea</i>	Grey Heron	Birds	Species of Conservation Concern
<i>Aythya fuligula</i>	Tufted Duck	Birds	Species of Conservation Concern
<i>Branta canadensis</i>	Canada Goose	Birds	Other Species
<i>Calidris alba</i>	Sanderling	Birds	Species of Conservation Concern
<i>Chloris chloris</i>	Greenfinch	Birds	Species of Conservation Concern
<i>Chroicocephalus ridibundus</i>	Black-headed Gull	Birds	Priority Species
<i>Cinclus cinclus</i>	Dipper	Birds	Species of Conservation Concern
<i>Cuculus canorus</i>	Cuckoo	Birds	Priority Species
<i>Curruca communis</i>	Whitethroat	Birds	Species of Conservation Concern
<i>Curruca curruca</i>	Lesser Whitethroat	Birds	Locally Important Species
<i>Dryobates minor</i>	Lesser Spotted Woodpecker	Birds	Priority Species
<i>Emberiza citrinella</i>	Yellowhammer	Birds	Priority Species
<i>Emberiza schoeniclus</i>	Common Reed Bunting	Birds	Priority Species
<i>Falco columbarius</i>	Merlin	Birds	Priority Species
<i>Falco peregrinus</i>	Peregrine	Birds	Priority Species
<i>Falco tinnunculus</i>	Kestrel	Birds	Priority Species
<i>Ficedula hypoleuca</i>	European Pied Flycatcher	Birds	Priority Species
<i>Fringilla montifringilla</i>	Brambling	Birds	Priority Species
<i>Fulica atra</i>	Eurasian Coot	Birds	Species of Conservation Concern
<i>Hirundo rustica</i>	Swallow	Birds	Species of Conservation Concern
<i>Larus argentatus</i>	European Herring Gull	Birds	Priority Species
<i>Larus fuscus</i>	Lesser Black-backed Gull	Birds	Species of Conservation Concern
<i>Linaria cannabina</i>	Linnet	Birds	Priority Species
<i>Locustella naevia</i>	Grasshopper Warbler	Birds	Priority Species
<i>Loxia curvirostra</i>	Red Crossbill	Birds	Priority Species
<i>Mareca penelope</i>	Wigeon	Birds	Species of Conservation Concern
<i>Mergus serrator</i>	Red-breasted Merganser	Birds	Species of Conservation Concern
<i>Milvus milvus</i>	Red Kite	Birds	Priority Species

Scientific Name	Common Name	Taxon	Category
<i>Motacilla cinerea</i>	Grey Wagtail	Birds	Species of Conservation Concern
<i>Muscicapa striata</i>	Spotted Flycatcher	Birds	Priority Species
<i>Numenius arquata</i>	Curlew	Birds	Priority Species
<i>Oenanthe oenanthe</i>	Wheatear	Birds	Species of Conservation Concern
<i>Passer domesticus</i>	House Sparrow	Birds	Priority Species
<i>Perdix perdix</i>	Grey Partridge	Birds	Priority Species
<i>Phalacrocorax carbo</i>	Cormorant	Birds	Species of Conservation Concern
<i>Phoenicurus phoenicurus</i>	Redstart	Birds	Species of Conservation Concern
<i>Phylloscopus sibilatrix</i>	Wood Warbler	Birds	Priority Species
<i>Phylloscopus trochilus</i>	Willow Warbler	Birds	Species of Conservation Concern
<i>Picus viridis</i>	European Green Woodpecker	Birds	Species of Conservation Concern
<i>Poecile montanus</i>	Willow Tit	Birds	Priority Species
<i>Prunella modularis</i>	Dunnock	Birds	Priority Species
<i>Pyrrhula pyrrhula</i>	Eurasian Bullfinch	Birds	Priority Species
<i>Regulus regulus</i>	Goldcrest	Birds	Species of Conservation Concern
<i>Riparia riparia</i>	Sand Martin	Birds	Species of Conservation Concern
<i>Saxicola rubetra</i>	Whinchat	Birds	Species of Conservation Concern
<i>Scolopax rusticola</i>	Woodcock	Birds	Species of Conservation Concern
<i>Sturnus vulgaris</i>	Starling	Birds	Priority Species
<i>Turdus iliacus</i>	Redwing	Birds	Priority Species
<i>Turdus philomelos</i>	Song Thrush	Birds	Priority Species
<i>Turdus pilaris</i>	Fieldfare	Birds	Priority Species
<i>Turdus torquatus</i>	Ring Ouzel	Birds	Priority Species
<i>Turdus viscivorus</i>	Mistle Thrush	Birds	Species of Conservation Concern
<i>Tyto alba</i>	Western Barn Owl	Birds	Priority Species
<i>Vanellus vanellus</i>	Lapwing	Birds	Priority Species
<i>Kindbergia praelonga</i>	Common Feather-moss	Bryophytes	Locally Important Species
<i>Anguilla anguilla</i>	European Eel	Fish	Priority Species
<i>Salmo trutta subsp. fario</i>	Brown Trout	Fish	Locally Important Species
<i>Salmo trutta</i>	Brown/Sea Trout	Fish	Priority Species
<i>Gliophorus laetus</i>	Heath Waxcap	Fungi and Slime Moulds	Locally Important Species
<i>Anania stachydalis</i>	Woundwort Pearl	Invertebrates (insect)	Locally Important Species
<i>Boloria selene</i>	Small Pearl-bordered Fritillary	Invertebrates (insect)	Priority Species
<i>Bombus hortorum</i>	Garden Bumblebee	Invertebrates (insect)	Locally Important Species
<i>Bombus lapidarius</i>	Red-tailed Bumblebee	Invertebrates (insect)	Locally Important Species
<i>Bombus lucorum</i>	White-tailed Bumblebee	Invertebrates (insect)	Locally Important Species
<i>Bombus pascuorum</i>	Common Carder Bee	Invertebrates (insect)	Locally Important Species
<i>Bombus sylvestris</i>	Forest Cuckoo Bee	Invertebrates (insect)	Locally Important Species
<i>Bombus terrestris</i>	Buff-tailed Bumblebee	Invertebrates (insect)	Locally Important Species
<i>Brachinus crepitans</i>	Bombardier Beetle	Invertebrates (insect)	Species of Conservation Concern
<i>Calopteryx splendens</i>	Banded Agrion	Invertebrates (insect)	Locally Important Species
<i>Chiasmia clathrata</i>	Latticed Heath	Invertebrates (insect)	Priority Species
<i>Coenonympha pamphilus</i>	Small Heath	Invertebrates (insect)	Priority Species
<i>Cordulegaster boltonii</i>	Golden-ringed Dragonfly	Invertebrates (insect)	Locally Important Species

Scientific Name	Common Name	Taxon	Category
<i>Crambus pratella</i>	Scarce Grass-veneer	Invertebrates (insect)	Species of Conservation Concern
<i>Craniophora ligustri</i>	Coronet	Invertebrates (insect)	Locally Important Species
<i>Erynnis tages</i>	Dingy Skipper	Invertebrates (insect)	Priority Species
<i>Harmonia axyridis</i>	Harlequin Ladybird	Invertebrates (insect)	Other Species
<i>Lasiommata megera</i>	Wall	Invertebrates (insect)	Priority Species
<i>Leptophyes punctatissima</i>	Speckled Bush-cricket	Invertebrates (insect)	Locally Important Species
<i>Lestes sponsa</i>	Common Emerald Damselfly	Invertebrates (insect)	Locally Important Species
<i>Magdalis cerasi</i>	Magdalis cerasi	Invertebrates (insect)	Species of Conservation Concern
<i>Spilosoma lutea</i>	Buff Ermine	Invertebrates (insect)	Priority Species
<i>Trypocopriss vernalis</i>	Spring Dumbledor	Invertebrates (insect)	Species of Conservation Concern
<i>Tyria jacobaeae</i>	Cinnabar	Invertebrates (insect)	Priority Species
<i>Potamopyrgus antipodarum</i>	Jenkins' Spire Snail	Invertebrates (other, marine or freshwater)	Other Species
<i>Arvicola amphibius</i>	European Water Vole	Mammals (terrestrial)	Priority Species
<i>Chiroptera</i>	Bats	Mammals (terrestrial)	Priority Species
<i>Eptesicus serotinus</i>	Serotine	Mammals (terrestrial)	Priority Species
<i>Erinaceus europaeus</i>	West European Hedgehog	Mammals (terrestrial)	Priority Species
<i>Lutra lutra</i>	European Otter	Mammals (terrestrial)	Priority Species
<i>Meles meles</i>	Eurasian Badger	Mammals (terrestrial)	Priority Species
<i>Mustela erminea</i>	Stoat	Mammals (terrestrial)	Priority Species
<i>Neovison vison</i>	American Mink	Mammals (terrestrial)	Other Species
<i>Nyctalus noctula</i>	Noctule Bat	Mammals (terrestrial)	Priority Species
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	Mammals (terrestrial)	Priority Species
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	Mammals (terrestrial)	Priority Species
<i>Pipistrellus</i>	Pipistrelle	Mammals (terrestrial)	Priority Species
<i>Sciurus carolinensis</i>	Eastern Grey Squirrel	Mammals (terrestrial)	Other Species
<i>Anguis fragilis</i>	Slow-worm	Reptiles and Amphibians	Priority Species
<i>Bufo bufo</i>	Common Toad	Reptiles and Amphibians	Priority Species
<i>Lissotriton helveticus</i>	Palmate Newt	Reptiles and Amphibians	Priority Species
<i>Rana temporaria</i>	Common Frog	Reptiles and Amphibians	Priority Species
<i>Zootoca vivipara</i>	Common Lizard	Reptiles and Amphibians	Priority Species
<i>Adiantum capillus-veneris</i>	Maidenhair Fern	Vascular Plants	Species of Conservation Concern
<i>Anacamptis pyramidalis</i>	Pyramidal Orchid	Vascular Plants	Locally Important Species
<i>Buddleja davidii</i>	Butterfly-bush	Vascular Plants	Other Species
<i>Carex pseudocyperus</i>	Cyperus Sedge	Vascular Plants	Locally Important Species
<i>Carex riparia</i>	Greater Pond-sedge	Vascular Plants	Locally Important Species
<i>Ceratocarpus claviculata</i>	Climbing Corydalis	Vascular Plants	Locally Important Species
<i>Elodea canadensis</i>	Canadian Waterweed	Vascular Plants	Other Species
<i>Fallopia japonica</i>	Japanese Knotweed	Vascular Plants	Other Species
<i>Filago minima</i>	Small Cudweed	Vascular Plants	Locally Important Species
<i>Frangula alnus</i>	Alder Buckthorn	Vascular Plants	Locally Important Species
<i>Hyacinthoides non-scripta</i>	Bluebell	Vascular Plants	Priority Species
<i>Jacobaea erucifolia</i>	Hoary Ragwort	Vascular Plants	Locally Important Species
<i>Lepidium campestre</i>	Field Pepperwort	Vascular Plants	Species of Conservation Concern
<i>Mimulus guttatus</i>	Monkeyflower	Vascular Plants	Other Species
<i>Mimulus moschatus</i>	Musk	Vascular Plants	Other Species
<i>Ophrys apifera</i>	Bee Orchid	Vascular Plants	Locally Important Species

Scientific Name	Common Name	Taxon	Category
<i>Puccinellia distans</i>	Reflexed Meadow-Grass	Vascular Plants	Locally Important Species
<i>Pyrola rotundifolia</i>	Round-leaved Wintergreen	Vascular Plants	Locally Important Species
<i>Sagittaria sagittifolia</i>	Arrowhead	Vascular Plants	Species of Conservation Concern
<i>Salix purpurea</i>	Purple Willow	Vascular Plants	Locally Important Species
<i>Spergularia marina</i>	Lesser Sea-spurrey	Vascular Plants	Locally Important Species
<i>Stellaria palustris</i>	Marsh Stitchwort	Vascular Plants	Priority Species
<i>Veronica agrestis</i>	Green Field-speedwell	Vascular Plants	Locally Important Species
<i>Viburnum lantana</i>	Wayfaring-tree	Vascular Plants	Locally Important Species

APPENDIX C – TARGET NOTES

Target note number	Description
TN 1	Scrub covered bund (approx 2.5m high & 5m wide). Scrub dominated by bramble over tall ruderal species
TN 2	A strip of semi-improved grassland between scrub and bare ground

APPENDIX D – SITE LOCATION PLAN

