



APPENDIX B: EXTENDED PHASE 1 HABITAT SURVEY 2025 UPDATE REPORT – JUNE 2026



PUBLIC

Neath Port Talbot County Borough Council **CRYDDAN BROOK FLOOD ALLEVIATION SCHEME (FAS)**

Extended Phase 1 Habitat Survey 2025 Update Report

June 2026

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Neath Port Talbot County Borough Council

CRYDDAN BROOK FLOOD ALLEVIATION SCHEME (FAS)

Extended Phase 1 Habitat Survey 2025 Update Report

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EXECUTIVE SUMMARY

WSP was commissioned by Neath Port Talbot County Borough Council (NPTCBC) to undertake an update to the initial Extended Phase 1 Habitat Survey undertaken in 2022 for the proposed Flood Alleviation Scheme (FAS) along the Cryddan Brook (British National Grid (BNG): SS 74714 96588); the 'Scheme'. Reference to the 'Site' below refers to the Red Line Boundary for the Scheme. The following ecological receptors and potential impacts from the Scheme were identified.

One Local Nature Reserve (Eaglebush Valley) encompasses the south-eastern boundary of the Site around the Cryddan Brook; no nationally or internationally important sites were within the Site.

17 non-statutory designated sites are located within 2km, of these only four were within or adjacent to the Site and have potential to be impacted by the Scheme.

No Ancient Woodland parcels exist within the Site.

Habitats in the Site included semi-natural broadleaved woodland; scrub; scattered trees; semi-improved neutral grassland; poor semi-improved grassland; swamp; marginal vegetation; standing water; running water; intertidal mudflats/saltmarsh; amenity grassland, ephemeral/short perennial; introduced shrub; hedgerow (intact species-poor); walls/buildings; bare ground; and hardstanding.

Priority Habitat types included lowland mixed deciduous woodland (semi-natural broadleaved woodland); eutrophic standing water (Neath Canal) and a mosaic of intertidal mud/saltmarsh/ reedbed (Neath Estuary Site of Importance for Nature Conservation (SINC)).

Habitats have potential to support bats, otter *Lutra lutra*, badger *Meles meles*, small mammals (including hedgehog *Erinaceus europaeus*, fish, reptiles, and amphibians, alongside some potential to support water vole *Arvicola amphibius* and white-clawed crayfish *Austropotamobius pallipes*.

Birds are highly likely to be commuting, foraging, and breeding within the Site and there is some potential for Schedule 1 species Cetti's warbler to be breeding within the vicinity of Neath Estuary and Neath Canal SINC.

There is potential for bluebell *Hyacinthoides non-scripta* presence within woodland within the Site.

In the absence of mitigation, the Scheme may have potential to cause injury/death, disturbance and/or habitat loss or degradation via clearance and pollution to designated sites, habitats and species. Potential impacts largely focused to the north-western extent of the Site. Further assessments will be required to determine full impacts to certain species.

Schedule 9 non-native plant species Japanese knotweed *Reynoutria japonica* and Indian (Himalayan) balsam *Impatiens glandulifera* were extensive along the Cryddan Brook, Neath Canal and River Neath. There is potential for these species to be disturbed and spread by the Scheme.

Recommendations (inclusive of further surveys and mitigation) will be required to ensure that the proposed Cryddan Brook FAS Scheme adheres to best practice guidelines and is compliant with current wildlife legislation. Where recommendations are implemented, it is preliminarily considered that the Scheme would unlikely result in significant long-term detrimental impacts to habitats and species at the Site. This, however, will be evaluated further in the recommended Ecological Impact Assessment following results of the further surveys. Recommended enhancement measures give



opportunity to provide a Net Benefit for Biodiversity at the Site in the long-term. These should be refined and developed further as the Scheme progresses to planning.

1 INTRODUCTION

- 1.1.1. WSP was commissioned by Neath Port Talbot County Borough Council (NPTCBC) to undertake an update to the initial Extended Phase 1 Habitat Survey undertaken in 2022 for the proposed Flood Alleviation Scheme (FAS) along the Cryddan Brook, Neath, Port Talbot (British National Grid (BNG) reference: SS 74714 96588); the 'Scheme'.
- 1.1.2. Reference to the 'Site' in this report will refer to the RLB, which is illustrated in Image 1-1. A 50m buffer was surveyed around the Site during the Phase 1 Habitat Survey which will be referred to as the 'Survey Area'.

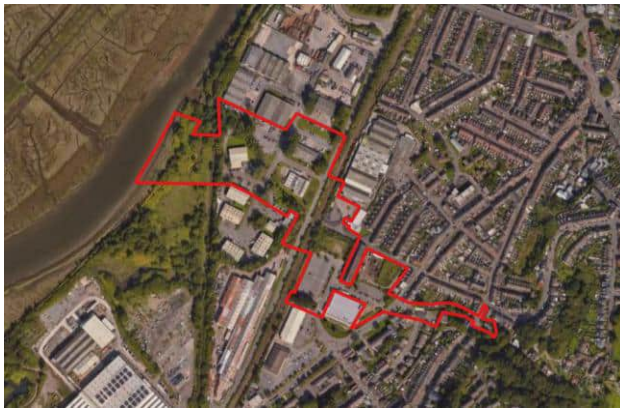


Image 1-1 – 2025 red line boundary for the Scheme. Adapted from Google Earth. (Google Earth, 2025).

1.2 SCHEME BACKGROUND & PROPOSED WORKS

- 1.2.1. The Scheme is located between the Cryddan Brook outfall into the River Neath and Foundry Road in the town of Neath, Port Talbot. Works are required to alleviate flooding to properties in the town from surface water, ground water, and fluvial flooding events associated with the Cryddan Brook. Three short-listed 'Options' were under consideration in 2022 which have subsequently been reduced to one finalised option (initial Red Line Boundary (RLB) and options detailed in the Environmental Scoping Report (WSP, 2022)). The finalised option is detailed as follows.
- 1.2.2. The proposed Scheme is a culvert bypass route from the existing culvert at St Catherine's Close. It is to run between Castle Bingo and Fordpad, through the Castle Bingo car park to DC Griffiths Way, under the existing railway, up Milland Road, into Milland Road Industrial Estate and under Cryddan Brook and Neath Canal, before discharging into the tidal River Neath. It involves a series of 2.5 x 1m box culverts and 2m diameter pipe culverts with 2no. storage chambers and 2m diameter pipe outfalls over a distance of ~ 690m. To construct the Scheme the following structures/construction methods (provisionally provided at this design stage and dependent on contractor) will be required:
 - **Culvert construction** – pipework installed via part open cut with use of trench box or trench sheeting to stabilise excavations. For some locations (i.e., crossing the railway and outfall pipe work crossing under the Cryddan Brook and Neath Canal) trenchless excavation techniques will be used. This involves creating shafts for micro tunnelling via the use of a tunnel boring machine (TBM). Shafts may be constructed using sheet piles or the caisson sinking method.
 - **Manhole construction** – constructed by creating shafts from sheet piles and creating a reinforced concrete base and pre-cast concrete rings to create the manhole. For connecting pipes, a diamond coring machine will be used. Wet concrete will be required to facilitate construction.

- *Outfall construction* – sheet pile cofferdam installed to segregate tidal water from the working area. Outfall anticipated to be a precast concrete outfall, which can be lowered/sited using a crane. Excavation required to facilitate installation. Flap valve to also be installed on the outfalls.
- *Chamber construction* – excavation to install an underground chamber with concrete walls and base with connection for pipes. The chamber downstream by the outfalls is intended to be a diversion chamber, so it could either be a large precast concrete manhole chamber or a precast concrete tank. May require sheet piling during excavations.
- *Wall construction* - Walls from St Catherine's Close culvert to Old Road are to be raised where possible. May be undertaken by re-casting concrete or adding more brick courses to existing wall.
- *Temporary works* – management of the existing watercourse levels on Cryddan Brook. Likely to cover the brook section between the St Catherine's Close culvert at the upstream end to downstream of the Briton Ferry Road east of Castle Bingo during works at this location. May comprise over-pumping of the brook. Temporary cofferdam installed at the River Neath outfall.

1.2.3. Machinery required will include a range of 6-22t 360 excavators, cranes (select locations), TBM tunnelling machine, diamond coring machine, relevant excavator attachments or piling rig, concrete trucks and chutes, 6t dumpers and skips. Works anticipated to take 9-18months.

ECOLOGICAL BACKGROUND

- 1.2.4. Full details of the ecological findings for the initial RLB can be found in the Extended Phase 1 Habitat Survey Report (WSP, 2022b). Using results from the initial habitat survey, land use within the current 2025 RLB is located predominantly within industrial and urbanised areas. The Cryddan Brook runs through the Survey Area in a south-east to north-westerly direction and confluences with the River Neath (part of the Neath Estuary SINC) to the north-western extent of the Site.
- 1.2.5. Upstream reaches of the Cryddan Brook which now fall outside the current RLB to the south-east, comprise woodlands associated with Eaglesbush Valley Local Nature Reserve (LNR) and Cupola Wood and agricultural land with scattered farmsteads and residential dwellings.

1.3 SCOPE/PURPOSE OF REPORT

- 1.3.1. The brief of the Extended Phase 1 Habitat Survey Update commission was to:
- Provide an update to the initial Extended Phase 1 Habitat Survey which detailed a baseline of the ecological conditions at the Site and surrounding study area, with reference to whether legally protected and/or notable sites, species or habitats are present or likely to be present.
 - Provide recommendations specific to the finalised Scheme option to enable compliance with relevant nature conservation legislation and planning policy.
 - To identify any requirements for avoidance, mitigation, compensation or enhancement measures and/or further ecological surveys.
- 1.3.2. This report includes details of the survey methodologies, results and discussion and contains recommendations for further survey/mitigation where appropriate.

1.4 RELEVANT LEGISLATION AND POLICY

- 1.4.1. The appraisal has been compiled with reference to relevant nature conservation legislation, planning policy and the UK Biodiversity Framework from which the protection of sites, habitats and species is derived in Wales. The context and applicability of each item is explained as appropriate in the relevant sections of the report and additional details are presented in Appendix A.

2 METHODOLOGY

2.1 OVERVIEW

- 2.1.1. This report has been prepared in accordance with best practice guidance as outlined in the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017a, 2017b and 2020) and Joint Nature Conservation Committee (JNCC, 2016); and guidance contained in the British Standard – Code of Practice for Biodiversity and Development BS42020:2013 (B.S.I, 2013).

2.2 DESK STUDY – 2025 UPDATE

- 2.2.1. The initial desk study results were updated to ensure data and records for ecological information relating to the finalised proposed development area and its surroundings were informed by current data. The following organisations/websites were consulted during September-October 2025.
- 2.2.2. For the purpose of the desk study exercise, records were collated within various radii from the central BNG for the Site. This approach is consistent with current good practice guidance published by the CIEEM, 2017a and 2017b. To provide the baseline data for the ecological desk study, the following information was requested from South East Wales Biodiversity Records Centre (SEWBRc):
- Records of legally protected and notable species within 2km of the Site (5km for bat records); and
 - Records of non-statutory sites designated for nature conservation value within 2km of the Site.
- 2.2.3. Freely downloadable datasets (available from Natural Resources Wales (NRW) and DEFRA's Multi-Agency Geographic Information for the Countryside (MAGIC)) were consulted for information regarding the presence of statutory designated habitats within 2km of Site.
- 2.2.4. Freely downloadable datasets (available from NRW) were consulted for information regarding Priority Habitats and woodland listed on the Ancient Woodland Inventory (AWI).
- 2.2.5. Neath Port Talbot Planning Department was also contacted for information regarding Tree Preservation Orders (TPOs) within the Site.
- 2.2.6. In addition, open source 1:25,000 Ordnance Survey mapping was used to identify any mapped water bodies and watercourses within 500m of the Site.
- 2.2.7. The findings of the desk study have been incorporated within Section 3 and Appendix B of this report and designated site locations shown on Figure 1.
- 2.2.8. The ecological desk study was carried out by an associate member of CIEEM who has completed numerous ecological desk studies within the last year.

2.3 EXTENDED PHASE 1 HABITAT SURVEY – 2025 UPDATE

- 2.3.1. Experienced WSP surveyors conducted the survey based on Extended Phase 1 habitat survey techniques (JNCC, 2010) on the 1st October 2025. The survey consisted of a thorough walkover of the Survey Area covering the finalised RLB (area significantly reduced from the initial 2022 survey) and 50m buffer surrounding, to determine if previously mapped habitat types in 2022 remained unchanged or required reclassification. Reference was made as appropriate to previous floral species lists for each habitat. The botanical list is provided in Appendix C and nomenclature of

vascular plants follows Stace (2019). The relative abundance of each vascular plant species was recorded using the Abundant, Common, Frequent, Occasional, Rare (ACFOR) scale. Dominant vascular plant species were noted, as were any uncommon species or species indicative of particular habitat types, but exhaustive species lists were not compiled. Invasive plant species were also mapped where first encountered in a particular habitat type, but detailed mapping of locations were not made. Supporting survey photographs are provided in Appendix D.

- 2.3.2. The habitats were also assessed for their potential to support protected/notable species of plants and/or animals, and observation was made of any incidental signs of protected/notable species. The outputs of the survey include a Phase 1 Habitat Map – 2025 Update which is illustrated on Figure 2. Any target notes compiled are illustrated on the Phase 1 Habitat Map and detailed fully in Appendix E.

2.4 DAYTIME BAT WALKOVER (DBW)

- 2.4.1. WSP ecologists conducted an external inspection of trees and structures within the Survey Area during the Extended Phase 1 survey visit. Ecologists inspected any features present for potential bat access and egress points, potential roosting sites and signs of bats themselves, using binoculars and torches where appropriate. Due to the number of trees in the Survey Area the DBW was undertaken to provide an overview of potential features to inform requirements for more detailed assessment/survey.
- 2.4.2. The survey methods were based on Bat Conservation Trust guidelines (4th Edition) (Collins, J (ed), 2023).

2.5 SURVEY CONSTRAINTS

- 2.5.1. The optimal period for undertaking Extended Phase 1 habitat surveys is between April and September (inclusive). This survey took place just outside of the optimal period in October, meaning some plant species may not have been detectable. It is therefore possible that protected plant species such as bluebell *Hyacinthoides non-scripta* are present within the Survey Area.
- 2.5.2. Any ecological survey can only identify what was present in the Survey Area at the time it was conducted, and habitat use by species can change over time. The length of time that the survey data remains valid will depend on a case-by-case basis, but it is generally considered that if the proposed works do not commence within 18 months of the date of the survey in this report an update may be required. Survey results and desktop data presented in this report therefore remain valid until June 2027.

3 RESULTS

3.1 DESIGNATED SITES

- 3.1.1. Designated sites identified during the desk study are detailed as follows and locations shown on Figure 1.

STATUTORY SITES

- 3.1.2. There were no nationally (e.g., Sites of Special Scientific Interest (SSSIs)), or internationally important (e.g., European Protected Sites - Special Areas of Conservation (SACs)) statutory designated sites within 2km (30km for bat designated sites) of the Site.
- 3.1.3. The statutory site Crymlyn Burrows SSSI was sited on the banks of the River Neath approximately 6km downstream and may share a hydrological connection with the Site during high tides. Construction will be confined to a localised outfall area on the southern bank of the River Neath and appropriate measures to negate pollution and flood risk will be implemented. It is therefore considered unlikely for works to result in damage or degradation to this SSSI or its key designatory features and will not be considered further in this report.
- 3.1.4. One LNR was located within the Site.

Table 3-1 – Statutory designated sites of European, International or UK importance within 2km (30km for bat designated sites) for the Site.

Site Name	Designation	Description	Approximate distance & orientation from Site
Eaglesbush Valley	LNR	Eaglesbush Valley is a steep-sided wooded valley dominated by sessile oak <i>Quercus petraea</i> located in the Melincryddan area of Neath. Other species include silver birch <i>Betula pendula</i> , ash <i>Fraxinus excelsior</i> , holly <i>Ilex aquifolium</i> , alder <i>Alnus glutinosa</i> , beech <i>Fagus sylvatica</i> , and sycamore <i>Acer pseudoplatanus</i> . Ground flora includes lesser celandine <i>Ficaria verna</i> , wood sorrel <i>Oxalis acetosella</i> , bluebell <i>Hyacinthoides non-scripta</i> , and winberry (bilberry) <i>Vaccinium myrtillus</i> . The site, designated as a LNR in June 2008, is a mix of ancient semi-natural woodland habitats dissected by the Cryddan brook and supports a variety of woodland birds (Woodland Trust, 2025).	Encompasses the Cryddan Brook to south-eastern extent of the Site

NON-STATUTORY SITES

- 3.1.5. 17 non-statutory designated sites (i.e., Sites of Importance for Nature Conservation (SINCs)) were located within 2km of the Site, of these four were directly within or adjacent to the Site. The latter are detailed in Table 3-2.

Table 3-2 – Non-statutory sites within or adjacent to the Site.

Site Name	Designation	Description	Location within Site
Neath Port Talbot Watercourses	SINC	Includes all watercourses within Neath Port Talbot area. No further information provided by SEWBRc data searches.	Cryddan Brook and whole of the Site sits within the NPT watercourses SINC
Neath Estuary	SINC	The Neath Estuary is a large site which starts inland at Tonna and runs westwards to Briton Ferry where it meets the sea at Baglan Burrows. Includes the River Neath and variety of wetland habitats including coastal saltmarsh, reedbeds, intertidal mudflats and flood plain grazing marsh. Species recorded include curlew <i>Numenius arquata</i> , lapwing <i>Vanellus vanellus</i> , and otter <i>Lutra lutra</i> .	Encompasses the Site west of the Neath Canal
Neath Canal	SINC	Neath Canal runs between Glynneath and Briton Ferry supports outstanding aquatic and emergent flora along much of its length. Adjacent habitats include saltmarsh, Neath Estuary, wet grassland and carr woodland, brownfield and industrial sites. Bankside vegetation includes numerous orchid species, as well as typical emergent plants such as yellow flag iris <i>Iris pseudacorus</i> and greater spearwort <i>Ranunculus lingua</i> . Otters are also regularly seen on the canal's riparian zone. Other important species recorded included Cettis' warbler <i>Cettia cettia</i> kingfisher <i>Alcedo atthis</i> , common toad <i>Bufo bufo</i> , hairy dragonfly <i>Brachytron pratense</i> , grass snake <i>Natrix helvetica helvetica</i> , common lizard <i>Zootoca vivipara</i> , slow-worm <i>Anguis fragilis</i> , adder <i>Vipera berus</i> and water vole <i>Arvicola amphibious</i> .	SINC bisects the Site to the north-west - proposed culvert pipe is set to pass under the canal.
The Waun, Cimla	SINC	Y Waun comprises an extensive mosaic of enclosed land that lies to the south of Cimla. Much of this land has impeded drainage and supports unimproved and semi-improved wet grasslands and valley mires that flank Cryddan Brook. Other important habitats include Registered Ancient Woodland and Ancient Hedgerows. Notable recorded species include brown hare <i>Lepus europaeus</i> , small pearl-bordered fritillary <i>Boloria selene</i> , and devil's-bit scabious <i>Succisa pratensis</i> . Habitat also considered suitable for otter, bats, and reptiles. Marsh Fritillary <i>Euphydryas aurinia</i> management guidance was recommended within the SINC information to ensure the best areas of grassland are maintained within a favourable condition.	Encompasses the Cryddan Brook to south-eastern extent of the Site flanking the Foundry Rd and Cryddan Brook around the Eaglebush Valley.

3.1.6. The following non-statutory sites were also located within the 2km of the Site (distances provided taken from the central grid reference for the Site):

- NPT Ancient Semi-Natural Woodland (419m)
- Square Pond (683m)
- Gwlyptir Mynachlog Nedd (752m)
- Garth Mor (771m)
- Tennant Canal (776m)
- Roman Way Reedbed (850m)
- Gnoll Country Park (1191m)
- Giant's Grave (1544m)
- Pentreffynnon (1551m)
- Catwg Wetland (1691m)
- Coed Bach A'r Cwm (1816m)
- Preswylfa Dingle (1844m)
- Bwlch Road Hedges (1953m)

3.1.7. These all fall outside the Site and are at a sufficient distance and/or are not hydrologically connected and will unlikely be impacted by the Scheme. These will therefore not be discussed further in this report.

OTHER HABITATS OF CONSERVATION IMPORTANCE

Ancient Woodland (AW)

3.1.8. No parcels of Ancient Woodland (AW) lie within 100m of the Site. The nearest AW parcels were located 100-500m along the Cryddan Brook, as detailed in Table 3-3. These parcels will not be impacted by works. AW will not be discussed further in this report.

Table 3-3 – Closest AW sites to the Site within 100-500m.

Name/ID	Approximate distance & direction from the Site
Ancient semi-natural woodland - 12255	110m south-east of Site (east of Foundry Road)
Ancient semi-natural woodland - 7766	150 m south-east of Site (encompassing and west of Foundry Road)
Restored ancient woodland site - 23144	250 m south-south-west (south of Meadow Road)
Ancient semi-natural woodland – 12254/8058/7497/7498/18283	Closest parcel 350m south-east (encompasses Cupola Wood including parts of Eaglesbush Valley LNR)

Tree Preservation Orders/Conservation Areas

3.1.9. No TPOs and/or Conservation Areas were identified with or near the Site (NPTC, 2025). These will not be discussed further in this report.

B-lines

3.1.10. The Site is fully encompassed within a B-line area. This is designated as an area of importance in providing a stepping stone for pollinators to habitats in the wider area.

3.2 PHASE 1 HABITAT SURVEY – 2025 UPDATE

OVERVIEW

- 3.2.1. Habitats within the Site remained largely unchanged from corresponding habitats identified during the initial 2022 survey, with only minor changes to habitat extents or types noted.
- 3.2.2. The Phase 1 Habit Survey identified the following habitats:
- Semi-natural broadleaved woodland
 - Dense/continuous and scattered scrub
 - Scattered trees (broadleaved and coniferous)
 - Semi-improved neutral grassland
 - Poor semi-improved grassland
 - Swamp (reedbed)
 - Marginal vegetation
 - Standing & Running water
 - Intertidal mudflats/saltmarsh
 - Amenity grassland
 - Ephemeral/short perennial
 - Introduced shrub
 - Hedgerow (intact species-poor)
 - Walls, Buildings (and associated gardens – not accessed)
 - Bare ground & Hardstanding
- 3.2.3. The following priority habitat types, of which are classified under Section 7 of the Environment (Wales) Act 2016 as being of principal importance for maintaining and enhancing biodiversity in relation to Wales, were recorded:
- Lowland mixed deciduous woodland (recorded as semi-natural broadleaved woodland)
 - Eutrophic standing (standing open water - Neath Canal)
 - Intertidal mudflats/ saltmarsh/ reedbed (mosaic).
- 3.2.4. Any supporting survey photographs are provided in Appendix D. Additionally, where TNs are stated, these refer to target notes and are illustrated on Figure 2 and are described further in Appendix E.

SEMI-NATURAL BROADLEAVED WOODLAND – A1.1.1

- 3.2.5. Semi-natural broadleaved woodland was located to the north-western extent of the Survey Area where the Cryddan Brook approached the Neath Canal/River Neath. Woodland then flanked the canal corridor.
- 3.2.6. Woody species included abundant willow species *Salix* spp. and alder *Alnus glutinosa*, commonly occurring sycamore *Acer pseudoplatanus* and hawthorn *Crataegus monogyna*, occasional dogwood *Cornus sanguinea* and rarely occurring guelder rose *Viburnum opulus*. Ground flora included abundant Japanese knotweed *Reynoutria japonica* and Indian (Himalayan) balsam *Impatiens glandulifera* (both WCA Schedule 9 listed invasive species) and locally abundant bramble *Rubus fruticosus* agg. Common to frequently occurring species included common reed *Phragmites australis*, meadowsweet *Filipendula ulmaria*, common nettle *Urtica dioica*, creeping buttercup *Ranunculus repens*, common hogweed *Heracleum sphondylium*, and butterfly-bush *Buddleja davidii* as well as occasionally occurring rosebay willowherb *Chamaenerion angustifolium* and lord's-and-

ladies *Arum maculatum*. Woodland along the canal and River Neath banks is likely to qualify as lowland mixed deciduous woodland.

- 3.2.7. Further woodland was noted to the south-east of the Survey Area linking with the Eaglebush Valley LNR. Woodland was more open and disturbed in this section with density increasing further east outside the Survey Area. Woody species included abundant sycamore and occasional ash *Fraxinus excelsior*, and privet *Ligustrum* sp. Ground flora species included abundant Japanese knotweed and Himalayan balsam and commonly occurring common nettle, common hogweed, ground elder *Aegopodium podagraria*, creeping buttercup, male-fern *Dryopteris filix-mas* and wood avens *Geum urbanum*.

DENSE/ CONTINUOUS AND SCATTERED SCRUB (WITH SCATTERED TREES) - A2

- 3.2.8. Patches of dense/continuous scrub and scattered scrub dominated by bramble occurred throughout the Survey Area, notably along the railway corridor and along grassland and woodland boundaries. Additional scrub areas bordered parcels of transitional poor semi-improved grassland and ephemeral short-perennial parcels near D.C.Griffiths Way.
- 3.2.9. Species within scrub areas included abundant bramble with frequent to commonly occurring butterfly-bush. Constant tree species included willow, ash, dogwood, alder, and sycamore. Cherry laurel *Prunus laurocerasus* was also locally abundant where scrub transitioned to woodland east of where the Cryddan Brook bisected the Neath Canal.
- 3.2.10. Japanese knotweed was a feature of scrub areas along the Cryddan Brook and railway corridor.

SCATTERED TREES (BROADLEAVED AND CONIFEROUS) – A3

- 3.2.11. Scattered trees were concentrated around the industrial areas west of Milland Road and within commercial areas of Neath itself. Species comprised mainly broadleaved and ornamental species, although some coniferous species were present. Species included occasional sycamore, oak species *Quercus* spp., silver birch *Betula pendula*, ash, cherry species *Prunus* sp., white poplar *Populus alba*, maple species *Acer* sp., dogwood, pine species *Pinus* sp., Leyland cypress *Cupressus x leylandii*.

SEMI-IMPROVED NEUTRAL GRASSLAND – B2.2

- 3.2.12. One small patch of semi-improved neutral grassland was located near the north-western boundary of the Site, west of the Neath Canal. Cock's-foot *Dactylis glomerata*, meadow-grass species *Poa* sp. common knapweed *Centaurea nigra* and red fescue *Festuca rubra* were abundant to frequently occurring, while species such as ribwort plantain *Plantago major*, rough hawkbit *Leontodon hispidus*, yarrow *Achillea millefolium*, red clover *Trifolium pratense*, and white clover *Trifolium repens* were frequent to occasionally occurring.

POOR SEMI-IMPROVED GRASSLAND – B6

- 3.2.13. Strips of poor semi-improved grassland (not all mapped) were located alongside roadsides verges within the residential/commercial areas of Neath.
- 3.2.14. Species included frequent perennial rye-grass, broad-leaved dock *Rumex obtusifolius*, dandelion *Taraxacum officinale* agg., creeping buttercup and ribwort plantain. Cock's-foot, common nettle, common ragwort *Senecio jacobaea* and red clover were occasionally occurring, and common knapweed rarely occurring.

TALL RUDERAL – C3.1

- 3.2.15. Mapped tall ruderal comprised an extensive area of Japanese knotweed surrounding a patch of semi-improved neutral grassland to the north-western boundary of the Site, west of the Neath Canal.
- 3.2.16. A smaller area was noted to the south-east of the Survey Area with similar species composition, although Japanese knotweed was noted to have been treated in this area.

SWAMP – F1

- 3.2.17. Swamp comprising reedbeds dominated by common reed was part of a mosaic of habitats including intertidal mud and saltmarsh within the Neath Estuary SINC to the north-west of the Site.

MARGINAL VEGETATION – F2

- 3.2.18. Marginal vegetation (not mapped) mixed with bankside scrub and scattered trees was located alongside Cryddan Brook north-west of the railway line. Species included locally abundant Japanese knotweed, frequent Indian (Himalayan) balsam and occasional canary reed-grass *Phalaris arundinacea*.
- 3.2.19. Further marginal/emergent vegetation comprising mainly common reed, yellow flag iris and occasional bur-reed species *Sparganium* sp. were present alongside Neath Canal and floating species water lily and pondweed were noted in the canal itself.

STANDING WATER – G1

- 3.2.20. Neath Canal at the north-western extent of the Survey Area falls under the broad habitat category of 'Standing open waters and canals' and was considered priority habitat type 'eutrophic standing waters.' Depth varied and high silting was observed. Marginal and floating vegetation was noted (see Marginal Vegetation – F2 above)

RUNNING WATER – G2

- 3.2.21. The running water of Cryddan Brook, the central focus of the Site, ran from southeast to northwest through the Survey Area before merging with the hydrologically connected Neath River.
- 3.2.22. The Cryddan Brook was relatively fast flowing. Substrate varied with rock/cobbles interspersed with siltier concreted sections. Within the Survey Area there was a high percentage of manmade structures such as culvert pipes, a backflow valve at the outfall to the River Neath, weirs and retaining walls, plus a flood alleviation structure which bifurcates the flow under high water levels.

INTERTIDAL MUDFLATS/ SALTMARSH (DENSE/CONTINUOUS) – H1/H2.6

- 3.2.23. A mosaic of saltmarsh and intertidal mud, along with reedbed (see also Swamp – F1) was present within Neath Estuary SINC on the banks of the River Neath to the north-western extent of the Survey Area. Intertidal mud with occasional cobbles were noted at low tide and seaweed (species not identified) was noted on the strandline.
- 3.2.24. Species within the saltmarsh included abundant red fescue and commonly occurring sea aster *Aster tripolium* and couch species *Elymus* sp. Sea plantain *Plantago maritima* was frequent and occasional species included sea milkwort *Lysimachia maritima*, orache species *Atriplex* sp (possibly grass-leaved orache), sea beet *Beta vulgaris* subsp. *maritima*. Mugwort *Artemisia vulgaris*, common vetch *Vicia sativa* and silverweed *Argentina anserina* were occasional on the upper banks.

AMENITY GRASSLAND – J1.2

- 3.2.25. Parcels of amenity grassland were present in landscaped verges within the industrial estate and urbanised areas. Species included commonly occurring perennial rye-grass and meadow-grass species, as well as occasional daisy *Bellis perennis* and dandelion.

EPHEMERAL/ SHORT PERENNIAL– J1.3

- 3.2.26. A mosaic of ephemeral/short perennial interspersed with bare ground, scattered scrub and trees was located near DC Griffiths adjacent to the railway line. Grass species such as cock's-foot, red fescue and rough meadowgrass were common and indicates this is transitioning into grassland. Moss species (locally abundant), bristly oxtongue *Helminthotheca echioides*, dandelion, lesser trefoil *Trifolium dubium*, rough hawkbit and greater plantain *Plantago major* were occasionally occurring,
- 3.2.27. A further area of ephemeral/short perennial was located between the Castle Bingo car park and railway corridor. Hedge mustard *Sisymbrium officinale* was abundant and smooth sow-thistle *Sonchus oleraceus*, and dock species *Rumex* sp. occasional. Indian (Himalayan) balsam was also noted.

INTRODUCED SHRUB – J1.4

- 3.2.28. Introduced shrub was present within urbanised areas of the Survey Area Species included laurel *Prunus* sp., snowberry *Symphoricarpos* sp., *berberis* species and Wilson's honeysuckle *Lonicera nitida*.

HEDGEROWS (SPECIES-POOR) – J2.1

- 3.2.29. Several relatively short species-poor hedgerows were noted within the town often bordering footpaths or car parks. Beech *Fagus sylvatica* was the predominant species with occasional field maple *Acer campestre*.

WALLS – J2.5 & BUILDINGS - J3.6

- 3.2.30. Walls (property and retaining walls along the brook) were often present within the urban sections of the Survey Area. These were not mapped.
- 3.2.31. Residential (and associated gardens) and commercial properties were extensive in the Survey Area.

BARE GROUND- J4 & HARDSTANDING

- 3.2.32. Small patches of bare ground were noted often in association with ephemeral/short perennial habitat or unmade footpath/tracks.
- 3.2.33. Hardstanding areas comprised mainly roads, streets, car parks and industrial estate land.

3.3 PROTECTED AND PRIORITY SPECIES

- 3.3.1. Species results combining information from data searches and physical observations during the Phase 1 Survey are presented as follows. A full list of protected or priority species and species of conservation concern records within 2km of the Site (5km for bats) is provided in Appendix B.

EUROPEAN PROTECTED SPECIES

Bats

- 3.3.2. A total of 253 records were returned from the 5km data search for bats, comprising ten distinct species, three categories for bats identified to genus level and one category for unidentified bats. The most common species recorded was common pipistrelle *Pipistrellus pipistrellus* for which 68 records were returned.
- 3.3.3. The closest record was for a noctule bat *Nyctalus noctula* approximately 300m east-northeast of the central BNG for the Site. The closest bat roost record was for a noctule bat approximately 920m southeast of the central BNG for the Site in the Eaglebush Valley Woods.
- 3.3.4. Site assessment for bats is detailed in Section 3.4 – Daytime Bat Walkover.

Hazel Dormouse

- 3.3.5. No hazel dormouse *Muscardinus avellanarius* records were returned within 2km in the last 10 years.
- 3.3.6. Habitats within the Survey Area were predominately negligible for dormouse often lacking in sufficient cover, shrub layer connectivity or successional food resources preferred by dormouse. Urban hedgerows were managed and not dense in structure. Banksides along the brook/canal and River Neath were often managed and/or dominated by Japanese knotweed.
- 3.3.7. Scrub and scattered trees along the railway corridor may provide more suitable habitat and/or connectivity to more suitable woodland in the wider area.

Otter

- 3.3.8. Seven records for otter *Lutra lutra* were returned within 2km. The closest record was in 2016 for two individuals described as possibly a mother and cub at the Cryddan Brook culvert, Milland Road. Records were also returned for otter along the River Neath, Neath Canal and along the Cryddan Brook within the Eaglesbush Valley LNR.
- 3.3.9. Neath Estuary SINC and Neath Canal SINC are cited as supporting otter and The Waun, Cimla SINC in the upstream reaches was considered suitable to support the species (see Table 3-2).
- 3.3.10. The bankside habitats along much of the Cryddan Brook in the Survey Area were sub-optimal for otter holt establishment due to modifications such as gabion baskets, concrete retaining walls or exposure to human disturbance. Potential increased in the less disturbed/modified habitats closer to the Neath Canal and along the River Neath. Foraging and commuting potential exists between the Cryddan Brook and River Neath/Neath Canal.

Great crested newt

- 3.3.11. One record for great crested newt (GCN) *Triturus cristatus* was returned within 2km, located north of the River Neath, which would provide a barrier to movement for individuals to enter the Site.
- 3.3.12. A large pool of standing water was identified via ordnance survey mapping (MAGIC, 2025) 225m south-west of the northern extent of the Site. A further large pond is located approx. 500m further south-west separated by hardstanding/buildings associated with the Millands Industrial Estate.
- 3.3.13. The Neath Canal which bisects the Site could have potential to support GCN in their aquatic stages. Terrestrial habitats along the canal to the north-western aspect of the Site such as woodland, and undisturbed grassland areas may offer some suitability for the species.

Marsh Fritillary

- 3.3.14. No records for marsh fritillary *Euphydryas Aurinia* were returned from the last 10 years within 2km.
- 3.3.15. Habitat within the Survey Area was unsuitable for marsh fritillary, lacking marshy grassland with suitable larval food resources. Marsh fritillary will not be considered further in this report.

UK PROTECTED SPECIES

Water Vole

- 3.3.16. One record for water vole *Arvicola amphibius* was returned via 2km data searches, for a dead individual recorded on a track 200m from the Cryddan Brook. This was approximately 400m south of the south-eastern extent of the Site.
- 3.3.17. Water vole have historically been recorded within Neath Canal SINC (see Table 3-2).
- 3.3.18. Neath Canal was found to have marginal reedbed vegetation with potential to support water vole during the survey. The upper reaches of the Cryddan Brook may have potential for water vole however downstream residential areas, which the Site largely encompasses, were less suitable due to high bankside modifications (high retaining walls, culvert pipes) and lack of dense or overhanging bankside vegetation.

Badger

- 3.3.19. Three records were returned for badger *Meles meles* within 2km in the last 10 years. Two were located to the northern side of the River Neath which would provide a barrier to movement. One was located approximately 1.5km south-west of the Site to the northern side of the Neath Canal and the canal path and crossing points could potentially allow movement from this area into the Site.
- 3.3.20. Eaglebush Valley LNR south-east of the Site contained an infographic which stated, 'at night the valley comes alive with nocturnal animals, including badgers.' Suitable habitat in the Eaglebush Valley LNR however will not be impacted by the Scheme.
- 3.3.21. Habitats within the Survey Area were largely unsuitable for badger comprising residential/commercial properties and associated infrastructure. Areas within proximity to the Neath Canal and River Neath offered improved potential with woodland corridors and more extensive habitat suitable for foraging. Potential to support sett establishment was low due to narrow and often damp woodland and or areas disturbed by frequent dog walkers.

Other Mammals

- 3.3.22. Thirty-three records were returned within 2km for two small mammal species, hedgehog *Erinaceus europaeus* (31 records) and hare *Lepus europaeus* (two records). The closest records were for hedgehog with many of these within and around residential and commercial areas indicating a significant population in and around the Site.
- 3.3.23. Habitats within the Survey Area such as woodland edges, tall ruderal, grassland and gardens were considered suitable for commuting, foraging, and breeding small mammals such as hedgehog. Hedgehog droppings were recorded between the River Neath and Neath Canal.

Birds

- 3.3.24. A total of 169 records for 30 different protected/priority bird species were returned from 2km data searches, including 14 Schedule 1 species (WCA, 1981). Schedule 1 species recorded included

Cetti's warbler *Cettia cetti*, kingfisher *Alcedo atthis*, and peregrine *Falco peregrinus*. The closest Schedule 1 records were for Cetti's warbler, peregrine, redwing, and red kite *Milvus milvus* approximately 500m northeast of the central BNG for the Site.

- 3.3.25. All other records were for Section 7 priority species listed in the Environment (Wales) Act 2016. Species included dunnock *Prunella modularis*, bullfinch *Pyrrhula pyrrhula*, lapwing *Vanellus vanellus*, and curlew *Numenius arquata*. The closest Section 7 records were for species including house sparrow *Passer domesticus*, dunnock, linnet *Linaria cannabina*, and starling *Sturnus vulgaris* approximately 230m southwest of the central BNG for the Site.
- 3.3.26. Bird species recorded during the survey included those listed in Table 3-4.

Table 3-4 – Bird species recorded during the Phase 1 Habitat Survey.

Common name	Scientific name
Blackbird	<i>Turdus merula</i>
Blue tit	<i>Cyanistes caeruleus</i>
Grey wagtail	<i>Motacilla cinerea</i>
House sparrow	<i>Passer domesticus</i>
Jackdaw	<i>Corvus monedula</i>
Long-tailed tit	<i>Aegithalos caudatus</i>
Moorhen	<i>Gallinula chloropus</i>
Robin	<i>Erithacus rubecula</i>

- 3.3.27. Habitats across the Site such as the woodland, scrub, scattered trees, grassland, running water, and hedgerows were suitable to support breeding, nesting, and commuting bird species. Reedbeds may also provide nesting habitat for Schedule 1 species Cetti's warbler. Habitats are also likely to provide feeding and shelter throughout the year.

Fish

- 3.3.28. No records for protected and priority fish species were returned within 2km in the last 10 years. Conversation between ecologists conducting the 2022 survey and a local farmer however revealed that brown trout *Salmo trutta* had previously been seen within Cryddan Brook (Verbal Communication, 2022).
- 3.3.29. Aquatic habitats within the Survey Area such as the Cryddan Brook, Neath Canal and River Neath were suitable to support a range of fish species. Fish (species not confirmed) were observed within the Neath Canal.

Freshwater (white-clawed) crayfish

- 3.3.30. No records were returned for white-clawed crayfish (WCC) *Austropotamobius pallipes* within 2km. Freshwater crayfish were however known to exist within the Neath catchment area (Environment Agency Wales, 2005).
- 3.3.31. Cryddan brook was considered to have some suitability to support freshwater crayfish however this is likely limited to upstream reaches largely outside the Survey Area where the brook becomes less modified and more suitable substrate and banks exist (rocks/cobbles and mud banks with tree roots for refuge).

- 3.3.32. There may be potential for the Neath Canal to support WCC although this was heavily silted and contained concrete retaining walls on the banks which may provide little refuge opportunities.

Reptiles

- 3.3.33. Four records were returned for two reptile species slow-worm *Anguis fragilis* and common lizard *Zootoca vivipara*. Common lizard, slow-worm, grass snake *Natrix helvetica helvetica*, and adder *Vipera berus* have also been cited within the Neath Canal SINC (see Table 3-2).
- 3.3.34. More open habitats across the Site such as the less managed grassland/short perennial parcels and railway corridor offer potential to support reptiles. A brash pile (TN8) and linear stone pile (TN9) identified during the survey may provide refugia.

Amphibians (excluding great crested newt)

- 3.3.35. Five records for two amphibian species were returned within 2km in the last 10 years comprising common toad *Bufo bufo* and palmate newt *Lissotriton helveticus*. The closest being for common toad 850m south-east of the Site. Common toad is also cited within the Neath Canal SINC (see Table 3-2).
- 3.3.36. Aquatic habitats such as the Neath Canal and terrestrial habitats on Site such as woodland, scrub, unmanaged grassland edges were considered suitable to support common amphibian species.

Invertebrates (excluding marsh fritillary and freshwater crayfish)

- 3.3.37. Forty-three records were returned for protected and priority invertebrate species within the survey area in the last 10 years. Species comprised 15 S7 moth species including cinnabar *Tyria jacobaeae*, small phoenix *Ecliptopera silaceata*, white ermine *Spilosoma lubricipeda*, and dusky thorn *Ennomos fuscantaria*; and two bee species long-horned bee *Eucera longicornis* and brown-banded carder bee *Bombus humilis*.
- 3.3.38. Small pearl-bordered fritillary *Boloria selene* is cited to have existed within The Waun, Cimla SINC and hairy dragonfly *Brachytron pratense* within Neath Canal SINC (see Table 3-2).
- 3.3.39. Habitats within the Survey Area were considered likely to support a range of both terrestrial and aquatic invertebrates.

Notable Flora and fungi

- 3.3.40. Seven records for protected and priority plant species bluebell and cornflower *Centaurea cyanus* within 2km. The closest record for bluebell approximately 1.2km northeast of the central BNG for the Site. Bluebell is also cited as having been recorded within Eaglesbush Valley LNR (see Table 3-1).
- 3.3.41. No records for protected and priority fungi were returned via data searches with exception of waxcaps recorded over 1km north-west to the northern side of the River Neath.
- 3.3.42. Whilst no priority plants or fungi were noted during the survey, grassland and woodland habitats may support such species.

NON-NATIVE SPECIES

- 3.3.43. Thirty-two records were returned for 15 invasive non-native plant species including WCA Schedule 9 listed species such as Indian (Himalayan) balsam, three-cornered garlic *Allium triquetrum*, and variegated yellow archangel *Lamiastrum galeobdolon* subsp. *argentatum*.

- 3.3.44. Schedule 9 species Japanese knotweed and Indian (Himalayan) balsam were recorded extensively within the Survey Area, particularly along the banksides of Cryddan Brook.
- 3.3.45. Wall cotoneaster *Cotoneaster horizontalis* was also noted on the eastern bank of Cryddan Brook near houses at the junction of Foundry Road and Old Road.
- 3.3.46. Other non-native plant species recorded included butterfly-bush and cherry laurel.

3.4 DAYTIME BAT WALKOVER (DBW)

- 3.4.1. Habitats on site such as woodland along the River Neath and Neath Canal and Cryddan Brook corridor, were considered suitable to support commuting and foraging bats. Bats are also likely to utilise streetlights in urban areas for foraging.
- 3.4.2. Table 3-5 provides examples of potential bat roost features noted during the visit however, an exhaustive search for potential roost features within trees was beyond the scope of the survey. Culverts and road bridges across the Survey Area were largely considered unsuitable to support roosting bats due to the following – lack of roosting features, proximity to water level limiting flight access and/or seasonal flooding lowering suitability. These therefore have not been included in Table 3-5. Bats are also likely to roost in residential properties and/or commercial buildings in Neath. As these will not be directly impacted by the Scheme they were not included in assessments.

Table 3-5 – Potential bat roosting features identified

Feature	Grid Reference	Description
Trees	SS7452196832 example tree with potential bat roosting feature (see also TN18)	Potential roost features (PRFs) in the form of rot holes and branch tear noted in willow. Further PRFs may exist in other trees across the Site. Further targeted surveys required once impacted trees are identified.
Masonry wall	SS7502396500 – (see also TN3)	Masonry wall with gaps/crevices – most look shallow however close access not obtained to full length of wall. Further assessment required if impacted.
Access bridge over canal	SS7454596850 (see also TN15)	Access bridge over canal - no close access to assess bat potential although lots of overhanging ivy may hinder flight access. Further assessment required if structurally impacted.
Bridge over canal	SS7453396909 – (see also TN16)	Concrete bridge over canal. Gaps between concrete blocks within arch – no signs of bat use in accessible sections. Outside Site and unlikely to be impacted. No further survey required.
Structure - Fordpad Ltd building (metal recycling plant)	SS 74776 96617	Several gaps within building that could provide roosting features. The building is subject to high internal noise associated with the metal works inside which may deter roosting bats. This building is unlikely to be directly impacted however should bats be using this for roosting it is anticipated that ground works within the adjoining land (car park and scrubbed over area) associated with the Scheme would not exceed the existing noise/vibratory baseline. The adjoining car park is also lit and as such lighting associated with works is unlikely to exceed the existing level in the area. No further survey required.

4 DISCUSSION AND RECOMMENDATIONS

4.1 STATUTORY & NON-STATUTORY DESIGNATED SITES

- 4.1.1. One statutory designated site: the *Eaglesbush Valley LNR*, encompasses the Cryddan Brook extending from the south-eastern boundary of the Site along the Foundry Road.
- 4.1.2. Of the 17 non-statutory designated sites, only four lie within or adjacent to the Site:
- *Neath Port Talbot Watercourses SINC* - covers all watercourses within the Site including Cryddan Brook and associated streams.
 - *Neath Estuary SINC* - encompasses the River Neath which the Cryddan Brook is hydrologically connected to, at the north-western boundary of the Site.
 - *Neath Canal SINC* - bisects the Cryddan Brook to the north-western extent of the Site.
 - *The Waun, Cimla SINC* – encompasses the length of Cryddan Brook from Foundry Rd into the Eaglebush Valley to the south-eastern boundary of the Site.
- 4.1.3. There is potential for these LNR/SINCs to be adversely impacted by works within the Site in terms of pollution to watercourses and priority habitats, or through vegetation/tree clearance if required to facilitate the works.
- 4.1.4. It should be noted that the small section of the Eaglebush Valley LNR and The Waun, Cimla SINC (overlapping sites) which fall within the Site runs between residential properties/gardens on both banks with steep bankside masonry retaining walls. It is therefore not anticipated that this habitat will have significant biodiversity value to the LNR or SINC with exception of the watercourse itself.

4.2 B-LINES

The Site lies within a B-line area. B-Line areas have been identified as important areas for providing biodiversity corridors for pollinators between habitats in the wider area. Whilst there are no direct legal obligations associated to B-Lines, the Scheme should take pollinators into consideration during development of mitigation and enhancement measures. An existing pollinator B-Line project has been registered in grassland adjacent to the south-west of the Site (see Image 4-1).

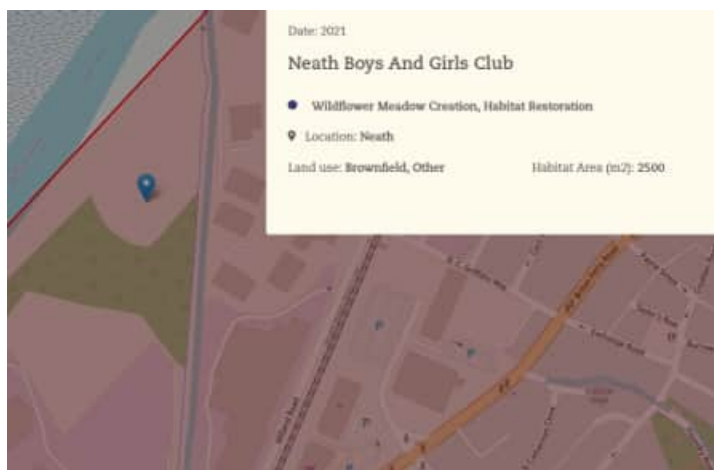


Image 4-1 - Registered B-Line project (blue marker) in grassland adjacent to the Site (as identified from <https://www.buglife.org.uk/our-work/b-lines/>)

4.3 PRIORITY HABITATS

- 4.3.1. Priority habitats are of principal importance for the purpose of maintaining and enhancing biodiversity in Wales as listed under Section 7 of the Environment (Wales) Act 2016. This places a duty on Welsh Ministers to “take all reasonable steps to maintain and enhance the types of habitats included in any list published under this section and, encourage others to take such steps”.
- 4.3.2. Priority habitat lowland mixed deciduous woodland (recorded as semi-natural broadleaved woodland), eutrophic standing water (Neath Canal), as well as mosaic of intertidal mudflats, saltmarsh, and reedbed (Neath Estuary) were recorded in the Site.
- 4.3.3. There is potential for works, in the absence of mitigation or avoidance, to adversely impact these priority habitat types via pollution and habitat loss or degradation. Further assessment will be required to determine the scale of impacts to the Priority habitats from the Scheme and inform appropriate design changes, mitigation and compensation as appropriate.

4.4 PROTECTED AND PRIORITY SPECIES

BATS

- 4.4.1. Bats are protected under the Conservation of Habitats and Species 2017 (as amended), and it is an offence to deliberately disturb, damage or destroy a breeding or resting site of any European protected species.
- 4.4.2. Trees across the Site have some potential to support roosting bats with potential roosting features such as rot holes and branch tears noted. Most culverts and road bridges in the Survey Area were assessed as negligible for roosting bats. Two bridges along the canal may offer roosting potential however one lies outside the Site (TN16) and is unlikely to be impacted. The second (TN15) was heavily obscured by overhanging ivy which may hinder flight access should any roosting features be present. A masonry wall (TN3) may also support roosting features but was not fully accessible.
- 4.4.3. To ensure compliance with wildlife legislation regarding roosting bats, further assessment will be required once impacted trees have been finalised. This should include assessment of the canal bridge at TN15 and masonry wall TN3 should these be structurally impacted as part of works.
- 4.4.4. There is potential for bats to be roosting in residential and commercial properties within the Site. However, these will not be directly impacted, and any works nearby are not anticipated to exceed the existing baseline noise/vibration or lighting conditions. These have therefore been scoped out and will not be included in any further assessments.
- 4.4.5. Habitats across the Site offer potential to support commuting and foraging bats, particularly along the wooded/scrub corridors of the Cryddan Brook and Neath Canal and around streetlights within urbanised areas. Works are expected to be undertaken during daytime hours and as such short-term impacts to transient bats will be minor to negligible. Works will also be localised and will not result in significant fragmentation of woodland habitats, therefore no long-term impacts from the Scheme are anticipated.

HAZEL DORMOUSE

- 4.4.6. Dormice are protected under the Conservation of Habitats and Species 2017 (as amended), and it is an offence to deliberately disturb and damage or destroy a breeding or resting site of any European protected species.

- 4.4.7. Habitats within the Survey Area were predominately negligible for dormouse often lacking in sufficient cover, shrub layer connectivity or successional food resources preferred by dormouse. Urban hedgerows were managed and often not dense in structure. Banksides along the brook were often managed and/or dominated by Japanese knotweed. Woodland along the Neath Canal/River Neath and around the confluence point with the Cryddan Brook may provide some opportunity for shelter however, this is considered sub-optimal due to lack of fruiting hazel, intermittent bramble and damp nature of ground cover open to some flood risk in winter.
- 4.4.8. Scrub and scattered trees along the railway corridor and drier woodland sections along the Neath Canal may provide more suitable habitat and connectivity to woodland in the wider area.
- 4.4.9. Due to the habitat structure and suitability across the Site and lack of nearby records, it is unlikely that impacts to dormouse will occur and clearance in more suitable habitat along the railway corridor is anticipated will be minor. A precautionary approach in line with general measures for small mammals is recommended to ensure no breach of wildlife legislation occurs during clearance works.

OTTER

- 4.4.10. Otters are protected under the Conservation of Habitats and Species 2017 (as amended) and it is an offence to deliberately disturb and damage or destroy a breeding or resting site of any European protected species.
- 4.4.11. Otters are known to be present in the area in and around the Site (data records and SINC citations).
- 4.4.12. Habitats along the Cryddan Brook, River Neath and Neath Canal were suitable to support commuting and foraging otter. Resting potential was limited in urbanised areas with banksides often low sward or exposed and/or modified (retaining walls). There may be potential for resting otter along the Neath Canal in less publicly disturbed areas away from the well walked footpaths. Dense scrub and woodland on banksides within the Eaglesbush Valley upstream of the Site also offered potential to support otter holts and/or resting areas. Where in-channel structures along the downstream urbanised sections of the brook are navigable, otter may pass through the Site to upstream brook reaches.
- 4.4.13. In the absence of mitigation there is potential for otters to be adversely impacted by the works resulting from pollution or clearance reducing habitat quality or availability and/or disturbance to potential holts/resting sites or foraging/commuting individuals. Impacts could arise from surface run-off and dust from materials and machinery, fuel spills, habitat removal, additional lighting or noise and disruption/obstruction of commuting and foraging routes.

GREAT CRESTED NEWT (GCN)

- 4.4.14. GCN are protected under the Conservation of Habitats and Species 2017 (as amended) and it is an offence to deliberately disturb and damage or destroy a breeding or resting site of any European protected species.
- 4.4.15. The two large pools were located at or near the outer core terrestrial zones (250m) around breeding ponds for GCN (225m and 500m) lowering the likelihood of presence in the Site area should they be using these ponds. The canal whilst could support GCN has not been cited as supporting this species historically. This also contained fish and waterfowl which lowers suitability somewhat. No direct in-channel impacts are however anticipated to the canal, as the bypass culvert is set to pass under the canal. There will be clearance of terrestrial habitat surrounding the canal (largely woodland and tall ruderal) however this will be localised to working areas and access routes.

- 4.4.16. With the lack of nearby records and no direct impacts anticipated to potential breeding waterbodies, it is considered unlikely for GCN to be impacted by works. A precautionary approach in line with general measures for common amphibians is recommended to ensure no breach of wildlife legislation occurs during terrestrial clearance works.

WATER VOLE

- 4.4.17. Water vole and their burrows are fully protected under the Wildlife and Countryside Act 1981 (as amended).
- 4.4.18. Reedbed margins alongside Neath Canal were considered to offer some suitability for the presence of water vole and the species is cited as having been recorded within this SINC (see Table 3-2).
- 4.4.19. Following email consultation with the Neath Port Talbot (NPT) Ecologist in March 2026, it was agreed due to the highly localised impact at the Neath Canal that no further assessment for water vole would be required.

BADGER

- 4.4.20. Under the Protection of Badgers Act 1992 it is illegal to kill or injure a badger, destroy a badger sett, obstruct access to/entrance of a sett, or to disturb a badger while occupying a sett.
- 4.4.21. Much of the Site was unsuitable for badger due to the Site being heavily urbanised. Habitats such as woodland, dense scrub, and grassland to the northern extent of the Site offered some suitability for commuting and foraging badger, however suitability for sett establishment was sub-optimal (narrow and/or disturbed damp woodland). More suitable habitat for sett establishment was located outside the Site in woodland in the wider canal corridor to the south/south-west.
- 4.4.22. Impacts to badger setts are therefore considered unlikely. Due to there being some foraging and commuting suitability along the wider canal corridor whereby records have been returned, a precautionary approach is recommended to ensure injury does not occur through encounters with machinery or open excavations. As works will be localised and anticipated within daytime hours, no significant short or long-term impacts will occur to foraging/commuting individuals.

OTHER MAMMALS

- 4.4.23. Mammals are protected by the Wild Mammal (Protection) Act 1996 which makes it an offence to intentionally cause unnecessary suffering to mammals by certain methods including crushing and asphyxiation which could occur during site clearance.
- 4.4.24. Hedgehogs, which are known to be present in and around the Site (data records and dropping observed), are a Priority Species for the purpose of maintaining and enhancing biodiversity in Wales under Section 7 of the Environment (Wales) Act 2016.
- 4.4.25. Habitats across the Site offered some potential to support small mammals such as hedgehog with this likely limited to residential garden areas and woodland/scrub/tall ruderal areas along the banks of the Neath Canal, and upper banks of the River Neath. Elsewhere habitat comprised extensive areas of buildings or hardstanding offering minimal opportunities for shelter. As works are localised and unlikely to impact extensive areas of suitable habitat, it is unlikely for small mammals to be impacted by works. A precautionary approach during vegetation clearance is however, recommended within denser vegetated habitats along and around the Neath Canal/River Neath.

BIRDS

- 4.4.26. Birds are protected under the Wildlife and Countryside Act 1981 (as amended) and it is an offence to damage or destroy a bird's nest whilst it is in use, or to kill or injure a bird, or to destroy an egg. In addition to this, for Schedule 1 birds it is also an offence to intentionally or recklessly disturb the bird while nest building or while at (or near) a nest with eggs or young; or disturb dependent young of such a bird.
- 4.4.27. The Site offered potential for a wide range of nesting, commuting, sheltering, and foraging birds, particularly within the woodland, scrub, scattered trees, standing and running water habitats.
- 4.4.28. The Schedule 1 listed species, Cetti's warbler, has previously been recorded within the Neath Canal SINC (see Table 3-2). Cetti's warbler has a strong affinity to reedbeds, utilising habitat throughout the year for breeding, shelter and feeding opportunities (Araujo *et.al.*, 2016). Nesting sites are usually located low in reedbed or dense vegetation near water (Robinson, 2005) therefore any disturbance or degradation of such habitat, could have an adverse impact upon the species if present.
- 4.4.29. The Cryddan Brook and Neath Canal was also considered likely to support dipper *Cinclus cinclus*. Dippers can commence nesting as early as February (Ferguson-Lees *et. al.*, 2011) and all effort should be made to avoid disturbing the species as generally they are faithful to their breeding sites.
- 4.4.30. In the absence of avoidance or mitigation, there is potential for the proposed works to cause disturbance to nesting birds (including Sch1 species Cetti's warbler) if works are conducted during the breeding season (February/March to August inclusive) which could contravene wildlife legislation regarding nesting birds. Works are anticipated to be relatively localised with suitable surrounding habitat to support most species during works and in the long-term. There could however be potential to cause long-term detrimental impacts to localised Site populations of Cetti's warbler should they be present and significant loss of reedbed habitat occurs as a result of works.

FISH & FRESHWATER CRAYFISH (WHITE-CLAWED CRAYFISH (WCC))

- 4.4.31. It is an offence under Section 2 of the Salmon and Freshwater Fisheries Act 1975 (as amended), to wilfully disturb spawn, spawning fish, or spawning areas.
- 4.4.32. The Neath Canal and River Neath (latter to which the Cryddan Brook hydrologically connects) are known to support fish and fish individuals were observed in the canal during the Survey. The Cryddan brook in the cobbled/rock sections offered potential to support resident bottom dwelling species such as bullhead *Cottus gobio*, which may include for spawning where adequate stones exist. Due to the present of a backflow valve at the outfall of the brook with the River Neath, alongside manmade barriers such as weirs and culvert pipes with downstream drops, it is unlikely for the brook to be an important migratory corridor for fish associated with the River Neath. Resident trout or brook lamprey *Lampetra planeri* may have potential to be present in the brook. However, this may be limited to the upper reaches outside the Site where the brook is less modified and passage more freely open.
- 4.4.33. WCC is listed in Appendix III of the Bern Convention and is fully protected under Schedule 5 of the Wildlife and Countryside Act (WCA) 1981 (as amended) in respect of taking from the wild and sale and is protected under the Conservation of Habitats and Species 2017 (as amended).
- 4.4.34. The Cryddan Brook offered some suitability for WCC. It is however likely this would be limited to the upper reaches of the brook outside the Site. Lower reaches within the town of Neath contained

barriers to movement such as culvert pipe outfalls with drops alongside intact retaining walls and less in-channel cobbles which would provide little bankside or in-channel refuge. This was particularly evident in canalised sections passing between Britton Ferry Rd up to the eastern side of the railway corridor.. Following email consultation with the NPT Ecologist in March 2026 it was confirmed WCC are absent from the Neath Canal.

- 4.4.35. No in-channel working is expected within the Neath Canal itself with the bypass pipe set to be installed under the canal. In-channel aspects of works along the Cryddan Brook are also anticipated to be very localised, as the bypass route will be constructed largely outside the brook with exception of the connection points. Even so, a precautionary approach to fish/WCC should be incorporated into any in-channel works. Measures will also be required to ensure pollution or disturbance to the watercourse e.g., through dust and run-off from materials and machinery, or fuel spills, noise, vibration, in-channel sediment disturbance and severance or obstruction of pathways is negated or minimised.

REPTILES

- 4.4.36. Common reptiles are protected against intentional killing and injury under the Wildlife and Countryside Act 1981 (as amended).
- 4.4.37. Common lizard, adder, and grass snake have been observed within Neath Canal SINC (Table 3-2).
- 4.4.38. Habitats such as grassland, scrub, woodland and log/brush piles within the Site were considered suitable to support the presence of such species.
- 4.4.39. Vegetation clearance to facilitate the works in such habitats has the potential to kill or injure reptiles and a precautionary approach is recommended. Overall, no long-term significant adverse impacts to reptile populations are anticipated, as suitable adjacent habitat is present to support displaced individuals and habitat connectivity would not be affected by the proposed works.

AMPHIBIANS (EXCLUDING GCN)

- 4.4.40. Amphibians (excluding GCN) are protected from unlawful sale under the WCA 1981 however, common toad is also listed under Section 7 of the Environment (Wales) Act 2016 as a species of principle importance for conserving biodiversity in Wales.
- 4.4.41. Habitats on site such as the woodland, scrub, and grassland, were considered suitable to support common amphibian species which, outside of their breeding season, use such areas for foraging and sheltering. The canal is also likely to provide opportunities for breeding although direct in-channel impacts are not anticipated as part of works.
- 4.4.42. Works have potential to cause accidental injury or killing of these species during any vegetation clearance to facilitate the works and a precautionary approach is recommended. Overall, no long-term significant adverse impacts to amphibian populations are anticipated, as suitable adjacent habitat is present to support displaced individuals and habitat connectivity would not be affected by the proposed works.

INVERTEBRATES

- 4.4.43. Habitats throughout the Site were considered suitable to support a range of common terrestrial and aquatic invertebrate species. The Site is also encompassed within a B-line which is a national strategy by Buglife to create 'a series of 'insect pathways' running through our countryside and

towns, along which we are restoring and creating a series of wildflower-rich habitat stepping stones.’ (buglife.org, 2025).

- 4.4.44. Whilst the Scheme is unlikely to significantly impact invertebrates in the long-term due to suitable adjoining habitats, measures should be taken to avoid or minimise habitat degradation or loss where possible. Mitigation and enhancement measures incorporated into the Scheme should make every effort to improve habitat for invertebrates.

NOTABLE FLORA AND FUNGI

- 4.4.45. Schedule (Sch) 8 species such as bluebells are protected under the Wildlife and Countryside Act 1981 (as amended). It is illegal to uproot the plant or bulb without permission from the landowner.
- 4.4.46. No protected and priority flora or fungi species were recorded, however, at the time of the survey in October, bluebells had finished flowering making them difficult to detect. As there were data records in the wider area, it is possible that native bluebells were present in suitable habitat within the Site.
- 4.4.47. Due to the localised nature of the works largely within urbanised areas, it was not considered likely that notable flora or fungi would be significantly impacted by the Scheme. A precautionary approach is recommended for bluebell if clearance of woodland in the northern extent of the Site is required.

NON-NATIVE SPECIES

- 4.4.48. It is an offence to cause the unlawful spread of any invasive species as listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).
- 4.4.49. Schedule 9 species Japanese knotweed and Indian (Himalayan) balsam were extensive along the Cryddan Brook, Neath Canal and River Neath. Wall cotoneaster was also recorded within the Survey Area.
- 4.4.50. A method of working will be required by the contractor to ensure unlawful spread of Japanese knotweed, Indian (Himalayan) balsam, wall cotoneaster, and any further Schedule 9 species does not occur during works. To also include other non-native plant species noted on site such as cherry laurel and butterfly-bush as appropriate.

4.5 FURTHER ASSESSMENT/SURVEY

- 4.5.1. The following further assessments and/or surveys detailed in Table 4-1 will be required in order to fully assess the ecological constraints of the Scheme. General mitigation has also been included in Table 4-1 however further mitigation may be required following the outcomes of the further surveys.
- 4.5.2. The Scheme is also to be subject to a planning application. It is not usually appropriate to submit a preliminary Extended Phase 1 Habitat Survey (or Preliminary Ecological Appraisal) report in support of a planning application (CIEEM, 2017a). As the scheme progresses to planning application stage, this report should be superseded by, or appended to, an Ecological Impact Assessment (EclA) report for submission with the planning application. This should include an evaluation of the importance of ecological features and assessment of the significance of effects.

Table 4-1 – Recommendations for further survey/assessment & general mitigation. Further mitigation likely required following further surveys

Ecological receptor	Potential constraint	Further survey/ requirements and general mitigation	Seasonal constraints
Designated sites Statutory – Eaglesbush Valley LNR Non-statutory (SINCs) - NPT Watercourses - Neath Estuary - The Waun, Cimla - Neath Canal Priority habitats - Woodland - Saltmarsh - Reedbeds - River/Canal	- Loss of trees/habitat - Habitat degradation - Pollution	- Consultation with County Ecologists where a direct impact to a designated site occurs. - National Vegetation Classification (NVC) of woodland, saltmarsh and reedbed areas. To ensure impacts are appropriately assessed and adequate habitat mitigation and compensation is developed for works to minimise damage and/or prevent permanent loss. - Avoidance or minimisation of habitat loss or disturbance particularly to saltmarsh, reedbeds, canal and semi-natural woodland habitats. - Method statement informed by this report and NVC results to ensure habitat damage is avoided, minimised or reinstated/compensated. - Track mats deployed to minimise habitat damage from machinery. - Tree loss replaced at 3:1 ratio and woodland replaced at a scale, design and species mix reflective of the area lost in line with PPW. Required to compensate loss and help to achieve NBB. Monitoring up to two years recommended to ensure successful establishment. - Tree root protection zones established in line with B.S.I guidelines (2012). - Pollution prevention measures	NVC – April - August
Bats	- Potential loss of roost sites if trees removed - Disturbance e.g., noise, additional lighting	- A detailed Ground Level Tree Assessment (GLTA) of impacted and adjacent trees once ascertained. To be undertaken as soon as possible in the event that further survey requirements are identified following the GLTA. - Inspection of canal access bridge (TN15) & masonry wall (TN3) if structurally impacted. - Avoidance of night working or construction lighting if required developed in consultation with a suitably experienced ecologist.	Ideally between November and March when PRF's are not obscured by foliage.
Otter	- Disturbance e.g., noise, lighting - Disturbance to holts/resting sites - Disruption of foraging/ commuting routes - Injury through encounters with machinery or open excavations. - Pollution	- Otter survey of Cryddan Brook, Neath Canal and southern bank of River Neath. - Avoidance of night working - Method statement to cover sensitive working practices to ensure otter are not injured should they enter working areas overnight. - Pollution prevention measures	No time constraints

Ecological receptor	Potential constraint	Further survey/ requirements and general mitigation	Seasonal constraints
Water vole	■ Pollution	■ Pollution prevention measures	
Badger	■ Habitat disturbance/degradation ■ Injury through encounters with machinery or open excavations.	■ Avoidance of night working. ■ Method statement to cover sensitive working practices to ensure badger are not injured should they enter working areas overnight.	No time constraints
Birds	■ Loss of habitat/nest sites ■ Disturbance to breeding birds ■ Potential for Schedule 1 species Cetti's warbler by Neath Canal/ River Neath	■ A survey visit of reedbed areas in the breeding season for Cetti's warbler in advance of works. If breeding confirmed, suitable avoidance and mitigation developed for impacted reedbed areas ■ If works carried out within the breeding season (February/March to August inclusive) a breeding bird check up to 48hrs prior to works commencing and Method Statement covering supervised de-vegetation works. ■ Minimisation of vegetation clearance particularly reedbed areas.	Survey between March – August Clearance ideally outside breeding bird season between September - January where possible.
Fish	■ Pollution ■ Habitat degradation ■ Disruption of pathways ■ Death/injury during in-channel works	■ In-channel works ideally undertaken outside fish spawning seasons (1st October to 15th June), unless carried out on a dry bed, or under Consent from the Local Authority Ordinary Watercourse consents officer. ■ Consultation with Natural Resources Wales advised for in-channel works particularly at the outfall location to the River Neath. ■ Method statement for any in-channel activities ■ Maintenance of aquatic passage throughout works where feasible ■ Pollution prevention and Biosecurity measures (check, clean and dry).	Ideally avoidance of in-channel works between 1st October to 15th June – covers both salmonid and coarse fish spawning periods.
White-clawed crayfish	■ Pollution ■ Disturbance ■ Habitat degradation ■ Death/injury during in-channel works	■ Precautionary checks of in-channel substrate/banksides of brook on morning of works, where impacted. ■ Pollution prevention and Biosecurity measures (check, clean and dry).	
Small mammals, Reptiles & Amphibians	■ Disturbance ■ Death/injury during ground clearance	■ Method Statement covering supervised de-vegetation works.	Clearance in April – September (inclusive) where possible
Notable flora and fungi	■ Potential for bluebell in woodland	■ Walkover prior to clearance of woodland areas to determine bluebell presence to ensure any bulbs if present can be translocated if at risk from excavations.	Ideally in April – May

Ecological receptor	Potential constraint	Further survey/ requirements and general mitigation	Seasonal constraints
Non-native invasive species	Spread of Japanese knotweed & Himalayan balsam (and other non-native invasive plant species)	Method Statement to be provided by the contractor and followed throughout the duration of the works to prevent the spread of invasive species	—
Ecological Impact Assessment (EclA)	Overall habitat/species impact assessment for Scheme. Required to support planning application	An EclA must be carried out using results of the above recommended surveys, to assess likely impacts of the Scheme. To be submitted as part of the planning application.	-

4.6 ECOLOGICAL/ENVIRONMENTAL METHOD STATEMENT

- 4.6.1. A detailed ecological/environmental method statement (or similar i.e., Construction Environmental Management Plan) should be formulated for the Scheme. This should detail appropriate working methods, timings and mitigation/compensation measures to protect habitats and species within and near to the Site and be guided by results in this report and the recommended further surveys/assessments detailed in Section 4.5.
- 4.6.2. The following should also be considered and incorporated into the method statement.

DESIGN CONSIDERATIONS - ECOLOGY

- Works staged to align with seasonal timings for species where possible i.e., tree clearance in winter, ground clearance in summer, in-channel works to avoid fish spawning periods.
- Avoidance or minimal clearance of Priority Habitats.
- Avoidance of habitats or reinstatement/replacement on a minimum of a like for like basis post-works. Enhancement of habitats beyond mitigation/compensation should also be made where possible in line with PPW and the Environment (Wales) Act, 2016.
- Tree loss to be replaced on a 3:1 basis and woodland replaced at a scale, design and species mix reflective of the area lost in line with PPW. Required to compensate loss and help to achieve NBB. Planting areas should be agreed prior to submitting the planning application..
- Maintenance of terrestrial and aquatic passage along watercourses during works where possible.
- Determination of if there is a potential risk of species entrapment within the diversion pipe design and measures implemented to prevent this i.e., grills/screen on culverts inlets/outlets. To be ascertained in consultation with a suitably experienced ecologist.

ENVIRONMENTAL BEST PRACTICE

- Pollution prevention measures - standard best practice and pollution control measures should be implemented in accordance with relevant guidance (e.g., CIRIA, 2001 and Environment Agency (2018). Guidelines for Pollution Prevention (GPP), particularly GPP 5 Works and maintenance in or near water, outlined in NetRegs (NetRegs, 2018)
- Excavations securely fenced off or covered and/ or provided with a ramp when not in use.
- Protection of trees to comply with BS5837:2012, "Trees in relation to design. Recommendations".
- Noise and vibration controlled and kept to the minimum necessary to avoid disturbance.
- Night-time working avoided and external lighting restricted to avoid additional light spill.
- Biosecurity measures (check, clean and dry) implemented.
- An appropriate Method Statement to avoid the spread of invasive non-native Schedule 9 species provided by the contractor and followed for the duration of the works.

4.7 ECOLOGICAL ENHANCEMENT OPPORTUNITIES

NET BENEFIT FOR BIODIVERSITY (NBB)

- 4.7.1. Planning Policy Wales (PPW) (Edition 12, 2024) states:
- 4.7.2. "A Resilient Wales can be supported by protecting and providing sufficient scale, extent, diversity and connectivity within, and between, landscapes and habitats to maintain and enhance biodiversity and the resilience of ecosystems. This support will enable them to withstand the pressures of change, to tackle pollution, to protect and enhance water resources, to protect soils and to enable flood mitigation, the creation of carbon sinks (especially in urban areas), and to promote

opportunities for social and economic activity based on valuing and enabling access to the natural, historic and built environment.”.

- 4.7.3. NBB in association with development is encouraged by PPW (2024) and required under Section 6 of Part 1 of the Environment (Wales) Act. The below recommendations aim to comply with an NBB approach, in the way of delivering an overall improvement in biodiversity. By engaging with these recommendations in the early stages of the Proposed Works, it is hoped that ecosystem resilience and wider ecosystem benefits can be achieved. This approach will support local authorities in achieving their Section 6 duty to “promote the resilience of ecosystems” when determining planning applications.
- 4.7.4. NRW has a duty to ensure that the environment and natural resources of Wales are sustainably maintained, sustainably enhanced and sustainably used. Article 4 of the Natural Resource Body for Wales (Establishment) Order 2012 (Welsh Government, 2012) sets a general purpose for NRW to pursue the Sustainable Management of Natural Resources (SMNR) in the exercise of its functions. The objective of the SMNR is to maintain and enhance the resilience of ecosystems and the benefits they provide and, in so doing, meet the needs of present generations of people without compromising the ability of future generations to meet their need, and contribute to the achievement of the well-being goals of the Well-being of Future Generations Act 2015.
- 4.7.5. The step-wise approach should be used to deliver a NBB, secured by PPW.
- 4.7.6. NRW have developed a framework for evaluating ecosystem resilience based on five attributes and properties specified in the Environment (Wales) Act 2016. This is referred to as DECCA and comprises the following objectives:
 - Diversity;
 - Extent;
 - Condition;
 - Connectivity; and
 - Aspects of ecosystem resilience (adaptability, recovery and resistance).
- 4.7.7. NRW has a duty to ensure that the environment and natural resources of Wales are sustainably maintained, sustainably enhanced and sustainably used. Article 4 of the Natural Resource Body for Wales (Establishment) Order 2012 (Welsh Government, 2012) sets a general purpose for NRW to pursue the Sustainable Management of Natural Resources (SMNR) in the exercise of its functions. In order to achieve this, NRW applies a set of 9 principles: adaptive management, scale, collaboration and engagement, public participation, evidence, multiple benefits, long term (consequences of actions), preventative action, and building resilience.
- 4.7.8. Importantly, the objective of the SMNR is to maintain and enhance the resilience of ecosystems and the benefits they provide and, in so doing, meet the needs of present generations of people without compromising the ability of future generations to meet their need, and contribute to the achievement of the well-being goals of the Well-being of Future Generations Act 2015.
- 4.7.9. Enhancement measures are recommended to comply with The Environment (Wales) Act 2016 and Planning Policy Wales (12th Ed. 2024). These are advised to be incorporated into a Green Infrastructure Statement outlining Net Biodiversity Benefit (NBB) for the Scheme to be submitted with the planning application.

4.7.10. Enhancement measures will be developed in more detail following the results of the further surveys and assessments and in line with the finalisation of the Scheme design. Measures however could include:

- Supplementary planting or management of the woodland, reedbed or saltmarsh areas in addition to any required compensation/mitigation, to improve structure and diversity of the existing habitat. To be developed following results of the NVC survey.
- Removal/treatment of non-native invasive plant species - Removal or treatment to eradicate or manage the presence of non-native invasive plant species e.g., Japanese knotweed and Indian (Himalayan) balsam) from banksides of Cryddan Brook, Neath Canal and River Neath would improve the Site by encouraging greater diversity of native plant species to establish.
- Removal of rubbish/fly-tipped debris from the Cryddan Brook and Neath Canal.
- Habitat management plan could be developed for the river, brook and canal habitats around the Scheme area to ensure invasive species are kept under control, fly-tipping is managed and any planting associated with the Scheme is monitored and maintained to ensure successful establishment in the long-term.
- Enhancements such as supplementary wildflower seeding and/or interspersed tree planting for pollinators within and around the B-Line project area to the north-west boundary – possible to involve initial project owners (see Section 4.2).
- Reptiles/Amphibians/Small mammals/Invertebrates - Creation of brash, stone, and/or log piles from any vegetation/trees that need to be removed during the works e.g., from wood chippings or removed branches. Ideally, these should be in more open areas in a sunny, south-facing position.
- Larger felled trunks should be retained as deadwood habitats for invertebrates and fungi.
- Dipper/grey wagtail box – box(es) should be attached in a suitable location to the underside of one of the bridges that cross Cryddan Brook or Neath Canal. This should be installed under guidance of an ecologist and located midway under the bridge, and as high as possible above the water level to reduce the risk of it being submerged during flooding. Recommended make and model: <https://www.nhbs.com/vivara-pro-woodstone-grey-wagtail-and-dipper-nest-box>.

5 CONCLUSION

- 5.1.1. One statutory designated site, namely Eaglesbush Valley LNR and four non-statutory SINC sites were located within the Site. There is potential for Eaglesbush LNR and four of the SINC sites, namely Neath Port Talbot Watercourses SINC, The Waun, Cimla SINC, Neath Estuary SINC and Neath Canal SINC to be detrimentally impacted e.g., through de-vegetation works, degradation of habitat, pollution via surface run-off and dust from materials and machinery, and/or fuel spills.
- 5.1.2. Priority Habitat types: lowland mixed deciduous woodland, saltmarsh/intertidal mudflat/reedbed mosaic and eutrophic standing water were identified at the Site. There is therefore potential for Priority Habitat to be adversely impacted in terms of pollution, degradation of habitat, and/or vegetation clearance during works.
- 5.1.3. The Site has potential to support bats, otter, badger, small mammals (including hedgehog), reptiles, and amphibians. There is also some potential for water vole to be present in the Neath Canal, and aquatic species such as WCC and fish within the canal and Cryddan Brook.
- 5.1.4. Birds are highly likely to be breeding, commuting, sheltering, and foraging within a range of habitats within the Site particularly around the denser habitats to the north-west of the Site. There is some potential for Schedule 1 Cetti's warbler to be breeding in the vicinity of Neath Estuary and Neath Canal SINC sites.
- 5.1.5. In the absence of mitigation, the Scheme may have potential to cause injury/death, disturbance and/or habitat loss or degradation to species using the Site. Further assessments will be required to determine full impacts to certain species.
- 5.1.6. The Schedule 9 WCA non-native plant species Japanese knotweed and Indian (Himalayan) balsam were recorded extensively during the survey. There is potential for these species to be disturbed and spread by the Scheme.
- 5.1.7. Recommendations (inclusive of further surveys and mitigation) provided in Sections 4.5 - 4.7 should be followed to ensure that the proposed Cryddan Brook Scheme adheres to best practice guidelines and is compliant with current wildlife legislation. Additional mitigation may be required following the results of the recommended further surveys.
- 5.1.8. Where recommendations are implemented, it is preliminarily considered that the Scheme would unlikely result in significant long-term detrimental impacts to habitats and species at the Site. This, however, will be considered further in the recommended EclA following results of the further surveys. Measures outlined in Section 4.7 give opportunity to improve/enhance the Site and adjoining areas for wildlife in the long-term. These should be refined and developed further as part of a Green Infrastructure Statement for the Scheme..

6 REFERENCES

PROJECT REFERENCES

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FIGURES

Figure 1 – Designated Sites Map

Figure 2 – Phase 1 Habitat Map- 2025 Update

Filepath: Z:\GB\Projects\UK0041xxx\UK00411142.6282 - SWMWREC Cryddan Brook FAS FBC DD\03 WIP\Ecology\QGIS\Designated Sites Map\Designated Sites Map.qgz



Contains Ordnance Survey data @ Crown copyright and database right 2025

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- Key
- Site - Red Line Boundary
 - Cryddan Brook alignment
 - 2km Buffer
 - LNR & SINC
 - EAGLESBUSH VALLEY LNR
 - Bwlch Road Hedges SINC
 - NEATH CANAL SINC
 - NEATH ESTUARY SINC
 - NPT Watercourses SINC
 - THE WAUN, CIMLA SINC



Client:	NEATH PORT TALBOT COUNTY BOROUGH COUNCIL	
Project:	CRYDDAN BROOK FAS EXTENDED PHASE 1 HABITAT SURVEY 2025 UPDATE	
Title:	DESIGNATED SITES MAP	
Drawing No.:	Drawn: FIGURE 1	EC
Date:	Checked: 05/12/2025	AD
Scale:	Approved: 1:16,000 @A3	GP

Filepath: Z:\GB\Projects\UK0041xxx\UK0041142.6282 - SWMWREC Cryddan Brook FAS FBC DD\03 WIP\Ecology\QGIS\Cryddan 2025 Phase 1 Map\Phase 1 Habitat Map\Cryddan Brook Phase 1 Update Habitat Survey V2.qgz



Key

- Site - Red Line Boundary
- 50m Survey Area
- Target Notes

Phase 1 Habitats

Scattered trees (indicative locations)

- Broadleaved
- Coniferous

Linear Features

- Standing Water
- Running Water
- Intact hedge - species-poor
- Defunct hedge - species-poor
- Hedge with trees - species-poor

Phase 1 habitat polygons

- Broadleaved woodland - semi-natural
- Scrub - dense/continuous
- Scrub - scattered
- Broadleaved Parkland/scattered trees
- Neutral grassland - semi-improved
- Poor semi-improved grassland
- Other tall herb and fern - ruderal
- Swamp
- Standing water
- Running water
- Running water - brackish
- Intertidal - mud/sand
- Saltmarsh/dune interface
- Amenity grassland
- Ephemeral/short perennial
- Introduced shrub
- Buildings
- Bare ground
- Hardstanding
- Gardens



Client:
NEATH PORT TALBOT COUNTY BOROUGH COUNCIL

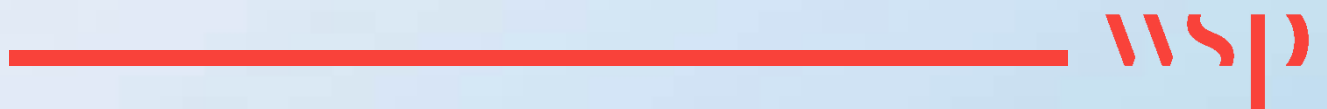
Project:
**CRYDDAN BROOK FAS
EXTENDED PHASE 1 HABITAT SURVEY
2025 UPDATE**

Title:
PHASE 1 HABITAT MAP - 2025 UPDATE

Drawing No.:	Drawn:	FIGURE 2	EC
Date:	Checked:	05/12/2025	AD
Scale:	Approved:	1:2,200 @A3	GP

Appendix A

RELEVANT LEGISLATION AND PLANNING POLICY



■ **ENGLAND & WALES LEGISLATION AND POLICY CONTEXT**

This report has been compiled with reference to relevant wildlife legislation, planning policy and the UK Biodiversity Framework. An overview and context of relevant legislation is provided, with the relevant protection each species groups or species receives summarised in Table 1.

■ **The Wildlife and Countryside Act 1981, (as amended) (WCA)**

Protected birds, animals and plants are listed under Schedules 1, 5, 8 respectively of the WCA, while Schedule 9 lists non-native and/or invasive species the spread of which in the wild is prohibited by the WCA. A description of these Schedules and their meaning is provided below.

Under the WCA (England and Wales) all birds, their nests and eggs (with exception of species listed under Schedule 2) are protected by the WCA. It is an offence to:

Intentionally kill, injure, or take any wild bird,

Take or destroy an egg of any wild bird.

Damage or destroy the nest of any wild bird (whilst being built, or in use). Under the WCA the clearance of vegetation within the survey area boundary, or immediately adjacent to the survey area during the bird nesting season could result in an offence occurring by the disruption or destruction of nest sites. The bird breeding season can be taken to occur between March - August inclusive, although is subject to variations based on species, geographical and seasonal factors.

■ **Schedule 1**

Birds listed under Schedule 1 of the WCA¹ are afforded additional protection with regard to intentional or reckless disturbance whilst nest-building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

■ **Schedule 5**

Species listed in Schedule 5 can either be fully protected or be partially protected under Section 9, which makes it unlawful to intentionally:

¹ To view the current list of Schedule 1 listed birds visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/1> [Accessed 05.12.2025]

Part 1: kill, injure or take;

Part 2: possess or control (live or dead animal, part or derivative);

Part 4 (a): damage or destruct any structure used for shelter or protection;

Part 4 (b): disturb them in a place of shelter or protection;

Part 4 (c): obstruct access to place of shelter or protection;

Part 5 (a): sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative);

Part 5 (b): advertise for buying or selling.

■ **Schedule 8**

The Act makes it an offence (subject to exceptions) to pick, uproot, trade in, or possess (for the purposes of trade) any wild plant listed in Schedule 8, and prohibits the unauthorised intentional uprooting of such plants.

■ **Schedule 9**

Invasive species listed under Schedule 9 are prohibited from release into the wild and the Act prohibits planting or “causing to grow” in the wild of any plant species listed in Schedule 9. It should be noted that certain bird species listed on Schedule 1 of the WCA are also listed on Schedule 9 to prevent release of non-native and captive individuals, this includes barn owl, red kite, goshawk and corncrake.

■ **Countryside Rights of Way Act 2000 (CRoW Act)**

The CRoW Act has amended the WCA in England and Wales strengthening the protection afforded to Sites of Special Scientific Interest (SSSI) and the legal protection for threatened species. It adds the word ‘reckless’ to the wording of the offences listed under Section 9(4) of the WCA. This alteration makes it an offence to recklessly commit an offence, where previously an offence had to be intentional to result in a breach of legislation.

■ **Natural Environment and Rural Communities (NERC) Act 2006**

Species and Habitats of Principal Importance in England and Wales are listed under Section 41 and Section 42 respectively of the NERC Act. The Section 41 and 42 lists detail species that are of principal importance for the conservation of biodiversity in England and Wales and should be used to guide decision-makers such as local and regional authorities when implementing their duty to have regard for the conservation of biodiversity in the exercise of their normal functions – as required under Section 40 of the NERC Act 2006.

■ **The Environment (Wales) Act 2016**

The Environment (Wales) Act 2016 (<http://www.legislation.gov.uk/anaw/2016/3/contents/enacted>) puts in place the legislation needed to plan and manage Wales' natural resources in a more proactive, sustainable and cohesive way. Section 7 replaces the duty in Section 42 of the NERC Act 2006, and it places a duty on the Welsh Ministers to publish, review and revise lists of living organisms and types of habitats which they consider are of key significance to sustain and improve biodiversity in Wales. The species and habitat lists are identical to those in Section 42, but it should be noted it is currently under review (23.03.2017).

■ **The Protection of Badgers Act (1992)**

It is an offence to wilfully take, kill, injure, possess or ill-treat a badger. Under the Act their setts are protected against intentional or reckless interference. Sett interference includes damaging or destroying a sett, obstructing access to any part of the sett, or disturbance of a badger whilst it is occupying a sett. The Act defines a badger sett as 'any structure or place, which displays signs indicating the current use by a badger' and Natural England (NE) takes this definition to include seasonally used setts that are not occupied but that show sign of recent use by badgers (Natural England, 2009²).

If impacts to badgers or their setts are unavoidable then authorised sett disturbance requires a licence.

■ **The UK Post-2010 Biodiversity Framework (2011-2020) (JNCC and DEFRA, 2012)**

This Framework lists the UK's most threatened species and habitats and sets out targets and objectives for their management and recovery. The UK Biodiversity Action Plan (BAP) process is delivered nationally, regionally and locally and should be used as a guide for decision-makers to have regards for the targets set by the framework and the goals they aim to achieve. The UK BAP has now been replaced by the UK Post-2010 Biodiversity

² Natural England, June 2009, Protection of Badgers Act 1992 (as amended), Guidance on 'Current Use' in the definition of a Badger Sett WMLG17, Natural England, Peterborough.

Framework, however, it contains useful information on how to characterise important species assemblages and habitats which is still relevant (UK Post-2010 Biodiversity Framework, 2012³).

■ **The Conservation of Habitats and Species Regulations 2017 (as amended)**

The Conservation of Habitats and Species Regulations 2017 (as amended) consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. They also transpose elements of the EU Wild Birds Directive in England and Wales. The Regulations came into force on 30th November 2017 and extend to England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland (excepted matters). In Scotland, the Habitats Directive is transposed through a combination of the Habitats Regulations 2010 (in relation to reserved matters) and the Conservation (Natural Habitats &c.) Regulations 1994. The Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) transpose the Habitats Directive in relation to Northern Ireland.

All species listed under Annex IV of the Habitats Directive require strict protection and are known as European Protected Species (EPS). Under Regulation 42 of the Habitats Regulations, it is unlawful to:

Deliberately kill, capture or disturb;

Deliberately take or destroy the eggs of; and

Damage or destroy the breeding site/resting place of any species protected under this legislation.

If the Ecologist determines that impacts to an EPS are unavoidable then the works may need to be carried out under a site-specific mitigation licence from Natural England (NE) or Natural Resources Wales (NRW). Low Impact Class licences are also available in both England and Wales for bats and great crested newts. This enables Registered Low Impact Consultants to undertake certain low impact activities reducing the EPS application paperwork and process length.

³ JNCC and Defra (on behalf of the Four Countries' Biodiversity Group), July 2012, UK Post-2010 Biodiversity Framework, Available from: http://jncc.defra.gov.uk/pdf/UK_Post2010_Bio-Fwork.pdf [Accessed 05.12.2025]



Certain EPS are also listed under Annex II of the Habitats Directive and are afforded protection by the establishment of core areas of habitat known as Special Areas of Conservation. This means these species are a relevant consideration in a Habitats Regulations Assessment (HRA).

The Birds Directive seeks to maintain populations of all wild bird species across their natural range (Article 2). All bird species listed under Annex I⁴ of the Birds Directive are rare or vulnerable and afforded protection by the classification of Special Protection Areas (SPAs), these are also designated under all regularly occurring migratory species, with regard to the protection of wetlands of international importance (Article 4). This means these bird species and communities are a relevant consideration in HRA.

■ **Planning Policy Wales (PPW), Edition 12 - 2024**

PPW sets out the national requirements for land use and planning. Its main aim is to ensure that the planning system contributes to sustainable development in Wales. It covers a wide range of topics, including nature conservation. It sets out the policies that apply to all new development across Wales

⁴ To view birds listed under Annex I visit: http://ec.europa.eu/environment/nature/conservation/wildbirds/threatened/index_en.htm [Accessed 05.12.2025]

Table A-1 - Key Species and National Wildlife Legislation, Policy and Biodiversity Framework Applicable in England & Wales

Table A:1: Key Species and National Wildlife Legislation, Policy and Biodiversity Framework Applicable in England & Wales								
Species	Legislation, Planning Policy and UK Biodiversity Framework							
	<i>Wildlife and Countryside Act 1981 (as amended), (WCA)</i>				<i>The Conservation of /Habitats and Species Regulations 2010 (as amended) (Habitats Regulations) - Regulation 41</i>	<i>Natural Environment and Rural Communities (NERC) Act 2006 / The Environment (Wales) Act (2016)</i>	<i>The Protection of Badgers Act 1992</i>	<i>The UK Post-2010 Biodiversity Framework 2011-2020 (JNCC and DEFRA, 2012)</i>
	<i>Schedule 1</i>	<i>Schedule 5</i>	<i>Schedule 8</i>	<i>Schedule 9</i>	<i>European Protected Species (Annex IV of the EC Habitats Directive),</i>			
Badger							✓	

Bats		✓ ⁵ (part)			✓ ⁶	✓ ⁷		✓ ⁸
Hazel Dormouse		✓ 5(part)			✓	✓		✓
Otter		✓ 5(part)			✓	✓		✓
Water vole		✓ ⁹ (full)				✓		✓
Birds	✓			✓ ¹⁰		✓ ¹¹		✓ ¹²

⁵ These species are partially protected under section 9(4)(b), (4)(c) and (5).

⁶ Only Barbastelle (*Barbastella barbastellus*), Bechstein's bat (*Myotis bechsteinii*), greater horseshoe bat (*Rhinolophus ferrumequinum*) and lesser horseshoe bat (*Rhinolophus hipposideros*) are listed on Annex II of the Habitats Directive.

⁷ Greater horseshoe bat, lesser horseshoe bat, Bechstein's bat, noctule (*Nyctalus noctula*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*) and barbastelle are listed as Species of Principal Importance in England with the addition of common pipistrelle (*Pipistrellus pipistrellus*) in Wales listed under

Section 7 of the Environment (Wales) Act (2016) <http://www.legislation.gov.uk/ukpga/2006/16/contents>.

⁸ Barbastelle bat, Bechstein's bat, noctule, soprano pipistrelle, brown long-eared bat, greater horseshoe bat, lesser horseshoe bat are listed as UK BAP species of bat.

⁹ Class Licences are available to Registered Consultants to intentionally disturb, damage or destroy water vole burrows or to displace water voles from their burrows in relation to a development proposal where the licensed action provides a conservation benefit for water voles. Certain displacement operations may be carried out under a Class licence by a registered person in England, however in Wales all displacement operations must be carried out under a site-specific licence.

¹⁰ To view plants and animals listed on Schedule 9 Part 1 visit <http://www.legislation.gov.uk/ukpga/1981/69/schedule/9> [accessed 6 April 2017]

¹¹ There are 49 species of birds listed as Species of Principal Importance in England in Section 41 of the NERC Act 2006 and 51 species in Wales under Section 7 of the Environment (Wales) Act (2016) <http://www.legislation.gov.uk/ukpga/2006/16/contents>.

¹² To view the current list of UK BAP priority birds, visit: <http://jncc.defra.gov.uk/page-5163> [Accessed 05.12.2025] .

Reptiles		✓ ¹³ (part)		✓ ⁹	✓ ¹⁴	✓ ¹⁵		✓ ¹⁶
Amphibians		✓ ¹⁷ (part)		✓ ¹⁸	✓ ^{19, 20}	✓ ²¹		
White-clawed Crayfish		✓ ²² (partial)			✓ ²³	✓		✓

¹³ The four common reptile species, Adder (*Vipera berus*), Grass snake (*Natrix natrix*), Common lizard (*Zootoca vivipara*) and Slow worm (*Anguis fragilis*) are offered partial protection under section 9(5). The rarer UK reptile species (Smooth snake (*Coronella austriaca*) and Sand lizard (*Lacerta agilis*)) are partially protected under section 9(4)(b) and (c) and (5).

¹⁴ Smooth snake (*Coronella austriaca*) and Sand lizard (*Lacerta agilis*) are the only reptiles to be designated as European Protected Species.

¹⁵ All 6 reptile species are listed as Species of Principal Importance in England listed under Section 41 of the NERC Act 2006 and 5 species, excluding smooth snake, listed under Section 7 of the Environment (Wales) Act (2016) <http://www.legislation.gov.uk/ukpga/2006/16/contents>.

¹⁶ To view the current list of UK BAP priority herptile species visit: <http://jncc.defra.gov.uk/page-5166> [Accessed 05.12.2025].

¹⁷ The four common reptile species, Adder (*Vipera berus*), Grass snake (*Natrix natrix*), Common lizard (*Zootoca vivipara*) and Slow worm (*Anguis fragilis*) are offered partial protection under section 9(5). The rarer UK reptile species (Smooth snake (*Coronella austriaca*) and Sand lizard (*Lacerta agilis*)) are partially protected under section 9(4)(b) and (c) and (5).

¹⁸ Common frog (*Rana temporaria*), Common toad (*Bufo bufo*), Smooth newt (*Lissotriton vulgaris*) and Palmate newt (*Lissotriton helveticus*) are offered partial protection under section 9(5). Great crested newt (*Triturus cristatus*) and Natterjack toad (*Epidalea calamita*) are offered partial protection under section 9(4)(b) and (c) and (5). Pool frog (*Pelophylax lessonae*) is offered partial protection under section 9(4)(b) and (c)(1) only and with respect to England only.

¹⁹ Great crested newt, Natterjack toad and Pool frog are the only amphibians to be designated European Protected Species.

²⁰ Great crested newt is the only amphibian listed on Annex II of the Habitats Directive.

²¹ Great crested newt, Natterjack toad and Common toad are listed as Species of Principal Importance in England in Section 41 of the NERC Act 2006 and under Section 7 of the Environment (Wales) Act (2016) <http://www.legislation.gov.uk/ukpga/2006/16/contents>.

²² Under the Wildlife and Countryside Act it is illegal to take or sell white clawed crayfish under the WCA. A licence is required to survey (hand net or trap) for the species. To undertake work within WCC inhabited rivers a Class Licence maybe issued by the relevant authority to move WCC away from harm prior to works. Although WCC are not protected from killing or injury Natural England state in their Class licence that due to declining numbers all efforts should be made to conserve the species.

²³ White clawed crayfish are listed under Annex II and V of the Habitats Directive.

Invertebrates		✓ ²⁴ (full/part)		✓	✓ ^{25, 26}	✓ ²⁷		✓ ²⁸
Fish		✓ ²⁹ (full/part)		✓ ⁹	✓ ^{30, 31}	✓ ³²		✓ ³³

²⁴ To view the current list of invertebrates that are protected under this Act either in part or full visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/5> [Accessed 05.12.2025] .

²⁵ The Large blue butterfly (*Maculinea arion*), Fisher's estuarine moth (*Gortyna borelii lunata*) and Lesser whirlpool ram's-horn snail (*Anisus vorticulus*) are the only invertebrates to be designated European Protected Species.

²⁶ There are currently twelve invertebrates listed in Annex II of the Habitats Directive; White-clawed crayfish (*Austropotamobius pallipes*), Southern damselfly (*Coenagrion mercuriale*), Marsh fritillary butterfly (*Eurodryas aurinia*), Violet click beetle (*Limoniscus violaceus*), Stag beetle (*Lucanus cervus*), Freshwater pearl mussel (*Margaritifera margaritifera*), Narrow-mouthed whorl snail (*Vertigo angustior*), Round-mouthed whorl snail (*Vertigo genesii*), Geyer's whorl snail (*Vertigo geyeri*), Desmoulin's whorl snail (*Vertigo moulinsiana*), Lesser whirlpool ram's-horn snail (*Anisus vorticulus*) and Fisher's estuarine moth (*Gortyna borelii lunata*).

²⁷ There are currently 379 invertebrate species (not including marine species) listed as Species of Principal Importance in England http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0ahUKEwivvu7J9trSAhXiCsAKHX4TBGcQFggvMAM&url=http%3A%2F%2Fpublications.naturalengland.org.uk%2Ffile%2F6518755878240256&usq=AFQjCNEpiUWYuOqhVcfSDvi_3iK2TJytfQ and 188 species in Wales http://www.eryri-npa.gov.uk/_data/assets/pdf_file/0003/486156/SpeciesList.pdf listed under Section 41 of the NERC Act 2006 and listed under Section 7 of the of the Environment (Wales) Act 2016. [Accessed 05.12.2025]

²⁸ To view the current list of UK BAP priority invertebrates, visit: <http://jncc.defra.gov.uk/page-5169> [Accessed 05.12.2025] .

²⁹ To view the current list of fish either part or fully protected under the Act visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/5> [Accessed 05.12.2025] .

³⁰ Sturgeon (*Acipenser sturio*) is the only fish to be designated a European Protected Species.

³¹ There are eight fish species listed on Annex II of the Habitats Directive. To view the current list visit: <http://jncc.defra.gov.uk/page-1523>[Accessed 05.12.2025] .

³² There are 35 species of fish listed as Species of Principal Importance in England listed under Section 41 of the NERC Act 2006 and 10 species in Wales listed under Section 7 of the Environment (Wales) Act 2016.

³³ To view the current list of UK BAP priority fish visit: <http://jncc.defra.gov.uk/page-5164> [Accessed 05.12.2025] .

Plants			✓ ³⁴	✓ ⁹	✓ ^{35, 36}	✓ ³⁷		✓ ³⁸
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³⁴ To view the current list of Schedule 8 listed plants visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/8> [Accessed 05.12.2025].

³⁵ There are nine plant species designated as European Protected Species. To view the current list visit: <http://www.legislation.gov.uk/ukxi/2010/490/schedule/5/made> [Accessed 05.12.2025].

³⁶ To view the current list of plant species on Annex II of the Habitats Directive visit: <http://jncc.defra.gov.uk/page-1523> [Accessed 05.12.2025].

³⁷ There are currently 152 vascular plants listed as Species of Principal Importance in England listed under Section 41 of the NERC Act 2006 and 77 species in Wales listed under Section 7 of the Environment (Wales) Act 2016.³¹ To view the current list of UK BAP priority plants visit: <http://jncc.defra.gov.uk/page-5171> and <http://jncc.defra.gov.uk/page-5168> [Accessed 05.12.2025].

³⁸ To view the current list of UK BAP priority plants visit: <http://jncc.defra.gov.uk/page-5171> and <http://jncc.defra.gov.uk/page-5168> [Accessed 05.12.2025].

Appendix B

SUMMARY OF ECOLOGICAL DESK STUDY DATA

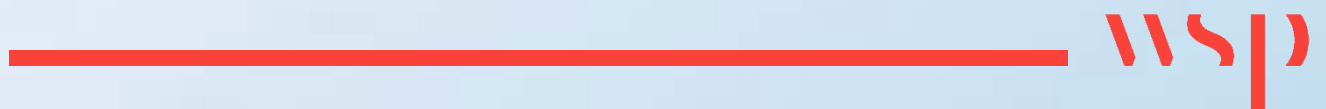


Table B-1 – Bat species records within 5km of the Site.

Bats Within 5km				
Common Name	Scientific Name	Legislation / Conservation Status	Number of Records	Most Recent Record
Bats	<i>Chiroptera</i>	EPS, WCA5, S7	20	August 2024
Brown long-eared bat	<i>Plecotus auritus</i>	EPS, HDir, WCA5, S7, UKBAP, Bonn, Bern, RD2 (UK)	7	August 2023
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	EPS, HDir, WCA5, S7, Bonn, Bern	68	July 2024
Daubenton's bat	<i>Myotis daubentonii</i>	Bern, EPS, HDir, RD2(UK), WCA5	20	August 2024
Greater horseshoe bat	<i>Rhinolophus ferrumequinum</i>	EPS, AnII, HDir, WCA5, S7, Bern, RDB2(UK)	1	August 2018
Lesser horseshoe bat	<i>Rhinolophus hipposideros</i>	Bern, EPS, HDir, RD2(UK), S7, WCA5	2	September 2023
Myotis	<i>Myotis</i>	Bern, EPS, HDir, WCA5	2	July 2024
Natterer's bat	<i>Myotis nattereri</i>	EPS, HDir, WCA5, Bonn, Bern, RD2 (UK)	4	July 2024
Noctule bat	<i>Nyctalus noctula</i>	EPS, HDir, WCA5, S7, UKBAP, Bonn, Bern, RD2 (UK)	44	March 2025
Pipistrelle	<i>Pipistrellus pipistrellus</i> agg.	EPS, HDir, WCA5, S7, Bonn, Bern, RD2 (UK)	11	July 2024
Pipistrelle bat species	<i>Pipistrellus</i>	EPS, WCA5	20	August 2024
Serotine	<i>Eptesicus serotinus</i>	EPS, HDir, WCA5, Bonn, Bern, RD2 (UK)	7	July 2022
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	EPS, HDir, WCA5, S7, UKBAP, Bonn, Bern, RD2 (UK)	42	July 2024
Whiskered bat	<i>Myotis mystacinus</i>	Bern, EPS, HDir, RD2(UK), WCA5	5	June 2024

Table B-2 – Protected and priority species records within 2km of the Site.

Protected and Priority Species within 2km (Excluding bats)				
Common Name	Scientific Name	Legislation / Conservation Status	No. of Records	Most Recent Record
Amphibians				
Common toad	<i>Bufo bufo</i>	WCA5, S7, Bern	3	June 2025
Great crested newt	<i>Triturus cristatus</i>	EPS, HDir, WCA5, S7, Bern, RDB2(UK)	1	April 2021
Palmate newt	<i>Lissotriton helveticus</i>	WCA5, Bern	2	June 2023
Birds				
Barn Owl	<i>Tyto alba</i>	WCA1, WCA9, Bern, CITES	1	September 2022
Black redstart	<i>Phoenicurus ochruros</i>	WCA1, Bern, WBAm(RSPB), UKBR(RSPB)	1	December 2017
Black-headed gull	<i>Chroicocephalus ridibundus</i>	BDir2.2, S7, UKBA, WBR	14	November 2024
Brambling	<i>Fringilla montifringilla</i>	WCA1, WBAm(RSPB)	2	February 2024
Bullfinch	<i>Pyrrhula pyrrhula</i>	S7, UKBA, WBR	6	January 2024
Cetti's warbler	<i>Cettia cetti</i>	WCA1.1	6	2024
Cuckoo	<i>Cuculus canorus</i>	S7, WBR(RSPB), UKBR(RSPB)	2	May 2023
Curlew	<i>Numenius arquata</i>	BDir2.2, S7, UKBR, WBR	6	2023
Dunnock	<i>Prunella modularis</i>	S7, Bern, UKBA	16	2024
Fieldfare	<i>Turdus pilaris</i>	BDir22, WCA1, WBAm(RSPB), UKBR(RSPB)	1	2018
Garganey	<i>Spatula querquedula</i>	BDir21, WCA1, CITES, WBAm(RSPB)	3	April 2022
Goshawk	<i>Accipiter gentilis</i>	WCA1, WCA9, CITES	1	2022
Green sandpiper	<i>Tringa ochropus</i>	WCA1, Bern, WBAm(RSPB)	1	2022
Herring gull	<i>Larus argentatus</i>	BDir2.2, S7, UKBR, WBR	15	December 2024
House sparrow	<i>Passer domesticus</i>	S7, UKBR, WBA	21	December 2024
Kestrel	<i>Falco tinnunculus</i>	Bern, CITES, S7, UKBA, WBR	3	2024
Kingfisher	<i>Alcedo atthis</i>	BDir1, WCA1.1, Bern, WBA, UKBA	2	2022
Lapwing	<i>Vanellus vanellus</i>	BDir2.2, S7, UKBR, WBR	4	2024
Linnet	<i>Linaria cannabina</i>	S7, Bern, WBR, UKBR	5	July 2023

Mediterranean gull	<i>Ichthyaeetus melanocephalus</i>	BDir1, WCA1, Bern, WBAm(RSPB)	1	2018
Peregrine	<i>Falco peregrinus</i>	BDir1, Bern, CITES, WCA1.1	8	August 2023
Pied flycatcher	<i>Ficedula hypoleuca</i>	S7, WBR(RSPB), UKBR(RSPB)	1	March 2016
Red kite	<i>Milvus milvus</i>	BDir1, WCA1, WCA9, CITES, WBAm(RSPB)	10	2024
Redwing	<i>Turdus iliacus</i>	BDir2.2, UKBR, WBA, WCA1.1	7	December 2024
Reed bunting	<i>Emberiza schoeniclus</i>	Bern, S7, UKBA, WBA	3	2022
Skylark	<i>Alauda arvensis</i>	BDir22, S7, WBAm(RSPB), UKBR(RSPB)	3	June 2023
Song thrush	<i>Turdus philomelos</i>	BDir2.2, Bern, S7, UKBR, WBA	14	2024
Spotted flycatcher	<i>Muscicapa striata</i>	S7, Bern, WBR(RSPB), UKBR(RSPB)	1	September 2022
Starling	<i>Sturnus vulgaris</i>	BDir2.2, Bern, S7, UKBR, WBR	10	December 2024
Tundra swan	<i>Cygnus columbianus</i>	BDir1, WCA1, S7, Bern, WBR(RSPB)	1	March 2024
Invertebrates				
August thorn	<i>Ennomos quercinaria</i>	S7	2	August 2016
Autumnal rustic	<i>Eugnorisma glareosa</i>	S7	1	September 2018
Brindled beauty	<i>Lycia hirtaria</i>	S7	1	2019
Brown-banded carder bee	<i>Bombus humilis</i>	S7	2	2018
Buff ermine	<i>Spilosoma lutea</i>	S7	2	June 2016
Cinnabar	<i>Tyria jacobaeae</i>	S7	6	July 2023
Dark-barred twin-spot carpet	<i>Xanthorhoe ferrugata</i>	S7	1	August 2016
Dusky thorn	<i>Ennomos fuscantaria</i>	S7	1	August 2016
Flounced chestnut	<i>Anchoscelis helvola</i>	S7	1	September 2016
Green-brindled crescent	<i>Allophytes oxyacanthae</i>	S7	2	September 2018
Grey dagger	<i>Acronicta psi</i>	S7	1	August 2015
Knot grass	<i>Acronicta rumicis</i>	S7	1	June 2015
Long-horned bee	<i>Eucera longicornis</i>	S7, RDB2(UK) – NA	3	June 2021
Rosy rustic	<i>Hydraecia micacea</i>	S7	1	August 2018
Rustic	<i>Hoplodrina blanda</i>	S7	1	July 2021

Small phoenix	<i>Ecliptopera silaceata</i>	S7	2	2018
White ermine	<i>Spilosoma lubricipeda</i>	S7	1	2016
Mammals				
Badger	<i>Meles meles</i>	WCA5, S7, Bern	3	May 2023
Hare	<i>Lepus europaeus</i>	S7	2	July 2022
Hedgehog	<i>Erinaceus europaeus</i>	Bern, S7	31	December 2022
Otter	<i>Lutra lutra</i>	Bern, CITES, EPS, HDir, RD2(UK), S7, WCA5	7	January 2020
Water vole	<i>Arvicola amphibius</i>	S7, WCA5	1	August 2016
Plants				
Bluebell	<i>Hyacinthoides non-scripta</i>	WCA8	6	April 2021
Cornflower	<i>Centaurea cyanus</i>	S7, RDB1(Wales) - CR	1	August 2015
Reptiles				
Common lizard	<i>Zootoca vivipara</i>	WCA5, S7, Bern	1	2019
Slow-worm	<i>Anguis fragilis</i>	WCA5, S7, Bern	3	2019

Table B-3 – Species of Conservation Concern within 2km of the Site.

Species of Conservation Concern within 2km				
Common Name	Scientific Name	Legislation / Conservation Status	No. of Records	Most Recent Record
Birds				
Common gull	<i>Larus canus</i>	BDir22, WBR(RSPB), UKBAm(RSPB)	3	January 2020
Common sandpiper	<i>Actitis hypoleucos</i>	WBR(RSPB)	2	June 2019
Coot	<i>Fulica atra</i>	BDir21, WBAm(RSPB)	4	2024
Cormorant	<i>Phalacrocorax carbo</i>	WBAm(RSPB)	7	2024
Dipper	<i>Cinclus cinclus</i>	Bern, WBAm(RSPB), UKBAm(RSPB)	4	July 2024
Goldcrest	<i>Regulus regulus</i>	Bern, WBAm(RSPB)	10	December 2024
Great black-backed gull	<i>Larus marinus</i>	BDir22, WBR(RSPB)	2	February 2021
Green woodpecker	<i>Picus viridis</i>	Bern, WBAm(RSPB)	4	May 2023
Greenfinch	<i>Chloris chloris</i>	Bern, WBAm(RSPB)	3	2024
Grey heron	<i>Ardea cinerea</i>	WBAm(RSPB)	10	2024

Grey wagtail	<i>Motacilla cinerea</i>	Bern, WBAm(RSPB), UKBR(RSPB)	13	May 2023
Hooded crow	<i>Corvus cornix</i>	WBAm(RSPB)	1	May 2022
Jack snipe	<i>Lymnocyrtus minimus</i>	BDir21, WBAm(RSPB)	1	February 2022
Lesser black-backed gull	<i>Larus fuscus</i>	BDir2.2, WBAm(RSPB), UKBAm(RSPB)	12	2024
Long-tailed tit	<i>Aegithalos caudatus</i>	WBAm(RSPB)	14	March 2024
Mallard	<i>Anas platyrhynchos</i>	BDir2.1, WBAm(RSPB), UKBAm(RSPB)	11	December 2024
Meadow pipit	<i>Anthus pratensis</i>	Bern, WBAm(RSPB), UKBAm(RSPB)	5	June 2023
Mistle thrush	<i>Turdus viscivorus</i>	BDir2.2, Bern, WBAm(RSPB), UKBR(RSPB)	8	2023
Pochard	<i>Aythya ferina</i>	BDir21, WBR(RSPB), UKBR(RSPB)	1	November 2017
Redshank	<i>Tringa totanus</i>	BDir2.2, WBAm(RSPB), UKBAm(RSPB)	3	2024
Sand martin	<i>Riparia riparia</i>	Bern, WBAm(RSPB)	3	March 2023
Shelduck	<i>Tadorna tadorna</i>	Bern, WBAm(RSPB), UKBAm(RSPB)	3	2020
Shoveler	<i>Spatula clypeata</i>	BDir21, CITES, WBAm(RSPB)	1	March 2015
Snipe	<i>Gallinago gallinago</i>	BDir2.1, WBAm(RSPB), UKBAm(RSPB)	2	2024
Swallow	<i>Hirundo rustica</i>	Bern, WBAm(RSPB)	6	February 2024
Swift	<i>Apus apus</i>	WBAm(RSPB), UKBAm(RSPB)	16	July 2024
Teal	<i>Anas crecca</i>	BDir2.1, WBAm(RSPB), LI(VC43), UKBAm(RSPB)	3	2022
Tufted duck	<i>Aythya fuligula</i>	BDir21, WBAm(RSPB)	2	March 2024
Whitethroat	<i>Curruca communis</i>	WBR(RSPB)	1	2017
Wigeon	<i>Mareca penelope</i>	BDir2.1, CITES, WBAm(RSPB), UKBAm(RSPB)	2	2017
Willow warbler	<i>Phylloscopus trochilus</i>	WBR(RSPB), UKBAm(RSPB)	6	May 2023
Invertebrates				
A beetle	<i>Polydrusus formosus</i>	RDB2 (UK) - NA	1	May 2024
A hymenopteran	<i>Dolichovespula media</i>	RDB2 (UK) - NA	1	May 2024
A hymenopteran	<i>Ectemnius sexcinctus</i>	RDB2 (UK) - NB	1	2017
A true bug	<i>Anoscopus albifrons</i>	RDB2 (UK) - NB	1	2017
Bramble bronze	<i>Argolamprotes micella</i>	RDB2 (UK) - N	1	August 2016
Buff-tailed mining bee	<i>Andrena humilis</i>	RDB2 (UK) - NB	1	June 2021
Long-fringed mining bee	<i>Andrena congruens</i>	RDB2 (UK) - NA	1	2017

Small tiphia	<i>Tiphia minuta</i>	RDB2 (UK) - NB	1	2017
Plants				
Corn marigold	<i>Tiphia minuta</i>	RDB1(UK) - VU, LI(SEWBRcC)	1	August 2015
Flowering-rush	<i>Butomus umbellatus</i>	RDB1(Wales) - VU, LI(SEWBRcC)	9	August 2024
Fringed water-lily	<i>Nymphoides peltata</i>	RDB2 (UK) - S	4	May 2021
Revolute plait-moss	<i>Roaldia revoluta</i>	RDB2 (UK) - R	1	February 2021
Scots pine	<i>Pinus sylvestris</i>	RDB2 (UK) - S	2	May 2021
Soft hornwort	<i>Ceratophyllum submersum</i>	RDB1 (Wales) - VU, LI(SEWBRcC)	1	April 2021

Table B-4 – Invasive non-native species within 2km of the Site.

Invasive species within 2km				
Common Name	Scientific Name	Legislation / Conservation Status	Number of Records	Most Recent Record
Birds				
Canada Goose	<i>Branta canadensis</i>	BDir2.1, WCA9, INNS	10	2024
Egyptian goose	<i>Alopochen aegyptiaca</i>	WCA9, INNS	1	2015
Mandarin duck	<i>Aix galericulata</i>	WCA9, INNS	2	March 2024
Snow goose	<i>Anser caerulescens</i>	WCA9, INNS	2	June 2023
Invertebrates				
Harlequin ladybird	<i>Harmonia axyridis</i>	INNS	12	2025
Mammals				
Grey squirrel	<i>Sciurus carolinensis</i>	WCA9, INNS	3	February 2021
Reptiles				
Pond terrapin	<i>Trachemys scripta</i>	INNS	2	July 2021
Plants				
Butterfly-bush	<i>Buddleja davidii</i>	INNS	4	May 2021
Canadian waterweed	<i>Elodea canadensis</i>	INNS	1	August 2015
Cherry laurel	<i>Prunus laurocerasus</i>	INNS	2	June 2024
Common cord-grass	<i>Spartina anglica</i>	INNS	1	August 2015
Heath star moss	<i>Campylopus introflexus</i>	INNS	1	May 2020

Himalayan balsam	<i>Impatiens glandulifera</i>	WCA9, INNS	6	September 2024
Himalayan cotoneaster	<i>Cotoneaster simonsii</i>	WCA9, INNS	1	August 2015
Himalayan honeysuckle	<i>Leycesteria formosa</i>	INNS	3	August 2024
Montbretia	<i>Crocasmia aurea x pottsii</i> = <i>C. x crocosmiiflora</i>	WCA9, INNS	1	August 2015
Nuttall's waterweed	<i>Elodea nuttallii</i>	INNS	3	July 2018
Snowberry	<i>Symphoricarpos albus</i>	INNS	2	April 2025
Three-cornered garlic	<i>Allium triquetrum</i>	WCA9, INNS	2	April 2019
Variegated yellow archangel	<i>Lamium galeobdolon</i> subsp. <i>argentatum</i>	WCA9, INNS	2	2019
Wall cotoneaster	<i>Cotoneaster horizontalis</i>	WCA9, INNS	2	April 2025
Wilson's honeysuckle	<i>Lonicera nitida</i>	INNS	1	August 2015

Table B-5 – Legislation Abbreviation descriptions.

Legislation: Abbreviations			
BAP	UK Biodiversity Action Plan	UKBR	RSPB UK Birds Red List (not based on IUCN criteria)
BDir1	EU Birds Directive Annexe 1	WBA	RSPB Welsh Birds Amber List (not based on IUCN criteria)
BDir2.1	EU Birds Directive Annexe 2.1	WBR	RSPB Welsh Birds Red List (not based on IUCN criteria)
BDir2.2	EU Birds Directive Annexe 2.2	WCA1.1	Wildlife & Countryside Act 1981 Schedule 1.1 (Birds which are protected at all times)
Bern	Bern Convention on the Conservation of European Wildlife and Natural Habitats	WCA1.2	Wildlife & Countryside Act 1981 Schedule 1.2 (Birds which are protected at certain times)
Bonn	Bonn Convention on the Conservation of Migratory Species of Wild Animals	WCA5	Wildlife & Countryside Act 1981 Schedule 5 (Animals which are protected from killing and taking, possession, disturbance and sale)
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora	WCA8	Wildlife & Countryside Act 1981 Schedule 8 (Plants which are protected)
EPS	European Protected Species	WCA9	Wildlife & Countryside Act 1981 Schedule 9 (Non-native animals and plants which are established in the wild)
HDir	EU Habitats Directive	WVP	IUCN Threat Listing of Welsh Vascular Plants
INNS	Invasive Non-native Species	LI	Locally Important within the listed area
LBAP	Local Biodiversity Action Plan species for the listed area	LI (SEWBRc)	Locally Important Species (as identified by local specialists) in SEWBRc area.
NRW	Natural Resources Wales Priority Species	LI (VC##)	Locally Important Species (as identified by local specialists) in Vice County ##
PBA	Protection of Badgers Act 1992	LI (VC##, LS)	Locally Scarce in Vice County ##
RD1(UK)	Red Data Book listing for the UK based on IUCN guidelines (CE= Critically Endangered, EN= Endangered, VU= Vulnerable, NT= Near Threatened, LC=Least Concern)	LI (VC##, LR)	Locally Rare in Vice County ##
RD1 (Wales)	Red Data Book listing for Wales based on IUCN guidelines	LI (VC##, EX)	Extinct in Vice County ##
RD2(UK)	Red Data Book listing for the UK not based on IUCN guidelines	LI (VC##, UR)	Under Recorded in Vice County ##
S7	Environment (Wales) Act 2016 (Section 7)	##	Vice County number. For more information on Vice Counties visit: https://www.ukbutterflies.co.uk/webpage.php?name=site_terms
UKBA	RSPB UK Birds Amber List (not based on IUCN criteria)		

Appendix C

BOTANICAL LIST



Table C-1 – Botanical List. Species abundance classified under ACFOR scale (A-Abundant; C-Common; F-Frequent; O-Occasional; R-Rare). L preceding abundance indicates Locally.

Common Name	Latin Name	Abundance (ACFOR scale) L=Locally
Semi-natural broadleaved Woodland - section in survey area associated with Eaglebush Valley LNR		
Sycamore	<i>Acer pseudoplatanus</i>	A
Common nettle	<i>Urtica dioica</i>	C
Creeping buttercup	<i>Ranunculus repens</i>	C
Ground elder	<i>Aegopodium podagraria</i>	C
Hogweed	<i>Heracleum sphondylium</i>	C
Male-fern	<i>Dryopteris filix-mas</i>	C
Wood avens	<i>Geum urbanum</i>	C
Japanese knotweed	<i>Reynoutria japonica</i>	C/LA
Common ivy	<i>Hedera helix</i>	F
Himalayan balsam	<i>Impatiens glandulifera</i>	F/LA
Ash	<i>Fraxinus excelsior</i>	O
Bramble	<i>Rubus fruticosus</i> agg.	O
Garlic mustard	<i>Alliaria petiolata</i>	O
Greater plantain	<i>Plantago major</i>	O
Hart's-tongue	<i>Asplenium scolopendrium</i>	O
Redshank	<i>Persicaria maculosa</i>	O
Wild privet	<i>Ligustrum vulgare</i>	O
Willowherb species	<i>Epilobium</i> sp.	O
Wall cotoneaster	<i>Cotoneaster horizontalis</i>	R
Semi-natural broadleaved woodland - alongside Neath Canal and Cryddan Brook near River Neath		
Alder	<i>Alnus glutinosa</i>	A
Himalayan balsam	<i>Impatiens glandulifera</i>	A
Japanese knotweed	<i>Reynoutria japonica</i>	A
Willow species	<i>Salix</i> spp.	A
Common nettle	<i>Urtica dioica</i>	C
Common reed	<i>Phragmites australis</i>	C
Creeping buttercup	<i>Ranunculus repens</i>	C
Hawthorn	<i>Crataegus monogyna</i>	C
Meadowsweet	<i>Filipendula ulmaria</i>	C
Sycamore	<i>Acer pseudoplatanus</i>	C
Butterfly-bush	<i>Buddleia davidii</i>	F
Hogweed	<i>Heracleum sphondylium</i>	F
Bramble	<i>Rubus fruticosus</i> agg.	F/LA

Common Name	Latin Name	Abundance (ACFOR scale) L=Locally
Common knapweed	<i>Centaurea nigra</i>	O
Dock species	<i>Rumex</i> sp.	O
Dogwood	<i>Cornus sanguinea</i>	O
Gorse	<i>Ulex europaeus</i>	O
Lords-and-Ladies	<i>Arum maculatum</i>	O
Male-fern	<i>Dryopteris filix-mas</i>	O
Rosebay willowherb	<i>Chamaenerion angustifolium</i>	O
Yellow flag-iris	<i>Iris pseudacorus</i>	O/LF at water's edge
Guelder rose	<i>Viburnum opulus</i>	R
Dense/continuous and scattered scrub with trees - along Cryddan Brook in section passing through the Milland Industrial Estate		
Bramble	<i>Rubus fruticosus</i> agg.	A
Alder	<i>Alnus glutinosa</i>	C
Butterfly-bush	<i>Buddleia davidii</i>	C
Japanese knotweed	<i>Reynoutria japonica</i>	F/LA
Ash	<i>Fraxinus excelsior</i>	O
Dogwood	<i>Cornus sanguinea</i>	O
Hazel	<i>Corylus avellana</i>	O
Hemp-agrimony	<i>Eupatorium cannabinum</i>	O
Pedunculate oak	<i>Quercus robur</i>	O
Silver birch	<i>Betula pendula</i>	O
Sycamore (saplings)	<i>Acer pseudoplatanus</i>	O
Willow species	<i>Salix</i> sp.	O
Cherry laurel	<i>Prunus laurocerasus</i>	O/LA
Red oak species	<i>Quercus rubra</i>	R
Wall cotoneaster	<i>Cotoneaster horizontalis</i>	R
Dense scrub with scattered trees and tall ruderal (Japanese knotweed) – along railway corridor		
Bramble	<i>Rubus fruticosus</i> agg.	A
Butterfly-bush	<i>Buddleia davidii</i>	A
Japanese knotweed	<i>Reynoutria japonica</i>	A
Ash	<i>Fraxinus excelsior</i>	C
Hemp agrimony	<i>Eupatorium cannabinum</i>	F
Sycamore	<i>Acer pseudoplatanus</i>	F
Alder	<i>Alnus glutinosa</i>	O
Dogwood	<i>Cornus sanguinea</i>	O
Willow	<i>Salix</i> sp.	O

Common Name	Latin Name	Abundance (ACFOR scale) L=Locally
Scattered trees - in landscaped areas across Milland Industrial Estate and Neath		
Ash	<i>Fraxinus excelsior</i>	O
Beech	<i>Fagus sylvatica</i>	O
Cherry species	<i>Prunus</i> sp.	O
Cupressus species	<i>Cupressus</i> sp.	O
Dogwood	<i>Cornus sanguinea</i>	O
Field maple	<i>Acer campestre</i>	O
Leyland cypress	<i>Cupressus x leylandii</i>	O
Maple species (Ornamental)	<i>Acer</i> sp.	O
Oak species	<i>Quercus</i> spp.	O
Pine species	<i>Pinus</i> sp.	O
Silver birch	<i>Betula pendula</i>	O
Sycamore	<i>Acer pseudoplatanus</i>	O
White poplar	<i>Populus alba</i>	O
Semi-improved neutral grassland - small field to north-western extent of Site		
Cock's-foot	<i>Dactylis glomerata</i>	A
Meadow-grass species	<i>Poa</i> sp.	A
Common knapweed	<i>Centaurea nigra</i>	C
Red fescue	<i>Festuca rubra</i>	F
White clover	<i>Trifolium repens</i>	F
Bramble	<i>Rubus fruticosus</i> agg.	O
Common fleabane	<i>Pulicaria dysenterica</i>	O
Red clover	<i>Trifolium pratense</i>	O
Ribwort plantain	<i>Plantago major</i>	O
Rough hawkbit	<i>Leontodon hispidus</i>	O
Yarrow	<i>Achillea millefolium</i>	O
Gorse	<i>Ulex europaeus</i>	R/LO
Poor semi-improved grassland - Road/footpath verges		
Broad-leaved dock	<i>Rumex obtusifolius</i>	F
Creeping buttercup	<i>Ranunculus repens</i>	F
Dandelion	<i>Taraxacum officinale</i> agg.	F
Perennial rye-grass	<i>Lolium perenne</i>	F
Ribwort plantain	<i>Plantago lanceolata</i>	F
Cock's-foot	<i>Dactylis glomerata</i>	O
Common nettle	<i>Urtica dioica</i>	O
Creeping thistle	<i>Cirsium arvense</i>	O

Common Name	Latin Name	Abundance (ACFOR scale) L=Locally
Red clover	<i>Trifolium pratense</i>	O
Willowherb species	<i>Epilobium</i> sp.	O
Common knapweed	<i>Centaurea nigra</i>	R
Poor semi-improved grassland - Area near D. C. Griffiths Way and Britton Ferry Rd		
Bramble	<i>Rubus fruticosus</i> agg.	A
Butterfly-bush	<i>Buddleia davidii</i>	A
Willow species	<i>Salix</i> sp.	A at scrub edges
Cock's-foot	<i>Dactylis glomerata</i>	C
Red fescue	<i>Festuca rubra</i>	C
Dandelion	<i>Taraxacum officinale</i> agg.	O
Dock species	<i>Rumex</i> sp.	O
Evening primrose	<i>Oenothera biennis</i>	O
Hazel (saplings)	<i>Corylus avellan</i>	O
Hogweed	<i>Heracleum sphondylium</i>	O
Ribwort plantain	<i>Plantago lanceolata</i>	O
Rough hawkbit	<i>Leontodon hispidus</i>	O
Smooth sow-thistle	<i>Sonchus oleraceus</i>	O
Wild carrot (potentially)	<i>Daucus carota</i>	O
Wood avens	<i>Geum urbanum</i>	O
Fleabane species	<i>Erigeron</i> sp.	R
Sun spurge	<i>Euphorbia helioscopia</i>	R
Tall ruderal - across site		
Japanese knotweed	<i>Reynoutria japonica</i>	A
Common nettle	<i>Urtica dioica</i>	O
Himalayan balsam	<i>Impatiens glandulifera</i>	O
Rosebay willowherb	<i>Chamaenerion angustifolium</i>	O
Willow	<i>Salix</i> sp.	O
Willowherb species	<i>Epilobium</i> sp.	O
Bramble	<i>Rubus fruticosus</i> agg.	O/LF
Swamp (reedbed) – along River Neath		
Common reed	<i>Phragmites australis</i>	A
Marginal vegetation - along Cryddan brook in section passing though Milland Industrial Estate and within canal		
Himalayan balsam	<i>Impatiens glandulifera</i>	F
Common reed	<i>Phragmites australis</i>	LC
Bulrush	<i>Typha latifolia</i>	O

Common Name	Latin Name	Abundance (ACFOR scale) L=Locally
Canary reed-grass	<i>Phalaris arundinacea</i>	O
Bur-reed species	<i>Sparganium</i> sp.	O (canal only)
Pondweed	<i>Species not identified</i>	O (canal only)
Water lily	<i>Species not identified</i>	O (canal only)
Yellow flag-iris	<i>Iris pseudacorus</i>	O/LF (canal only)
Saltmarsh - dense/continuous		
Red fescue	<i>Festuca rubra</i>	A
Sea plantain	<i>Plantago maritima</i>	F
Orache (potentially grass-leaved)	<i>Atriplex</i> sp.	O
Sea milkwort	<i>Lysimachia maritima</i>	O
Common vetch	<i>Vicia sativa</i>	O (upper banks)
Mugwort	<i>Artemisia vulgaris</i>	O (upper banks)
Silverweed	<i>Potentilla anserina</i>	O (upper banks)
Sea aster	<i>Aster tripolium</i>	O/LF
Sea couch	<i>Elytrigia atherica</i>	O/LF (upper banks)
Sea beet	<i>Beta vulgaris</i> subsp. <i>maritima</i> ,	R (upper banks)
Amenity grassland – industrial/urban areas		
Meadow-grass species	<i>Poa</i> sp.	C
Perennial rye-grass	<i>Lolium perenne</i>	C
Daisy	<i>Bellis perennis</i>	O
Dandelion	<i>Taraxacum officinale</i> agg.	O
Ephemeral/short perennial mosaic with bare ground, scrub & scattered trees - near DC Griffiths adjacent to railway		
Cock's-foot	<i>Dactylis glomerata</i>	C
Red fescue	<i>Festuca rubra</i>	C
Rough meadowgrass	<i>Poa trivialis</i>	C
Butterfly-bush	<i>Buddleia davidii</i>	F
Gorse	<i>Ulex europaeus</i>	F
Willow	<i>Salix</i> sp.	F
Moss species	<i>Bryophyta</i>	LA
Bristly oxtongue	<i>Helminthotheca echioides</i>	O
Common fleabane	<i>Pulicaria dysenterica</i>	O
Dandelion	<i>Taraxacum officinale</i> agg.	O
Dog rose	<i>Rosa canina</i>	O
False oat-grass	<i>Arrhenatherum elatius</i>	O
Greater plantain	<i>Plantago major</i>	O

Common Name	Latin Name	Abundance (ACFOR scale) L=Locally
Lesser trefoil	<i>Trifolium dubium</i>	O
Ribwort plantain	<i>Plantago lanceolata</i>	O
Rough hawkbit	<i>Leontodon hispidus</i>	O
St John's-wort species	<i>Hypericum</i> sp.	O
Sycamore (saplings)	<i>Acer pseudoplatanus</i>	O
Bramble	<i>Rubus fruticosus</i> agg.	O/LA
Evening primrose	<i>Oenothera biennis</i>	R
Ephemeral/short perennial - Between Castle Bingo car park and railway corridor		
Hedge mustard	<i>Sisymbrium officinale</i>	A
Herb-robert	<i>Geranium robertianum</i>	C
Dock species	<i>Rumex</i> sp.	F
Smooth sow-thistle	<i>Sonchus oleraceus</i>	F
Evening primrose	<i>Oenothera biennis</i>	O
Himalayan balsam	<i>Impatiens glandulifera</i>	O
Scarlet pimpernel	<i>Lysimachia arvensis</i>	O
Thistle species	<i>Cirsium</i> sp.	O
Willowherb species	<i>Epilobium</i> sp.	O
Cut-leaved cranesbill	<i>Geranium dissectum</i>	O/LF
Black nightshade	<i>Solanum nigrum</i>	R
Introduced shrub - Milland Industrial Estate		
Laurel species	<i>Prunus</i> sp.	O
Snowberry species	<i>Symphoricarpos</i> sp.	O
Wilson's honeysuckle	<i>Lonicera nitida</i>	O
Introduced shrub - Castle Bingo		
Common ivy	<i>Hedera helix</i>	C
Privet species	<i>Ligustrum</i> sp.	C
Berberis species	<i>Berberis</i> sp.	O
Butterfly-bush	<i>Buddleja davidii</i>	O
Gorse	<i>Ulex europaeus</i>	O
Holly	<i>Ilex aquifolium</i>	O
Apple	<i>Malus</i> sp.	R
Species-poor hedgerow with trees – in landscaped urban areas		
Beech	<i>Fagus sylvatica</i>	A
Field maple	<i>Acer campestre</i>	F
Pedunculate oak	<i>Quercus robur</i>	O

Appendix D

PHOTOGRAPHS



Table D-1 – Phase 1 Habitat Survey supporting Photographs

	
1. Cryddan Brook in Eaglebush LNR & The Waun, Cimla SINC which runs between two residential properties to the south-eastern extent of the Site.	2. Eaglebush Valley LNR & The Waun, Cimla looking upstream from south-eastern boundary of the Site (outside red line boundary)
	
3. Semi-natural woodland around the canal.	4. Scattered broadleaved trees around Milland Rd industrial estate.
	
5. Scrub and scattered trees along railway corridor.	6. Semi-improved neutral grassland to north-western edge of Survey Area.



7. Poor semi-improved grassland with scattered scrub between D.C. Griffiths Way and Briton Ferry Rd



8. Tall ruderal comprising predominately of Japanese knotweed.



9. Reedbed by Cryddan Brook outfall to River Neath



10. Standing water of Neath Canal (SINC).



11. Cryddan Brook flowing past Castle Bingo – looking downstream



12. Intertidal mud/saltmarsh & reedbed mosaic forming part of Neath estuary at north-western boundary of Site



13. Ephemeral/short perennial area near D.C.Griffiths Way and railway corridor.



14. Species-poor hedgerows in urban landscaped areas.



15. Hedgehog dropping found in the tall ruderal (Japanese knotweed) area along the River Neath.



16. Existing manmade structures along the Cryddan Brook across the Site. Further structures target noted in Appendix E.



17. Fordpad Ltd commercial property (scrap metal recycling plant) scoped out for bat impacts due to no direct structural impacts, existing internal noise high and street lighting externally.

Appendix E

TARGET NOTES



Table E-1 – Target Note descriptions (locations illustrated on Figure 2)

Target Note	Grid Ref.	Description	Photograph
1	SS75052 96453	Ledge in bank opposite the access road, no signs of use – 45m from red line boundary. Japanese knotweed (JKW) on banks	
2	SS75054 96444	Himalayan balsam (HB) & JKW on bank opposite access road. Culvert with canoe, no close internal assessment for bats – outside Site approx. 50m from red line boundary.	
3	SS75023 96500	Masonry wall where the Cryddan Brook flows between two residential properties to the south-eastern boundary of Site. Possible bat potential - mostly shallow crevices from what was visible. There may be further crevices in inaccessible sections downstream.	
4	SS74907 96533	Flood damaged flood prevention structure	

Target Note	Grid Ref.	Description	Photograph
5	SS7482 496539	Downstream of culvert within Neath with poor to negligible potential for white-clawed crayfish.	
6	SS74802 96526	HB individual on Cryddan brook bank by Castle Bingo	-
7	SS74677 96589	HB and JKW scattered along railway corridor	-
8	SS74703 96641	Brash pile by railway culvert	
9	SS74753 96661	Stone pile along boundary	
10	SS74718 96692	JKW near railway bridge crossing	

Target Note	Grid Ref.	Description	Photograph
11	SS74836 96602	Poor semi-improved grassland and scrub – high fly tipping noted and local advised of potential syringes. Avoided direct entry to area.	
12	SS74691 96723	HB along banks and in grass verge	-
13	SS74631 96797	HB on banks – partially cut	-
14	SS74592 96849	Weir and gabion basket banks. HB and JKW abundant on banks	
15	SS74545 96850	JKW & HB extensive along canal and in woodland Access bridge over canal - no close access to assess bat potential although dense overhanging ivy may hinder flight access.	

Target Note	Grid Ref.	Description	Photograph
16	SS74533 96909	Bridge - some bat potential	
17	SS74453 96768	JKW dense – cutting in process during visit	
18	SS74521 96832	Willow tree in wood/tall ruderal area between canal and river. Potential roost features - rot hole and branch tear.	



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