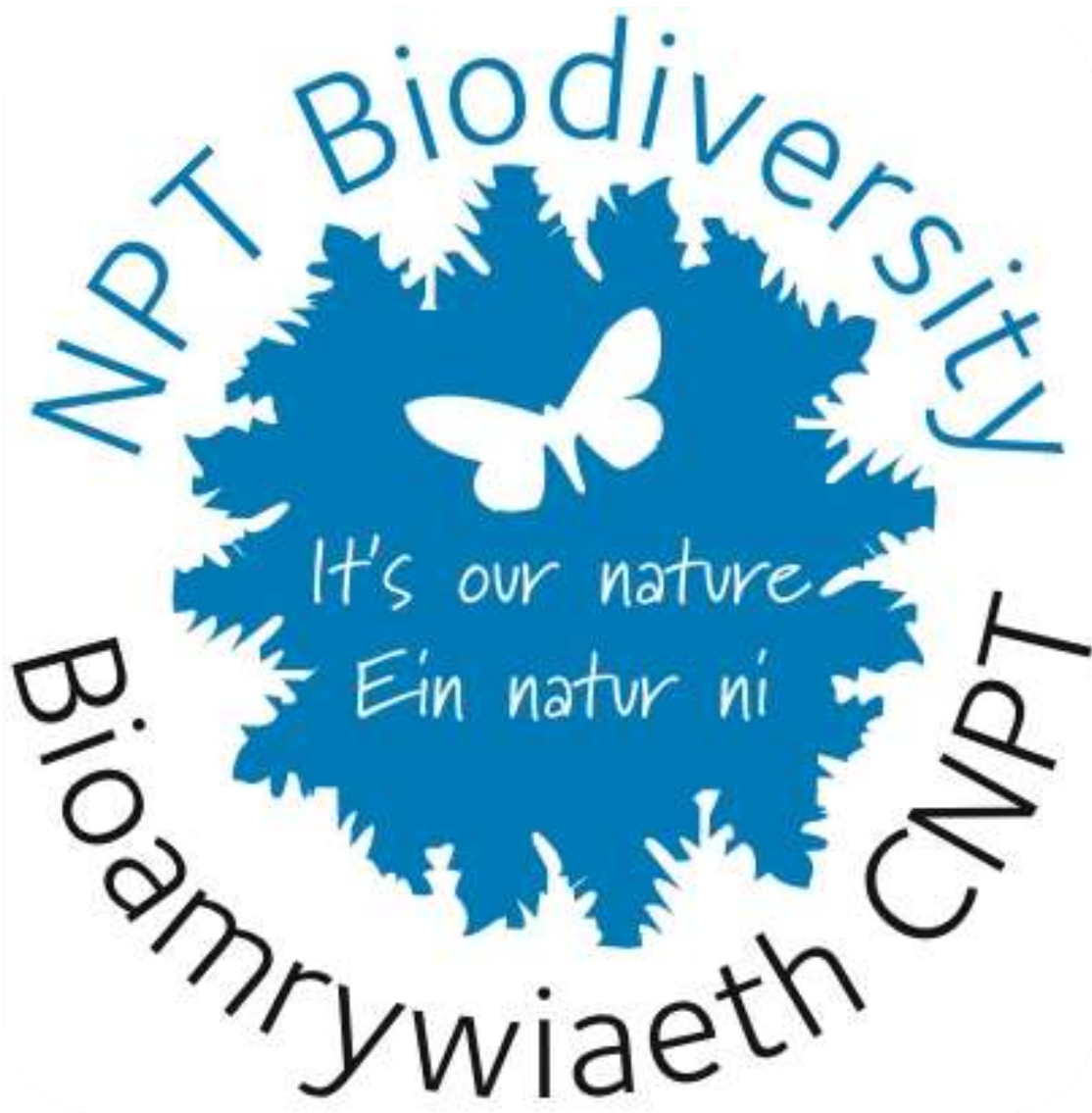




Swansea Bay Technology
Centre

Preliminary Ecological
Assessment Update
February 2020

by

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Countryside and Wildlife Team
Neath Port Talbot CBC

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DECLARATION

The information, advice and opinions which we have prepared and provided is true, and has been prepared and provided in accordance with the CIEEM's Code of Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

Signed:

A handwritten signature in black ink, appearing to read 'MB Price'.

Miss Megan Price –Graduate Ecologist, NPTC

The following report is considered a reasonable and true representation of the ecological situation on the site assessed. The report is however just a snapshot assessment therefore the authors are unable to guarantee that all biodiversity interest has been identified. In addition, if works are not undertaken as programmed re-assessment will be required. The survey information is considered applicable for one year from the date of the survey. The mitigation proposals are only applicable to works undertaken prior to the reptile hibernation season, if site clearance works are to be undertaken during winter months the mitigation proposals will need to be re-visited.

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EXECUTIVE SUMMARY

The Countryside and Wildlife Team of Neath Port Talbot CBC have undertaken an ecological survey and assessment of an area of land with the Baglan Energy Park, which is to be developed as a new office building. The site is located between the M4, Triangular Pond and Railway line.

The site is over 1.2km from the nearest statutory designated site at Earlswood Road Cutting and Ferry Boat Inn Quarries SSSI. A number of Sites of Importance for Nature Conservation are however within 500m of the site, including woodland and wetland features. A large number of records for protected and priority species within 1km of the site were reported as part of the desk study, some of which were considered to have potential to be present on site. The extended phase 1 habitat survey undertaken confirmed the presence of Local Biodiversity Action Plan habitat and habitats listed under (S7 Environment Act 2016 formerly S42 NERC), e.g. wet woodland, ponds and reed beds.

A number of constraints in relation to habitats and species have been identified and are suggested to need further assessment and survey as impact from the development is considered likely. Direct and indirect impacts upon S7/Local Biodiversity Action Plan habitat on site and habitat supporting protected and priority species are considered to be likely from the scheme, although avoidance of impact through development design is recommended.

Some initial ideas for mitigation measures and opportunities for enhancement of biodiversity are suggested, e.g. habitat replacement, seeding, species translocation.

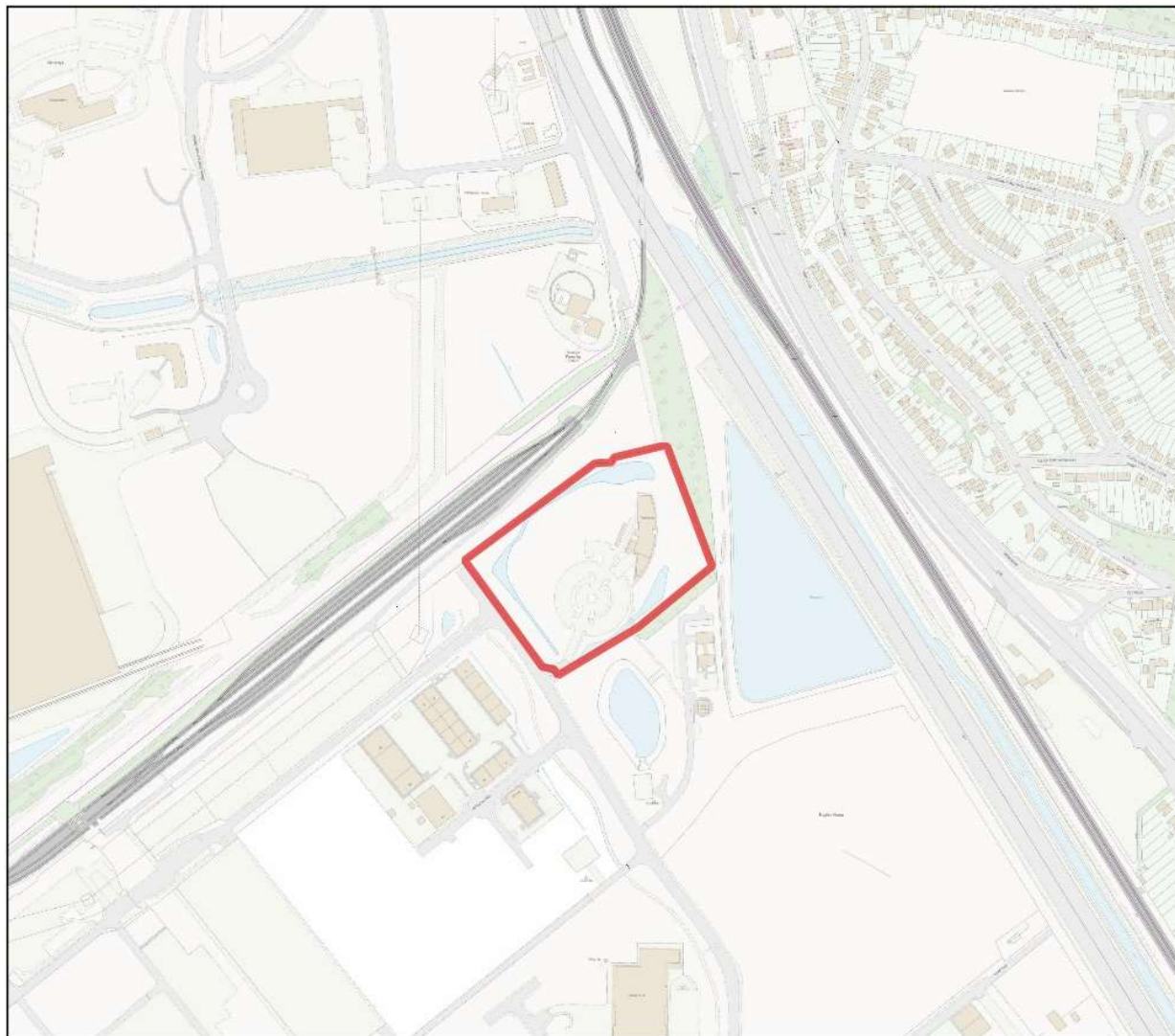
Recommendations for further survey work and assessment to inform the development design and planning submission are suggested, including survey for a number of species.

1 INTRODUCTION

1.1 SITE LOCATION

The Countryside and Wildlife Team of Neath Port Talbot Council were asked to undertake an ecological survey and assessment of an area of land adjacent to the Baglan Innovation Centre in the Baglan Energy Park, Neath, which is to be used to accommodate a second office building. The location of the site is shown on Figure 1.

The site is located south of the M4 within the Baglan Energy Park, between a railway line and the Triangular Pond.



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COUNTRYSIDE AND WILDLIFE

Environment
THE QUAYS, BRUNEL WAY, BAGLAN ENERGY
PARK
NEATH SA11 2GG
www.npt.gov.uk

Baglan Technology Centre

Location Plan

Revision

Scale 1:5000

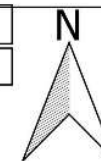


Figure 1: Site Location

1.2 DESCRIPTION OF DEVELOPMENT

The development will involve:

- Construction of a new building along with new road infrastructure and car parking.
- Drainage measures.
- Landscaping.

Initial preparation will include clearance of vegetation, waste materials, existing hard-standing and fences.

1.3 SCOPE OF SURVEY

The scope of the survey was to undertake an ecological survey and identify any ecological constraints to the development. This was to include:

- The identification and assessment of habitat types present within the site
- To identify and assess likely presence of fauna within the site, especially in relation to protected species
- To make recommendations for further survey work, if necessary
- An indicative assessment of the likely constraints and opportunities for biodiversity
- To include indicative recommendations of measures to avoid and minimise any adverse impacts upon habitat and species
- To identify any opportunities for enhancement of the ecological value of the site.

2 DESK STUDY

2.1 DESIGNATED SITES

2.1.1 STATUTORY SITES

The site does not lie within, nor is adjacent to any statutory protected sites, such as Special Areas of Conservation (SAC), Ramsar Site, Sites of Special Scientific Interest (SSSI), National Nature Reserve (NNR) or Local Nature Reserve (LNR). The closest statutory sites are Earlswood Road Cutting and Ferry Boat Inn Quarries SSSI and Crymlyn Burrows SSSI. Earlswood Cutting is approximately 1.2km and to the north of the site, and Crymlyn Burrows SSSI 1.3km to the North West.

2.1.2 NON-STATUTORY SITES

Neath Port Talbot Council have adopted the Sites of Importance for Nature Conservation (SINC) Guidelines as part of the adopted Local Development Plan, and the process of identifying sites that meet the criteria is an ongoing process. There are a number of sites that meet the criteria which are located within 500m of the site:

- Woodland SINC (Ancient Woodland) (405m to the east of the site), designated for woodland habitats.
- Watercourse next to the M4, an abandoned canal (150m to the east of the site), designated for watercourse habitats.
- Triangular Pond (50m to the east of the site), designated for pond habitat and important population of Deptford Pink.
- Jaffa Land (160m to the south of the site), brownfield habitat supporting various important plants including Deptford Pink, Distant Sedge and Brown Sedge.
- Marden Park (130m to south of the site), designated for open mosaic habitat on previously developed land and supports various important plant species.

The closest Wildlife Trust Nature Reserve is situated in Baglan over 2km away from the site.

All designated sites are mapped on Figure 3.

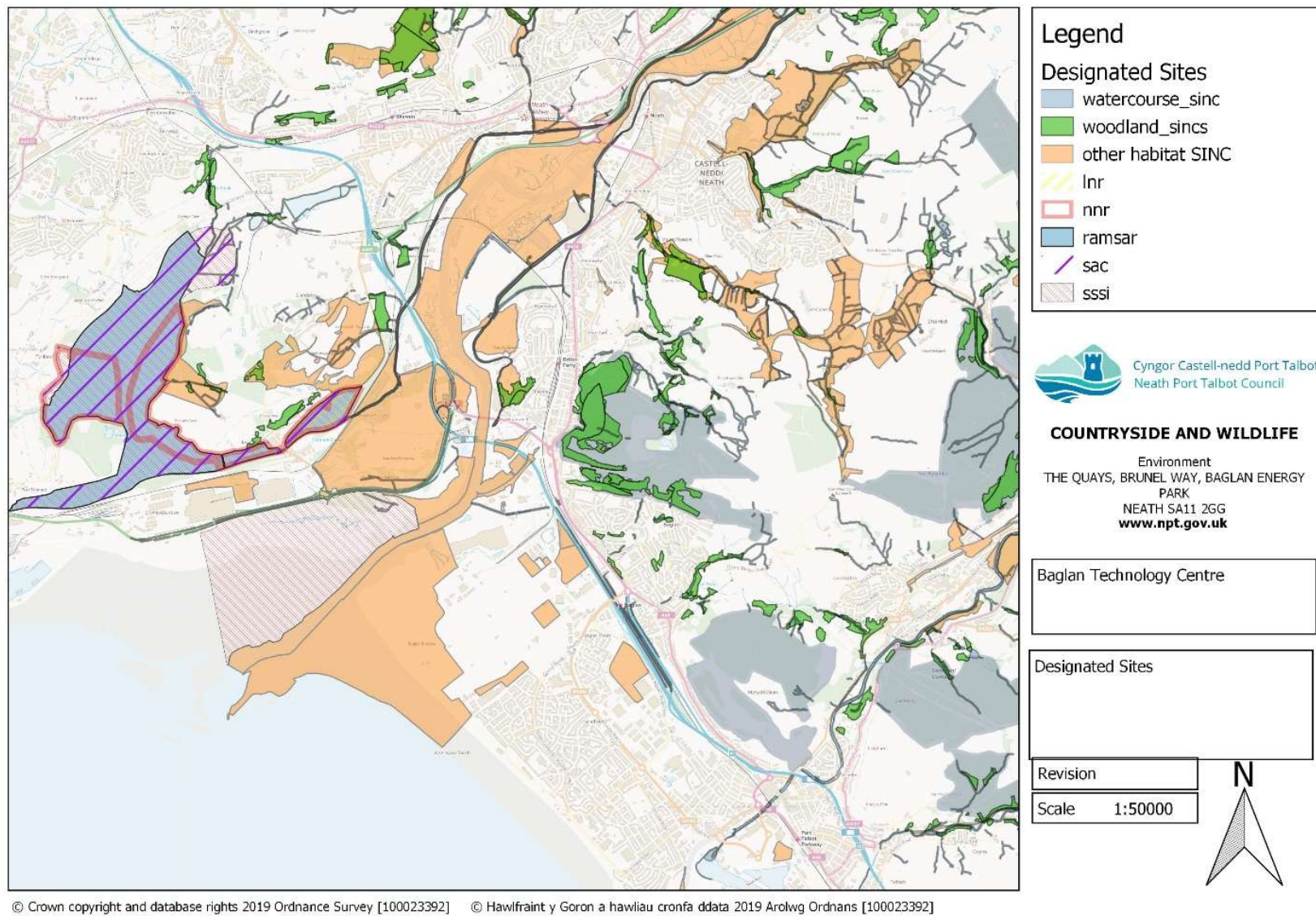


FIGURE 3. Designated sites

2.2 SPECIES RECORDS

2.2.1 DATA SEARCH

A biodiversity records search of S7, LBAP and protected species was undertaken for a 1km radius of the site by the South East Wales Biodiversity Records Centre. Over 1700 species records were reported in this search (LERC Ref. 0190-613). The results of the search have been reviewed and the following tables include species from the data search that are considered possible to be present or utilise the development site, based on species ecological requirements.

Mammals	
Common Name	Latin
Badger	<i>Meles meles</i>
Hedgehog	<i>Erinaceus europaeus</i>
Otter	<i>Lutra lutra</i>
Hare	<i>Lepus europaeus</i>
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>

Amphibians and Reptiles	
Common Name	Latin
Common Toad	<i>Bufo bufo</i>
Slow Worm	<i>Anguis fragilis</i>
Common Lizard	<i>Zootoca vivipara</i>

Birds		
Common Name	Latin	Comment
Linnet	<i>Linaria cannabina</i>	
Dunnock	<i>Prunella modularis</i>	
Red Kite	<i>Milvus milvus</i>	Likely flying over rather than nesting or foraging
Song Thrush	<i>Turdus philomelos</i>	
Kestrel	<i>Falco tinnunculus</i>	Unlikley to nest on site
Spotted Flycatcher	<i>Muscicapa striata</i>	
Bullfinch	<i>Pyrrhula pyrrhula</i>	
Starling	<i>Sturnus vulgaris</i>	
Herring Gull	<i>Larus argentatus</i>	Unlikley to nest on site but possible next door building
Lapwing	<i>Vanellus vanellus</i>	Unlikley to nest on site
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	Unlikley to nest on site
Redwing	<i>Turdus iliacus</i>	Winter visitor only
Purple Heron	<i>Ardea purpurea</i>	Rare visitor
Barn Owl	<i>Tyto alba</i>	Unlikley to nest on site
Bittern	<i>Botaurus stellaris</i>	Unlikley to nest on site
Kingfisher	<i>Alcedo atthis</i>	
Reed Bunting	<i>Emberiza schoeniclus</i>	
Peregrine Falcon	<i>Falco peregrinus</i>	Unlikley to nest on site
Whimbrel	<i>Numenius phaeopus</i>	Unlikley passage visitor
House Sparrow	<i>Passer domesticus</i>	
Merlin	<i>Falco columbarius</i>	Winter visitor to area only

Fieldfare	<i>Turdus pilaris</i>	
Brambling	<i>Fringilla montifringilla</i>	Winter visitor only
Little Gull	<i>Hydrocoloeus minutus</i>	Infrequent visitor
Cetti's Warbler	<i>Cettia cetti</i>	
Grasshopper Warbler	<i>Locustella naevia</i>	
Mediterranean Gull	<i>Larus melanocephalus</i>	Winter visitor, unlikely to nest
Wood Warbler	<i>Phylloscopus sibilatrix</i>	Unlikely on site, requires significant size and maturity of woodland
Black Redstart	<i>Phoenicurus ochruros</i>	
Lesser Redpoll	<i>Acanthis cabaret</i>	Unlikely to nest on site

Invertebrates	
Common Name	Latin
Cinnabar	<i>Tyria jacobaeae</i>
Small Blue	<i>Cupido minimus</i>
Knot Grass	<i>Acronicta rumicis</i>
Latticed Heath	<i>Chiasmia clathrata</i>
Small Heath	<i>Coenonympha pamphilus</i>
Dingy Skipper	<i>Erynnis tages</i>
Wall	<i>Lasiommata megera</i>
Lackey	<i>Malacosoma neustria</i>
Dot Moth	<i>Melanchra persicariae</i>
Shoulder-striped Wainscot	<i>Leucania comma</i>

Rosy Minor	<i>Litoligia literosa</i>
Rustic	<i>Hoplodrina blanda</i>
Mottled Rustic	<i>Caradrina morpheus</i>
Moss Carder-bee	<i>Bombus muscorum</i>
Brown-banded Carder-bee	<i>Bombus humilis</i>
Broom Moth	<i>Ceramica pisi</i>

Plants	
Common Name	Latin
Deptford Pink	<i>Dianthus armeria</i>
Cornflower	<i>Centaurea cyanus</i>
Basil Thyme	<i>Clinopodium acinos</i>
Marsh Stitchwort	<i>Stellaria palustris</i>
Yellow Centaury	<i>Cicendia filiformis</i>

3 BASELINE SURVEY RESULTS

3.1 PHASE 1 HABITAT SURVEY

3.1.1 SURVEY METHOD

An extended phase 1 habitat survey was undertaken for the site by Wendy Larcombe in May 2018. The habitat types present on the site were assessed using the habitat classification system as set out in the Joint Nature Conservation Committee Handbook for Phase 1 habitat survey – a technique for environment audit (JNCC, 1993). Habitats were mapped and classified based largely on vegetation composition, with target notes used to demarcate features of interest. In addition to the habitats, conspicuous fauna particularly protected species, were also recorded.

An additional phase 1 survey was carried out in February 2020 to include an additional area which was added in (the cable run between the technology centre and the hydrogen centre) by Megan Price

3.1.2 LIMITATIONS

The survey was undertaken at a suitable time of year to assess habitat types, with most flora being conspicuous. The survey is a snapshot of what was observable on the survey visits, further species (particularly mobile faunal species) may be missed if not present during the survey visits and recommendations for further survey work are set out in sections 4 and 5. However, we believe that the survey provides a good initial appraisal of the ecological value of habitats on the site.

3.1.3 SURVEY RESULTS

The results of the survey, including habitat descriptions are presented below and mapped in Figure 4. A species list was compiled and presented in full in Appendix A. Photographs are also provided in Appendix B.

Habitats recorded:

Wet woodland/Willow carr

The majority of the scrub around the southern and western boundaries is dominated by willow carr/wet woodland. This habitat is associated with the drainage for the site and runs alongside the ditches on site.

Standing and running water

Ditches with associated reed beds and a pond occur in adjacent areas to the wet woodland, and alongside the western and northern boundaries. These form the current drainage system for the site.

Tall herb, scrub and semi-improved neutral grassland mosaic

A mosaic of habitat including tall herbs and semi-improved grassland occurs within adjacent areas to the wet woodland and ditch system. These areas support significant anthills.

Semi-improved neutral grassland

Semi-improved neutral grassland that is regularly mown dominates the main part of the site, between the other habitats and the adjacent building.

Scrub

There is a planted area consisting of mainly bramble, non-native landscaping species and the occasional tree present. This area is on the boundary between the Technology Centre and the Hydrogen centre.

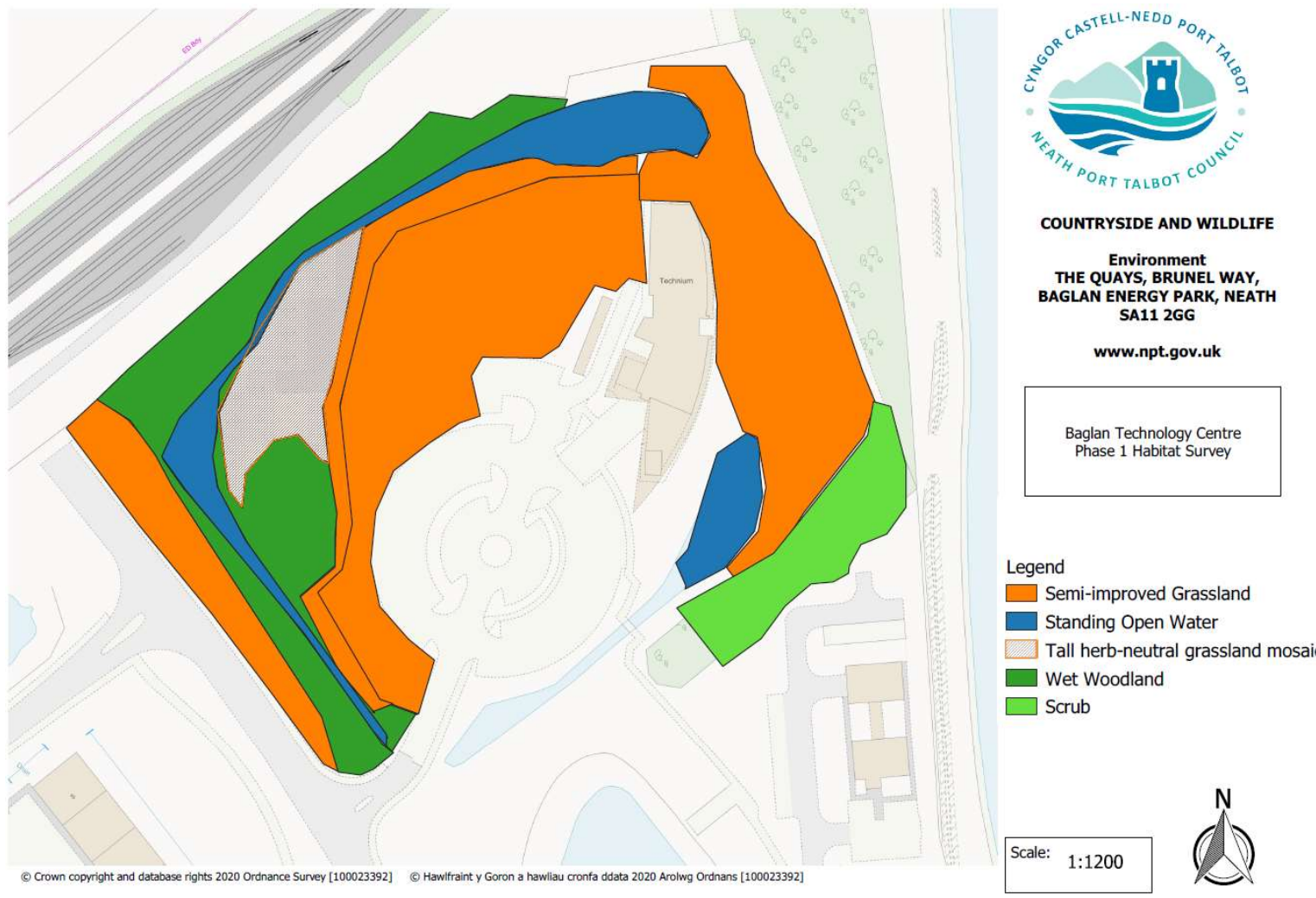


Figure 4. Phase 1 Habitat Survey Plan

3.2 PROTECTED SPECIES

3.2.1 MAMMALS

Bats

Most, if not all, British bat species are believed to be in decline, and all of the 17/18 species are protected by European and UK legislation: the Conservation of Habitats and Species Regulations 2010 as amended and Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This affords complete legal protection to all bats and their roosts. The protection provided by these laws means that it is illegal to:

- Kill, injure or handle a bat
- Disturb bats when they are roosting
- Obstruct, damage or destroy the places where bats live (this applies even if the bats are not in residence)
- Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or any part of a bat
- Keep bats in captivity

A derogation licensing system is in place that may permit works that may impact bats if certain criteria are met. These licenses are issued by Natural Resources Wales.

Barbastelle (*Barbastella barbastellus*), Bechstein's (*Myotis bechsteinii*), Noctule (*Nyctalus noctula*), Common Pipistrelle (*Pipistrellus pipistrellus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*), Brown long-eared (*Plecotus auritus*), Greater Horseshoe (*Rhinolophus ferrumequinum*), and Lesser Horseshoe bats (*Rhinolophus hipposideros*) are all listed under S7 Environment Act 2016, as species of principal importance for conservation of biological diversity in Wales. All bat species are also included in the Local Biodiversity Action Plan for Neath Port Talbot.

The life-cycle of the different species of bat varies but generally they all require the following:

- Hibernation roost sites ; to enable bats to enter into a period of torpor over winter these sites need to have a stable winter temperatures (e.g. caves, mines, adits or crevices and hollows in mature trees),
- Maternity/Nursery roost sites; these sites are where females give birth and rear their offspring in spring/summer,
- General roost sites for individuals or small numbers of bats, particularly males, through spring-autumn,
- Foraging grounds; areas that support good numbers of insects.

- Some species may also require social-gathering sites at certain times of the year, such as during the autumn mating season (however this requirement is not well understood at present).

Summer roosts, including maternity and male roosts, are often found in roof spaces and mature trees.

Assessment

The desk study suggests that Common Pipistrelle and Soprano Pipistrelle may be present in the general area. There are no buildings on site that may support bats. However, a number of trees are present on site that may support roosting bats. The woodland and the wetland features on site may provide foraging habitat and commuting routes for bats.

Badger

Badgers (*Meles meles*) are social animals and live in family units, called 'clans'. The same pathways to feeding grounds are used by the family throughout their lives, even when obstacles such as fences, roads and buildings encroach on them. Badgers are omnivorous and eat a variety of foods, including earthworms (their main diet), small mammals, grubs, fruits, bulbs and berries. They normally chose wooded areas to sett in and often forage in improved pastures for earthworms. Their territories can range from 10ha -300ha with an average of about 50ha. Setts consists of a network of tunnels and chambers. A number of types of sett are recognized: the main sett (continuously used, including for breeding); annexe setts (smaller setts close to the main sett that are used temporarily or less frequently to the main sett, including by individuals of the clan that have been excluded from the main sett); outlier and subsidiary setts (usually only one or two holes, used infrequently and can be anywhere within the territory). The Badger is protected under the Protection of Badgers Act 1992, which includes protection of the sett, and Schedule 6 of the Wildlife and Countryside Act 1981 (as amended). Appendix III, Article 7 of the Bern Convention states that the British Badger population has high value in international conservation of the species. Some protection of Badgers is also given under the Hunting with Dogs Act 2004. Badgers are included in the Neath Port Talbot Biodiversity Action Plan.

The protection afforded badgers under law was based mainly on the need to protect them from badger baiting and deliberate harm. The following would constitute an offence under the Protection of Badgers Act 1992.

- to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or attempt to do so
- damaging or destroying a sett
- obstructing access to a sett

- disturbing a badger when occupying a sett
- plus, offences in relation to persecution.

Any development to be carried out within the vicinity of a sett may require a license from Welsh Government. Generally use of heavy machinery within 30m of an active sett would need a license.

Assessment

No signs of badgers were noted during the habitat survey on the site and records of Badger in the general area is limited. However, there is one record of signs of Badger close to the Triangular Pond not far from the site. The site is surrounded by development or previously developed land that holds little suitable connectivity habitat for this species to use.

It is not expected that Badgers are using the site but further checks are recommended to confirm.

Brown Hare

The Brown Hare (*Lepus europaeus*) is occasionally seen, but is an inconspicuous species in the Glamorgan countryside. Nationally the Brown Hare is thought to have undergone a substantial decline in numbers since the early 1960s. The Brown Hare is listed S7 of the Environment Act (2016), as a species of principal importance for conservation of biological diversity in Wales; and is included in the Local Biodiversity Action Plan for Neath Port Talbot.

Brown Hare have been recorded occasionally in coastal areas of Neath Port Talbot; utilising sand dune and large areas of brownfield land; otherwise it is more commonly found in areas of open upland habitat, especially on common land.

Survey/assessment

No Brown Hare were noted during the habitat survey. The habitat and the location of the site, situated in an area surrounded by development; was considered to hold limited suitability for this species. Brown Hare prefer large areas of open habitat. The surrounding developments, roads and buildings were considered to significantly reduce the suitability of the site for this species.

Other Species

Otter and Dormouse are both European Protected Species afforded protection under the Conservation of Habitats and Species Act 2010 and the Wildlife and Countryside Act 1981

(as amended). Both are listed under S7 of the Environment Act (2016), as species of principal importance for conservation of biological diversity in Wales; and are also included in the Local Biodiversity Action Plan for Neath Port Talbot.

Water Vole are afforded protection under the Wildlife and Countryside Act 1981 (as amended); is listed under S7 of the Environment Act (2016), as species of principal importance for conservation of biological diversity in Wales; and is also included in the Local Biodiversity Action Plan for Neath Port Talbot.

Hedgehog are listed under S7 of the Environment Act (2016), as species of principal importance for conservation of biological diversity in Wales

Survey/assessment

No Otter or Water Vole were noted during the habitat survey. The site does support suitable habitat for Otter and Water Vole, including the ditch, ponds and wet woodland. There are no records for Water Voles in the vicinity and this species is rare in lowland areas in NPT, with only historic records relating to the Tennant and Neath Canals. It is considered unlikely that they will be present. Otters however do frequent the Baglan Brook (less than 200m away) and the River Neath (850m to the north west). The habitat on site provides very little foraging opportunity for Otter but it cannot be ruled out that they may use to site infrequently.

No survey has been undertaken for Dormouse. The site does support woodland habitat that Dormouse could use, although wet woodland is unlikely to provide optimal habitat for this species although drier areas could be suitable. There are no records for Dormouse in the vicinity of the site (with very few confirmed records in the county as a whole) and with limited connectivity of habitat it is considered unlikely that this species would be present.

No survey has been undertaken for Hedgehog. The site does support habitats suitable for Hedgehog with drier parts of the woodland and scrub providing foraging and resting places; plus the grassland also has foraging potential. There are records of Hedgehog in the vicinity of the site and it is therefore considered possible that this species would be present.

3.2.2 AMPHIBIANS

Great Crested Newts

Adult Great Crested Newts (*Triturus cristatus*) spend most of the year on dry land, returning to ponds only to breed, generally between March/April and July. Britain supports a significant proportion of the European population and the species can be found throughout much of England and Wales, having a more restricted distribution in Scotland and apparently being absent from south-west England and western Wales.

There are only 2 confirmed sites in Neath Port Talbot. The Great Crested Newt has a complex set of habitat requirements; including waterbodies for breeding, suitable foraging habitat including rough grassland, hedges and pasture; and suitable hibernation sites, such as under leaf litter and undergrowth or deadwood.

The Great Crested Newt is a European protected species and is afforded protection under the Conservation of Habitats and Species Act 2010 and the Wildlife and Countryside Act 1981 (as amended). The protection under the listed legislation means that it is illegal to:

- Kill, injure or capture a great crested newt
- Disturb a great crested newt in its place of shelter or breeding
- Obstruct, damage or destroy the places where great crested newts live
- Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead Great Crested Newt or any part of a Great Crested Newt.

Great Crested Newt is also listed under S7 of the Environment Act (2016), as species of principal importance for conservation of biological diversity in Wales; and are also included in the Local Biodiversity Action Plan for Neath Port Talbot.

Survey/assessment

No survey has been undertaken for Great Crested Newts. There a number of waterbodies on or close to the site that could support Great Crested Newts, however the biodiversity data search reported no records of this species. The site is surrounded by development or previously developed land that holds little suitable connectivity habitat for this species to use. The limited distribution of Great Crested Newts in Neath Port Talbot also suggest that the presence of this species on site is unlikely, the nearest record being well over 5km from the site.

Other Amphibians

The Common Toad (*Bufo bufo*) is widespread and native to Britain. The Toad's diet consists of insects, larvae, spiders, worms and slugs. Toads tend to breed in large water bodies, including lakes and slow moving rivers (especially behind weirs) where water quality is good. Although vegetation is necessary for spawning, heavily shaded sites tend to be avoided. Common Toads tend to occur in areas of mixed farmland, woodland, flowing and still water, scrub and worked out mineral extraction sites. On land, Toads bury themselves within soil or leaf litter or hide beneath dead wood and vegetation. Movements towards breeding ponds (usually their birth ponds) occur during spring, after dusk on mild, damp nights, when the air temperature is above 4°C. Road traffic mortality is a common threat at this time. Toads are also at risk from pond loss and destruction of breeding sites, particularly as they are 'site faithful'. Toads receive some

protection under Appendix III of the Bern Convention and under Schedule 5 of the Wildlife and Countryside Act 1981.

Common Toad is also listed under S7 of the Environment Act (2016), as species of principal importance for conservation of biological diversity in Wales; and is also included in the Local Biodiversity Action Plan for Neath Port Talbot.

The other species of amphibian that occur in Neath Port Talbot; Common Frogs (*Rana temporaria*), Palmate Newts (*Lissotriton helveticus*) and Smooth Newts (*Lissotriton vulgaris*) are afforded protection from Sale under the Wildlife and Countryside Act 1981 (as amended). All of these species have similar habitat requirements, in relation to suitable waterbodies for breeding and terrestrial habitat for foraging and hibernation.

Survey/assessment

No Toads or other amphibians were recorded during the habitat survey. However, there are suitable waterbodies on or close to the site that would support the above amphibian species. The habitat on site would provide suitable hibernacula and foraging. It is therefore considered that they are likely to be present.

3.2.2 REPTILES

Reptiles are widespread within Neath Port Talbot, particularly in the Port Talbot area. Reptiles recorded in the County Borough include the Adder (*Vipera berus*), Grass Snake (*Natrix natrix*), Slow Worm (*Anguis fragilis*) and Common or Viviparous Lizard (*Lacerta vivipara*). Heathlands, moorlands, acidic grasslands and some areas of brownfield land provide suitable open habitats for these reptiles. Reptiles are cold-blooded and maintain their body temperature externally by sunbathing and moving under cover. Reptiles give birth to their young between June and September and most species' young hatch from eggs. However, the Common Lizard gives birth to live young. Grass Snakes, usually associated with water, feed mainly on amphibians and fish, whilst Adder feed mainly on rodents and Lizards and are particularly associated with heathland, grassland and woodland edge habitats found on some of the slopes of the upland areas in Neath Port Talbot. Slow Worm are legless Lizards and, like Lizards, can drop their tail to escape from a predator. The Slow Worm is probably the most commonly encountered British reptile. They prefer to hide under stones, logs or pieces of discarded rubbish exposed to the sun. Slow Worms are also keen on compost heaps where they find warmth and plenty of food. They feed on slow moving prey, particularly small slugs. They are often found in gardens and any areas of land that provides enough cover and prey; often in grasslands with scrub. The widespread Common Lizard feeds mainly on spiders and insects; it can be found in more open habitats to the Slow Worm, including brownfield land and heathlands. All British reptiles are protected under of the Wildlife and Countryside Act 1981. The protection under this legislation means that it is illegal to:

- Kill or injure a reptile
- Trade/sell a reptile.

All reptile species are listed under S7 of the Environment Act (2016), Act 2006, as species of principal importance for conservation of biological diversity in Wales; and are also included in the Local Biodiversity Action Plan for Neath Port Talbot.

Assessment

No survey for Reptiles has been undertaken. The desk study noted records for reptiles within 200m of the site; specifically Slow Worm and Common Lizard. With known populations using similar habitats in the area the presence of reptiles is considered likely; although the connectivity of the site is not necessarily considered ideal for these species.

3.2.3 BIRDS

All wild birds are protected under law when they are nesting, under the Wildlife and Countryside Act 1981 (as amended). In addition Schedule 1 species are protected at all times. It is an offence under the Wildlife and Countryside Act to:

- Kill, injure or take any wild bird.
- Take, damage or destroy a nest while it is in use or being built.
- Take or destroy eggs.
- Possess or control any wild bird (dead or alive) or any part of a wild bird which has been taken in contravention of the Act or the Protection of Birds Act 1954.
- Possess or control any egg or part of an egg which has been taken in contravention to the Act.
- Possess or control any live bird of prey of any species in the world (with the exception of vultures and condors) unless it is registered and ringed.
- Disturb any wild bird listed on Schedule 1 of the Act while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.
- In addition there are also offences relating to selling, trading, exhibiting, keeping in captivity and registering for possessing/controlling certain species.

The 2012 amendment to the Conservation of Habitats and Species Act 2010 included a duty for appropriate authorities, nature conservation bodies etc. to take appropriate steps in the exercise of their functions to secure: *“ the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of such habitat, as appropriate, having regard to the requirements of Article 2 of the new Wild Birds Directive.”*

In addition, a number of species are listed under S7 of the Environment Act (2016), as species of principal importance for conservation of biological diversity in Wales;

included in the Local Biodiversity Action Plan for Neath Port Talbot, and listed as a species of conservation concern by the RSPB.

Survey/assessment

No specific bird survey was undertaken on the site. However, the records assessed as part of the desk study suggest that a number of bird species are likely to nest or forage on the site, including a number of S7 species and listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) e.g. Cetti's Warbler.

3.2.5 INVERTEBRATES

Certain invertebrate species are afforded protection by legislation, including the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Act 2010; although species listed in the latter are not known to occur and neither are they likely to occur in Neath Port Talbot, being limited to south-east England. In addition, a number of species are listed under S7 of the Environment Act (2016), Act 2006, as species of principal importance for conservation of biological diversity in Wales and included in the Local Biodiversity Action Plan for Neath Port Talbot.

Survey/assessment

No survey has been undertaken for invertebrates. The desk study suggests that the area supports a number of important invertebrate species, including various butterflies, moths and bumblebees. Of specific interest is the Small Blue Butterfly (*Cupido minimus*), which is listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) (protected from sale); and listed under S7 of the Environment Act (2016). It is considered likely that important invertebrates could be present on site.

3.2.6 BOTANICAL SPECIES

A few plant species are afforded protection by legislation, including the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Act 2010; although species listed in the latter are not known to occur and neither are they likely to occur in Neath Port Talbot. In addition, a number of species are listed under S7 of the Environment Act (2016), Act 2006, as species of principal importance for conservation of biological diversity in Wales and included in the Local Biodiversity Action Plan for Neath Port Talbot.

Survey/assessment

No particular species of note were recorded during the phase 1 habitat survey, however no detailed botanical survey has been undertaken on the site. Records of species noted in the phase 1 habitat survey are listed in appendix A. The desk study suggests that the area supports a number of important plant species. Of specific interest is Deptford Pink,

which is listed under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) (protected from sale); and listed under S7 of the Environment Act (2016). This species is recorded in immediately adjacent areas to the site. It is therefore considered likely that important plant species could be present on site.

4 CONSTRAINTS AND OPPORTUNITIES

The below sets out preliminary results of the constraints to the development and initial recommendations of how these can be addressed within the development. Opportunities for mitigation and enhancement are also identified wherever possible. Also see Figure 5 a summary constraints and opportunities plan.

4.1 DESIGNATED SITES

4.1.1 STATUTORY SITES

There are no statutory sites within or adjacent to the site and therefore the development of a new building on site is unlikely to have any direct effects. However, additional vehicular movement or other air emissions (if applicable) from the building have potential to impact sites at some distance from the site. This potential impact will require further assessment once further detail of the development is available.

4.1.2 NON-STATUTORY SITES

There are no non-statutory sites within or adjacent to the site and therefore the development of a new building on site is unlikely to have any direct effects.

Additional vehicular movement or other air emissions (if applicable) from the building have potential to impact sites at some distance from the site. This potential impact will require further assessment once further detail of the development is available.

The watercourse and associated wetland features may be directly linked to watercourses in the area, that are designated SINCs. The wetland features, whilst not directly connected, may form a key part of a network of such features including the Triangular Pond SINC. Assessment of any direct or indirect impacts (e.g. loss of connectivity) will require further assessment once further detail of the development is available.

Further assessment will also need to be undertaken to establish whether any of the habitats or species on site meet SINC criteria. This will need to be undertaken following further survey work.

4.2 HABITATS

Wet woodland/Willow carr

The willow carr/wet woodland would be classed as Wet Woodland as listed under S7 of the Environment Act as a habitat of principal importance for conservation in Wales, and under the LBAP. Development of the site has potential to impact this habitat through direct loss or indirect impact such as changes to drainage regimes. Further survey and

assessment of any direct or indirect impacts will be required once further detail of the development is available.

Preliminary recommendation for development design:

1. Avoid encroachment into this habitat. If this is not able to be avoided further survey and assessment will be necessary.
2. Inclusion of a buffer area between the development and the wet woodland to prevent encroachment and to protect the tree root zones, the woodland edge habitat and part of the hydrological regime.

Preliminary recommendation for other mitigation:

1. Any loss of habitat would require appropriate mitigation/compensation. As the site is limited in extent off-site replacement habitat would be likely to be necessary as compensation for any loss, in line with Local Development Plan Policy and the Biodiversity and Geodiversity Supplementary Planning Guidance.

Preliminary recommendation for enhancement:

1. Bird and bat boxes.

Standing and running water

The reed beds, pond and watercourses would be classed as S7 habitats under the Environment Act, as habitats of principal importance for conservation in Wales, and under the LBAP. Development of the site has potential to impact these habitats through direct loss or indirect impact such as changes to drainage regimes. Further survey and assessment of any direct or indirect impacts will be required once further detail of the development is available.

Preliminary recommendation for development design:

1. Avoid encroachment into these wetland habitats. If it is not possible to avoid further survey and assessment will be necessary, including consideration of connectivity.
2. Inclusion of wetland habitats within drainage design.

Preliminary recommendation for other mitigation:

1. Any loss of habitat would require appropriate mitigation/compensation. As the site is limited in extent off-site replacement habitat would be likely to be necessary as compensation for any loss, in line with Local Development Plan Policy and the Biodiversity and Geodiversity Supplementary Planning Guidance

Preliminary recommendation for enhancement:

1. Change to management regime to improve diversity: very occasional and selective hand clearance

Tall herb, scrub and semi-improved neutral grassland mosaic

A mosaic of habitat including tall herbs and semi-improved grassland occurs within adjacent areas to the wet woodland and ditch system. These areas support significant anthills. Whilst part of the mosaic of habitats on site, these habitats have limited ecological value and would not be classed as a S7 or LBAP habitat, however may support various species such as reptiles, nesting birds and invertebrates. This habitat may be impacted by the works through direct loss. Further assessment of any direct or indirect impacts will be required once further detail of the development is available.

Preliminary recommendation for development design:

1. Avoid encroachment (as much as possible) into these habitats. If it is not possible to avoid further survey and assessment will be necessary.
2. Soft landscaping and planting for any new development could be designed to provide some replacement habitat to mitigate for impacts. See Appendix C for a suggested seed mix.

Preliminary recommendation for enhancement:

1. Change to management regime to improve botanical diversity: strim and take off arisings in early September (only do half area each year to leave dead stems for invertebrates), avoid disturbing anthills.

Semi-improved neutral grassland

The semi-improved neutral grassland dominates the main part of the site. This habitat is regularly mown and has limited ecological value and would not be classed as a S7 or LBAP habitat. Whilst not S7 this habitat is relatively species-rich. This habitat may be impacted by the works through direct loss.

Preliminary recommendation for development design:

1. Limit construction footprint as much as possible.
2. Soft landscaping and planting or a green/brown roof included in any new development could be designed to provide some replacement habitat to mitigate for impacts. See Appendix C for a suggested seed mix.

Preliminary recommendation for enhancement:

1. Change to management regime to improve botanical diversity: regularly mow 1m edge alongside paths and buildings. Mow remaining late spring (mid-April), then again in later summer (end August) take arisings off. Alternatively, for a short flowering lawn, cut and remove arisings again in

early-mid May. Some areas close to buildings would need to be kept short for amenity use. Provision of reptile hibernacula.

4.3 SPECIES

4.3.1 MAMMALS

Of the mammals investigated bats, otter, hedgehog (and possibly badger) were considered likely to use the site. Loss of habitat, resting places or foraging habitat may occur due to development on the site. Lighting could also impact on nocturnal/diurnal species such as bats and badger. Increased road traffic could result in an increased risk of roadkill of all of these species. Changes to drainage regimes could impact the suitability of the wet habitats for otter. Further survey and assessment of any direct or indirect impacts will be required once further detail of the development is available.

Preliminary recommendation for development design:

1. Avoid or limit encroachment/loss of habitat suitable for mammal species; including wet woodland, pond/ditches, scrub, grasslands.
2. Provide wildlife-friendly soft landscaping and planting
3. Include artificial roosting boxes/bricks.
4. Wildlife-friendly lighting design ensuring dark corridors of suitable habitat is maintained around the site.
5. Provision of a buffer to protect the woodland edge habitat that is likely to be used by bats.

Preliminary recommendation for other mitigation:

1. Avoid site clearance during sensitive times – see Appendix D.

4.3.3 AMPHIBIANS

No Great Crested Newts were considered likely to be present in the vicinity, however the site was assessed as providing potential for other more common species of amphibians. Risks to these species would be from killing and injuring during construction; as they can be slow moving and often remain partially or entirely buried in the ground or beneath undergrowth. The development could also increase the risk of roadkill, particularly of common toad during breeding migration times. In addition, the removal of habitat would also have potential to reduce available foraging and refugia. Changes to drainage regimes could impact the suitability of the wet habitats for amphibians. Further survey and assessment of any direct or indirect impacts will be required once further detail of the development is available.

Preliminary recommendation for development design:

1. Avoid or limit encroachment/loss of habitat suitable for amphibian species; including wet woodland, pond/ditches, and scrub.
2. Provide replacement habitat within the drainage or landscaping scheme.

Preliminary recommendation for other mitigation:

1. An Ecological Clerk of Works should be employed to supervise the works and move any amphibians encountered out of the way of construction or site clearance.

4.3.4 REPTILES

It is likely that reptiles are present on site within the tall herb, semi-neutral grassland and scrub mosaic, wet woodland, and standing water habitats, with records in the desk study confirming presence close to the site. Therefore, there could be a significant risk of reptiles being killed/injured during the works; this would be an offence under the Wildlife and Countryside Act 1981 (as amended). In addition, the removal of vegetation and substrate is also likely to reduce the available suitable habitat, in respect of foraging, hibernacula and basking. Further survey and assessment of any direct or indirect impacts will be required once further detail of the development is available.

Preliminary recommendation for development design:

1. Avoid or limit encroachment/loss of habitat suitable for reptile species; including wet woodland, pond/ditches, and tall herb, grassland and scrub mosaic.
2. Provide replacement habitat within the drainage or landscaping scheme.

Preliminary recommendation for other mitigation:

1. Translocation of reptiles to a receptor site on or off-site. A method statement for reptile conservation should be developed (if confirmed present) and receptor site will need to be identified. Ecological Clerk of Works should be employed to supervise the works/translocation.
2. Provision of reptile hibernacula.

4.3.6 BIRDS

The wet woodland, tall herb, semi-improved neutral grassland and scrub mosaic, semi-improved neutral grassland and the standing water (ponds, ditches and reedbeds) habitats all have potential to support wild birds, for nesting and foraging. A number of bird species were noted in the desk study including S7 and Schedule 1 species. The development is likely to impact upon such habitat, including result in loss of habitat,

which is used by breeding and/or foraging birds. Changes to drainage regimes could impact the suitability of the wet habitats for wetland birds such as Reed Bunting and Cetti's Warbler. Further survey and assessment of any direct or indirect impacts will be required once further detail of the development is available.

Preliminary recommendation for development design:

1. Avoid or limit encroachment/loss of habitat suitable for bird species.
2. Provide replacement habitat within the drainage or landscaping scheme.
3. Provide additional artificial nesting sites in the design of the building through the provision of bird bricks.

Preliminary recommendation for other mitigation:

1. Avoid site clearance during sensitive times – see Appendix D.

4.3.7 INVERTEBRATES

The habitat on site is considered suitable to support numerous important invertebrate species and the desk study has identified a number of S7 species in the vicinity of the site. Specifically for the Small Blue and Shril Carder Bee the pockets of suitable habitat along the coastal strip of Port Talbot are an important stronghold and important at a county level; therefore any losses of suitable habitat may cumulatively have a significant impact upon local populations. Further assessment of any direct or indirect impacts will be required once further detail of the development is available.

Preliminary recommendation for development design:

1. Avoid or limit encroachment/loss of habitat on site.
2. Provide replacement habitat within the drainage and landscaping scheme, including the seeding or planting of plant species that specifically support key invertebrates. Planting Red Bartsia to support Shril Carder bee and Kidney vetch for Small Butterfly could be considered. Heather could be included to support pollinators. Also, see Appendix C for a suggested seed mix.
3. Provide bug hotels, these can be built into the building or landscaping design.

Preliminary recommendation for other mitigation:

1. Translocation of important food plant species to receptor areas within the site. Donor and receptor sites will need to be identified.

4.3.8 BOTANICAL SPECIES

The habitat on site is considered suitable to support a number of important plant species, and given the locality of a number of records of S7 species and the schedule 8 species Deptford Pink almost immediately adjacent to the site it is considered likely that such

species may be found on site. Further survey and assessment of any direct or indirect impacts will be required once further detail of the development is available.

Preliminary recommendation for development design:

1. Avoid or limit encroachment/loss of habitat on site.
2. Provide replacement habitat within the landscaping scheme.

Preliminary recommendation for other mitigation:

1. Translocation of important plant species to receptor areas within the site.
2. In relation to Deptford Pink, if found, propagation and planting of Deptford Pink under licence from NRW will be required. A suitable receptor site would need to be identified or created for this species.

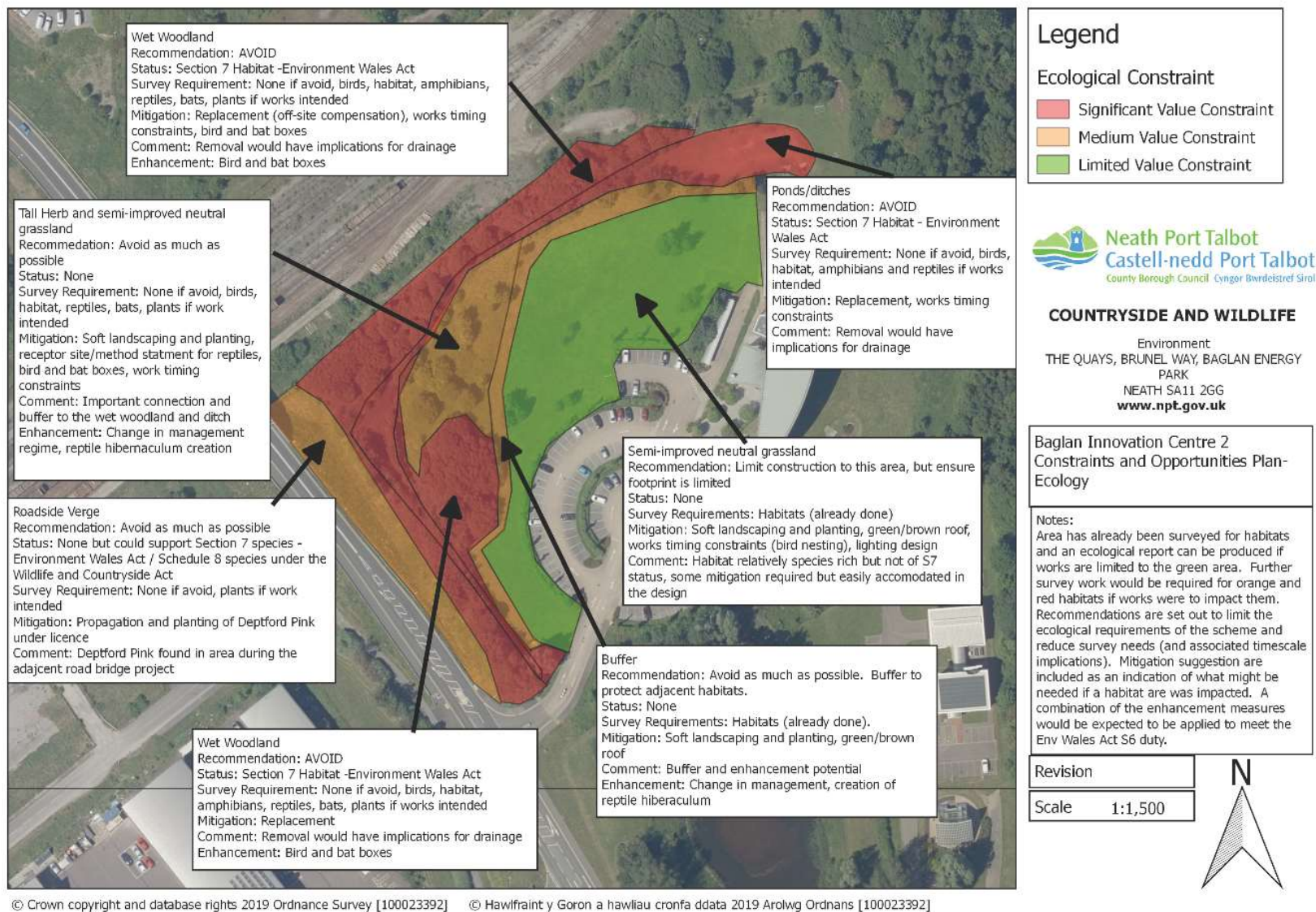


Figure 5. Summary Constraints and Opportunities

5 RECOMMENDATIONS

5.1 FURTHER SURVEY AND ASSESSMENT

To inform the development and any subsequent planning application further assessment and survey work is required. Section 4 identifies where further survey and assessment is needed and this is summarized below:

- Mammal survey, especially for otter and bats and a check for badger
- Amphibian survey
- Reptile survey
- Bird survey
- Botanical survey

These surveys are scheduled to be finished in May 2020.

It is dependent upon the layout of the development and what habitats are likely to be impacted as to which of the above surveys will be necessary. See section 4 for details.

In addition, the following assessments will need to be included with the planning submission and will be informed by the further survey work above:

- Assessment of air quality impacts on designated sites (if necessary).
- Assessment of wild bird habitat (see Conservation of Habitats and Species Regulations 2017).
- Assessment of ecosystem resilience (see Environment Act 2016).
- Assessment (include quantitative loss and gains) of SINC/S7 and LBAP habitats and species.

An appropriately qualified/experience ecologist will need to be employed to undertake the above necessary surveys and assessments.

5.2 MITIGATION/COMPENSATION

Details of all mitigation and compensation for impacts identified by further survey and assessment will need to be developed by an ecologist and provided as part of the planning submission. See section 4 for initial suggestions.

5.3 ENHANCEMENT

Details of all enhancement opportunities identified by further survey and assessment will need to be developed by an ecologist and provided as part of the planning submission to ensure compliance with the Environment Act and Planning Policy Wales 10. See section 4 for initial suggestions.

5.4 OTHER REQUIREMENTS

Invasive non-native species, including Japanese Knotweed, were noted on site. It is recommended that these species be mapped and a scheme for treatment be established for the development.

6 REFERENCES

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7 APPENDICES

APPENDIX A –SPECIES LIST

Representative Species lists

Birch
Bramble
Common Nettle
European Gorse
Fern sp.
Hawthorn
Hemlock Water- dropwort
Herb Robert
Japanese Knotweed
Rosebay Willow herb
Salix spp.
Soft Rush
Wild Parsnip
Wild Raspberry
Yellow Flag
Broadleaf plantain
Common Knapweed
Common Sorrel
Creeping Buttercup
Creeping thistle
Creeping Willow
Curled Dock

Equisetum sp.
dead nettle
Hemp Agrimony
Lady's Bedstraw
Ribwort Plantain
Salad Burnet (Fodder)
Sweet Vernal Grass
Wild/barren strawberry?
Yorkshire Fog
Bugle
Carex sp.
Cock's-foot grass
Common Daisy
Common Knapweed
Cowslip/Primula
Creeping Thistle
Forget-me-not sp
Groundsel
Lesser Bird's-foot Trefoil
Meadow buttercup
Mouse-ear Chickweed
Orchid (no spots)?
Ox-Eye Daisy
Ribwort Plantain

Selfheal
Sheep's Fescue
Thyme-leaved Speedwell
Star moss??
Sweet Vernal grass
White Clover
Yarrow
Yorkshire Fog
Watercourse
Common Reed

APPENDIX B –PHASE 1 HABITAT SURVEY PHOTOGRAPHS

Images of habitats on site:



Plate 1. Tall ruderal with Wet woodland



Plate 2. Species-rich neutral grassland (recently mown)



Plate 3. Neutral grassland with plantation/scrub margins



Plate 4. Standing open water

APPENDIX C – WILDFLOWER SEED MIX

Wildflower Seed Mix

Emorsgate Seeds EM7- Meadow Mixture for Sandy Soils (Sow at 4grms/m²)

Wildflowers:

- 0.5% *Achillea millefolium* Yarrow
- 2% *Centaurea nigra* Common Knapweed
- 1% *Daucus carota* Wild Carrot
- 2% *Echium vulgare* Viper's Bugloss
- 1.5% *Galium verum* Lady's Bedstraw
- 1.2% *Leucanthemum vulgare* Oxeye Daisy
- 0.3% *Linaria vulgaris* Common Toadflax
- 2% *Lotus corniculatus* Birdsfoot Trefoil
- 0.5% *Malva moschata* Musk Mallow
- 1% *Plantago lanceolata* Ribwort Plantain
- 0.5% *Plantago media* Hoary Plantain
- 1% *Primula veris* Cowslip
- 3% *Ranunculus acris* Meadow Buttercup
- 1% *Rumex acetosa* Common Sorrel
- 0.5% *Rumex acetosella* Sheep's Sorrel
- 2% *Silene vulgaris* Bladder Campion

Grasses:

- 10% *Agrostis capillaris* Common Bent
- 2% *Anthoxanthum odoratum* Sweet Vernal-grass (w)
- 24% *Cynosurus cristatus* Crested Dogstail
- 20% *Festuca ovina* Sheep's Fescue
- 20% *Festuca rubra* Slender-creeping Red-fescue
- 4% *Phleum bertolonii* Smaller Cat's-tail (w)

Note: Mix is suitable for sandy soils

APPENDIX D – GENERAL BIODIVERSITY TIMING CONSTRAINTS

SURVEY TIMINGS

Some surveys can only be undertaken at certain times of the year so can have implications for timetabling planning determination and development commencement. The following can be used as a general guide:

Survey for:	Type	J	F	M	A	M	J	J	A	S	O	N	D
Birds	Breeding			/	/	/	/	/					
	Wintering	/	/								/	/	/
Reptiles	Presence				/	/	/	/	/	/			
Great Crested Newts	Presence			/	/	/	/	/	/				
Badgers, Water Vole, Otter, Dormice	Presence	/	/	/	/	/	/	/	/	/	/	/	/
Bats	Roosts					/	/	/	/	/			
	Hibernating	/	/	/								/	/
Marsh Fritillary Butterfly	Presence						/			/	/		
Fen Raft Spider	Presence						/	/	/				
Plants	Presence					/	/	/	/				

Survey for:	Type	J	F	M	A	M	J	J	A	S	O	N	D
High Brown Fritillary Butterfly	Presence							/					
Habitat Survey						/	/	/	/	/			

/ = optimal period for survey

Please note that if a survey is undertaken outside of the optimal period it may be rejected and required to be re-done during the correct season. In addition, if applications are submitted without relevant surveys and in a season where surveys are not able to be undertaken the application will be unable to be determined.

MITIGATION TIMINGS

Biodiversity is often season specific. Certain species appear or are most active only during certain times of the year. Therefore, not only do surveys have to be undertaken at certain times but so do some mitigation works. Appropriately scheduling these sorts of works is key to the avoidance of delays. Some key timing constraints are shown in the below table:

Habitat or Species	Works Type	J	F	M	A	M	J	J	A	S	O	N	D
Badgers	Sett creation	/	/	/	/	/	/	/	/	/	/	/	/
	Sett closure (under licence)								/	/	/	/	
Birds	Vegetation clearance	/	/						/	/	/	/	/
Reptiles	Capture and translocation				/	/	/	-	-	/	/		

Habitat or Species	Works Type	J	F	M	A	M	J	J	A	S	O	N	D
	Vegetation clearance	/	/	/								/	/
Great Crested Newts	Newt trapping -pond and land (under licence)			/	/	/	/						
	Newt trapping - land (under licence)			/	/	/	/	-	-	-	-		
Habitat works	Planting and translocation	/	/	-	-					-	/	/	/
	Wildflower Meadow Cutting (hay-cut)				/					/			
Otters	Holt creation	/	/	/	/	/	/	/	/	/	/	/	/
Bats	Roost creation (separate to existing)	/	/	/	/	/	/	/	/	/	/	/	/
	Works to maternity roosts (under licence)	/	/	/	/					/	/	/	/
	Works to hibernation roosts (under licence)					/	/	/	/	/	/		

/= optimal time for works. - = sub-optimal time for works.

Please note that the above table is only a guide to the general timing constraints commonly encountered. For works involving protected species that require a licence

more specific timings may be put in place for the specific development. Further advice should be sought from the licensing body in this respect e.g. Natural Resources Wales or Welsh Government. Also, depending upon the species seeded, wildflower meadow cutting timings may vary.