

Grandison Brook

Ecological Impact Assessment Report

Atkins
61377
July 2025



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List of Abbreviations

Abbreviation	Full Description
BAP	Biodiversity Action Plan
BCT	Bat Conservation Trust
CIEEM	Chartered Institute for Ecology and Environmental Management
ECH	European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora
EcoIA	Ecological Impact Assessment
ECOP	Ecological Constraints and Opportunities Plan
JNCC	Joint Nature Conservation Committee
NBN	National Biodiversity Network
NERC	Natural Environment Research Council
PEA	Preliminary Ecological Appraisal
WCA	Wildlife and Countryside Act

1 SUMMARY

PURPOSE

TACP (UK) Ltd (TACP) was commissioned by AtkinsRealis to undertake a Phase 1 Habitat survey and an Ecological Impact Assessment (EclA) for the Grandison Brook Scheme as part of the Neath Port Talbot County Council flood alleviation programme (hereafter referred to as “the Scheme”). The Scheme starts at grid reference SS 75230 95048 at the southern end of the site and concludes at SS 74104 95618 to the north. The boundary of the Site is shown in Appendix A.

This EclA has been commissioned to support the Scheme, which includes upgrades to the flood alleviation system, including new culverts, connections to the new culvert from the existing culvert, repairing the existing culverts, creating flood bunds, attenuation ponds, manholes and outfall structures.

This report provides an ecological overview of the site, including a description of potential ecological receptors, and presents an updated impact assessment of the Scheme on ecology.

RESULTS

A Phase 1 Habitat Survey and Preliminary Ecological Appraisal (PEA) was undertaken by TACP in April 2025 which consisted of a desk study and field survey following the Chartered Institute of Ecology and Environmental Management (CIEEM) Preliminary Ecological Appraisal (CIEEM, Chartered Institute of Ecology and Environment Management Preliminary Ecological Appraisal Guidelines, 2017) guidelines and standard Phase 1 Habitat Survey protocol (JNCC, 2010).

The Scheme may result in impacts on wildlife and habitats affecting the following protected species:

- Reptiles and Amphibians
- Bats
- Badgers
- Breeding and Nesting Birds

As recorded in Table 8, there are slight negative impacts on all the above species, leading to slight adverse effects on both bats and breeding birds.

The negative impacts are all related to construction activities, with excavations for installation of drainage and culverts, as well as vegetation clearance, in particular scrub with relevance to reptiles and breeding birds. Vegetation clearance may also affect commuting routes for bats.

RECOMMENDATIONS

On the basis of the Habitat survey, TACP recommends further surveys including:

- Ground level tree assessment for potential bat roost features (GLTA) in the trees should any be scheduled to be affected in any way.

Pre-construction nesting bird surveys are recommended if works are to be undertaken during the active season (late February to early September inclusive, weather dependent). As recorded in Table 8, there are neutral effects on both badgers and invertebrates, and therefore no further mitigation is required other than general construction measures. Staged vegetation clearance is recommended for both reptiles and amphibians and breeding birds. In order to provide additional mitigation, incorporation of bird and bat boxes is suggested as well as brash piles for reptiles.

If reptiles are found, then translocation to suitable habitat outside of the works area by a suitably qualified ecologist will be required. Emergence surveys may be required if trees with bat features cannot be adequately checked.

2 INTRODUCTION

2.1 Background

- 2.1.1 TACP was commissioned by AtkinsRealis to undertake an update Ecological Impact Assessment (EclA) of the Grandison Brook Scheme, hereafter referred to as 'the Scheme', as part of the Neath Port Talbot County Borough Council (NPTCBC) flood alleviation programme. The previous EclA was produced in July 2022 by TACP (enclosed in Appendix D).
- 2.1.2 This EclA was commissioned to identify whether there are known or potential ecological receptors (nature conservation designations, and protected and notable habitats and species) that may constrain or influence the design and implementation of the Scheme. The approach applied when undertaking this EclA is in accordance with the Guidelines for Ecological Impact Assessment in the UK and Ireland published by the Chartered Institute of Ecology and Environmental Management (CIEEM, Guidelines For Ecological Impact Assessment in the UK and Ireland , 2018 (UPDATED 2022)) The EclA addresses relevant wildlife legislation and planning policy as summarised in Section 3 of this report.
- 2.1.3 In order to deliver the EclA, a desk study and an extended Phase 1 Habitat Survey was undertaken by an appropriately experienced ecologist, to identify ecological features within the Site and the wider potential zone of influence of the Scheme. The surveys were completed by James Bilham, Principal Ecologist at TACP, BSc (Hons) MSc, MCIEEM, MRSB.
- 2.1.4 This report provides an ecological overview of the site including a description of potential ecological receptors and gives an ecological impact assessment in relation to the site and the proposed works. This includes recommendations for mitigation and enhancement in relation to the potential impacts identified based on the available information. Proposed areas for retention and enhancement to benefit ecology and nature conservation have also been identified.

2.2 Site Description

The Site is linear and located in Britton Ferry, Neath. The site begins at National Grid Reference (NGR) SS 75230 95048 at the southern end of the site and concludes at SS 74104 95618 to the north, passing through the centre of Ynysmaerdy. The boundary of the Site is shown in the Phase 1 Habitat drawing in Appendix A. The site area comprises approximately 2.26 hectares through an urbanised/residential area containing a primary school (Ysgol Carreg Hir), cricket and lawn bowls club, cemetery, and allotments. There is a park and woodland (Jersey Park/Britton Ferry Woods) to the south east of the site, this will remain unaffected, however the playground may be used as a site compound during the works (to be agreed). To the south west of the site is a linear public-right-of-way/Country Park known as The Incline, which includes a watercourse, native broadleaved woodland, as well as scrub / ruderal understorey with a number of invasive species present.

2.3 Proposed Works

2.3.1 The proposed Scheme would provide an upgrade to the flood alleviation system by introducing new culverts, connections to the new culvert from the existing culvert, repairing the existing culverts, creating flood bunds, attenuation ponds, manholes and outfall structures. These structures would be created in areas of amenity grassland, woodland, hard standing (main roads and car parks) and areas of invasive species (Japanese knotweed).

2.3.2 The main works are proposed to comprise of:

- Construction of a new flood defence bund adjacent to the main rail and district rail lines at Penrhiwtin.
- Construction of a new precast box culvert 1750 x 750mm across the A474 Pant yr Heol road and Morgans Terrace across to the railway.
- Construction of a new precast box culvert 1750 x 1000mm on the eastern side of the main passenger railway.
- New flood defence wall built over the existing culvert adjacent to the eastern side of the district rail line.
- Existing watercourse adjacent to Morgans Terrace to receive overland flows from properties at Brook Court.
- Construction of a new 1200mm culvert from Pant yr Heol road to Pant Howell Ddu/Ynysmaerdy Road.
- New Trash screen and platform to replace the existing at Inlet structure CUL 0015 at Ynysmaerdy Road.
- Construction of a new drainage ditch and inlet headwall adjacent to The incline.
- Construction of a new box culvert 1000x1000mm from CUL 0015 inlet structure to The Incline.
- Connection of new culvert to existing at Ynysmaerdy road adjacent to the bowls club to split the flows.

2.3.3 It is understood that construction is programmed to commence no sooner than April 2026.

2.4 Objectives

2.4.1 EcIA is a process of identifying, quantifying, and evaluating potential effects of development on habitats, species and ecosystems. EcIA supports implementation of national biodiversity strategies and national planning policies for safeguarding biodiversity and supporting the delivery of sustainable development. This assessment demonstrates how the scheme accords with relevant planning policy and legislation.

2.4.2 The purpose of this report is to provide an ecological impact assessment, which includes:

- Details of relevant national and local planning policy with regards to nature conservation and relevant legislative background;
- Description of survey and assessment methodology;
- A description of the baseline conditions for the application site;

- An evaluation of the application site in terms of its value for nature conservation;
- An assessment of potential ecological impacts of the proposed development including habitat loss and fragmentation, disturbance and potential off-site impacts and whether those impacts are likely to result in significant effects on Important Ecological Features;
- Proposed mitigation measures to avoid or minimise significant adverse effects on Important Ecological Features;
- A description of measures that can be implemented to enhance biodiversity; and
- Identification of residual effects taking into account proposed mitigation measures.

3 PLANNING POLICY AND LEGISLATION

3.1 National Planning Policy

3.1.1 The relevant planning policies related to this EclA are listed below.

- **Planning Policy Wales** (Welsh Government, 2024)
- **Planning Policy and Guidance for Professionals**

3.2 Legislative Framework

- 3.2.1 The main statutory species protection is provided by **The Conservation of Habitats and Species** and Planning regulations (UK GOV, The Conservation of Habitats and Species Regulations, 2017)(England and Wales) **and the Wildlife and Countryside Act 1981** (UK GOV, The Wildlife and Countryside Act, 1981) (as amended).
- 3.2.2 The degree of protection varies between species; in general, it is an offence to intentionally kill or injure individual animals or disturb their roosts or hibernacula. A licence may be required to interfere with any protected species or their roosts and resting places.
- 3.2.3 Priority species and habitats agreed under the **UK BAP** (UK GOV, 1994) are those which are identified as being the most threatened and requiring conservation action. The UK BAP was superseded by 'The UK Post-2010 Biodiversity Framework 'which was published in July 2012 with work focussing at the country level, but the list of priority habitats and species remain the basis for the biodiversity work in the countries. Therefore, species listed under Section 41 (S41) of the **Natural Environment and Rural Communities (NERC) Act 2006** (NERC, 2006) were reviewed as these are the rarest and most threatened in England.

4 METHODS

4.1 Scope of the assessment

- 4.1.1 An Extended Phase 1 Habitat Survey of the Site was carried out in April 2025 by TACP.
- 4.1.2 The extent of the survey area is the land within the red line boundary defined in the Phase 1 Habitat Plan in Appendix A. Where possible or relevant, this was extended into adjacent habitat to provide context to the Site.
- 4.1.3 The assessment uses a 1 km area of search around the Site for records of protected and notable species and locally or nationally designated wildlife sites.
- 4.1.4 The application site 'the Site' comprises of an urbanised/residential area containing a primary school (Ysgol Carreg Hir), cricket and lawn bowls club, cemetery, and allotments. There is a park and woodland (Jersey Park/Britton Ferry woods) to the south east of the site. To the south west of the site is a linear public-right-of-way/Country Park known as The Incline, which includes a watercourse, native broadleaved woodland, as well as scrub / ruderal understorey with a number of invasive species present.
- 4.1.5 To provide information on the Site's ecological value, the following studies have been carried out, the relevant reports produced being:
- Phase 1 Habitat survey & Preliminary Ecological Appraisal (September 2020)(completed by TACP).
 - Phase 1 Habitat & Ecological Impact Assessment (July 2022) (completed by TACP)
- 4.1.6 The reports for all surveys listed above can be found in Appendix D.
- 4.1.7 All surveys are undertaken by suitably qualified ecologists. The surveying ecologist James Bilham BSc(Hons) MSc MCIEEM MRSB has 12 years' experience carrying out ecological survey and assessment.

4.2 Desk Study

- 4.2.1 A data search was undertaken in May 2025 using the South East Wales Biological Records Centre (SEWBRc) database. Covering 1km beyond the Site, it provides an indication of the protected species that are present in the wider area.

A review of available designated sites information was also undertaken within 1km of the site for internationally and nationally designed sites and within 1km for locally designated sites.

4.3 Field Surveys

Phase 1 Habitat Survey

- 4.3.1 An Extended Phase 1 Habitat Survey was carried out by James Bilham on 29th April 2025 to provide a baseline to assess the value of the habitats and their potential to

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support protected species. This survey was conducted following appropriate Chartered Institute for Ecology and Environmental Management (CIEEM) guidelines and the methods outlined in the Joint Nature Conservation Committee (JNCC)'s 'Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit' (JNCC, 2010). All habitats within the sites were classified and mapped with detailed target notes (refer to Appendix C) and species lists produced for each habitat area.

- 4.3.2 The survey involved a site walkover and preliminary assessment of key habitats, land use and ecological features. The plant species defining the habitat types on the Site were recorded. Evidence of any invasive plant species subject to legal controls was recorded. The Site was assessed for its potential to support protected or notable species in order to identify potential ecological constraints and to guide recommendations for further surveys. The Phase 1 survey incorporated a preliminary protected species assessment.

4.4 Limitations

- 4.4.1 Biological records can be received from a wide variety of sources and may or may not be comprehensive and accurate. However, if assessed in conjunction with a Phase 1 Habitat survey, they can contribute to a robust ecological assessment of a site.
- 4.4.2 No access was possible to the Briton Ferry Rugby or Football Grounds, however this was considered to be of limited importance, as the grounds are mainly amenity grassland, which is heavily managed and well used, reducing the ecological importance of the areas identified. However one tree is present to the southern boundary of the football club that could not be assessed, and therefore is a constraint to the results.
- 4.4.3 No access was possible to Ysgol Carreg Hir, the south east corner of the site was able to be assessed from the corner of Tyla and Old road, however the southern boundary of the site adjacent to Bethesda Cwrt Sart, was unable to be viewed, however the proposed pipeline is running through mainly well managed amenity grassland until it crosses Pant yr Heol at the front of the school.
- 4.4.4 The field adjacent to the mainline railway and district line was heavily vegetated with Japanese Knotweed and therefore limited access was possible, with only visual access possible from the bottom of the field in line with Collins St (Target Note 10).
- 4.4.5 Despite the limitations described, there are deemed to be no significant limitations to this EcIA.

4.5 Assessment Criteria

- 4.5.1 The CIEEM Guidelines for Ecological Impact Assessment (EcoIA) in the U.K and Ireland (2019) have been used to undertake the impact assessment as detailed below. These guidelines provide the basis for more thorough surveys and assessments, which are used to provide detailed mitigation requirements and ecological enhancement measures.
- 4.5.2 The wildlife value has been assessed using the Ratcliffe Criteria. This assesses an ecological feature in terms of:
1. Fragility
 2. Rarity
 3. Size (area of extent)
 4. Diversity
 5. Potential Value
 6. Position within the Ecological/ Geographical Unit
 7. Typicality
 8. Recorded History
 9. Naturalness
 10. Intrinsic Appeal
- 4.5.3 The degree to which a feature can be replaced/substituted has also been taken into consideration. Guidance suggests that the loss of a feature of national value that is irreplaceable may be considered more significant than the loss of a feature that can be replaced or substituted.
- 4.5.4 The overall ecological value of the area has been considered in the context of the pattern of habitat and interdependencies between habitats, as well as the relative legislative value of any protected species, habitats, or sites.
- 4.5.5 The value of the ecological features has been given, as far as possible, in terms of geographical context in accordance with CIEEM EcoIA guidance (2019):
- **International/European** – e.g., Natura 2000 sites, significant populations of European Protected Species (EPS), sites hosting significant populations under the Bonn Convention, non-designated international features such as large populations that are rare on an International/European scale.
 - **National (U.K)** – e.g., Sites of Special Scientific Interest, Geological Conservation Review sites, significant populations of U.K protected species.
 - **Regional** – e.g., regionally important designation which can be reasonably substituted such as Local Nature Reserves, important inventory site such as Ancient Woodland, small population of European or U.K protected species, medium population of Section 7 species, medium populations of U.K Birds of Conservation Concern.
 - **County** – e.g., County Wildlife Sites or other county-wide designations, sites with Local Biodiversity Action Plan (LBAP) species, non-breeding individuals of European or U.K protected species, small populations of U.K Birds of Conservation Concern.

- **River Basin District**
 - **Estuarine System/Coastal Cell**
 - **Local** – features of value within the site area, district, borough, or parish only
 - **Zone of Influence** – this can include any of the above features and is determined by the extent/potential extent of impacts identified and can vary from feature to feature, particularly for mobile species.
- 4.5.6 The 2019 guidelines also identify the need to assess potential impacts on ecosystem services resulting from the Scheme ecological effects. Ecosystem services can be divided into four types, as detailed below.
- **Supporting services** – services necessary for the production of all other ecosystem services, including soil formation, photosynthesis, primary production, nutrient cycling, and water cycling.
 - **Provisioning services** – products obtained from ecosystems, including food, fibre, fuel, genetic resources, biochemical, natural medicines, pharmaceuticals, and fresh water.
 - **Regulating services** – benefits obtained from the regulation of ecosystem processes, including air quality regulation, climate regulation, water regulation, erosion regulation, water purification, disease regulation, pest regulation, pollination, and natural hazard regulation.
 - **Cultural services** – non-material benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation, and aesthetic experiences thereby taking account of landscape values.
- 4.5.7 The assessment includes direct, indirect, short-term, medium-term, and long-term, secondary, and cumulative impacts. Both positive and negative impacts on the ecological baseline of the site are assessed.
- 4.5.8 Magnitude of impact is assessed by the scale of loss or damage predicted to semi-natural vegetation, wildlife habitats and protected species. Significance is assigned by looking at the magnitude of change to habitats and species of local and regional importance and assigning higher significance to greater loss of regionally important habitats.
- 4.5.9 The following criteria for determining the magnitude of impact are used and are based upon, or adapted from, those given in the Guidance.
- 4.5.10 **Major negative** – The proposal may adversely affect the integrity of the site, in terms of the coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or the population levels of species of interest. This includes large-scale damage or loss of a large proportion of a particular semi-natural habitat type or protected species habitats that are of regional/national importance or listed as key habitats in the UK Biodiversity Action Plan Steering Group Report Loss of Protected Species.

- 4.5.11 **Moderate negative** – The site's integrity will not be adversely affected but the effect on the site is likely to be significant in terms of its ecological objectives. If, in the light of full information, it cannot be clearly demonstrated that the proposal will not have an adverse effect on integrity, then the impact should be assessed as major negative. This would apply in the case of damage or loss of a small proportion of a particular semi-natural habitat type or protected species habitat that are of local importance or listed as key habitats in the UK Biodiversity Action Plan Steering Group Report.
- 4.5.12 **Slight negative** – Neither of the above apply, but some minor negative impact is evident. (In the case of Natura 2000 sites a further assessment may be necessary if detailed plans are not yet available). This would apply in the case of damage or loss of common semi-natural vegetation, wildlife habitats or important wildlife but not protected species. Habitats are not locally or regionally important.
- 4.5.13 **Neutral** – No observable impact in either direction. This would apply in the case of damage or minor losses of common types of habitats or common wildlife. Habitats are not locally or regionally important.
- 4.5.14 **Slight Positive** – Impacts which provide a slight net gain for biodiversity overall. This would apply in the case of an increase in the population of a species or area of habitat which is not locally or nationally important.
- 4.5.15 **Moderate Positive** – Impact which provide a net gain for biodiversity overall (but which will not positively affect the integrity of the site). This would include a small increase in the proportion of a semi-natural habitat or habitat of a protected species that are locally important or listed as key habitats within the UK Biodiversity Action Plan Steering Group Report.
- 4.5.16 **Major Positive** – Impact which provides a net gain for biodiversity overall in terms of increases in habitat diversity (and which may positively affect the integrity of the site). This would apply in the case of a large-scale increase in a protected species or habitat of a protected species that are locally important or listed as key habitats within the UK Biodiversity Action Plan Steering Group Report.
- 4.5.17 The overall significance of each impact is determined from the ecological value of the feature and the magnitude of the potential impact, as shown in **Table 1** below.

Table 1 - Overall Significance of Impact Assessment

Magnitude of Potential Impact	Nature Conservation Value of Ecological Feature				
	Very High	High	Medium	Low	Negligible
Major Negative	Very large adverse	Very large adverse	Moderate adverse	Slight adverse	Neutral
Moderate Negative	Large adverse	Large adverse	Moderate adverse	Slight adverse	Neutral
Slight Negative	Slight adverse	Slight adverse	Slight adverse	Slight adverse	Neutral

Magnitude of Potential Impact	Nature Conservation Value of Ecological Feature				
	Very High	High	Medium	Low	Negligible
Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
Slight Positive	Slight positive	Slight positive	Slight positive	Slight positive	Neutral
Moderate Positive	Large positive	Large positive	Moderate positive	Slight positive	Neutral
Major Positive	Very large positive	Very large positive	Moderate positive	Slight positive	Neutral

5 BASELINE ECOLOGICAL CONDITIONS

5.1 Desk Study Results

Designated Sites

5.1.1 The results of the desk study designated habitats, sites and features within proximity to the Site are listed in **Table 2** below.

Table 2 - Desk Survey Results for Designated Sites

Designation /Feature	Description
Designated Sites within 2 km	There is one designated site within 2km of the Scheme; Earlswood Road Cutting and Ferryboat Inn Quarries Site of Special Scientific Interest (SSSI). This is located approximately 1.5km south-west of the site and designated for geological features and ancient river systems.
Locally Designated Sites within 1 km	There are eleven locally designated sites within 1km of the Scheme, with the closest being the NPT Ancient Semi-Natural Woodland, NPT Watercourses and Neath Canal: - NPT Watercourses (pass through the site) - NPT Ancient Semi-Natural Woodland (7m) - Neath Canal (240m) - Square Pond (258m to the north) - Garth Mor (289m to the north-east) - Giant's Grave (348m to the west) - Neath Estuary (558m to the west) - The Waun, Cimla (622m to the north-east) - Shelone Woods (705m to the south-west) - Eaglesbush Valley (821m to the north-east) - Britton Ferry Waste Ground (975m)
Surrounding Land Use	Urbanised and residential areas surround the site. The beginning of the site, in the east, is adjacent to a large cemetery, and a number of recreational facilities/amenities (namely a bowling green, rugby and cricket club, an amateur football pitch, and an allotment). The site continues through residential areas before crossing the railway. The western edge of the site consists of amenity grasslands, services facility, and the Neath canal which forms part of the cycle path Wales. The tidal outfall of the River Neath is located along the westerly edge of the site.

Designation /Feature	Description
Ancient Woodland	There are 33 areas of Ancient Semi Natural Woodland, nine areas of Restored Ancient Woodland, seven areas of Plantation on Ancient Woodland, and three areas of Ancient Woodland Site of Unknown Category within 1km of the Scheme.
Ponds within 500m	There are two areas of standing water, these are located to the north and south of the Scheme.
Previous Surveys	A Phase 1 habitat survey was undertaken by TACP during July 2022, this followed a previous phase 1 survey undertaken by TACP in 2019 (and presented in 60940_REP_Grandison Brook_PEA_P1_S3). The aim was to provide a baseline to assess the value of the habitats and their potential to support protected species.

Habitats

5.1.2 The desk study also revealed that a number of Priority Habitats were located within the surrounding 1 km of the site. These include Ancient Semi-Natural Woodland, Restored Semi-Natural Woodland, Plantation on Ancient Woodland Site, Ancient Woodland Site of Unknown Category, NRW Priority Area (Woodland – PAWS), and B-Lines. Whilst these are not designated, they do hold NERC (2006) status. These results are summarised in

5.1.3 **Table 3** below.

Table 3 - Priority Habitats within 1km of site

HABITAT TYPE	LOCATION	RELEVANT LEGISLATION
Ancient Semi-Natural Woodland	There are 33 areas of Ancient Semi-Natural Woodland within 1km of the Proposed Scheme. These are located to the north-east, east and south of the Scheme.	NERC (2006)
Restored Semi-Natural Woodland	There are nine areas of Restored Semi-Natural Woodland within 1km of the Proposed Scheme. These are located to the north-east, south-east and south of the Scheme.	NERC (2006)

HABITAT TYPE	LOCATION	RELEVANT LEGISLATION
Plantation on Ancient Woodland Site	There are seven areas of Plantation on Ancient Woodland within 1km of the Scheme. These are located to the east, south-east and south of the Scheme.	NERC (2006)
Ancient Woodland Site of Unknown Category	There are three areas of Plantation on Ancient Woodland within 1km of the Scheme. These are located to the south of the Scheme.	NERC (2006)
NRW Priority Area (Woodland – PAWS)	There are seven areas of Plantation on Ancient Woodland within 1km of the Scheme. These are located to the east, south-east and south of the Scheme.	NERC (2006)
B-Lines	The Scheme falls within a designated B-Lines area.	NERC (2006), Section 40

Protected and Priority Species

- 5.1.4 The SEWBRcC was also contacted for a full data search of all records of protected species within a 1km area of the site. These are summarised in **Table 4**. It is noted that the absence of records of other flora and fauna does not necessarily discount the possibility of protected species being on the site or in the vicinity.
- 5.1.5 The presence or absence of any protected species within the site was taken into account when carrying out the detailed site-specific searches as part of the extended Phase 1 survey. In addition, any habitat which had clear potential for any protected species was also taken into account when undertaking the site survey.

Table 4 – Protected and Priority Species Potential

SPECIES GROUP	SPECIES	RELEVANT LEGISLATION
Plants	Bluebell, <i>Hyacinthoides non-scripta</i> – 5 records	Protected under Schedule 7 and the Wildlife and Countryside Act
Invertebrates	- Cinnabar, <i>Tyria jacobaeae</i> – 3 records - Long-horned Bee – <i>Eucera longicornis</i> – 2 records	All are protected under Schedule 7

SPECIES GROUP	SPECIES	RELEVANT LEGISLATION
	Wall, <i>Lasiommata megera</i> – 1 record	
Amphibians	- Common Frog, <i>Rana temporaria</i> – 2 records - Smooth Newt, <i>Lissotriton vulgaris</i> – 1 record	All are protected under the Wildlife and Countryside Act
Reptiles	Slow-worm, <i>Anguis fragilis</i> – 1 record	Protected under Schedule 7 and the Wildlife and Countryside Act
Birds	Black Redstart, <i>Phoenicurus ochruros</i> - 1 record	WCA1
	Black-headed Gull, <i>Chroicocephalus ridibundus</i> – 3 records	Protected under Schedule 7 and the Wildlife and Countryside Act
	Bullfinch, <i>Pyrrhula pyrrhula</i> – 3 records	Protected under the Wildlife and Countryside Act
	Cetti's Warbler, <i>Cettia cetti</i> – 1 record	Protected under the Wildlife and Countryside Act
	Cormorant, <i>Phalacrocorax carbo</i> – 1 record	Protected under the Wildlife and Countryside Act
	Dipper, <i>Cinclus cinclus</i> - 1 record	Protected under Schedule 7 and the Wildlife and Countryside Act
	Dunnock, <i>Prunella modularis</i> – 7 records	Protected under the Wildlife and Countryside Act
	Goldcrest, <i>Regulus regulus</i> - 5 records	Protected under the Wildlife and Countryside Act
	Green Woodpecker, <i>Picus viridis</i> – 3 records	Protected under the Wildlife and Countryside Act
	Grey Heron, <i>Ardea cinerea</i> – 3 records	Protected under the Wildlife and Countryside Act
	Grey Wagtail, <i>Motacilla cinerea</i> – 2 records	Protected under the Wildlife and Countryside Act
	Herring Gull, <i>Larus argentatus</i> – 3 records	Protected under Schedule 7 and the Wildlife and Countryside Act
	House Sparrow, <i>Passer domesticus</i> – 6 records	Protected under the Wildlife and Countryside Act
	Kestrel, <i>Falco tinnunculus</i> – 1 record	Protected under the Wildlife and Countryside Act
	Kingfisher, <i>Alcedo atthis</i> – 1 record	Protected under the Wildlife and Countryside Act
	Lesser Black-backed Gull, <i>Larus fuscus</i> – 1 record	Protected under the Wildlife and Countryside Act
	Lesser Redpoll, <i>Acanthis cabaret</i> – 2 records	Protected under the Wildlife and Countryside Act
	Linnet, <i>Linaria cannabina</i> – 2 records	Protected under the Wildlife and Countryside Act
	Long-tailed Tit, <i>Aegithalos caudatus</i> – 4 records	Protected under the Wildlife and Countryside Act

SPECIES GROUP	SPECIES	RELEVANT LEGISLATION
	Mallard, <i>Anas platyrhynchos</i> – 2 records	Act
	Marsh Tit, <i>Poecile palustris</i> – 1 record	Protected under Schedule 7 and the Wildlife and Countryside Act
	Meadow Pipit, <i>Anthus pratensis</i> – 1 record	Protected under the Wildlife and Countryside Act
	Mistle Thrush, <i>Turdus viscivorus</i> – 6 records	
	Pied Flycatcher, <i>Ficedula hypoleuca</i> – 1 record	Protected under Schedule 7 and the Wildlife and Countryside Act
	Red Kite, <i>Milvus milvus</i> – 1 record	Protected under the Wildlife and Countryside Act
	Redstart, <i>Phoenicurus phoenicurus</i> – 1 record	
	Redwing, <i>Turdus iliacus</i> – 3 records	Protected under Schedule 7 and the Wildlife and Countryside Act
	Ring Ouzel, <i>Turdus torquatus</i> – 1 record	
	Snipe, <i>Gallinago Gallinago</i> – 1 record	Protected under the Wildlife and Countryside Act
	Song Thrush, <i>Turdus philomelos</i> – 5 records	Protected under Schedule 7 and the Wildlife and Countryside Act
	Spotted Flycatcher, <i>Muscicapa striata</i> – 1 record	
	Starling, <i>Sturnus vulgaris</i> – 4 records	Protected under the Wildlife and Countryside Act
	Swallow, <i>Hirundo rustica</i> – 2 records	
	Swift, <i>Apus apus</i> – 4 records	Protected under Schedule 7 and the Wildlife and Countryside Act
	Turtle Dove, <i>Streptopelia turtur</i> – 1 record	Protected under the Wildlife and Countryside Act
	Whitethroat, <i>Curruca communis</i> – 1 record	
	Willow Warbler, <i>Phylloscopus trochilus</i> – 4 records	Protected under the Wildlife and Countryside Act
	Wood Warbler, <i>Phylloscopus sibilatrix</i> – 1 record	Protected under Schedule 7 and the Wildlife and Countryside Act
	Woodcock, <i>Scolopax rusticola</i> – 1 record	Protected under the Wildlife and Countryside Act

SPECIES GROUP	SPECIES	RELEVANT LEGISLATION
Bats	Noctule, <i>Nyctalus noctule</i> – 3 records	All are protected under Schedule 7 and the Wildlife and Countryside Act
	Common Pipistrelle, <i>Pipistrellus pipistrellus</i> – 8 records	
	Soprano Pipistrelle, <i>pipistrellus pygmaeus</i> – 3 records	
	Pipistrelle species, <i>Pipistrellus</i> – 6 records	
	Myotis species, <i>Myotis</i> – 2 records	
	Natterer's Bat, <i>Myotis nattereri</i> – 1 record	
	Lesser Horseshoe Bat, <i>Rhinolophus hipposideros</i> – 2 records	
Water Vole	Water Vole, <i>Arvicola amphibius</i> – 1 record	All are protected under Schedule 7 and the Wildlife and Countryside Act
Other Mammals	Hedgehog, <i>Erinaceus europaeus</i> – 23 records	Protected under Schedule 7

5.2 Phase 1 Survey Results

Habitats

5.2.1 The habitats identified during the Extended Phase 1 Habitat Survey within the Site boundary and their descriptions are shown in **Table 5**. A plan of the Site showing the location and distribution of these habitats is shown in Appendix A.

Table 5 - Summary of habitats from Phase 1 survey

HABITAT	DESCRIPTION	SECTION 7 (WALES)
Semi- natural broad leaved woodland	An area of woodland is present along the boundaries of the Incline. Species present within this include Holly (<i>Ilex aquifolium</i>), self seeded Sycamore (<i>Acer pseudoplatanus</i>), Oak (<i>Quercus robur</i>), Beech (<i>Fagus sylvatica</i>) and Cypress sp.	No
Tall Ruderal	The understorey of the Incline included creeping buttercup (<i>Ranunculus repens</i>), dandelion (<i>Taraxacum</i> sp.), bramble (<i>Rubus fruticosus</i>), narrow leaf plantain (<i>Plantago lanceolata</i>), cleavers (<i>Galium aparine</i>), dock and Hart's-tongue fern (<i>Asplenium scolopendrium</i>).	No

HABITAT	DESCRIPTION	SECTION 7 (WALES)
Amenity Grassland	Amenity grassland sports pitches are present within the middle section of the scheme. These belong to Briton Ferry Cricket and Rugby Club. To the west of the scheme, the proposed pipeline passes through the grounds of Ysgol Carreg Hir.	No
Running Water	A stream is present within a line of scattered trees including alder (<i>Alnus glutinosa</i>) and willow (<i>Salix aurita</i>), this runs under the side road, to the north of Farm Rd and runs east towards the Railway.	
Scattered trees	A line of scattered trees is present along the edges of the stream (as noted above), as well as individual trees present within the school grounds including Field maple (<i>Acer campestre</i>), hornbeam (<i>Carpinus betulus</i>), ash (<i>Fraxinus excelsior</i>) and prunus sp.	No
Allotments	An area of allotments is present to the south of the Renewable Centre Stadium. A track is present to the east with the cricket pitch to the west.	No
Hard Standing	At the eastern end of the scheme is the Ynysmaerdy Road which borders the cemetery and runs from the bowls club to the Incline. The scheme also crosses Old Road and the A474, as well as parts of the car parking areas within Ysgol Carreg Hir.	No
Bare Ground/Track	A track, well used by pedestrians and dog walkers is present at the Incline at the eastern end of the scheme. This runs west to east, with broadleaved woodland and associated understorey adjacent. An open channel was present on the south eastern extent of the track.	No

Protected and Priority Species

- 5.2.2 Details of protected and priority species recorded on Site are shown in **Table 6**. A plan of the Site showing the location and distribution of features with potential for protected or priority species is shown in the Phase 1 habitat plan, with Target notes (refer to Appendix C) of protected species evidence or features that have potential to support protected species.

Table 6 - Phase 1 Protected Species Results

SPECIES	DESCRIPTION
Plants	No protected plants were noted during the Phase 1 survey.
Invertebrates	The woodland, scrub and grassland habitats within the scheme all provide suitable features for invertebrates. Invertebrates could be disturbed, injured during the works.
Amphibians	There are two watercourses adjacent to site, one that runs east from Ynysmaerdy Road and the other adjacent to the railway to the west of the site. Opportunities are limited for amphibians within the scheme area and with limited records from the desk study (Table 4), it is unlikely that they are present within the site.
Reptiles	The majority of the site is considered to have limited suitability to support reptiles or amphibians, given the limited opportunities for basking or foraging, or suitable hibernacula. The areas of scrub, ruderal vegetation within the Incline and within the field adjacent to the railway, could support foraging and resting transient species. However, these are a frequently disturbed and managed/grazed with poor connectivity to more suitable habitat.
Birds	Habitats within and adjacent to the Site provide potential bird nesting habitat, attractive to a variety of species but mainly of common or noise / light tolerant species due to anthropogenic influence. The areas of scrub throughout the site and the large trees within the rugby and cricket ground have the potential to support birds during the breeding season (Late February to early September inclusive, weather dependent). The Incline provides opportunities for birds, again likely tolerant species due to the proximity of residential dwellings and the frequency of use recreationally – particularly by dog walkers.
Bats	With the records detailed in Table 4, with 7 species within a 1km area from the site, the field to the east and the woodland at the Incline may provide foraging areas for bats, in some of the trees at the Incline and at Jersey park may provide roosting opportunities for bats, where no lighting is present.
Badgers	There were no signs of Eurasian Badgers (<i>Meles meles</i>) during the survey, and no records within 1km from the desk study data. However, there may be opportunities for foraging and commuting and potential residency in areas adjacent to the Site to the east of the Incline as well as to the north of the junction of the two railway lines, that were not accessible. It is, therefore, possible that badger utilise the Site, particularly given the opportunities afforded by the anthropogenic influences.

Invasive Species

- 5.2.3 Japanese Knotweed was found in the field to the west of the main passenger railway, and in the scrub area where a new flood defence bund is proposed, adjacent to the district rail line.
- 5.2.4 Hollyberry cotoneaster (*Cotoneaster bullatus*) and Wall cotoneaster (*Cotoneaster horizontalis*), Japanese Knotweed, Bamboo and Rhododendron sp, were present in the understorey at the Incline. A list of those invasive species recorded within the desk study are listed in **Table 7**.
- 5.2.5 Invasive non-native species (INNS) recorded within 1km of the site are listed on **Table 7** below. Species that are listed on Schedule 9 of the WCA 1981 (as amended) makes it illegal to plant or otherwise cause these species to grow / spread in the wild.

Table 7 - Records of INNS species within 1km of the Site (SEWBrEC, 2025)

Binomial Name	Common Name
<i>Buddleja davidii</i>	Butterfly-bush
<i>Sciurus carolinensis</i>	Cherry Laurel
<i>Rhododendron ponticum</i>	Rhododendron
<i>Crocsmia sp</i>	Montbretia
<i>Fallopia japonica</i>	Japanese Knotweed
<i>Cotoneaster horizontalis</i>	Wall Cotoneaster
<i>Cotoneaster simonsii</i>	Himalayan Cotoneaster
<i>Pseudosasa japonica</i>	Arrow Bamboo
<i>Epilobium brunnescens</i>	New Zealand Willowherb
<i>Impatiens glandulifera</i>	Himalayan Balsam
<i>Leycesteria formosa</i>	Himalayan Honeysuckle
<i>Rosa rugosa</i>	Japanese Rose
<i>Elodea nuttallii</i>	Nuttall's Waterweed
<i>Allium triquetrum</i>	Three-cornered Garlic
<i>Lamiasrum galeobdolon</i>	Variegated Yellow Archangel
<i>Lonicera nitida</i>	Wilson's Honeysuckle

6 DESCRIPTION OF THE PROPOSED DEVELOPMENT

- 6.1.1 The Scheme would provide an upgrade to the flood alleviation system by introducing new culverts, connections to the new culvert from the existing culvert, repairing the existing culverts, creating flood bunds, attenuation ponds, manholes and outfall structures. These structures would be created in areas of amenity grassland, woodland, hard standing (main roads and car parks) and areas of invasive species (Japanese knotweed).

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- 6.1.2 A full description of the proposals can be found in section 2.1 and the drawings showing the proposed works are detailed in Appendix B.

7 POTENTIAL IMPACTS

7.1 Construction Impacts

- 7.1.1 There are no designated sites within the site area and none of those identified by the desk study would be affected by the current proposals in terms of habitats. Potential impacts on designatory species have been addressed in the species-specific assessments below.

7.1.2 Habitats

- 7.1.3 The Scheme proposals in their current form would not result in the permanent loss of the habitats within the site boundary. This would be temporary disturbance for the creation of a new 1200 diameter culvert running parallel to that of the existing 750 diameter culvert. The only areas where habitat will be lost are at the western end, adjacent to the railway where a new drainage channel, 1750 x 1000 pre cast box culvert and flood defence bund and wall are proposed.

- 7.1.4 The impact upon scrub, parkland scattered trees, and mixed semi natural woodland trees would have a magnitude of **slight negative** resulting in a **slight adverse** ecological significance of impact at the local level only.

- 7.1.5 Other, ruderal vegetation and amenity grassland, would have a magnitude of **slight negative** which would result in a **neutral** ecological significance of impact overall.

- 7.1.6 The remaining habitats within the survey area, predominantly The Incline, would be subject to direct and indirect disturbance during the construction works. The magnitude of this would be **slight to moderate negative**, depending on construction methodologies, resulting in a **slight adverse** ecological significance of impact. (Should the works result in an increased extent of INNS or the occurrence of these in areas they are not present currently, this significance of impact could increase.)

7.1.7 Invertebrates

- 7.1.8 Works to install the new drainage pipes could result in direct mortality and injury to and disturbance of invertebrate species, especially with the installation of flood bunds to the west of the site. However, further direct impacts are not anticipated. As works would only be planned to be undertaken during daylight hours, there would be no light pollution effects, and therefore limited disturbance.

- 7.1.9 Overall, the potential impact on invertebrate would be **slight negative** in magnitude and therefore, **neutral** in terms of significance.

7.1.10 Reptiles and Amphibians

- 7.1.11 Works could result in direct mortality, injury, or disturbance to both reptiles amphibians resulting in a slight negative magnitude in terms of their populations. However, as

referred to in **Table 6**, there are limited opportunities on site for amphibians and therefore limited potential for disturbance.

- 7.1.12 Further direct impacts on reptiles and amphibians may occur should they utilise the Site during the works, particularly if works are undertaken during the active season and excavations are left open overnight, as these could result in trapped or injured animals. These impacts would be of a negligible to slight negative magnitude. These direct impacts could also extend to any works that are done around watercourses on the scheme, in particular where works to install box culverts are planned, for example between SW MH 19 & 20 to the east of the railway.
- 7.1.13 The clearance of the scrub to the western boundary of the site, may result in direct impacts on reptiles.
- 7.1.14 Overall, the potential impacts on reptiles and amphibians would be **slight negative** in magnitude resulting in a **neutral** significance of impact.
- 7.1.15 **Breeding and Non-Breeding Birds**
- 7.1.16 There is potential for the construction phase to reduce availability of habitats for both breeding and non-breeding birds resulting in a slight negative magnitude. Clearance of these areas, though likely to be minimal in duration, could also result in direct mortality, injury, or disturbance to birds, particularly if clearance is to be undertaken during the breeding season (late February to early September inclusive, weather dependent).
- 7.1.17 Indirect impacts are also dependant on the construction methodologies, particularly in terms of noise pollution and disturbance of adjacent retained habitats, and particularly during the breeding season when bird species are more sensitive to indirect impacts. As such these construction impacts would be of a **slight negative** magnitude.
- 7.1.18 Overall, the potential impact on birds would be **slight negative** in magnitude resulting in a **negligible** significance for non-breeding birds and **slight adverse** significance of impact for breeding birds.
- 7.1.19 **Bats**
- 7.1.20 During construction there is potential of effect upon habitats on Site that would reduce the extent of available foraging habitats for bats resulting in a magnitude of **slight negative**. This may include hedgerows, scrub and scattered trees. This would also reduce the commuting capacity for bats.
- 7.1.21 No other direct impacts on bats are anticipated. However, there may be indirect impacts depending on the construction methodologies, particularly in terms of light and noise pollution, however no night works are anticipated and noise impacts would be temporary and short term.
- 7.1.22 Any potential impacts on trees with bat features would require further investigation and potential further surveys depending on the findings and the magnitude of the works.

7.1.23 Overall, the potential impact on bats would be **slight negative** in magnitude resulting in a **slight adverse** ecological significance of impact.

7.1.24 **Badgers**

7.1.25 No actual or potential active setts were identified on Site at the time of the surveys, either in 2022 or 2025 and as such sett impacts are not anticipated.

7.1.26 Depending on the construction requirements, direct impacts on badgers may occur should they utilise the Site during the works, particularly if there are excavations left open overnight as these could result in trapped or injured animals. Given the location of the site within a residential area and railway area it is anticipated that any indirect impacts that may occur could be carefully managed, for example noise, as this would need to be reduced to a minimum adjacent to those residential areas. As such these construction impacts would be of a **slight negative** magnitude.

7.1.27 Overall, the potential impact on badgers is considered to be **slight negative** in magnitude resulting in a **neutral** significance of impact. It should be noted that this would increase should active setts be found on Site prior to or during the work, especially in those areas which were inaccessible during the 2025 Phase 1 survey, for example the scrub/invasive area to the west of the site, adjacent to both railway lines.

7.2 **Operational Impacts**

7.2.1 **Habitats**

7.2.2 The operation phase is not anticipated to have any additional impacts on any of the habitats identified as there would be no significant change in the type or level of Site use as currently. It is assumed that the habitats will be re-instated/replaced following the works and re-seeded where necessary in the case of the amenity grassland areas.

7.2.3 **Invertebrates**

7.2.4 The operation phase is not anticipated to have any additional impacts on invertebrate populations as no change in the type or level of Site use is anticipated. The significance of operational impacts on Invertebrates would be **neutral**.

7.2.5 **Reptiles and Amphibians**

7.2.6 No operational impacts are anticipated and therefore the significance of operational impacts on these species would be **neutral**.

7.2.7 **Breeding and Non-Breeding Birds**

7.2.8 No operational impacts are anticipated and therefore the significance of operational impacts on breeding and non-breeding birds would be **neutral**. The only reason for disturbance in areas suitable for nesting/breeding birds would be any maintenance of trash screens etc, and we would suggest these are done outside of the breeding season.

7.2.9 Bats

7.2.10 No operational impacts are anticipated and therefore the significance of operational impacts on these species would be **neutral**.

7.2.11 Badgers

7.2.12 No operational impacts are anticipated and therefore the significance of operational impacts on these species would be **neutral**. If there are any maintenance issues that require actioning, if there are setts found during construction this may change the overall significance.

8 MITIGATION MEASURES

8.1 Construction

8.1.1 General Construction Measures

8.1.2 Potential indirect construction impacts on protected species would largely be mitigated through the implementation of the following measures and governed by the development of specific method statements (with prominence of appropriate best practice for protected species on Site), the production and implementation of a suitable pollution and sediment management plan, and associated toolbox talks to guide Site operations.

8.1.3 While clearance works is currently proposed to be kept to a minimum, best practice would include, but not be limited to:

- A precautionary method of works adopted with clearance following a two-staged approach following full ecological checks with a first cut of vegetation to 150mm (300mm for woody species). Subsequent levels of clearance would follow detailed ecological checks. Arisings would be removed from Site or used to develop habitat piles in agreed retained areas.
- Clearance would be undertaken during seasonally appropriate times that accord with the ecological receptors present on Site. Such as; works being undertaken during the active reptile season (April to End of September dependent on weather and temperature) despite the conflict with the nesting bird season as the latter can be mitigated for by ecological checks.
- Removal of trees is not generally anticipated, however there may be a need to remove a few trees on the southern boundary of the rugby club and also on the boundary of the district railway line. Any tree removal will adhere to BCT guidance for potential bat roosts. All works will be subject to a pre work check by a suitably experienced ecologist for protected species including nesting birds, and bats. (as encapsulated in the site specific Method Statement and tool box talks).

- Works near trees will not impact root protection zones, tree protection fencing should be installed around trees of importance across the scheme, for example those at the frontage of Ysgol Carreg Hir and the tree directly adjacent to the cricket club.
- Works in watercourses, for example for construction of box culverts, should avoid the time of the migratory fish embargo (15th October – 15th May) unless agreed with the county ecologist.
- Any excavations left open should be closed or covered overnight to prevent trapping or injuring animals. Where this is not possible, excavations should be fenced off and a means of escape provided.
- Careful placement of Site compounds, storage, lay down areas etc. to ensure connectivity for protected species is maintained where possible and use of noise barrier fencing to reduce noise impacts within retained habitats.
- Use of secure and clearly identified barrier fencing to prevent accidental encroachment into retained/adjacent areas.
- Clear identification of access routes into and through the construction Site, maximising the use of existing access roads and other hard standing areas already present.
- Implementation of appropriate material and waste management plans including contingency and emergency measures and avoidance of re-fuelling and parking of vehicles close to watercourses wherever possible.
- Use of dust suppression measures as and when appropriate and provision of spill kits close to high risk areas for rapid deployment in the event of a pollution event.
- Involvement of an Ecological/Environmental Clerk of Works during clearance and construction works to identify and address other risks as and when they arise.

8.1.4 Designated Sites

- 8.1.5 No direct impacts have been identified on the Earlswood Road Cutting and Ferryboat Inn Quarries Site of Special Scientific Interest (SSSI), and as it is 1.5km south west of the site and not connected to the watercourses on site, mitigation measures are not considered to be required.

8.1.6 Habitats

- 8.1.7 The identified habitat losses have been assessed to be of slight adverse significance at the Site and local level and therefore, mitigation would be required. This would be implemented through best practice and reinstatement/replacement of any affected habitat and replacement of any removed trees at a ratio of 2:1, where applicable.
- 8.1.8 Natural recolonisation would also allow the working areas to recover, where the original seed bank can be replaced and also reduce the overall need for seeding.

8.1.9 Invertebrates

8.1.10 The potential impact resulting from the loss of invertebrate habitats would be mitigated through the measures proposed in Section 8.1 (General Construction Measures).

8.1.11 Reptiles and Amphibians

8.1.12 Clearance within the site is currently considered to be minimal and unlikely to require an exclusion and trapping exercise as populations of both reptiles and amphibians are expected to be low, and suitability of habitat is also low given the urban use and grazing of areas.

8.1.13 Works that encounter reptiles will be governed by the method statement, which will include recommendations such as (but not limited to) translocation into the wider adjacent habitat beyond works by a suitably experienced ecologist and the following (based on and in conjunction with measure outlined in Section 8.1 above):

- Pre-clearance ecological checks would be carried out, a toolbox talk delivered, and a full ecological watching brief provided by a suitably experienced ecologist.
- Low ground bearing cutting machinery that can be set at a specific height or hand-held cutting equipment would be utilised. Vegetation would initially be cut to 150mm.
- A second ecological check would precede a second cut to ground level and topsoil strip. Arisings would be removed from site immediately. Any animals found would be translocated outside of the working area immediately.
- A scorched earth condition would be maintained to demarcate the area being used for construction and would reduce the opportunities for species to re-colonise the area.

8.1.14 Habitat features to benefit these species, such as log/brush piles, green waste compost heaps, could be incorporated into some of the new and retained habitat areas within the Site, using site won materials from clearance.

8.1.15 Breeding and Non-Breeding Birds

8.1.16 The potential impact resulting from the loss of potential breeding and non-breeding bird habitats, although at present anticipated to be minimal, would be mitigated through the measures proposed in Section 8.1.

8.1.17 Ideally, vegetation clearance would take place outside the bird nesting season (late February to early September inclusive, weather dependent). However, clearance works need to consider the sensitivity of other species and the overall construction programme, therefore a staged approach is to be taken in relation to the higher risk habitats. This approach would follow the procedure recommended for reptile clearance incorporating a nesting bird check (including ground nesting birds). Here, the first cut of vegetation would be to no less than 150mm following ecological checks and under a full ecological watching brief, with all arisings removed. The second cut of these areas would take place again under a full ecological watching brief.

- 8.1.18 Should breeding birds be present or a nest noted or the development of a nest witnessed by an ecologist, a minimum no-works buffer of 10m radius (species dependent) should be established around the nest location. This buffer should be kept in place until such time as the young have fledged, and the nest has been confirmed as inactive by a suitably experienced ecologist.
- 8.1.19 Where trees are required to be removed, these should be replaced at a ratio of 3:1, and where these trees are in areas of potential bird nesting, bird boxes should be considered to be implemented to account for the loss of nesting habitat.
- 8.1.20 **Bats**
- 8.1.21 As no bat roosts have been identified on Site, a European Protected Species licence would currently not be required. However, appropriate measures would still be implemented, including (but be not limited to) the following:
- A pre works assessment if are trees to be removed. This would follow the principles of the GLTA to ensure as much as possible that roost features have been identified prior to works.
 - Appropriate timing of feature removal (i.e., trees) to minimise impacts on bats.
 - Careful checking and removal of potential roost features using appropriate methodologies and under a suitable ecological watching brief.
- 8.1.22 If a roost feature cannot comprehensively be checked by climbing or using an endoscope, then further emergence/re-entry surveys may be required. If bats are found using the tree features during any of these surveys then a European Protected Species Licence will be required.
- 8.1.23 Where ecological checks identify roost features in trees, these should be checked by a licenced ecologist prior to removal. If these can be definitively checked and no bats are present, trees can be removed. Where roosting resource is depleted, bat boxes should be deployed on suitable trees, and potentially on any suitable buildings nearby, for example Ysgol Carreg Hir.
- 8.1.24 **Badger**
- 8.1.25 The potential impact resulting from the loss of potential badger foraging habitats would be mitigated through the measures proposed in Section 8.1.

9 ASSESSMENT OF EFFECTS AND MITIGATION MEASURES

9.1.1 **Table 8** below summarises the species, impact, magnitude of effect, proposed mitigation and residual impact, with reference to **Table 1**.

Table 8 – Species impacts and mitigation

Species	Value	Impact	Magnitude of effect	Mitigation	Residual impact
Invertebrates	Low	Slight negative	Neutral	Construction mitigation measures	Neutral
Reptiles & Amphibians	Medium	Slight negative	Neutral	Translocation. Ecological checks prior to clearance. Brash and green waste piles	Slight positive.
Breeding/Non-Breeding Birds	Medium	Slight negative	Slight adverse	Staged vegetation clearance, replanting of nesting habitat, incorporation of bird boxes.	Neutral/Slight positive.
Bats	High	Slight negative	Slight adverse	Pre-works assessments, emergence surveys. Bat Boxes	Neutral
Badgers	Medium	Slight negative	Neutral significance	Construction mitigation measures	Neutral

10 FURTHER SURVEYS

10.1.1 Should works not be undertaken within 18 months- 2 years of the issue of this report, up-to-date habitat surveys would be recommended.

10.1.2 Species specific surveys should be undertaken following the finalising of the design and prior to construction including the following:

- Ground level tree assessment for potential bat roost features (GLTA) in the trees should any be scheduled to be affected in any way.
- Pre-construction nesting bird surveys are recommended if works are to be undertaken during the active season (late February to early September inclusive, weather dependent).
- These surveys should be undertaken by suitably experienced ecologists in accordance with best practice guidelines.

11 REFERENCES

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12 APPENDICES

Appendix A
Phase 1 Habitat & Site Plan



- Target Notes
- Survey Boundary
- ### Phase 1 Habitats Grandison Brook
- #### Woodland and scrub
- A.1.1.1 (Semi-natural broad-leaved woodland)
 - A.3.1 (Broad-leaved parkland/scattered trees)
- #### Miscellaneous
- J.1.2 (Amenity grassland)
 - J.3.6 (Buildings)
 - J.3.7 (Track)
 - J.4 (Bare ground)

P1	S2	25.07.25	Habitat Plan	JB	FV	AK
V.	S.	Date	Description	B.	C.	A.



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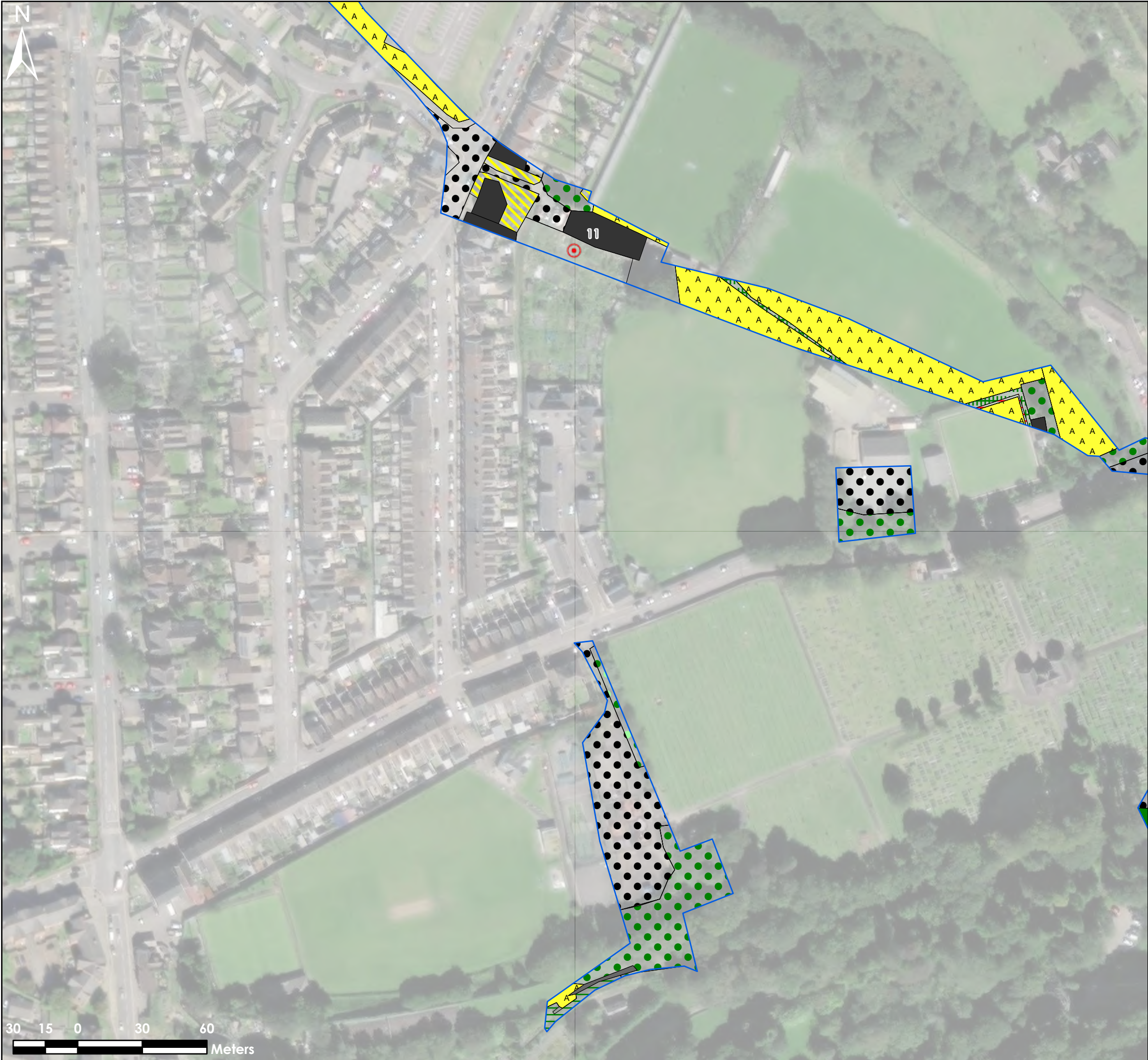
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Grandison Brook

Ecological Impact Assessment

Phase 1 Habitat Plan Sheet 1 of 3

Drawing no.:	61377_DWG_Phase1HabitatPlan
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Target Notes

Survey Boundary

Phase 1 Habitats

Grandison Brook

Woodland and scrub

A.1.1.1 (Semi-natural broad-leaved woodland)

A.3.1 (Broad-leaved parkland/scattered trees)

A.3.3 (Mixed parkland/scattered trees)

Miscellaneous

A

J.1.2 (Amenity grassland)

J.1.5 (Gardens)

J.2.1.2 (Species-poor intact hedge)

J.2.3.2 (Species-poor hedge and trees)

J.2.5 (Wall)

J.3.6 (Buildings)

J.3.7 (Track)

J.4 (Bare ground)

J.5 (Other habitat)

P1	S2	25.07.25	Habitat Plan	JB	FV	AK
V.	S.	Date	Description	B.	C.	A.

TACP

4th Floor, James William House,
9 Museum Pl, Cardiff CF10 3BD

AtkinsRealis

Grandison Brook

Ecological Impact Assessment

Phase 1 Habitat Plan Sheet 2 of 3

Drawing no.:	61377_DWG_Phase1HabitatPlan
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OS, Esri, HERE, Garmin, iPC, Maxar, Microsoft



Target Notes

Survey Boundary

Phase 1 HabitatsGrandisonBrook

Woodland and scrub

A.3.1 (Broad-leaved parkland/scattered trees)

A.3.3 (Mixed parkland/scattered trees)

A.2.2 (Scattered scrub)

Open water

G.2.2 (Mesotropic running water)

Miscellaneous

J.1.2 (Amenity grassland)

J.1.5 (Gardens)

J.2.4 (Fence)

J.3.6 (Buildings)

J.3.7 (Track)

J.4 (Bare ground)

P1	S2	25.07.25	Habitat Plan	JB	FV	AK
V.	S.	Date	Description	B.	C.	A.

TACP

4th Floor, James William House,
9 Museum Pl, Cardiff CF10 3BD

AtkinsRealis

Grandison Brook

Ecological Impact Assessment

Phase 1 Habitat Plan Sheet 3 of 3

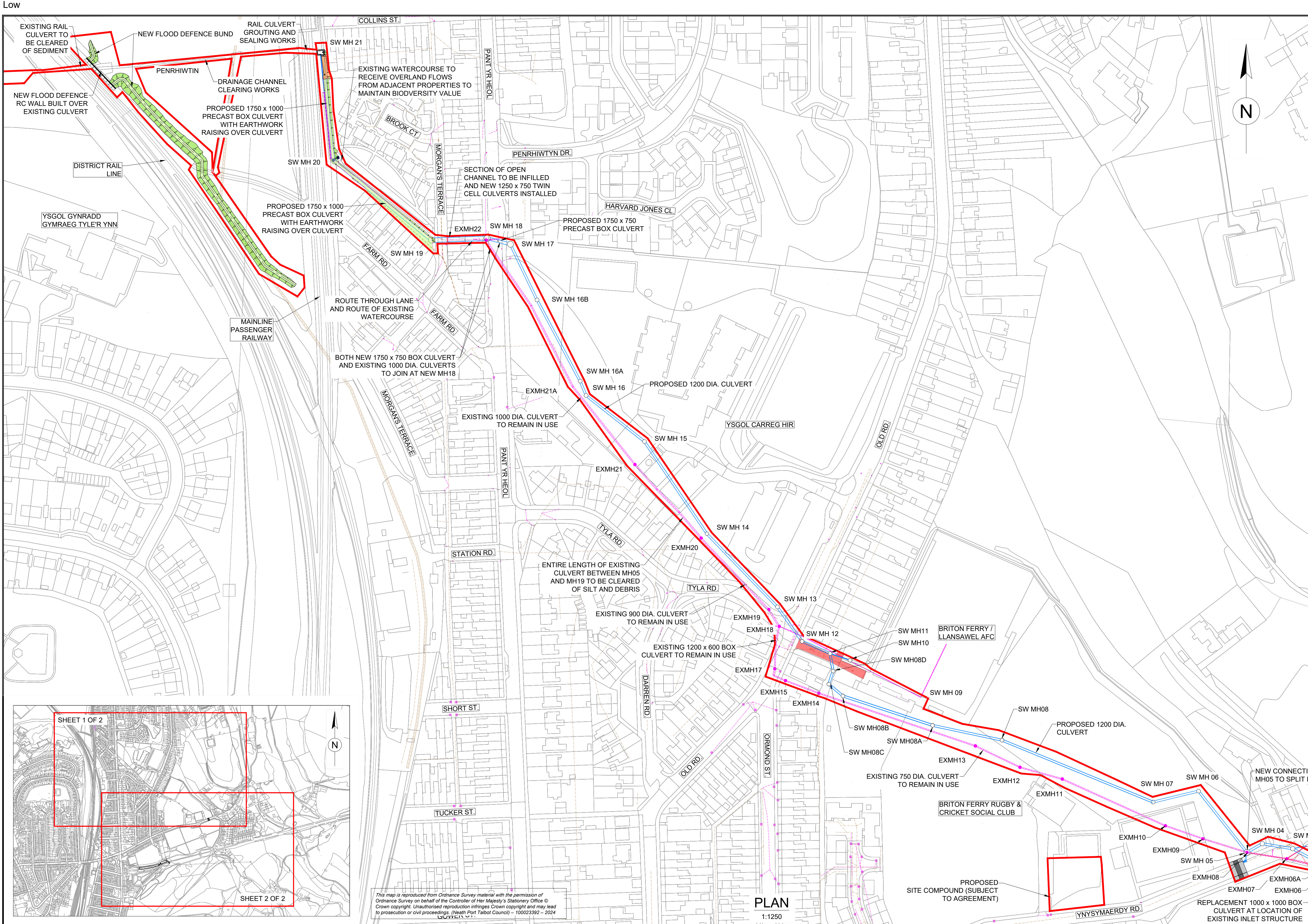
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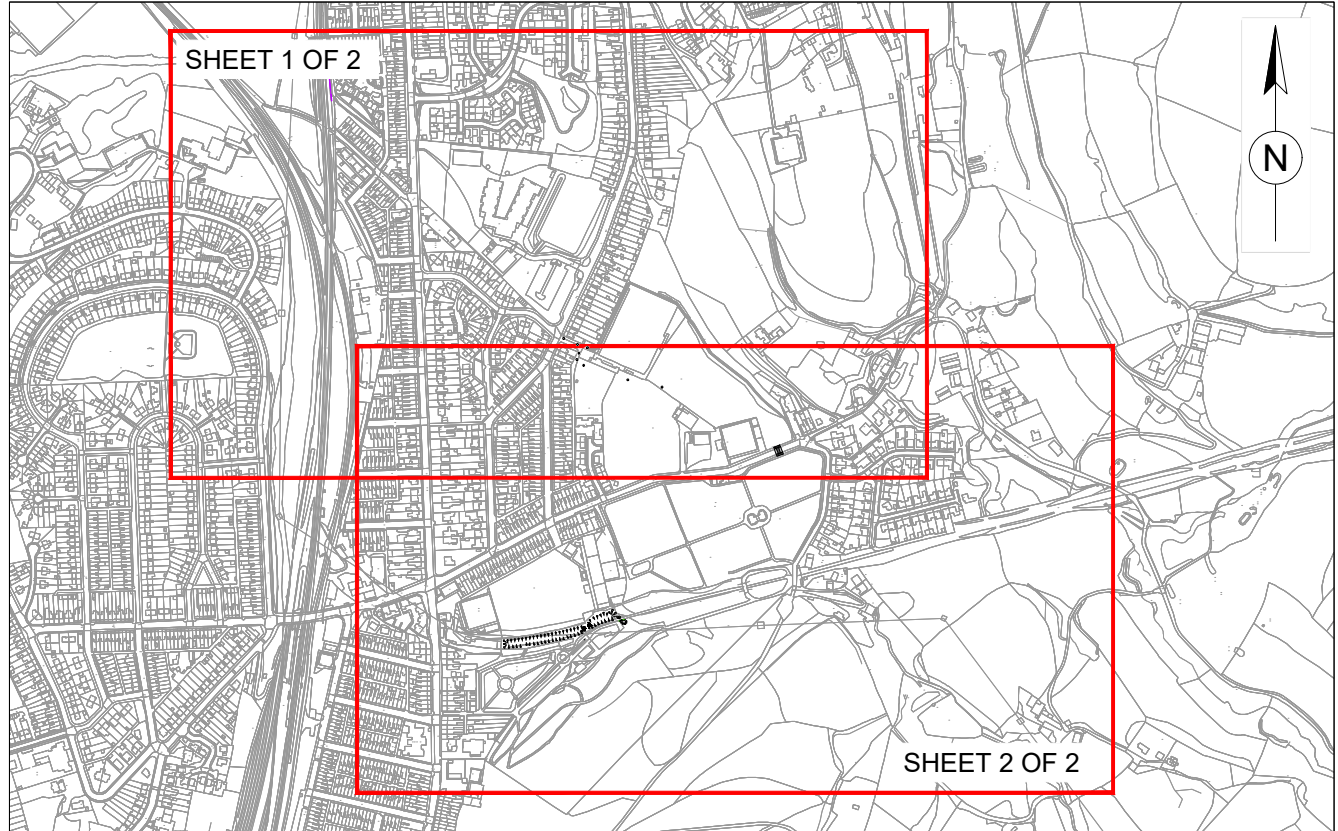
Appendix B
Proposed Site Plans

DO NOT SCALE

0 10 100
Millimetres



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION	
In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).	
Construction	- Requirement for services diversions in advance of works to install new culvert - Potential for encountering unplotted services or private underground services - access to be maintained to residential and commercial properties - Presence of asbestos containing materials at Carreg Hir - Presence of contaminated soils in areas of former industrial use (land at Penrhiwlin) - Maintaining of existing surface water flows - Sudden increase in flows
Maintenance / Cleaning	- Trash screen will require regular inspection and clearance - Trash screen and outfall to be inspected after storm events - Attenuation tanks to be cleaned by high flow jetting - Silt/rock traps to be emptied to prevent culvert blockage
Use	- Trash screen will require regular inspection and clearance - Trash screen and outfall to be inspected after storm events - Attenuation tanks to be cleaned by high flow jetting - Silt/rock traps to be emptied to prevent culvert blockage
Decommissioning / Demolition	- Requirement for services diversions in advance of works to install new culvert - Potential for encountering unplotted services or private underground services - access to be maintained to residential and commercial properties - Presence of asbestos containing materials at Carreg Hir - Presence of contaminated soils in areas of former industrial use (land at Penrhiwlin) - Maintaining of existing surface water flows - Sudden increase in flows



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PLAN
1:1250

NOTES

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
- ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM UNLESS OTHERWISE NOTED.

DRAINAGE SERVICES LEGEND

- Neath Port Talbot Borough Council - Drainage
- Neath Port Talbot Borough Council - Gully
- Dwr Cymru Welsh Water - Sewerage
- Dwr Cymru Welsh Water - Water

KEY

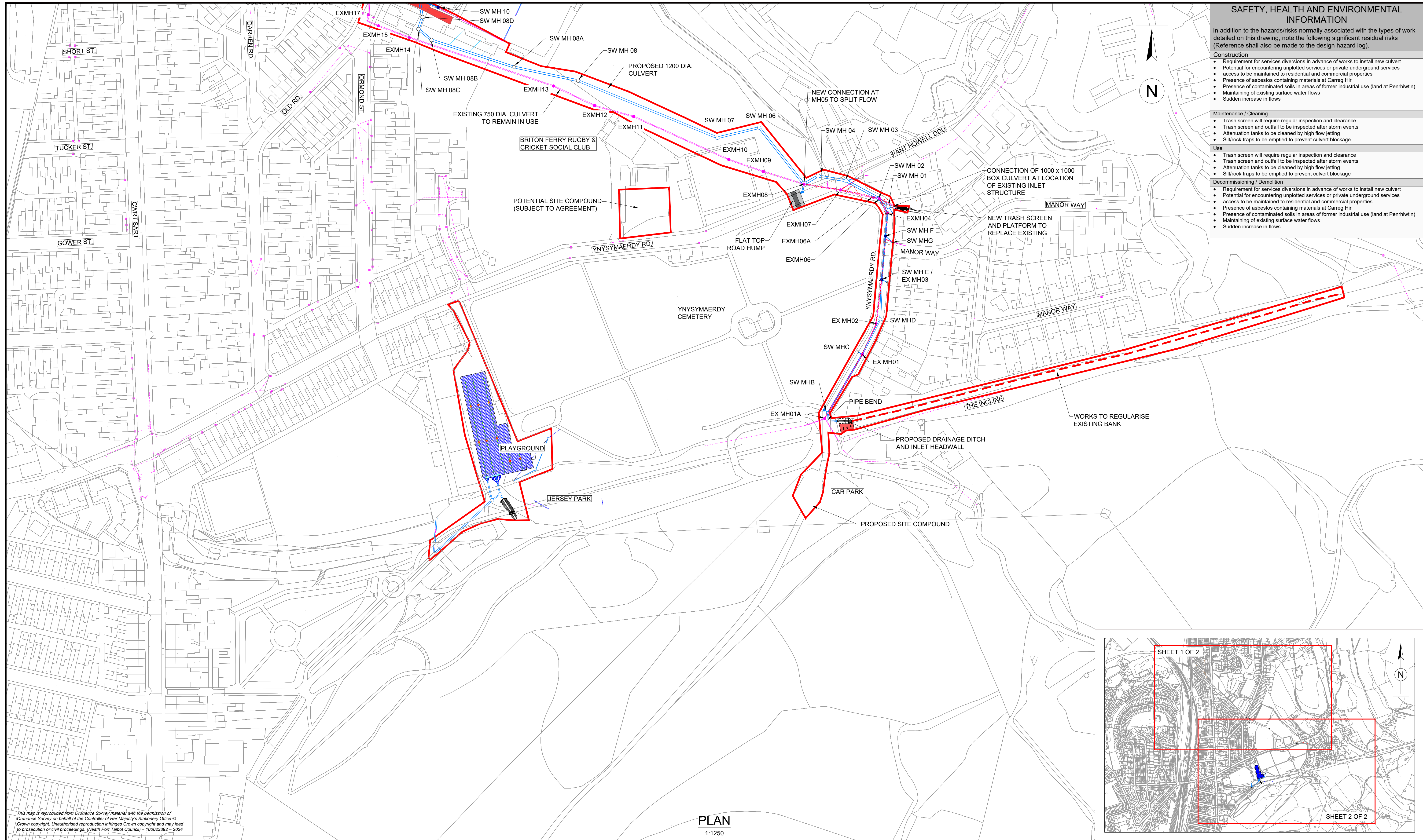
PLANNING BOUNDARY, BASED ON SITE ACCESS ROUTES AND SITE COMPOUND

Description						
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
Description						
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
Description						
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
Description						
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
S0	P01.3	ME	---	---	---	07/04/25

Drawing Suitability		Status	Project Title
WORK IN PROGRESS		S0	GRANDISON BROOK
Description		Drawing Title	
 Member of the SNC-Lavalin Group Copyright © SNC Lavalin (2019)		PROPOSED SCHEME OVERVIEW SHEET 1 OF 2	
Client		Drawing Number	Project
 NEATH PORT TALBOT COUNTY BOROUGH COUNCIL		NE05_001	ATK - GEN - SWMWREC
Original Size		Scale	Project Ref. No.
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Location		Sheet	Rev
1 of 2		P01.3	---

DO NOT SCALE

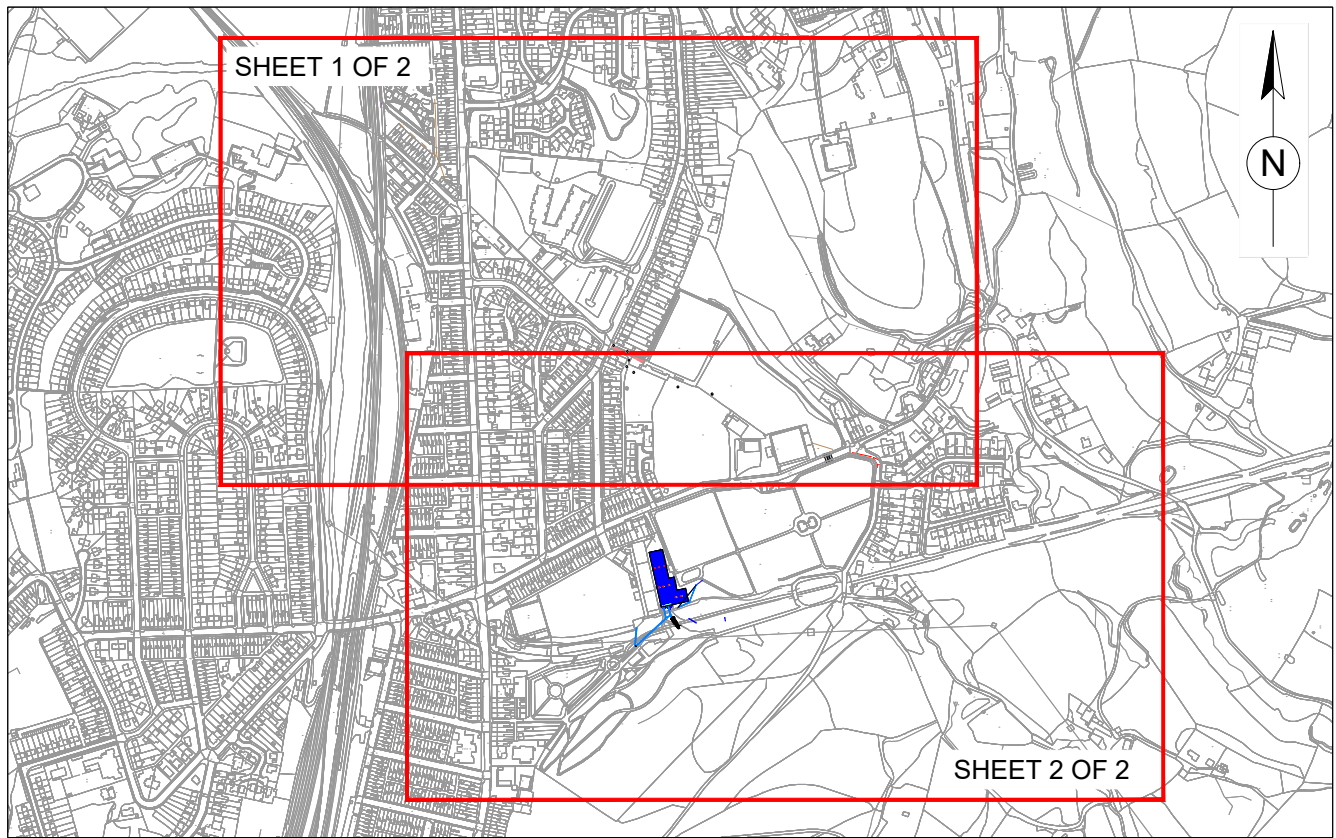
0 10 100
Millimetres



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION	
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PLAN
1:1250



NOTES

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
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DRAINAGE SERVICES LEGEND

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- Neath Port Talbot Borough Council - Gully
- Dwr Cymru Welsh Water - Sewerage
- Dwr Cymru Welsh Water - Water

KEY

PLANNING BOUNDARY, BASED ON SITE ACCESS ROUTES AND SITE COMPOUND

Description						
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
Description						
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
Description						
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
Description						
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
S0	P01.3	ME	---	---	---	07/04/25

Drawing Suitability	Status	Project Title
WORK IN PROGRESS	S0	GRANDISON BROOK
Drawing Title		
PROPOSED SCHEME OVERVIEW SHEET 2 OF 2		
Client		
NEATH PORT TALBOT COUNTY BOROUGH COUNCIL		
Drawing Number	Originator	Volume
NE05_001	ATK	GEN
Project	SWMWREC - DR - CD - 000002	
Location	Type	Role
A1	1:2500	Rev
Original Size:	Scale:	Project Ref. No.
A1	1:2500	5192793
Sheet:	2 of 2	Rev: P01.3

Appendix C
Phase 1 Target Notes

Target Note No.	Target Note	Photograph
1	Wall Cotoneaster (INNS)	
2	Hollyberry Cotoneaster (INNS)	
3	Rhododendron	
4	Rhododendron, Himalayan balsam and Cotoneaster (INNS)	

Target Note No.	Target Note	Photograph
5	Bamboo stand	
6	Rhododendron with Japanese Knotweed (INNS)	

Target Note No.	Target Note	Photograph
7	Japanese Knotweed (INNS)	
8	Japanese Knotweed (INNS)	

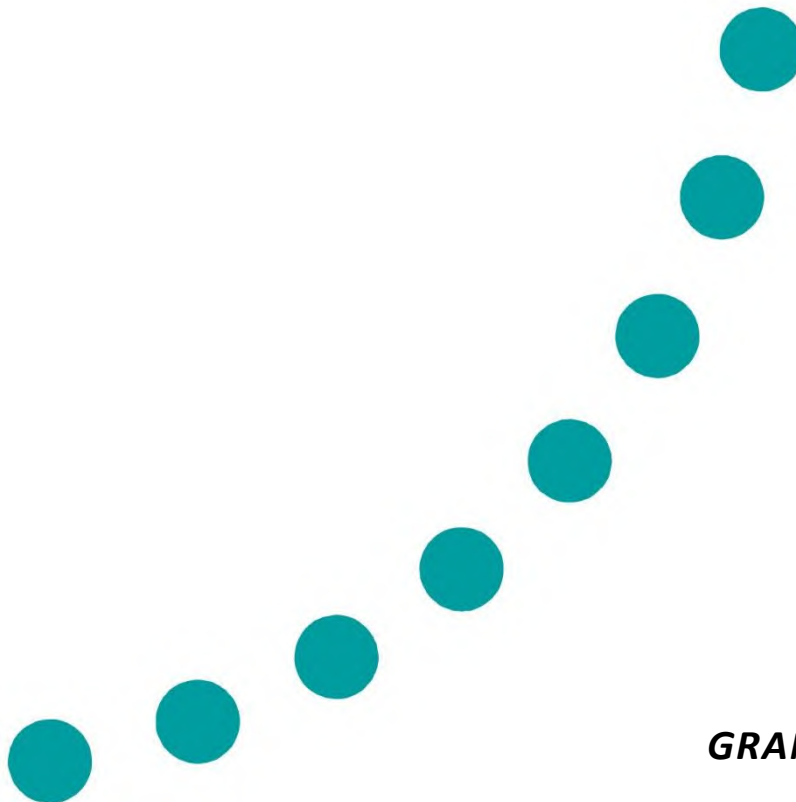
Target Note No.	Target Note	Photograph
9	Rhododendron	
10	Japanese Knotweed (INNS)	

Target Note No.	Target Note	Photograph
11	Allotment	

Appendix D
Previous Ecological Reports

60940

TACP



***GRANDISON BROOK
PRELIMINARY ECOLOGICAL APPRAISAL
CLIENT
DECEMBER 2019***

Atkins

December 2019

**TACP
10 PARK GROVE
CARDIFF
CF10 3BN**

Project Number: **60940**

Revision: **P1**

Revision No.	Date of Revision	Comments	Checked by	Date	Approved by	Date
P1	19/12/19		SS	19/12/19	JW	

The final revision will be deemed as accepted by the client if no comments are received within two weeks of issue.

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1 INTRODUCTION

1.1 Background

- 1.1.1 TACP was commissioned by Atkins in November 2019 to undertake preliminary impact assessment on the Grandison Brook site.
- 1.1.2 This report provides an ecological overview of the site including a description of potential ecological receptors and gives a preliminary ecological appraisal in relation to the site and the proposed works. This appraisal includes recommendations for mitigation and enhancement in relation to the potential impacts identified based on the available information. .

1.2 Site Description

- 1.2.1 The site is a linear route that covers approximately 0.05 and is located at Britton Ferry, Neath (see Figure 1.0) and beginning on grid reference SS7490095110. The site consists of culvert route through an urbanised and residential area beginning with a large cemetery, followed by a public footpath, and a number of recreational facilities/amenities (namely a bowling green, rugby and cricket club, an amateur football pitch, and an allotment). There is a park and a woodland to the south east of the site, beyond the proposed scope of works. Further to the West adjacent to Llys-y-Nant road is an additional culvert outlet that has been highlighted for improvement works. This measures approximately 100m through a residential area and culminates at a railway line and is separated from the main area of proposed works by approximately 350m.

1.3 Proposed Works

- 1.3.1 Neath Port Talbot County Borough Council (NPTCBC) propose to upgrade the flood alleviation system by enhancing existing access points and introducing new culverts. The proposals for the new culvert are still being developed. However, the current strategy is to introduce a new culvert to the existing one that begins on Ynysmaerdy Rd and continues to the outlet at Llys-y-Nant road to the West (Grid reference SS 74266 95523). The area of operation within the scheme is proposed to be contained to between Ynysmaerdy Rd and the entrance to the football grounds. It is intended, at time of writing for the culvert to channel beneath the bowling club, Rugby and cricket grounds, and the allotment. Additional repair work also on the culvert egress near Llys-y-Nant has also been proposed.

2 METHOD

2.1 Desk Study

- 2.1.1 A SEWBRc (South East Wales Biodiversity Records Centre) data search was undertaken within 1km of the site to provide an indication of the protected species that are present in the wider area.
- 2.1.2 A review of available designated sites information was also undertaken within 2km of the site for internationally and nationally designed sites and within 1km for locally designated sites.

2.2 Field Surveys

Phase 1 Habitat Survey

- 2.2.1 A Phase 1 Habitat Survey was carried out by Dan Hawthorn BSc, MSc, on the November 2019. This was conducted following the methods outlined in the Joint Nature Conservation Committee (JNCC)'s Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit (JNCC, 2010). Habitats within the site were classified and mapped.

Preliminary Protected Species Assessment

- 2.2.2 Habitats were evaluated as far as possible for their potential to support rare and protected species, with particular reference to bat species which were assessed in accordance with the Bat Conservation Trust (BCT) Bat Surveys for Professional Ecologists Good Practice Guidelines (2016) and riparian mammal species in accordance Ecology of the European Otter Conserving Natura 2000 Rivers Ecology Series No. 10.

2.3 Limitations

- 2.3.1 It is acknowledged that November is a sub-optimal time to undertake grassland and woodland habitat surveys, reducing the likelihood of rare and protected floral species being identified. However, given the habitats present, this is not considered to have had a significant influence on the species identified and the conclusions drawn.
- 2.3.2 No species-specific surveys have been undertaken at the site and as such the value of the site in terms of protected species is based on the available desk study records and professional judgement. Details of recommended species-specific surveys have been identified within Section 6.
- 2.3.3 The detailed proposals for the site have yet to be developed and agreed which limited the ability to identify and quantify detailed ecological impacts. Impacts and potential mitigation and enhancement measures have been identified based on the available information on a precautionary basis.

2.4 Site Assessment

- 2.4.1 Both the CIEEM Guidelines for Preliminary Ecological Appraisal (PEA) (December 2017) and the CIEEM Guidelines for Ecological Impact Assessment (EcoIA) in the U.K and Ireland (September 2018) have been referenced to undertake the impact assessment.

- 2.4.2 The PEA Guidelines (2017) provide the basis for identifying the presence of statutory and non-statutory designated sites, an initial assessment of the site habitats based on site surveys and an assessment of the likely presence of protected and priority species. This information is then used to identify likely constraints and mitigation, the need for further surveys and potential opportunities for ecological enhancement. These can then be used to inform the design and layout of proposals in advance of a formal planning application.
- 2.4.3 The EcoIA Guidelines (2018) provide the basis for more thorough surveys and assessments, which can be informed by a PEA report, and which is used to provide detailed mitigation requirements and ecological enhancement measures. This has been applied as far as possible to the site to provide a more robust assessment and greater consideration within the proposals of the ecological features within the site and the wider area.
- 2.4.4 The wildlife value has been assessed using the Ratcliffe Criteria. This assesses an ecological feature in terms of:
- a. Fragility
 - b. Rarity
 - c. Size (area of extent)
 - d. Diversity
 - e. Potential Value
 - f. Position within the Ecological/ Geographical Unit
 - g. Typicality
 - h. Recorded History
 - i. Naturalness
 - j. Intrinsic Appeal
- 2.4.5 The degree to which a feature can be replaced/substituted has also been taken into consideration. Guidance suggests that the loss of a feature of national value that is irreplaceable may be considered more significant than the loss of a feature that can be replaced or substituted.
- 2.4.6 The overall ecological value of the area has been considered in the context of the pattern of habitat and interdependencies between habitats, as well as the relative legislative value of any protected species, habitats or sites.
- 2.4.7 The value of the ecological features has been given, as far as possible, in terms of geographical context in accordance with CIEEM EcoIA guidance (2018), as shown below.
- a. **International/European** – e.g. Natura 2000 sites, significant populations of European Protected Species (EPS), sites hosting significant populations under the Bonn Convention, non-designated international features such as large populations that are rare on an International/European scale.
 - b. **National (U.K)** – e.g. Sites of Special Scientific Interest, Geological Conservation Review sites, significant populations of U.K protected species, significant populations of Section 7 species (Environment (Wales) Act 2016).
 - c. **National (Wales)** – e.g. nationally important designations which can be reasonably substituted such as National Parks, medium populations of European or U.K protected species, significant populations of U.K or Wales ‘Red List’ of Birds of Conservation

Concern or Wales Red Data List Species, medium to significant populations of Section 7 species (Environment (Wales) Act 2016).

- d. **Regional** – e.g. regionally important designation which can be reasonably substituted such as Local Nature Reserves, important inventory site such as Ancient Woodland, small population of European or U.K protected species, medium population of Section 7 species, medium populations of U.K or Wales ‘Red List’ of Birds of Conservation Concern or Wales Red Data List Species
- e. **County** – e.g. County Wildlife Sites or other county-wide designations, sites with Local Biodiversity Action Plan (LBAP) species, non-breeding individuals of European or U.K protected species, small populations of Section 7 species, small populations of U.K or Wales ‘Red List’ of Birds of Conservation Concern or Wales Red Data List Species
- f. **River Basin District**
- g. **Estuarine System/Coastal Cell**
- h. **Local** – features of value within the site area, district, borough or parish only
- i. **Zone of Influence** – this can include any of the above features and is determined by the extent/potential extent of impacts identified and can vary from feature to feature, particularly for mobile species.

2.4.8 The 2018 guidelines also identify the need to assess potential impacts on ecosystem services resulting from a project’s ecological effects. Ecosystem services can be divided into four types, supporting, provisioning, regulating and cultural. Impacts on these services cannot be assessed at present but should be reviewed once detailed proposals have been produced.

2.4.9 The assessment includes direct (resulting from direct interaction of an activity with the ecological feature), indirect (impacts produced away from or as a result of a complex indirect pathway), short-term, medium-term and long-term, secondary and cumulative impacts as far as possible. Both positive and negative impacts on the ecological baseline of the sites have also been assessed as far as possible.

2.4.10 The initial impact assessment has been made in the absence of any mitigation measures to ensure that all potential impacts are identified and that all necessary and suitable mitigation and enhancement measures can be identified.

2.4.11 The magnitude and significance of potential impacts cannot be assessed at present as more detailed survey information and detailed proposals would be required.

3 RESULTS

3.1 Desk Study

3.1.1 There is one **designated site** within 2km of the proposed site;

Earlswood Road Cutting and Ferryboat Inn Quarries Site of Special Scientific Interest (SSSI) is located approximately 1.5km south-west of the site and designated for geological features and ancient river systems.

3.1.2 There are four **locally designated sites** within 1km of the site, including:

- a. Eaglebush Valley local nature reserve, located approximately 1km north-east of the site
- b. The River Neath is a Sites of Importance for Nature Conservation (SINC) located 1km west of the site.
- c. There is an ancient semi-natural woodland to the south (18274)
- d. There is also a restored ancient woodland (11351) located within the vicinity of jersey park to the south and adjacent to the above.

3.1.3 **Bluebell** (*Hyacinthoides non-scripta*), which is listed on Schedule 8 of the Wildlife and Countryside Act (WCA) 1981 (as amended), has been recorded within 1 km of the site.

3.1.4 **Invasive non-native species** (INNS) recorded on site has included *Rhododendron ponticum*, *Montbretia (Crocosmia sp)*, Japanese Knotweed (*Fallopia japonica*), Wall Cotoneaster (*Cotoneaster horizontalis*), Himalayan Cotoneaster (*Cotoneaster simonsii*), Himalayan Balsam (*Impatiens glandulifera*), Japanese Rose (*Rosa rugosa*) and Curly Waterweed (*Lagarosiphon major*). These species are all listed on Schedule 9 of the WCA 1981 (as amended). This makes it illegal to plant or otherwise cause these species to grow or spread in the wild.

3.1.5 The following **bat** species have been recorded within 1km of the site. Common Pipistrelle (*Pipistrellus pipistrellus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*), Lesser Horseshoe Bat (*Rhinolophus hipposideros*), Noctule (*Nyctalus noctula*), Brown Long-eared (*Plecotus auritus*) and undistinguished *Myotis* species. All UK bat species are protected by European legislation and are listed under Annex IV of the Habitats Directive (Council Directive 92/43/EEC), which is transposed into UK law by the Conservation (Natural Habitats &c.) Regulations 2017. Under regulation 41(1): ‘a person who: deliberately captures, injures or kills any wild animal of a European Protected Species; Deliberately disturbs wild animal of any such species; damages, destroys a breeding site, or resting place of such an animal...is guilty of an offence’.

3.1.6 There were no records of **Eurasian Badger** (*Meles meles*) within 1km of the site although it should be noted that this does not rule out the potential presence for these species. This species is afforded full U.K. protection under the Protection of Badgers Act 1922, which protects both the individual animals and their setts. However, habitats used for any other purpose are not afforded any form of protection under this or other legislation. This species is also listed on Schedule 6 of the WCA 1981 (as amended), which outlaws certain methods of taking and killing when this is necessary.

- 3.1.7 There are records of **European Hedgehog** (*Erinaceus europaeus*) within 1km of the site. This species is listed as a living organism of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales on Section 7 of the Environment (Wales) Act 2016. They are also afforded protection under the Berne Convention.
- 3.1.8 There are records of **European Otter** (*Lutra lutra*), within 1km of the proposed works. Otters are an EPS listed on Annex IV of the Habitats Directive 1992 which is transposed into U.K law by the Conservation (Natural Habitats &c) Regulations 1994 or “Habitats Regulations” and consolidated within The Conservation of Habitats and Species Regulations 2017. Otters are also a Priority Biodiversity Action Plan (BAP) Species on the U.K BAP and listed on Section 7 of the Environment (Wales) Act 2016. Otters are also protected through Schedules 5 and 6 of the WCA 1981 (as amended), and the Bern Convention on the Conservation of European Wildlife and Natural Habitats.
- 3.1.9 There are records of **Water Vole** (*Arvicola amphibious*) within 1km of the proposed works, which are protected under Schedule 5 of the WCA 1981 (as amended) and is listed on Section 7 of the Environment (Wales) Act 2016. Water Voles are also listed as a Priority BAP Species on the U.K BAP.
- 3.1.10 No records for other protected mammals such as **Polecat** (*Mustela putorius*) were found within 1km of the site, although it should be noted that this does not rule out the potential presence for these species.
- 3.1.11 All **bird** species, including their eggs and nests, are protected from harm during the breeding season under the WCA 1981 (as amended) to varying degrees. Further protection is afforded to those listed on Schedule 1 of this Act making it an offence to intentionally or recklessly disturb these birds at, on or near an ‘active’ nest. Certain species are also afforded further protection under Annex I of the EC Birds Directive and under Section 7 of the Environment (Wales) Act 2016. All UK birds are categorized under the Birds of Conservation Concern (BoCC) listings as Red, Amber or Green for their conservation status. Red is the highest conservation priority, with species needing urgent action. Amber is the next most critical group, followed by green.
- 3.1.12 **WCA Schedule 1** species with records within 1km of the proposed works include; Black Redstart (*Phoenicurus ochruros*) Red Kite (*Milvus milvus*), Osprey (*Pandion haliaetus*), Barn Owl (*Tyto alba*), Merlin (*Falco columbarius*), Peregrine (*F. peregrinus*), Green Sandpiper (*Tringa ochropus*), Kingfisher (*Alcedo atthis*), Redwing (*Turdus iliacus*), Fieldfare (*T. pilaris*) Brambling (*Fringilla montifringilla*), Mediterranean Gull (*Larus melanocephalus*), Spoonbill (*Platalea leucorodia*) and, Cetti’s warbler (*Cettia cetti*) within 1.5km.
- 3.1.13 **Section 7** species with records within 1km of the proposed works include; Lesser Redpoll (*Acanthis cabaret*), Skylark (*Alauda arvensis*), Ringed Plover (*Charadrius hiaticula*), Pied Flycatcher (*Ficedula hypoleuca*), Black-headed Gull (*Chroicocephalus ridibundus*), Curlew (*Numenius arquata*), House Sparrow (*Passer domesticus*), Tree Pipit (*Anthus trivialis*), Tree Sparrow (*Passer montanus*), Marsh Tit (*Poecile palustris*), Dunnock (*Prunella modularis*), Linnet (*Linaria cannabina*), Bullfinch (*Pyrrhula pyrrhula*), Starling (*Sturnus vulgaris*), Song Thrush (*Turdus philomelos*), Wood Warbler (*Phylloscopus sibilatrix*) and Lapwing (*Vanellus vanellus*).

- 3.1.14 **Red-listed** species with records within 1km of the proposed site include; Lesser Redpoll, Herring Gull (*Larus argentatus*) Common Gull (*Larus canus*), Greater Black-backed Gull (*Laurus marinus*), Willow Warbler (*Phylloscopus trochilus*), Marsh Tit, House Sparrow, Bullfinch, Redwing, Linnet, Curlew, Wood Warbler, Bullfinch, Lapwing, Ring Ouzel (*Turdus torquatus*) and Starling.
- 3.1.15 **Amber-listed** species with records in the area include; Red Kite, Peregrine, Merlin, Honey-Buzzard (*Pernis apivorus*), Black Redstart, Skylark, Kingfisher, Wood Warbler, Dunnock, Teal (*Anas crecca*), Tree Pipit, Meadow Pipit (*A. pratensis*), Redshank (*Tringa totanus*), Wigeon (*Anas penelope*), Mallard (*A. platyrhynchos*), Ringed plover, Redwing, Mute Swan (*Cygnus olor*) Herring Gull, Barn Owl, Long-tailed Tit (*Aegithalos caudatus*), Fieldfare, Swift (*Apus apus*), Dipper (*Cinclus cinclus*), Snipe (*Gallinago gallinago*) House Martin (*Delichon urbicum*), Swallow (*Hirundo rustica*), Mediterranean Gull, Spoonbill, Shellduck (*Tadoma tadoma*), Cormorant (*Phalacrocorax carbo*), Common Sandpiper (*Actitis hypoleucos*), Willow Warbler, Green woodpecker (*Picus viridis*), Wheateater (*Oenanthe oenanthe*) Woodcock (*Scolopax rusticola*), Garden Warbler (*Sylvia borin*), Whitethroat (*S. communis*) and Goldcrest (*Regulus regulus*).
- 3.1.16 **Reptile** records for within 1km of the site included; Slow-worm (*Anguis fragilis*). No records for other protected reptiles were found within 1km of the site, although it should be noted that this does not rule out the potential presence for these species. All reptiles are protected against killing, injuring and sale under UK legislation through their inclusion in Appendix III of the Bern Convention (1979), Schedule 5 of the WCA 1981 (as amended) and Section 7 of the Environment (Wales) Act 2016.
- 3.1.17 **Amphibian** records for within 1km of the proposed site include; Common Frog (*Rana temporaria*) and Smooth Newt (*Lissotriton vulgaris*). No records for other protected amphibians were found within 1km of the site, although it should be noted that this does not rule out the potential presence for these species. These species are afforded protection of various levels under Schedule 5 of the WCA 1981 (as amended) and are also listed as a living organism of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales on Section 7 of the Environment (Wales) Act 2016. They are also listed as a U.K. Biodiversity Action Plan (BAP) Priority Species and included within the Bern Convention 1979.
- 3.1.18 **Invertebrates** records for within 1km of the proposed work site included; Dingy Skipper (*Erynnis tages*) which is afforded protection under Section 7 of the Environment (Wales) Act 2016. They are also listed as a U.K. Biodiversity Action Plan (BAP) Priority Species. There are additional historical records of Section 7 species. However, these are classed as research only species with no new records within the last 8 years.
- 3.1.19 There are no records for **fish species** within 1km of the proposed work area.

3.2 Field Surveys

Phase 1 Habitat Survey

- 3.2.1 The site (see Figure 2.0) comprises of a variety of habitat types, as follows including the phase 1 habitat code (in brackets):

- a. Parkland and scattered trees (A3)
- b. Cultivated/disturbed land – amenity grassland (J.1.2)
- c. Buildings (J.3.6)
- d. Bare Ground and Hard Standing (J.4)
- e. Hedge with Tree (J.2.3)
- f. Fence (J.2.4)
- g. Wall (J.2.5)

- 3.2.2 The southern extent of the site is situated amongst urbanised and residential land. Approximately 75m to the south is a parkland (Jersey Park) that is adjacent to a semi-natural and restored ancient woodland. While this is beyond the extent of the works there is potential for the carpark within the entrance of this to be utilised as a site compound for the works. There is evidence of recent management within this car park with numerous Ash (*Fraxinus excelsior*) trees having been felled. Adjacent to the north and covering approximately 3ha is the Ynysmaerdy cemetery and associated church buildings. The boundary wall of which has a very small (approx. 30-45cm) strip of grass adjacent to the road. While there are a number of planted trees lining the extent of this access wasn't granted at time of survey to be fully assessed. However, these are beyond 50m from the proposed works.
- 3.2.3 The start of the proposed works is the culvert numbered CUL_0015 located on Ynysmaerdy Rd. It has a small grouping of Alder scrub (*Alnus glutinosa*) adjacent to culvert. The next culvert is numbered CUL_0014 is located approximately 30m north of this and has a similar small scrub profile adjacent.
- 3.2.4 Residential areas to the north west pass an unmanaged public footpath leading to the boundary fence of the bowling green. There is an area of scrub, with self-drawn trees comprising of Ash (*Fraxinus excelsior*), Alder, and Holly (*Ilex aquifolium*) and patches of bramble scrub (*Rubus fruticosus* agg.) contained by fencing.
- 3.2.5 The rugby and cricket club comprises a planted birch avenue (*Betula* sp.) hard standing, buildings, and amenity grassland. The latter has both a cricket pitch and a rugby pitch that is divided by a fence and a small (no more than 60m²) grassy scrub with infrequent willowherb (*Epilobium* sp.)
- 3.2.6 Within the western extent of the grounds stands 4 Elm trees (*Ulmus procera*), two of which are mature.
- 3.2.7 Beyond the sports grounds and separated by fencing there is an allotment of approximately 0.09ha, beyond this is a residential lane with isolated patches of alder lining this.
- 3.2.8 Culvert CUL_0019 is located beyond the main proposed site at a distance of approx. 350m. At the time of survey this was proposed to be part of the maintenance works. However, it is not linked to the other works being separated by a large residential area. The culvert is open and located in an urbanised setting with isolated examples of alder where it meets the road. Beyond this is an area of amenity grassland that is dominated by Japanese knotweed, leading for approx. 50m to the railway.
- 3.2.9 No protected floral species were recorded during survey.
- 3.2.10 Japanese Knotweed was recorded in the vicinity of CUL_0019 leading to the railway line.

3.2.11 No priority habitats recorded during survey.

Preliminary Protected Species Assessment

- 3.2.12 At time of survey the Elm trees located within the rugby and cricket grounds had potential roost features for **bats**. Further, the scrub lined fencing offers potential commuting routes with the wider area offering opportunities for foraging. Additionally, Jersey Park has potential for roosting and commuting and foraging for bats, although this is beyond the main area proposed for the works it does have connectivity. As such the site is considered to have at least **local importance** for bats.
- 3.2.13 The site is considered to be unlikely to support **hedgehog** populations, bar a small chance of transient foraging. There are few foraging or resting sites with the residential areas precluding movement. As such the site is considered to have **negligible importance** for hedgehog.
- 3.2.14 The site has an open water channels of culvert. However, there is little connectivity to wider areas in addition to being in a highly urbanised setting with few opportunities for foraging or areas to reside/rest due to the nature of the culvert. Therefore, the majority of the site is considered to have at least negligible importance for **otter** and **water vole**. The area immediately west of the culvert CUL_0019 has connectivity to a wider area and culminates in the railway. However, there was no access to survey beyond this during the survey. Therefore, this area is considered to have **negligible importance** for otters and water vole.
- 3.2.15 The areas of scrub throughout the site and the large trees within the rugby and cricket ground have the potential to support **birds** during the breeding season (Late February to early September inclusive, weather dependent). As such the site is considered to have at least **local importance** for breeding birds.
- 3.2.16 The majority of the site is considered to have little suitability to support a population of **reptiles** and **amphibians**. There are few examples of basking or foraging grounds and little in the way of potential or suitable hibernacula and as such is considered to have at least negligible importance for reptiles and amphibians. The areas of scrub within the rugby and cricket ground and the allotments have detritus and scrub that could support foraging and resting transient species. However, this is a frequently disturbed and managed area with poor connectivity to more suitable habitat. Therefore, this area is considered to have at least **local importance** for reptiles and amphibians.
- 3.2.17 There are few opportunities for Dingy Skipper on site. Despite being occasionally found in urbanised areas, there is little areas that would support their main foodstuff such as Common Bird's-foot Trefoil (*Lotus corniculatus*), Horseshoe Vetch (*Hippocrepis comosa*) or Greater Bird's-foot Trefoil (*L. pedunculatus*). The timings of the survey precluded a full flower inventory. However, there is little opportunity for richness with only small isolated patches of amenity grassland and dominance of species poor scrub. As such the site is considered to be of **negligible importance** to Invertebrates

4 POTENTIAL IMPACTS

4.1 Construction Impacts

4.1.1 Potential impacts during construction vary between individual ecological receptors depending on their extent and sensitivity and on the timing of works. However, the potential impacts of the proposals fall into several discrete types.

4.1.2 Potential direct impacts in the absence of any and all mitigation include:

- a. Loss of habitats through vegetation clearance – these impacts would be long-term and negative with overall reductions in total habitat;
- b. Loss of potential breeding bird habitats – these impacts would be medium to long term and negative. It should be noted that active nests must not be affected, and no licence is available to permit the removal of such nests;
- c. Spread of INNS species – these impacts would be medium to long term and negative. It should be noted that correct procedures should be followed if works are within the vicinity of any INNS.

4.1.3 Potential indirect impacts in the absence of any and all mitigation include:

- a. Disturbance to individuals of key species, such as bats and nesting birds (during the active season) which are resident within retained habitats adjacent to development works (e.g. through noise, lighting etc.) – these impacts would be negative and short to medium-term depending on the duration of the construction works;

4.2 Operational Impacts

4.2.1 It is considered unlikely there are potential direct or indirect impacts in the absence of any and all mitigation.

5 POTENTIAL MITIGATION AND ENHANCEMENT MEASURES

5.1 Habitats

- 5.1.1 No designated sites will be directly affected by the proposals and indirect impacts through construction would be managed through construction best practice and appropriate scheme design. Impacts in relation to mobile species associated with these sites would be mitigated through the measures detailed in the section below.
- 5.1.2 There is potential for INNS to be directly affected by the works on site particularly at Lys-y-Nant Rd. At time of survey the proximity of the works to this was unclear. Any works within 7m of a schedule 9 species (e.g. Japanese Knotweed) must be subject to an appropriate methodology agreed with NRW to reduce or prevent further dissemination of the plant based on the Japanese Knotweed Code of Practice (INNSA 2018) or other appropriate guidance.
- 5.1.3 The majority of the habitats likely to be lost as part of the proposals consist of amenity grassland and/or scrub, these habitats are of negligible ecological and nature conservation value. However, the extent of the loss of these habitats should be reduced as far as possible within the scheme designs with retained areas subject to more ecologically friendly management regimes and ecological enhancement measures, where possible. It is proposed that any required laydown areas (for storage, culvert head construction or for welfare units) will be confined to the Park car park to the south or the Rugby and cricket grounds. This will pose no apparent ecological constraints.
- 5.1.4 The indirect construction impacts should be addressed through best practice measures including the following:
- a. Avoidance to and restriction of night-time working;
 - b. Use of directional and low-level lighting to reduce light spill into adjacent habitats;
 - c. Careful placement of compounds, storage areas etc. and use of noise barrier fencing to reduce noise impacts within retained habitats;
 - d. Avoidance of re-fuelling and parking of vehicles close to watercourses wherever possible;
 - e. Production and implementation of a suitable pollution and sediment management plan;
 - f. Provision of spill kits close to high risk areas for rapid deployment in the event of a pollution event;
 - g. Use of dust suppression measures as and when appropriate.

5.2 Protected Species

- 5.2.1 A majority of the potential protected species impacts during construction would be addressed through the measures detailed above, particularly those for retaining habitats and habitat connectivity and reducing indirect impacts during both construction and operation.
- 5.2.2 The loss of species-specific habitat features should be addressed through the provision of similar features or better within the scheme designs. At time of writing the exact plans are not established. However, if there is potential for the loss of woodland or parkland habitat a replacement of the number of trees removed with appropriately mature and correct species is recommended. .

- 5.2.3 The above could be incorporated as potential enhancement measures as well as for mitigation purposes.
- 5.2.4 During construction, in addition to the measures described above, the following measures should also be applied to avoid species specific impacts:
- a. Works causing high noise levels should be considered in terms of potential bird nests on site. It may be necessary to limit the timing of such works to periods outside of the active season.
 - b. Works causing vibration should be limited to non-sensitive times of year, such as outside the nesting and/or hibernation seasons, as appropriate depending on the proposed task and species group affected.
- 5.2.5 Operational impacts to protected species are not anticipated and therefore additional mitigation measures are not required.

6 RECOMMENDED FURTHER SURVEYS

6.1 Habitats

- 6.1.1 It is recommended that further surveys are undertaken for invasive non-native species (INNS) particularly at the eastern extent of the site near Llys-y-Nant Rd. Additionally, should works not be undertaken within 2 years of the issue of this report, up-to-date habitat surveys would be required.

6.2 Protected Species

- 6.2.1 Species specific surveys should be undertaken prior to detailed scheme design and impact assessment. These should include:
- a. Ground level tree assessment for potential bat roost features (GLTA) in the trees within the rugby and cricket grounds, should these be affected in any way.
 - b. Pre-construction nesting bird surveys are recommended if works are to be undertaken during the active season (late February to early September inclusive, weather dependent)
- 6.2.2 These surveys should be undertaken by suitably experienced ecologists in accordance with best practice guidelines.
- 6.2.3 Further surveys may be necessary depending on the results of the above, the scheme designs and habitat changes across the sites in the interim period.

7 SUMMARY

- 7.1.1 TACP was commissioned by Atkins PLC to undertake a habitat assessment survey and preliminary ecological assessment across the proposed site for flood alleviation works, namely the redirection and introduction of a new culvert in addition to trash screening and river channel works to the northern end of the site. This report provides an ecological overview of the site including a description of potential receptors and a preliminary impact assessment.
- 7.1.2 The site is located in Briton Ferry and consists of a screened but open culvert that then travels beneath an urbanised and residential area. There is a large cemetery and a public park to the south, these are adjacent to an improved semi-natural ancient woodland. The proposed works continue through amenity grassland and hardstanding within a bowling green, a rugby and cricket club, and a football club. Further west separate from the main area of works, the culvert is again exposed and channels down to the local railway.
- 7.1.3 Neath Port Talbot County Borough Council are currently planning to undertake maintenance or replacement works at the culvert inlet and further until it re-joins the existing culvert at Old Road. Further to the west the culvert is re-exposed with this also being considered for works. There will be little change to the majority of the site. However, some works will be required in small patches of scrub and potentially through the allotment.
- 7.1.4 The areas proposed for a compound include an existing car park approximately 75m south east of the start of the works.
- 7.1.5 A desk study and site surveys, including a Phase 1 habitat survey and initial ecological assessment, were carried out by TACP in Nov 2019. The habitats recorded were also assessed for their potential qualification as BAP Priority Habitats.
- 7.1.6 The habitats on site do not correspond to any EU Annex I habitats or UK/Neath Port Talbot BAP habitats and do not contain any rare or protected species of flora or fauna. There is evidence of INNS to the west of the site.
- 7.1.7 Surveys for potential bat roost are recommended for the trees within the Rugby and cricket grounds. Pre-construction surveys for breeding birds is recommended if the work is undertaken during the active season.
- 7.1.8 The preliminary ecological appraisal identified a range of potential impacts that may occur during construction along with a small number of potential mitigation and enhancement measures, as summarised below:
- a. Implementation of ecologically friendly management regimes within retained habitats;
 - b. Implementation of ecological enhancement measures within low ecological value areas;
 - c. Management of works and scheme design to reduce indirect construction and operation impacts;
 - d. Implementation of ecologically friendly management regimes across new habitats including those used for amenity and public purpose.

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