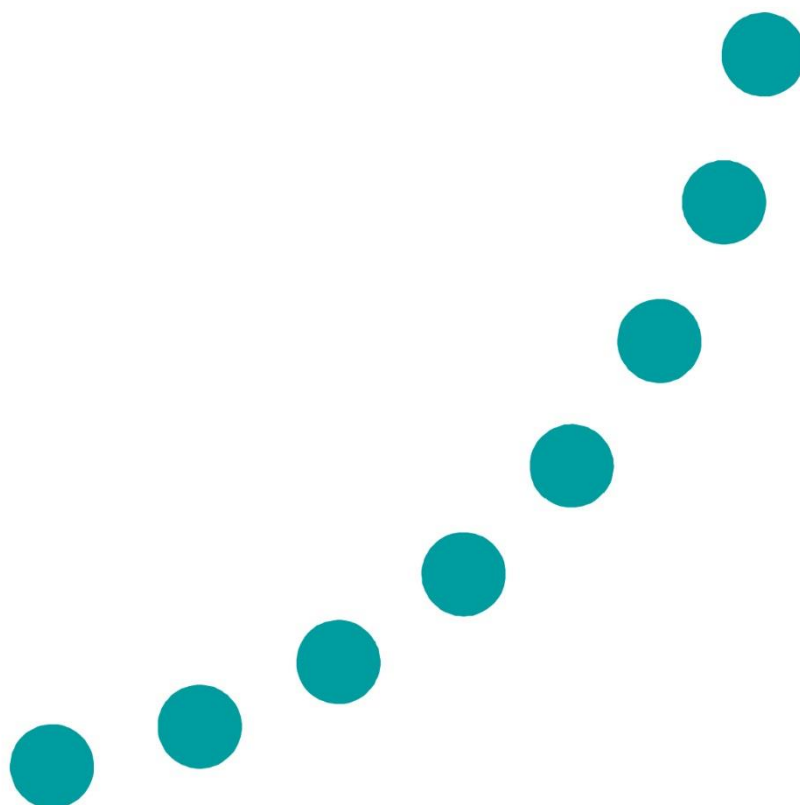




Job no 60940/2

TACP



*LANCASTER CLOSE & ROCK STREET
PRELIMINARY ECOLOGICAL APPRAISAL*

*ATKINS
OCTOBER 2020*

Atkins

October 2020

**TACP
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Project Number: **60940**

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1 INTRODUCTION

1.1 Background

- 1.1.1 TACP (UK) Ltd was commissioned by Atkins in September 2020 to undertake a preliminary ecological assessment on the Lancaster Close and Rock Street site as a follow up and extension to a 2019 appraisal also undertaken by TACP (see 2019_12_02_REP_60940_Rock street_PEA_P1_S0).
- 1.1.2 This report provides an ecological overview of the site including a description of potential ecological receptors and provides 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 linear and covers approximately 0.25ha and is located at Lancaster Close and Rock Street (as shown in Appendix C) and centred on grid reference SN8793006730. The site consists of a water culvert that begins at the base of a semi natural ancient woodland to the north before tracking south through an urbanised and residential area for approximately 150m. The culvert is covered for approximately 75m of this. Beyond this to the south west there is a sitting area and a parkland comprising densely planted trees adjacent to a car park and a residential home. The site continues beyond B4242 into poor semi-improved grassland ending in a dry ditch and plantation woodland.

1.3 Proposed Works

- 1.3.1 The site is part of the wider Neath Port Talbot flood alleviation works with the culvert maintenance and replacement proposals still being developed. The current strategy is to undertake river channel works at the northern end of the site, including installing a trash screen, followed by upgrading the culvert and carrying out any additional maintenance works required throughout the site. The culvert will connect to the existing structures to the south-west of the site. An area proposed for a site compound has been highlighted in a car park to the south of the site, or a patch of bare ground to the south-west of the site (as yet unconfirmed).

2 METHODOLOGY

2.1 Desk Study

- 2.1.1 A South East Wales Biodiversity Records Centre (SEWBReC) data search was undertaken in September 2020 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 undertaken within 2km of the site for internationally and nationally designated 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 of TACP in September 2020 to provide a baseline for assessing the value of the habitats and their potential to 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).

Preliminary Protected Species Assessment

- 2.2.2 Habitats were also evaluated as far as possible for their potential to support rare and protected species, with the exception of bats as surveys are ongoing in relation to these species. Any incidental observations made during the survey were also recorded.

2.3 Limitations

- 2.3.1 It is acknowledged that September is a sub-optimal time to undertake grassland and woodland habitat surveys, reducing the likelihood of rare and protected floral species being identified.
- 2.3.2 No species-specific surveys have been undertaken 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 limit the opportunity 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 used 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 design development of the ecological features on site and in 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 Berne 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 Designated sites include:

- a. Cwm Gwrelych and Nant llyn fach streams located within 1km of the site.

3.1.2 There are a number of **locally designated sites** within 2km of the proposed scheme:

- a. An ancient semi natural ancient woodland of 1.96ha (ID – 18547) is located at the northern extent of the proposed site

3.1.3 A number of ancient woodlands, restored ancient woodlands, and NRW Priority Area (Woodland - PAWS) are within 2km of the site and all waterbodies in Neath Port Talbot are designated as Sites of Importance for Nature Conservation (SINC).

3.1.4 **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.

3.1.5 **Invasive non-native species** recorded on site has included Rhododendron (*Rhododendron ponticum*), Montbretia (*Crocasmia sp*), Japanese Knotweed (*Fallopia japonica*), Wall Cotoneaster (*Cotoneaster horizontalis*) and Himalayan Cotoneaster (*Cotoneaster simonsii*). 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.

3.1.6 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*), and Brown Long-eared (*Plecotus auritus*) and Whiskered Bat (*M. mystacinus*). 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’.

3.1.7 There are records of **European Badger** (*Meles meles*) and a sett and latrine recorded within 1.2km of the proposed works. This species is afforded full U.K. protection under the Protection of Badgers Act 1992, 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.

3.1.8 There were records **European Hedgehog** (*Erinaceus europaeus*). 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.

3.1.9 There are records of **European Otter** (*Lutra lutra*), within 1km of the proposed works. Otters are a European Protected Species (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 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 protected through Schedules 5 and 6 of the WCA 1981 (as amended), and the Berne Convention on the Conservation of European Wildlife and Natural Habitats.

- 3.1.10 There are records of **Polecat** (*Mustela putorius*) these are protected in the UK under the Wildlife and Countryside Act, 1981 (as amended) and are classed as priority Species under the UK Post-2010 Biodiversity Framework.
- 3.1.11 There were no records for other protected mammals such as **Water Vole** (*Arvicola amphibious*) found within 1km of the site, although it should be noted that this does not rule out the potential presence for these or other species.
- 3.1.12 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.
- 3.1.13 **WCA Schedule 1** species with records within 1.5km of the proposed site include: Red kite (*Milvus milvus*), Peregrine (*Falco peregrinus*), Honey-buzzard (*Pernis apivorus*), Redwing (*Turdus iliacus*) and Barn Owl (*Tyto alba*).
- 3.1.14 **Section 7** species recorded within 1.5km of the proposed site include Dunnock (*Prunella modularis*), Bullfinch (*Pyrrhula pyrrhula*), House sparrow (*Passer domesticus*), Wood warbler (*Phylloscopus sibilatrix*), Herring Gull (*Larus argentatus*), and Starling (*Sturnus vulgaris*).
- 3.1.15 **Red-listed** species with records within 1.5km of the proposed works include: Herring Gull (*Larus argentatus*) and Willow warbler (*Phylloscopus trochilus*), House sparrow (*Passer domesticus*), Bullfinch (*Pyrrhula pyrrhula*), redwing (*Turdus iliacus*) and starling (*Sturnus vulgaris*).
- 3.1.16 **Amber-listed** species with records within 1.5km of the proposed site include: Red kite (*Milvus milvus*), Peregrine (*Falco peregrinus*), Honey-buzzard (*Pernis apivorus*), Wood warbler (*Phylloscopus sibilatrix*), Dunnock (*Prunella modularis*), Redwing (*Turdus iliacus*), Herring Gull (*Larus argentatus*), and Barn Owl (*Tyto alba*). Long-tailed Tit (*Aegithalos caudatus*), Swift (*Apus apus*), Dipper (*Cinclus cinclus*), House Martin (*Delichon urbicum*), Swallow (*Hirundo rustica*), Cormorant (*Phalacrocorax carbo*), Willow warbler (*Phylloscopus trochilus*), Green woodpecker (*Picus viridis*), and Goldcrest (*Regulus regulus*).
- 3.1.17 There are records of **reptiles** within 1km of the site, namely Slow Worm (*Anguis fragilis*) and Viviparous Lizard (*Zootoca vivipara*). All reptiles are protected against killing, injuring and sale under UK legislation through their inclusion in Appendix III of the Berne Convention (1979), Schedule 5 of the WCA 1981 (as amended) and Section 7 of the Environment (Wales) Act 2016.

- 3.1.18 Records of **amphibians** within 1km of the site, namely common frog (*Rana temporaria*) and common Toad (*Bufo bufo*). These species are afforded protection under Schedule 5 of the WCA 1981 (as amended) and is 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. It is also listed as a U.K. Biodiversity Action Plan (BAP) Priority Species and is included within the Bern Convention 1979. No other amphibian records were identified within the 1km search area.
- 3.1.19 **Invertebrates** records within 1km of the site included Small Heath (*Coenonympha pamphilus*) and Dingy Skipper (*Erynnis tages*). Both species are afforded protection under Section 7 of the Environment (Wales) Act 2016 and are Priority Species in the UK Biodiversity Action Plan.
- 3.1.20 Records of **fish** species within 1km of the area include Brown/Sea Trout (*Salmo trutta*) which is Priority Species under the UK Post-2010 Biodiversity Framework and European Eel (*Anguilla anguilla*) which is Priority Species under the UK Post-2010 Biodiversity Framework, listed as Critically Endangered on the global IUCN Red List of Threatened Species.

3.2 Field Surveys

Phase 1 Habitat Survey

- 3.2.1 The site comprises a variety of habitat types (see **Figure xx**), as follows including the Phase 1 habitat code (in brackets):
- a. Broadleaved woodland – semi natural (A1.1.1)
 - b. Parkland and scattered trees (A3)
 - c. Cultivated/disturbed land – amenity grassland (J.1.2)
 - d. Buildings (J.3.6)
 - e. Bare Ground and Hard Standing (J.4)
 - f. Hedge with Tree (J.2.3)
 - g. Fence (J.2.4)
 - h. Wall (J.2.5)
 - i. Poor semi improved grassland (B6)
 - j. Mixed woodland – Plantation (A1.3.2)

- 3.2.2 The northern extent of the site begins in the footing of a semi-natural ancient woodland comprising Common Oak (*Quercus robur*), Ash (*Fraxinus excelsior*), and scattered Beech (*Fagus sylvatica*) with historic evidence of river channel work. Evidence of badger noted during the 2019 survey was not seen during the return visit. However, this does not exclude the possibility of the species being present.
- 3.2.3 An area of hardstanding of approximately 15x15m with stacked detritus (tyres and metalwork) is located immediately to the south-east of the culvert entrance. This then passes through a residential area consisting of a mixture of domestic properties and small businesses. The culvert passes beneath the gardens of the properties on Lancaster Close for approximately 125m before crossing under the road where it opens to flow in line with a single wall that is lined with bramble scrub (*Rubus fruticosus* agg). This area has recently been modified by the house owner opening up the area surrounding the open channel.
- 3.2.4 No Invasive Non-Native species (INNS) could be identified at the time of survey however a local resident indicated anecdotally that there was Japanese Knotweed here prior to recent management by the council.
- 3.2.5 The culvert then forms a channel in the shadow of the wall mentioned above adjacent to a parkland of planted scattered trees, that included Poplar (*Populus* spp.), Alder (*Alnus glutinosa*), Silver Birch (*Betula pendula*), Beech, Sycamore (*Acer pseudoplatanus*), Hazel (*Corylus avellana*), and Linden/Lime (*Tilia* spp.). Beyond this is a residential home (Trem Y Glyn Residential Home) and the culmination of the site.
- 3.2.6 The residential area consists of managed amenity grassland with one Common Oak tree approximately 25m from the culvert channel.
- 3.2.7 Further to the west, an area of bare ground was surveyed as a potential compound area for the proposed works. This area was of recently cleared hard standing with a 'heras' fencing perimeter. No species were recorded in this area at time of survey.
- 3.2.8 An area of poor semi-improved grassland lies south east of the B4242, with poa grass (*Poa annua*), ryegrass (*Lolium* sp.), buttercup (*Ranunculus acris*), clover (*Trifolium repens*), and bracken (*Pteridium*). This leads to the dry ditch that is banked to the south by a plantation woodland dominated by ash (*Fraxinus excelsior*).
- 3.2.9 No protected floral species were recorded during survey.
- 3.2.10 No priority habitats were recorded during survey.

Preliminary Protected Species Assessment

- 3.2.11 There were no visible potential roost features for **bats** present on any tree in the parkland at the south-western extent of the site. However, the trees and the linear features adjacent to the parkland, such as the open culvert and standing wall, have the potential to provide foraging and/or commuting opportunities. The semi natural ancient woodland had numerous oak trees with potential for bat roosts. While none of these were within 20m of the culvert, they should still be considered as the exact plan of works is yet to be finalised. The woodland, even in the absence of bat roosts, provides considerable opportunities for foraging and commuting bats as does the plantation woodland to the south of the B4242. As such the site is considered to have at least **local** importance for bats.
- 3.2.12 The woodland to the north and the grassland and woodland to the south do provide opportunities for badger. The wider site is considered to have **negligible** importance for badgers. However, the woodland to the north and south of the site are considered of at least **local** importance for badgers.
- 3.2.13 The woodland to the north of the site, planted parkland to the south-west, and the woodland bank to the south have potential to support nesting **birds** during the active season (late February to early September inclusive, weather dependent). Additionally, the poor semi-improved grassland to the south of the site has potential for ground nesting birds during this time. A grey wagtail was spotted foraging in the open culvert of the residential area. As such the site is considered to have at least **local** importance for breeding birds.
- 3.2.14 The majority of the site is considered to have little suitability to support a population of **reptiles**. However, there are some examples of basking or forgoing grounds and potential or suitable hibernacula predominantly to the north of the site, with the woodland and the hard-standing area, but also in the planted parkland as the line of the culvert could provide some connectivity to the wider site. The poor semi-improved grassland to the south of the site has potential for transient reptiles and some small potential hibernacula. The banked woodland would also provide a suitable corridor for movement. As such the site is considered to have at least **local** importance for reptiles.
- 3.2.15 The majority of the site is considered to have little suitability to support a population of **amphibians**. However, there are some examples of basking or forgoing grounds and potential for suitable hibernacula predominantly to the north of the site, with the woodland and the hard-standing area. The parkland could provide some connectivity to the wider site. The poor semi-improved grassland to the south of the site has potential for transient species and some small potential hibernacula. The marshy areas, though isolated, in the south could support small numbers of breeding amphibians. The banked woodland would also provide a suitable corridor for movement. As such the site is considered to have at least **local** importance for amphibians.

- 3.2.16 The site has few areas of habitat suitable for the **Dingy Skipper** with no notable records of its main foodstuff such as Bird's-foot trefoil (*Lotus corniculatus*), Horseshoe Vetch (*Hippocrepis comosa*) or Trefoil (*L. pedunculatus*) recorded. No suitable habitats for the **Small Heath** butterfly were noted during survey and while this species has been previously spotted in residential areas the distance of the record and the lack of connectivity to more suitable habitat renders the site to be considered as having **negligible** importance for **invertebrates**.
- 3.2.17 The site has few opportunities for protected **fish**, with the exposed areas of the culvert being shallow and well managed. As such the site has **negligible** importance for fish.

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. Dissemination 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.

4.2 Operational Impacts

- 4.2.1 Potential indirect impacts in the absence of any and all mitigation include:
- a. Damage to and disturbance of retained habitats adjacent to the development areas during construction – these impacts would be negative and short to medium-term depending on the duration of the construction works;
 - b. Disturbance to individuals of key species, such as bats, nesting birds (during the active season) or reptiles 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;
 - c. Reduced breeding success or survival due to increased disturbance of key species within retained habitats – these impacts would be negative and short to medium term depending on the duration of the construction works.

4.3 Operational Impacts

- 4.3.1 Potential impacts during operation also vary between individual ecological receptors depending on their extent and sensitivity but again fall into several discrete types.

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

- a. Risk of mortality within areas that provide habitat for species which are subsequently at risk from routine management (e.g. birds, bats, badgers) – these impacts would be negative and long-term.

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

- a. It remains unlikely that there will be any indirect impacts during this phase.

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 both through construction and operation 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. At time of survey the works likely to be within the vicinity were unclear. Any works within 7m of a schedule 9 species (e.g. Japanese Knotweed, Himalayan Balsam) 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 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.
- 5.1.4 The woodland habitats to the north of the site are likely to be directly affected by the works as proposed at the time of writing. However, the extent of the loss of these habitats should be reduced as far as possible within the scheme design with retained areas subject to more ecologically friendly management regimes and ecological enhancement measures, where possible. This could include modifying the design to relocate any impacts on the ancient woodland or translocating the effected trees and soil to another area. The river channel management works proposed in this area have potential to benefit the drainage and function of the woodland if done in a sensitive way.
- 5.1.5 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 both construction and operation 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 design. At time of writing the exact plans are not established. However, there is potential for the loss of woodland or parkland habitat. Therefore, a replacement of the number of trees removed with appropriately mature and correct species is recommended. Additionally, there is potential to enhance the area by installing bat boxes and or/bird boxes within the woodland.
- 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. Temporary connectivity measures may be required should any commuting routes be identified within either of the sites. These can take the form of moveable barriers or fencing that can be removed and replaced on a daily basis or dead hedges/brash corridors that are either removed at the end of construction or left to naturally decompose.
 - c. 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.

Operational impacts to protected species should also largely be addressed by the measures detailed above in terms of habitat retention, mitigation and enhancement.

6 RECOMMENDED FURTHER SURVEYS

6.1 Habitats

- 6.1.1 It is recommended that further surveys for invasive non-native species within the work site, particularly to the north near the woodland and to the south west in the parkland prior to the commencing of work are carried out. 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 woodland to the north, parkland to the south-west, and the banked woodland to the south.
 - b. Pre-construction surveys for badger in the woodland to the north.
 - c. Pre-construction surveys for breeding birds 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 design and habitat changes across the sites in the interim period.

7 SUMMARY

- 7.1.1 TACP was commissioned by Atkins to undertake an updated 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 and a replacement culvert to the south. This report provides an ecological overview of the site including a description of potential ecological receptors, a preliminary ecological impact assessment, potential mitigation and enhancement measures and potential areas for retention and enhancement.
- 7.1.2 The site is located in the vicinity of Lancaster Close & Rock Street in Glynneath and consist of a partially open culvert that channels beneath or in front of residential properties before following a single wall of a demolished commercial/industrial building through parkland with trees and beyond into amenity grassland prior to connecting with the western culvert that is to be retained. The site continues beyond the B4242 and culminates in poor semi improved grassland and banked woodland to the south of the scheme. There is a semi natural ancient woodland to the north of the site.
- 7.1.3 Neath Port Talbot County Borough Council are currently planning to undertake maintenance or replacement works at the culvert inlet and undertake river channelling works prior to installing new trash screening. A new culvert running the length of Lancaster Close will be installed. There will be little change to the majority of the site. However, some works to and within the vicinity of the woodland and parkland trees will be required. The southern area will require channelling works.
- 7.1.4 The areas proposed for a compound include an existing car park and/or a recently cleared area of hard standing that is fenced off (at time of writing).
- 7.1.5 Impacts on ecosystem services cannot be assessed at present but should be reviewed once detailed proposals have been produced.
- 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.
- 7.1.7 Species specific surveys are recommended for bat roost potential (within 30m of construction or if any trees are to be felled as part of the construction works and badger (within 30m of the works) within the woodland, and breeding birds during the active season.
- 7.1.8 The preliminary ecological appraisal identified a range of potential direct and indirect impacts that may occur during construction or operation along with a variety of potential mitigation and enhancement measures, as summarised below:
- a. Reduction in habitat loss through appropriate and sensitive scheme design;
 - b. Retention of key areas of ecological value;
 - c. Implementation of ecologically friendly management regimes within retained habitats;
 - d. Implementation of ecological enhancement measures within low ecological value areas;
 - e. Creation of new replacement habitats of a greater ecological value than those lost;
 - f. Translocation of existing ecological features wherever possible;

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- g. Management of works and scheme design to reduce indirect construction and operation impacts;
 - h. Installation/creation of species-specific mitigation and enhancement measures;
 - i. Implementation of ecologically friendly management regimes across new habitats including those used for amenity and public purpose.

8 REFERENCES

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