

Subject Trebanos Wastewater Treatment Works: Headwall - Green Infrastructure Statement
Job No/Ref 275375-50
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DOCUMENT CHECKING

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1. Introduction

In light of recent planning policy changes to Chapter 6 of Planning Policy Wales, it is our understanding that a Green Infrastructure Statement will be required alongside all planning applications, to demonstrate how green infrastructure has been incorporated into the proposal. This should consider how the project has applied the mitigation hierarchy (a stepwise approach to show that any adverse environmental effects are firstly avoided, then minimised, mitigated, and as a last resort compensated for) and its compliance with the requirements for biodiversity net benefit and ecosystem resilience.

Planning Policy Wales defines Green Infrastructure as: *‘the network of natural and semi- natural features, green spaces, rivers and lakes that intersperse and connect places.’*

This Green Infrastructure Statement has been prepared by Ove Arup and Partners Limited (Arup) on behalf of Morgan Sindal (on behalf of Dŵr Cymru Welsh Water (DCWW)). The purpose of this statement is to support an application for full planning permission submitted to Neath Port Talbot Council, herein referred to as the Local Planning Authority (LPA).

The Trebanos Wastewater Treatment Works Headwall Scheme (the ‘Proposed Scheme’, shown in Location D of Figure 1-1Figure 1-1: Location of Proposed Scheme) is part of a wider operation to upgrade the built infrastructure at Trebanos Wastewater Treatment Works (WwTW). The Proposed Scheme consists of improvements to a headwall, which will deliver environmental benefits to the water bodies and surrounding environment. The total area of the Proposed Development is approximately 0.017ha, this includes the headwall and temporary works. The final headwall will be approximately 0.003ha and all remaining land will be reinstated to the baseline habitat.

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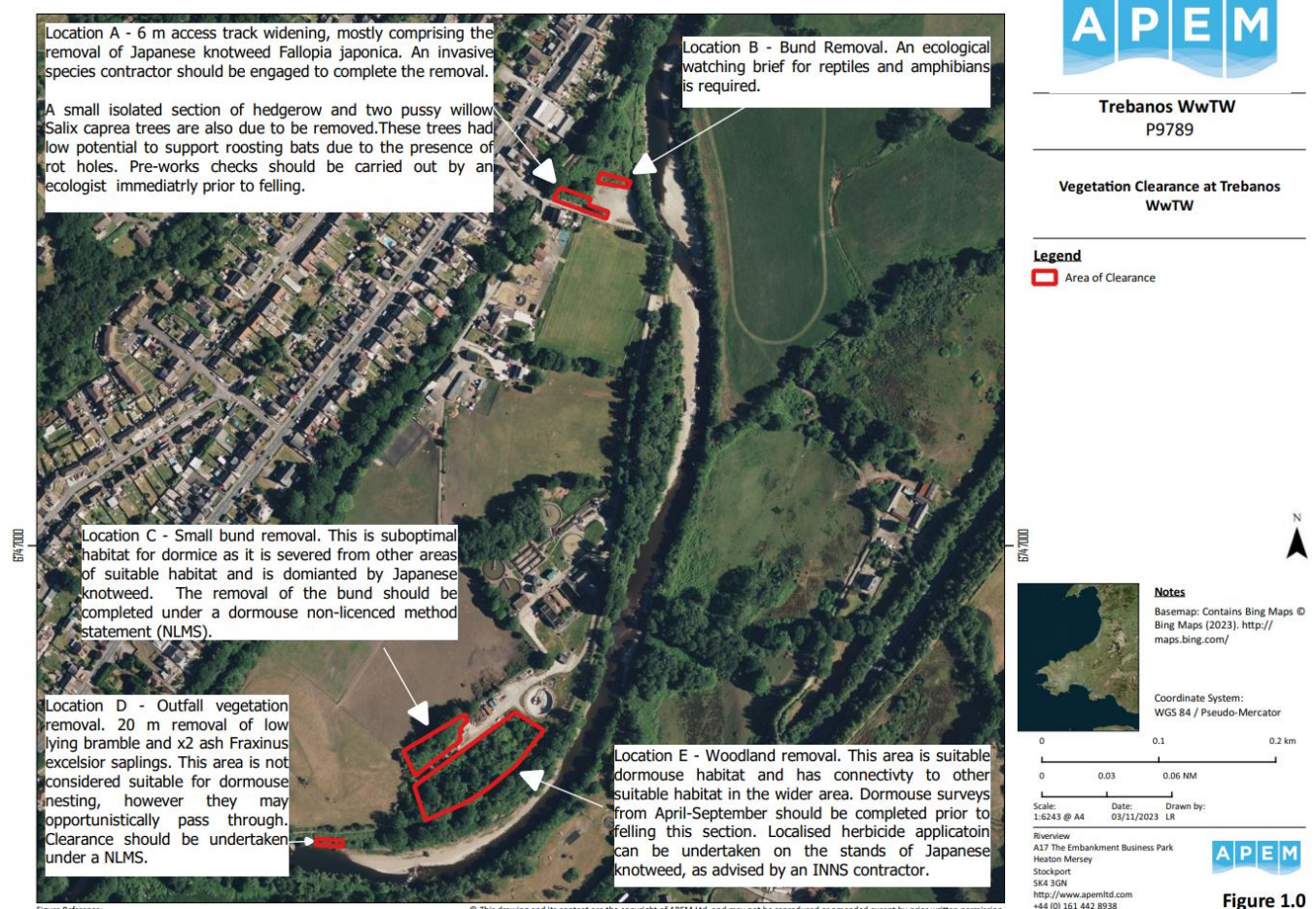


Figure 1-1: Location of Proposed Scheme

2. Existing site Green Infrastructure

In order to inform the planning application, the following reports have been produced:

- APEM Trebanos WwTW Preliminary Ecological Appraisal (PEA)¹
- Trebanos WwTW: Headwall - Preliminary Water Environment Regulations Compliance Assessment (PWERCA)²

¹ Alsop, C. (2022). Trebanos WwTW Preliminary Ecological Appraisal. Stockport: APEM Ltd.

² Ove Arup & Partners Limited. (2023). Trebanos Wastewater Treatment Works: Headwall - Preliminary Water Environment Regulations Compliance Assessment.

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These reports detail the findings of ecological and hydrological surveys undertaken at the site, these assessments have considered the nature and value of existing Green Infrastructure features at the site and have been used to inform this Green Infrastructure Statement.

2.1 Statutory and non-statutory sites

There is one statutory designated site located within 2 km of the site and there are fourteen non-statutory designated sites located within 2 km of the site, including thirteen SINC's and one Wildlife Trust Reserve (WTR). The proposed works are confined to the footprint of the Proposed Scheme. Non-statutory sites with potential to be impacted by the works are those located adjacent to or within 200m of the site, or those which have hydrological connectivity to the site.

No impacts are anticipated to any of the statutory or non-statutory sites due to the intervening distances between sites and the proposed works area, and lack of impact pathways (hydrological or terrestrial). In the absence of mitigation, the proposed works have the potential to indirectly affect three of the non-statutory sites (the Tawe Corridor, Swansea Canal and Neath Port Talbot watercourses SINC's) through pollution or surface run-off during the construction phase. However, potential effects will be mitigated through the implementation of a Construction Environmental Management Plan (CEMP).

2.2 Habitats

The existing site consists of semi-natural broadleaved woodland, which qualifies as Priority Habitat, and lies along the bank of the River Tawe (see Figure 2-1). Habitat adjacent to the site, within the wider operation, consists of improved grassland and the river itself. The river falls within the Tawe Corridor, Swansea Canal and NPT watercourses SINC's. To the north of the Proposed Scheme (but within the wider operation) lies a mixture of improved and amenity grassland, broadleaved woodland, hardstanding, and structures associated with the WwTW.

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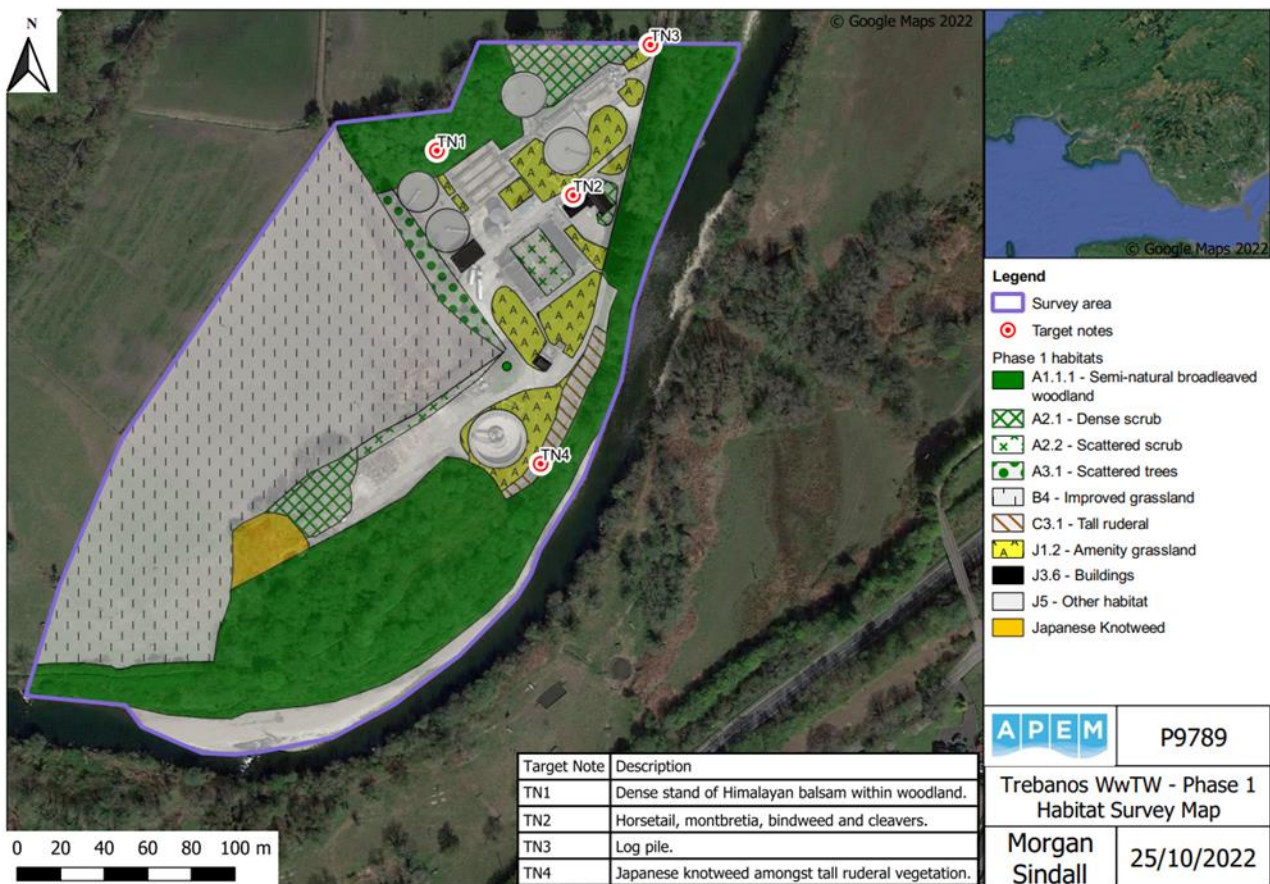


Figure 2-1: Habitat map of wider operation

In the wider area, the site is surrounded by a mixture of residential development and farmland, including a network of hedgerows and blocks of woodland. The blocks of woodland are cut off by residential buildings and a main road on both sides of the River Tawe. Connected to the wider site, there are a variety of habitat networks of both upland and lowland heath, woodland, bog, fen and grassland.³

The Proposed Scheme has been designed to protect and retain existing features of biodiversity value/green infrastructure at the site, wherever possible. However, it has been identified that in order to deliver the necessary improvements, there will be unavoidable loss of bramble and ash saplings within the Proposed Scheme boundary. Saplings will be retained wherever possible, but where removal is required, they will be replanted elsewhere on the site.

2.3 Species

The potential for several protected and notable species including amphibians, bats, birds, hedgehogs, otters and reptiles were reported within the PEA and further survey to confirm their

³ Habitat Networks | DataMapWales (2022) datamap.gov.wales. Available at: https://datamap.gov.wales/layergroups/geonode:nrw_habitat_network.

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likely presence or absence are recommended. Habitat within the Proposed Scheme has the potential to support this species through provision of resting, breeding, commuting, and feeding resources. Additionally, the River Tawe supports an abundance species such as fish, aquatic invertebrates and otter within the water course and along its banks. Removal of suitable habitat will be avoided and minimised through retention of as much habitat as possible. Any works which may impact protected species will be carried out under a Natural Resources Wales licence, where required.

The Proposed Scheme has the potential to directly affect these species through killing or injuring of animals and disturbance during the construction phase. If additional lighting is required (temporary or permanent), this could also cause indirect effects through light pollution and disturbance. These impacts will be mitigated through the implementation of a CEMP.

Japanese knotweed (*Reynoutria japonica*) and Himalayan balsam (*Impatiens glandulifera*) are present across much of the wider operation and montbretia (*Crocsmia x crocosmiflora*) and horsetail (*Equisetum sp.*) are present in isolated locations. As such, there is potential for them to be present within the Proposed Scheme. These species are all Invasive Non-Native Species (INNS), listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). The Proposed Scheme has the potential to result in the spread of these species within and outside of the site. A removal and management plan for INNS will be outlined within the CEMP.

Temporary changes to flow are anticipated during construction of the new headwall. Consideration to the potential impact to aquatic species will be necessary, requiring a pre-construction survey to be completed, and work to be conducted outside of the fish spawning season. Aquatic species surveys are recommended within the PWERCA. No biological impacts are anticipated during operation of the headwall.

3. Proposed Green Infrastructure

Habitat lost to facilitate the construction of the headwall will be replaced and enhanced within approximately 80% of the Proposed Scheme boundary. The remaining 20% will contain the headwall itself, so cannot be replaced with habitat. Replacement habitat will include woodland planting and scrub that represents the native mix of species present within the site baseline. Plants will be selected from stock of a provenance that would be likely to tolerate future climatic conditions (e.g. not from the north of England).

Due to the scale of the works and small site area, no further habitat creation or enhancement will be provided as part of the Proposed Scheme. Additional enhancement and creation of habitat will be included in the design for the wider operation; however, this will not be undertaken for at least two years from the date of these works. Those enhancement works will be covered in an separate Green Infrastructure Statement.

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4. Assessment

The impact of the Proposed Scheme to Green Infrastructure has been assessed using the principles set out in the Building with Nature Standards Framework⁴. Those relevant to the Proposed Scheme are listed below:

- **Standard 1 - Optimised Multifunctionality and Connectivity**
 - Retention and replacement of lost habitat will help maintain existing connectivity for commuting and foraging species.
- **Standard 2 - Positively Responds to the Climate Emergency**
 - The retention of the trees in the site will maintain a cooling effect by providing shade via evapotranspiration.
 - Species planted to replace lost habitat will be chosen to include climate resilient species of a local province.
- **Standard 4 - Champions a Context Driven Approach**
 - The Proposed Development supports the enhancement of the River Tawe, which is identified in local policy, by improving the quality of water discharged into the water course.
 - The woodland habitat type within the site is a Priority Habitat and is of importance within the country and region. As such, the Proposed Development seeks to retain and replace the habitat wherever feasible within the site boundary.
- **Standard 5 - Created Distinctive Places**
 - Works within the Proposed Scheme will be small scale and designed to integrate with the local environment with minimal visual intrusion and light pollution.
 - The Proposed Scheme is on private land and thus will not directly impact the local community.
- **Standard 9 - Delivers Climate Resilient Water Management**
 - Water quality will be improved as a result of the Proposed Scheme due to the new and improved headwall creating greater flow rate of treated final effluent, which will reduce the frequency of spills from the WwTW.
- **Standard 11 – Delivers Wildlife Enhancement**
 - Improved water quality as a result of the Proposed Scheme will bring minor and localised beneficial effects to the riparian habitat and to biological life within the River Tawe.
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⁴ Standards Framework (BwN 2.0) (2022). Gloucester: Building with Nature. Available at: https://static1.squarespace.com/static/5c45e569c3c16a9eac56d244/t/6351513d1afee236d4cf6ce8/1666273600232/Building_with_Nature_Standards_Framework_2.0_Oct22_Download_Version.pdf.

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- **Standard 12 – Underpins Nature’s Recovery**

- The woodland within the Proposed Scheme is part of a larger woodland corridor that connects the site to the wider landscape. Retention of woodland habitat and replacement of lost areas ensures the site’s use by priority species (e.g. bats and hazel dormouse) is retained.
- Replacement habitat will be designed to include species that are beneficial to priority species.

5. Summary

The Proposed Scheme primarily involves the localised minimal loss of species-poor scrub and woodland and disturbed land, and aquatic habitats during the construction of the new WwTW headwall.

In consideration of the Step-wise approach, the design has considered maintaining the largest possible area of existing habitat paying due regard to the potential for continued long term maintenance and management of retained areas to benefit biodiversity. The proposals ensure that retained habitats continue to be well connected to adjacent habitats to provide connectivity for key species and ensuring that the favourable conservation status of local species populations is maintained.

The Proposed Scheme is likely to provide a small benefit to the local environment due to improved flow and a reduction in spillages, thereby improving the water quality flowing into the River Tawe.

Given the small scale of the works and reinstatement of 80% of lost habitat, the Proposed Scheme is unlikely to have a negative impact on Green Infrastructure. The improvements to water quality, removal of INNS, and enhancement of retained woodland through improved species selection will provide an overall positive, although small, impact on biodiversity. However, the Proposed Scheme currently does not commit to long term management, thereby creating a risk to the longevity of any biodiversity gains.