

# TREMEIRCHION WASTE WATER TREATMENT WORKS

## GREEN INFRASTRUCTURE STATEMENT

Report Ref: EE.4346b.24.RC

Date: 26/09/2024

### 1. INTRODUCTION

This Green Infrastructure Statement has been produced by Enfys Ecology for the Wye & Usk Foundation and provides a brief statement associated with construction of an Integrated Constructed Treatment Wetland (ICTW) scheme at the existing Tremeirchion Waste Water Treatment Works (WwTW).

Green infrastructure (GI) is defined in Planning Policy for Wales (PPW) Edition 12<sup>1</sup> as “*the network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect places*”. Development proposals should take GI into consideration in order to avoid negative impacts on habitats and species, and seek ways to maintain and enhance biodiversity. Impacts on habitats and species should be treated in a step-wise manner (PPW 12, paragraph 6.4.15), by seeking to:

- **Avoid** damage to biodiversity in its widest sense by maintaining the largest possible area of existing habitat supporting biodiversity and functioning ecosystems, particularly Section 7 habitats and species where present, through careful development design and consideration of long-term maintenance and management and ensuring that retained habitats continue to be well connected to adjacent habitats to provide connectivity for key species.
- **Mitigate** or **restore** by identifying measures to address the specific negative effects by repairing damaged habitats and disturbed species. The measures should seek to restore in excess of like for like, accounting for disturbance and time lags for the recovery of habitat and species, and in every case, mitigation or restoration measures should seek to build ecosystem resilience within the site and where possible the wider area.
- As a last resort off-site **compensation** for unavoidable damage must be provided. This must be of significant magnitude to fully compensate for any loss.
- All development must **deliver a net benefit** for biodiversity and ecosystem resilience from the baseline state (proportionate to the scale and nature of the development proposed).

Denbighshire County Council provide local planning policy information in the ‘Denbighshire County Council Local Development Plan 2006 – 2021’ and Supplementary Planning Guidance documents. There are no specific policies related to green infrastructure, however biodiversity and green infrastructure are discussed in the following:

- DCC LDP 2006 – 2021 Policy RD 1 – Sustainable development and good standard design;
- DCC LDP 2006 – 2021 Policy VOE 1 – Key Areas of importance;
- DCC LDP 2006 – 2021 Policy VOE 5 – Conservation of natural resources;

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<sup>1</sup> See: <https://www.gov.wales/planning-policy-wales>

- Supplementary Planning Guidance Note – Conservation and Enhancement of Biodiversity (July 2016);
- Supplementary Planning Guidance Note – Trees & Landscaping (July 2016); and,
- DCC ‘Response to Update of Chapter 6 of Planning Policy Wales’.

## 2. SITE DETAILS

The proposed development site is adjacent to the existing Tremeirchion Waste Water Treatment Works (WWTW), which is situated approximately 1km to the south-west of the village of Tremeirchion in Denbighshire. Two Wildlife Sites are within 1km of the site (the closest approximately 0.16km to the south-west) but neither will be directly impacted by the proposed works. A small area of Ancient Semi-Natural Woodland will be affected by the works.

The reports / drawings reviewed in the production of this Green Infrastructure Statement are detailed in Table 2.1.

**TABLE 2.1: PROJECT INFORMATION SOURCES**

Information	Organisation	Reference and Date
Proposed site layout	Dŵr Cymru	B17505-00DM13-03-AB-DR-CA-CI5006 (27/06/2024)
Preliminary Landscaping Plan Integrated Constructed: Wetland Development at Tremeirchion WwTW	The Wye & Usk Foundation	V1.0 (24/04/2024)
Land adjacent to sewage works, Tremeirchion, Denbighshire: Preliminary Ecological Appraisal	Worcestershire Wildlife Consultancy	2022/059 B (26/06/2024)
Tremeirchion Waste Water Treatment Works: Ecological Assessment	Enfys Ecology	EE.4346.23.HT (16/01/2024)
Tremeirchion Waste Water Treatment Works: Preliminary Ecological Appraisal	Enfys Ecology	EE.4346.24.RC (20/09/2024)

## 3. SITE BASELINE AND CONNECTIVITY

The site consists of agricultural grassland, with a block of broadleaved/mixed woodland running along the north-western edge; a small section of the proposed development area lies within the woodland. The woodland extends approximately 400m south-west from the survey site, and the waste water treatment site is located immediately to the north-east. Agricultural fields surrounded the site in all directions, with a few scattered standalone mature trees.

Hedgerows provide some connectivity with small blocks of woodland within the wider landscape, but connectivity is otherwise restricted by the nature of the open agricultural fields.

A stream running through the woodland provides blue infrastructure, and further habitat connectivity. It connects with a small river, the Afon Bach, approximately 0.7km downstream from the site; these in turn connect to the larger watercourse of the Afon Clwyd 0.2km downstream.



**FIG. 3.1: SITE CONTEXT**

BACKGROUND IMAGE © GOOGLE MAPS 2024

#### 4. SUMMARY OF GREEN INFRASTRUCTURE PROPOSALS

As set out in PPW 11, paragraph 6.4.21, the impacts on habitats and species from a proposed development should be treated in a step-wise manner. Table 4.1 summarises how the proposed works at Tremeirchion WWTW has adopted these step-wise principles and details the Green Infrastructure contribution of the proposed scheme. The Green Infrastructure contribution proposed is considered to be proportionate to the proposed development.

**TABLE 4.1: SUMMARY OF GREEN INFRASTRUCTURE PROPOSALS FOR TREMEIRCHION WASTE WATER TREATMENT WORKS**

Step-Wise Stages	Summary of Project Proposals
Avoidance	<ul style="list-style-type: none"> <li>The proposed development largely avoids any impact on the broadleaved/mixed woodland, which is the most valuable habitat in the immediate area.</li> </ul>
Minimisation	<ul style="list-style-type: none"> <li>The majority of the development area is restricted to grazed improved grassland, with low ecological value and a common habitat in the local area.</li> <li>Impacts on the woodland will be minimal and short-lasting, and largely restricted to a narrow area where the discharge point will be created.</li> </ul>
Mitigation or Restoration	<ul style="list-style-type: none"> <li>Reasonable avoidance measures include specific guidance regarding the timing of clearance works to avoid disturbance of hibernating animals or nesting birds</li> </ul>
Compensation	<ul style="list-style-type: none"> <li>Species-rich hedgerow planting will compensate for the loss of any trees during the works</li> <li>Bird boxes to be installed to provide nesting opportunities while the hedgerow becomes established.</li> </ul>
Enhancement	<ul style="list-style-type: none"> <li>The creation of the wetland cells will provide a significant biodiversity enhancement to the site.</li> <li>Further enhancement will be provided by enrichment and management of retained grassland.</li> <li>The planned hedgerows will both provide an overall biodiversity enhancement to the site, and improve habitat connectivity.</li> <li>Additional opportunities for biodiversity enhancement include erecting bird and bat boxes.</li> </ul>

#### 5. STATEMENT

The proposed development involves the construction of an Integrated Constructed Treatment Wetland (ICTW) scheme at the existing Tremeirchion WwTW comprising the installation of two underground septic tanks, the creation of three wetland cells with planting, a welfare facility, new internal access road(s), perimeter fencing and landscaping works. The existing WwTW will be retained as a standby facility throughout the commissioning and three-year operating technique agreement period (the minimum lifetime of the development). Following this three-year period, provided the ICTW technology has proved to be successful, the existing WwTW would be decommissioned, and once all buildings and structures are demolished, the area would be seeded with meadow land plants. The scheme has been designed taking a step-wise approach to impacts on habitats and species, and ecological enhancement will be provided through the creation of new wetland area, which is itself an integral part of the design for the new water treatment facility, creation of new, species-rich hedgerows, and enhancement of retained grassland.

Planning Policy Wales identifies the importance of *“paying due regard to the potential for continued long term maintenance and management of retained areas to benefit biodiversity”* (PPW12, paragraph 6.4.15). It is recommended that a plan identifying the proposed maintenance and management of habitats and species features (in addition to other Green Infrastructure components as required) be produced at an appropriate stage.

<b>REPORT REF:</b>				
Report Reference: EE.4346.24b.RC. Tremeirchion Waste Water Treatment Works – Green Infrastructure Statement				
<b>CLIENT</b>	The Wye & Usk Foundation			
<b>DATE</b>	<b>AUTHOR</b>	<b>APPROVED</b>	<b>VERSION</b>	<b>COMMENTS</b>
26/09/2024	Richard Cutts	Tim Yardley	V1	
04/10/2024	Richard Cutts	Tim Yardley	V2	Minor amendments to descriptions of the proposed works
10/10/2024	Richard Cutts	Tim Yardley	V3	Minor amendments to biodiversity enhancements

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