Glandŵr Cymru
Canal & River Trust in Wales

Project Habitats Regulations Assessment

TREVOR BASIN EDUCATION CENTRE

Version Control Table

Version	Purpose/Change	Author	Date
1.0	Final, for submission	Jenny Spelling, Ecologist, Canal & River Trust	15/05/2025

Stage 1 – Screening: Does the project have a likely significant effect on any European/Ramsar site either alone or in combination with any other plan or project?

Name of proposed project	Trevor Basin Education Centre
Site address/location	Land at Trevor Basin, Pontcysyllte, Llangollen, Wrexham, LL20 7TY SJ 2715 4225
Brief Description	Demolition of existing building and construction of a new Education Centre, with associated landscaping.
Generic pathways of impact for the project	<u>Construction phase</u> Mechanical removal of material during construction. Direct harm to features of interest and habitat during construction. Removal of habitat during sensitive times of year, e.g. during breeding season. Noise, vibrations and human activity during construction and operation. Reduction in water quality through pollution of watercourse. Although there is no direct connection from the application site to the River Dee, an overspill weir connecting the Llangollen Canal to the River Dee is present to the south. Therefore, there is a hydrological connection between the canal adjacent to the application site and the river. Introduction or spread of invasive, non-native species. <u>Operational phase</u> Disturbance from human activity once construction is complete
Sites affected by project	At this location, the River Dee is designated as River Dee and Bala Lake/Afon Dyfrdwy a Llyn Tegid (Wales) Special Area of Conservation (SAC). It is also designated as Afon Dyfrdwy (River Dee) Site of Special Scientific Interest. The River Dee and Bala Lake SAC is part of a wider network of connected designated sites, which includes the functionally linked Dee Estuary SAC (Wales)/Ramsar (Wales/England), which includes two of the qualifying features for the River Dee SAC: Sea lamprey *Petromyzon marinus* and River Lamprey *Lampetra fluviatilis*. According to the Core Management Plan for the River Dee and Bala Lake/Afon Dyfrdwy a Llyn Tegid SAC[1], these two qualifying features do not occur in the SAC unit within which the project is located. There are no works proposed within the river channel that would

	affect these two qualifying features and the Dee Estuary SAC is situated over 75km downstream of the project. Therefore, the Dee Estuary SAC is screened out from this assessment. The Dee Estuary SPA (Wales/England) was initially identified during Screening as it is hydrologically connected to the River Dee. However, it is situated over 75km downstream of the project and does not share the same features of interest as the Dee SAC, as it is designated for its assemblage of important populations of waterfowl. The Dee Estuary Ramsar (Wales/England) is also hydrologically connected to the Dee SAC. It is designated for Annex 1 Habitats including extensive areas of intertidal sand and mudflats and saltmarsh, as well as for populations of natterjack toad *Bufo calamita* and waterbirds. Therefore, given the nature of the designated features, which are not functionally linked to the River Dee SAC and their distance downstream from the proposals, both the Dee Estuary SPA and Ramsar site can be immediately screened out.
Qualifying Features	Primary Reasons for overall designation: Feature 1. Watercourses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation Feature 2. Atlantic salmon *Salmo salar* Feature 3. Floating water-plantain *Luronium natans* Other Reason Feature 4. Sea lamprey Feature 5. Brook lamprey *Lampetra planeri* Feature 6. River Lamprey Feature 7. Bullhead *Cottus gobio* Feature 8. European otter *Lutra lutra* Within the SAC unit 785[1] Dee-Ceiriog to Alwen that the site falls within, the following Qualifying Features occur: Feature 1. Watercourses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation Feature 2. Atlantic salmon Feature 5. Brook lamprey Feature 7. Bullhead Feature 8. European otter

[1] (Natural Resources Wales (September 2022) CORE MANAGEMENT PLAN INCLUDING CONSERVATION OBJECTIVES FOR River Dee and Bala Lake/Afon Dyfrdwy a Llyn Tegid SAC. Available from: https://naturalresources.wales/media/673374/river_dee___bala_lake_32_plan.pdf [accessed: 15/05/2025]

Relevant Conservation Objectives Supplementary Advice[1]	Conservation Objective for watercourse: • The ecological status of the water environment should be sufficient to maintain a stable or increasing population of each feature. This will include elements of water quantity and quality, physical habitat and community composition and structure. • Water quality standards for the river Dee follow those in the revised Common Standards Monitoring Guidance for Rivers (JNCC 2016). These are detailed in Appendix 2. There will be no deterioration in water quality, as defined by these standards, other than that temporarily generated by natural variations in water flow or by man-made variations occurring as a result of operating the River Dee flow control regime within its normal operating parameters. • The Dee flow regime should remain within 10% of 'recent actual flow' as described by Bethune (2006). • The river planform and profile should be predominantly unmodified. Physical modifications having an adverse effect on the integrity of the SAC will be avoided. • Artificial factors impacting on the capability of each feature to occupy the full extent of its potential range should be modified where necessary to allow passage, eg. weirs, bridge sills, or other forms of barrier. • Natural limiting factors such as waterfalls, which may limit the natural range of a feature or its dispersal between naturally isolated populations, should not be modified. • Levels for nutrients, in particular phosphate, will be agreed for cross-border water bodies between NRW and NE, and measures taken to maintain nutrients below these levels. • Potential sources of pollution, nutrient enrichment and/or suspended solids that have not been addressed in the Review of Consents such as, but not confined to, diffuse pollution or disturbance to sediments, will be considered in assessing plans and projects. Feature 1: The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: • The conservation objective for the watercourse as defined above must be met. • The extent of this feature within its potential range in this SAC should be stable or increasing

	• The extent of the sub-communities that are represented within this feature should be stable or increasing. • The conservation status of the feature's typical species should be favourable. • All known, controllable factors, affecting the achievement of these conditions are under control (many factors may be unknown or beyond human control). Feature 2: The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: • The parameters defined in the vision for the watercourse as defined above must be met • The SAC feature populations will be stable or increasing over the long term. • The natural range of the features in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. • There will be no reduction in the area or quality of habitat for the feature populations in the SAC on a long-term basis • All known, controllable factors, affecting the achievement of these conditions are under control (many factors may be unknown or beyond human control). Feature 5: The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: • The parameters defined in the vision for the watercourse as defined above must be met. • The SAC feature populations will be stable or increasing over the long term. • The natural range of the features in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. • There will be no reduction in the area or quality of habitat for the feature populations in the SAC on a long-term basis. • All factors affecting the achievement of these conditions are under control. Feature 7: The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:

	• The parameters defined in the vision for the watercourse as defined above must be met. • The SAC feature populations will be stable or increasing over the long term. • The natural range of the features in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. • There will be no reduction in the area or quality of habitat for the feature populations in the SAC on a long-term basis. • All factors affecting the achievement of these conditions are under control. Feature 8: The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: • The parameters defined in the vision for the watercourse as defined above must be met. • The SAC otter population is stable or increasing over the long term, both within the SAC and within its catchment. • There will be no loss of otter breeding or resting sites other than by natural means (such as naturally occurring river processes) within the SAC or its catchment. • The number of potential resting sites within the SAC will not be a factor limiting that limits the otter population's size or extent. • There should be no reduction of fish biomass within the SAC or its tributaries except for that attributable to natural fluctuations. • There should be no loss of amphibian habitat likely to provide a source of prey for members of the SAC otter population. • The potential range of otters in the within the SAC or its catchment is neither being reduced nor is likely to be reduced for the foreseeable future. • All known or potential access or dispersal routes within the catchment for otters that might be considered part of the SAC population should be maintained such that their function is not impaired including the incorporation of measures or features required to avoid disturbance. • Off site habitats likely to function as 'stepping stones' within the catchment for members of the SAC otter population will be maintained for migration, dispersal, foraging and genetic exchange purposes. • All man-made structures within or likely to be used by otters from the SAC population must incorporate

	effective measures to facilitate the safe movement and dispersal of otters. • All known, controllable factors, affecting the achievement of these conditions are under control (many factors may be unknown or beyond human control)
Ecological surveys & results relevant to European site qualifying features	Surveys of the site were carried out on 20 March and 03 April 2025 and an Ecology Assessment prepared[2]. The survey included a desk study and site visits to conduct an Extended Phase 1 Habitat survey. The River Dee is situated 0.2km downhill from the application site and provides optimum habitat for otters, one of the qualifying features. Although the application site does not support habitat for otters, they may pass through or near to the application site due to the presence of the Llangollen Canal adjacent, with otters potentially moving between the canal and river through adjacent suitable habitats. No other qualifying habitats or species are present within the application site. Of relevance to the River Dee SAC, the desk study identified several invasive non-native species within 1km, with a small patch of Conoteaster sp. recorded within the application site.
Is the project directly connected with or necessary to the management of the European site?	No

[2] Canal & River Trust, Trevor Basin Education Centre Ecology Assessment, 15 May 2025.

Special Feature	Conservation Objective	Potential Hazard	Pathway(s) of Impact
Watercourse	Conservation Objective for watercourse: • The ecological status of the water environment should be sufficient to maintain a stable or increasing population of each feature. This will include elements of water quantity and quality, physical habitat and community composition and structure. • Water quality standards for the river Dee follow those in the revised Common Standards Monitoring Guidance for Rivers (JNCC 2016). These are detailed in Appendix 2. There will be no deterioration in water quality, as defined by these standards, other than that temporarily generated by natural variations in water flow or by man-made variations occurring as a result of operating the River Dee flow control regime within its normal operating parameters. • The Dee flow regime should remain within 10% of 'recent actual flow' as described by Bethune (2006).	Reduction in water quality through pollution of watercourse from chemicals or disturbed sediment. Introduction or spread of invasive, non-native species.	During construction operations, there is a risk of debris, incorrectly stored chemicals and silt/sediment entering the river via an overspill weir from the canal adjacent to the application site, affecting water quality by nutrient enrichment and pollution. Integral to the project will be the implementation of standard pollution prevention measures, including spill trays and spill kits, use of double bunded fuel bowser/s and barrier fencing. On this basis, there will be no likely significant effect on water quality within the river. One invasive, non-native species is known to be present within the application site (Cotoneaster sp.), which will be removed and disposed of appropriately, as required by legislation and best practice measures. There is also potential for new invasive species to be introduced to the site via contaminated plant/equipment/footwear. Integral/standard measures used during Canal & River Trust operations at sensitive sites include biosecurity 'check, clean, dry' both prior to transporting equipment to site and prior to removing it offsite at the end of the project. Therefore no effect is anticipated.

	• The river planform and profile should be predominantly unmodified. Physical modifications having an adverse effect on the integrity of the SAC will be avoided. • Artificial factors impacting on the capability of each feature to occupy the full extent of its potential range should be modified where necessary to allow passage, eg. weirs, bridge sills, or other forms of barrier. • Natural limiting factors such as waterfalls, which may limit the natural range of a feature or its dispersal between naturally isolated populations, should not be modified. • Levels for nutrients, in particular phosphate, will be agreed for cross-border water bodies between NRW and NE, and measures taken to maintain nutrients below these levels. • Potential sources of pollution, nutrient enrichment and/or suspended solids that have not been addressed in the Review of Consents such as, but not confined to, diffuse pollution or disturbance to sediments, will be considered in assessing plans and projects.		

Feature 1. Watercourses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation	Feature 1: The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: • The conservation objective for the watercourse as defined above must be met. • The extent of this feature within its potential range in this SAC should be stable or increasing • The extent of the sub-communities that are represented within this feature should be stable or increasing. • The conservation status of the feature's typical species should be favourable. • All known, controllable factors, affecting the achievement of these conditions are under control (many factors may be unknown or beyond human control).	Pollution from debris, chemicals, silt and sediment during construction affecting water quality. Introduction or spread of invasive, non-native species.	For discussion of impact pathways for effects on water quality, please see above. For discussion of impact pathways for effects from invasive species, please see above.
Feature 2. Atlantic salmon	Feature 2: The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: • The parameters defined in the vision for the watercourse as defined above must be met	Pollution from chemical spills or sediment.	For discussion of impact pathways for effects on water quality, please see above.

	• The SAC feature populations will be stable or increasing over the long term. • The natural range of the features in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. • There will be no reduction in the area or quality of habitat for the feature populations in the SAC on a long-term basis • All known, controllable factors, affecting the achievement of these conditions are under control (many factors may be unknown or beyond human control).		
Feature 5. Brook lamprey	Feature 5: The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: • The parameters defined in the vision for the watercourse as defined above must be met. • The SAC feature populations will be stable or increasing over the long term. • The natural range of the features in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. • There will be no reduction in the area or quality of habitat for the	Pollution from chemical spills or sediment.	For discussion of impact pathways for effects on water quality, please see above.

	feature populations in the SAC on a long-term basis. • All factors affecting the achievement of these conditions are under control.		
Feature 7. Bullhead	Feature 7: The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied: • The parameters defined in the vision for the watercourse as defined above must be met. • The SAC feature populations will be stable or increasing over the long term. • The natural range of the features in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. • There will be no reduction in the area or quality of habitat for the feature populations in the SAC on a long-term basis. • All factors affecting the achievement of these conditions are under control.	Pollution from chemical spills or sediment.	For discussion of impact pathways for effects on water quality, please see above.
Feature 8. European otter	Feature 8: The vision for this feature is for it to be in a favourable conservation status, where all of the following conditions are satisfied:	Direct harm to feature during construction operations.	The disturbance caused by equipment and human activity mean that the feature of interest is highly unlikely to be present within the working area during construction operations. The compound will be fenced such that otters will not become trapped inside the compound and will not be prevented from moving safely

	• The parameters defined in the vision for the watercourse as defined above must be met. • The SAC otter population is stable or increasing over the long term, both within the SAC and within its catchment. • There will be no loss of otter breeding or resting sites other than by natural means (such as naturally occurring river processes) within the SAC or its catchment. • The number of potential resting sites within the SAC will not be a factor limiting that limits the otter population's size or extent. • There should be no reduction of fish biomass within the SAC or its tributaries except for that attributable to natural fluctuations. • There should be no loss of amphibian habitat likely to provide a source of prey for members of the SAC otter population. • The potential range of otters in the within the SAC or its catchment is neither being reduced nor is likely to be reduced for the foreseeable future. • All known or potential access or dispersal routes within the catchment for otters that might be considered part of the SAC	Direct harm to habitat during construction operations. Disturbance from noise, vibrations and human activity during construction operations. Pollution from chemical spills or sediment affecting water quality for sources of prey.	around the working area. Within Canal & River Trust activities, it is standard procedure to install a ramp where there is a risk of otters (and other animals) becoming trapped within excavations. Therefore, no effect is likely. Surveys of the project site have confirmed the River Dee to the south of the site provides optimal habitat to support otter, however the application site does not contain habitat suitable for this species. Otter may pass through or near to the site as part of a wider territory linking the river and canal. Integral to the project will be the use of fencing for health and safety purposes, and to prevent accidental damage to habitat from construction work outside of the working area. Given the small size of the project site and localised nature of the works, there will be no appreciable effect. Construction operations will be carried out during daylight hours, avoiding night working and therefore will not use continuous artificial lighting, although some temporary, timer-controlled security lighting may be required for the site compound. Given the absence of holts or resting places for the feature of interest within or near to the project site (due to existing levels of human activity along the paths), no significant disturbance effect is expected, since otters will still be able to access and move through high quality habitat along the river outside of the construction site. Given the small size of the project site and short term nature of the works, there will be no appreciable effect. For discussion of impact pathways for effects on water quality, please see above.

	population should be maintained such that their function is not impaired including the incorporation of measures or features required to avoid disturbance. • Off site habitats likely to function as 'stepping stones' within the catchment for members of the SAC otter population will be maintained for migration, dispersal, foraging and genetic exchange purposes. • All man-made structures within or likely to be used by otters from the SAC population must incorporate effective measures to facilitate the safe movement and dispersal of otters. • All known, controllable factors, affecting the achievement of these conditions are under control (many factors may be unknown or beyond human control)	Disturbance from an increase in human activity once construction complete.	The Education Centre will not encourage a significantly greater number of visitors to the area, although it will attract coordinated visits from users such as school groups, as well as those already visiting the World Heritage Site. A level of human activity is already experienced at this location due to the attraction of the Aqueduct and World Heritage Site. Although some new artificial lighting is proposed, this will be minimal required to allow safe access to the building, it will be motion-sensitive and timer controlled. Therefore, as no significant increase in visitor numbers or lighting is expected, there will be no appreciable effect.

There are no impact pathways identified as having a risk of a significant adverse effect on the conservation objectives for the FOI, therefore Stage 2: Appropriate Assessment is not required.