AtkinsRéalis

Water Framework Directive Assessment

Neath Port Talbot Council

April 2025

NE05_001-ATK-EWE-SWMWREC-RP-LW-000001

GRANDISON BROOK FLOOD ALLEVIATION SCHEME

Notice

This document and its contents have been prepared and are intended solely as information for Neath Port Talbot Council and use in relation to a Planning Application.

AtkinsRéalis UK Limited assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

This document has 37 pages including the cover.

Document history

Document title: Water Framework Directive Assessment

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
1.0	For information	AJ	FS	RM	RM	07/04/2025

Client signoff

Client	Neath Port Talbot Council
Project	GRANDISON BROOK FLOOD ALLEVIATION SCHEME
Job number	100104914
Client signature/date	

Contents

Tables

Figures

1. Introduction

1.1 Overview

This document presents a Water Framework Directive (WFD) compliance assessment for the Grandison Brook Flood Alleviation Scheme in Briton Ferry, Neath (henceforth referred to as the Proposed Scheme). The Proposed Scheme will comprise of several phases, with the aim to reduce risks associated with surface water and watercourse flooding within the Grandison Brook. The WFD compliance assessment will focus on the accumulation of works that flow above the tidal limit of Neath Estuary transitional waterbody.

The aims of the document are to provide:

- Background information on the Proposed Scheme and the WFD legislation.
- Screening of the activities that could impact the status of the overlapping and adjacent WFD water bodies.
- Scoping of any potential risks to these WFD water bodies.
- A compliance assessment to determine whether the Proposed Scheme will have a non-temporary effect on the status of one or more WFD 'quality elements' at the waterbody scale.

1.2 Legislative Background

The Water Framework Directive (WFD) came into force in 2000 (Directive 2000/60/EC)[1] and was transposed into UK law in 2003 (The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003). Domestic legislation was most recently updated in The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017.[2]

The WFD's principal aims are to protect and improve the water environment and promote the sustainable use of water. The headline environmental objectives of the WFD and its daughter directives are to:

- Prevent the deterioration of aquatic ecosystems.
- Protect, enhance and restore water bodies to Good Status, which is based on ecology (with its supporting hydromorphological and physico-chemical factors) and chemical factors for surface water, and water quantity and chemical status for groundwater.
- Progressively reduce pollution from priority substances and phase out emissions, discharges and losses of priority hazardous substances.

1.2.1 Surface Water Bodies

The WFD sets a default objective for all rivers, lakes, estuaries (also called 'transitional' water bodies), and coastal water bodies (collectively termed 'surface water bodies'), as well as groundwater water bodies, to achieve Good Status by 2027 at the latest. For natural surface water bodies, Good Status

[1] Directive 2000/60/EC Of The European Parliament And Of The Council Of 23 October 2000
[2] The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017

is a function of both Good Chemical Status (GCS) and Good Ecological Status (GES). The River Basin Management Plans (RBMPs), published every six years by Natural Resources Wales (NRW) through engagement with a broad spectrum of organisations and individuals, outline the pressures faced in the Welsh water environment and the actions required to enable natural water bodies to achieve these objectives. Artificial and Heavily Modified Water Bodies (A/HMWBs) are considered unable to attain GES due to the modifications that are necessary to maintain their function for society (often referred to as their 'human use'), as they provide important ongoing socio-economic benefits. They are, however, required to achieve Good Ecological Potential (GEP) which is, in part, achieved through the implementation of a series of Mitigation Measures outlined in the RBMP. A/HMWBs still need to attain GCS which, along with GEP, will collectively result in Good Status in these water bodies.

New activities and schemes that affect the water environment may adversely impact biological, hydromorphological, physico-chemical and/or chemical quality elements (WFD quality elements), and this could consequently result in a deterioration in the existing waterbody status. New activities may also preclude the implementation or effectiveness of the proposed improvement measures or Mitigation Measures, leading to the waterbody failing to meet its WFD objectives for GES/GEP. Under the WFD, activities and schemes must not cause deterioration in waterbody status or prevent a waterbody from meeting GES/GEP by precluding the delivery of any required improvement measures.

The overall ecological status of a waterbody is primarily based on consideration of its biological quality elements (phytoplankton, diatoms, macrophytes, phytobenthos, benthic invertebrates and fish) and is determined by the lowest scoring of these elements. These biological elements are 'supported' by the physico-chemical (water quality) and hydromorphological (hydrological or tidal regime, river continuity and morphological conditions (i.e. habitat)) quality elements. Deterioration of any quality element, including 'supporting elements' would result in non-compliance with the WFD, even where this does not result in a change in the overall waterbody classification. To achieve GCS, a waterbody must pass a separate chemical status assessment, relating to pass/fail checks on the concentrations of priority / dangerous substances.

1.2.2 Groundwater Bodies

For groundwater bodies, Good Status has a quantitative and a chemical component. Both are measured on a scale of good, moderate or poor, and a confidence rating is assigned to the status assessment of high or low. Together, these criteria provide a single final classification of either good or poor status. There is also a trend objective set for groundwater water bodies where environmentally significant and sustained rising trends in pollutant concentrations need to be identified along with a definition of the starting point (percentage of level or concentration) for trend reversal. Furthermore, the daughter directive of the WFD specifically concerning groundwater (the Groundwater Directive) also requires the prevention of any input of priority substances and limiting (or control) of the input of all other substances to groundwater to prevent the deterioration of status.

1.3 Background to WFD

A summary of key WFD concepts is presented in Figure 1-1. This includes the definition of what a waterbody is in relation to this assessment. The WFD compliance assessment follows the 'Clearing

the Waters for All' guidance which has been developed specifically for estuarine and coastal waters.[3] The guidance suggests that a WFD assessment can be comprised of up to three stages:

1. Screening assessment - to determine what activities associated with the Proposed Scheme require further consideration and what activities can be screened out at this stage of the process.
2. Scoping assessment - to identify risks associated with the Proposed Scheme activities on relevant water bodies and their quality elements.
3. Impact assessment - a detailed impact assessment of the water bodies and their quality elements that are likely to be affected by the Proposed Scheme. Any potential for non-compliance would be highlighted at this stage along with a consideration of any necessary mitigation measures and enhancements that are considered necessary for the Proposed Scheme to comply with the WFD objectives.

All stages may not need to be completed, but this is dependent on the findings at each stage.

[3] Water Framework Directive assessment: estuarine and coastal waters

WFD Objectives

The WFD is a European Directive, which sets out a strategic planning process for the purposes of managing, protecting and improving the water environment. This directive was transposed into English and Welsh law in the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003 and was updated in 2017. The main objectives of the original WFD legislation are to:

- Prevent deterioration in the status of aquatic ecosystems, protect them and improve the ecological condition of waters;
- Aim to achieve at least 'Good Status' for all waters by 2027 where fully justified within an extended deadline under Article 4.4;
- Promote sustainable use of water;
- Conserve habitats and species that depend directly on water;
- Progressively reduce or phase out the release of individual pollutants or groups of pollutants that present a significant threat to the aquatic environment;
- Progressively reduce the pollution of groundwater and prevent or limit the entry of pollutants; and
- Help reduce the effects of floods and droughts.

Natural Resources Wales is the Government's 'competent authority' for implementing the WFD in Wales; it monitors, advises and manages many aspects of the water environment though regulating discharges, abstractions and processing environmental permits and licences. NRW is committed to implementing environmental improvements that would result in the achievement of the objectives of the WFD.

WFD Classification

The WFD classification for a defined waterbody is produced by the assessment of a wide variety of different 'elements' which include:

- '*Biological elements'* such as macroalgae;
- '*Hydromorphology supporting elements*' that include hydrological regime and morphology; and
- '*Priority substances', 'Other Pollutants' and 'Priority hazardous substances'* that assess a wide range of elements to determine the Chemical Status of the waterbody.

The assessment given for each element is also accompanied by a measure of certainty in the result. The status classification is published in the RBMP and provides a baseline condition against which compliance and future improvements can be measured.

WFD Compliance

There are three key objectives against which the impacts of proposed works on a waterbody need to be assessed to determine compliance with the overarching objectives of the WFD:

- Test 1: The proposed scheme will not cause a deterioration in any element of waterbody classification.
- Test 2: The proposed scheme will not prevent the WFD status objectives from being reached within the waterbody or other downstream water bodies.

These obligations must be met in order to ensure compliance with the WFD. If it is considered that the proposed scheme is likely to cause deterioration in waterbody status or prevent a waterbody from meeting its ecological objectives as a result of new physical modification, then an assessment would be required against the conditions listed in Article 4.7 of the WFD. Article 4.7 can be invoked if; 'new modifications' relating to physical modification or alterations in groundwater levels are of overriding public interest and/or the environmental and social benefits of achieving the WFD objectives are outweighed by the benefits of the new modifications to human health, safety and sustainable development; there are no significantly better environmental options that are technically feasible or not disproportionately costly; and, all practicable steps for mitigation have been taken.

A/HMWB

These water bodies cannot achieve GES due to substantial modification, e.g. for flood risk management. Instead, they are required to reach GEP. The presence or absence of a set list of Mitigation Measures is used as a proxy for biological indicators for those biological elements that are considered to be 'sensitive' to the human use in the waterbody that has driven the HMWB designation. All non-sensitive biological elements are required to meet the same criteria required in order to attain GES. Assuming that this is the case, and if all relevant Mitigation Measures and improvement actions have been implemented, the waterbody would be assigned a preliminary tag of GEP (or better). 'Moderate or worse' is used if some mitigation measures are yet to be implemented. HMWBs may therefore have an element rated 'poor' but not be considered 'poor' in overall status. HMWBs are still required to attain good overall status, through a combination of GEP and GCS.

Hydromorphology

Hydromorphology is a term used in the WFD to describe the processes operating within, and the physical form of, a waterbody. The term encompasses both hydrological and geomorphological characteristics that, in combination, help support a healthy ecology. Hydromorphology is a supporting condition unless a waterbody is classified as being of 'high' ecological status. In these cases, hydromorphological elements contribute towards status classification.

Figure 1-1 - Background to the WFD

2. Scheme Description

2.1 Scheme Location

The Proposed Scheme is concerned with the Grandison Brook Flood Alleviation Scheme which involves a series of works aimed at reducing flood risks in Briton Ferry, specifically along the Grandison brook.

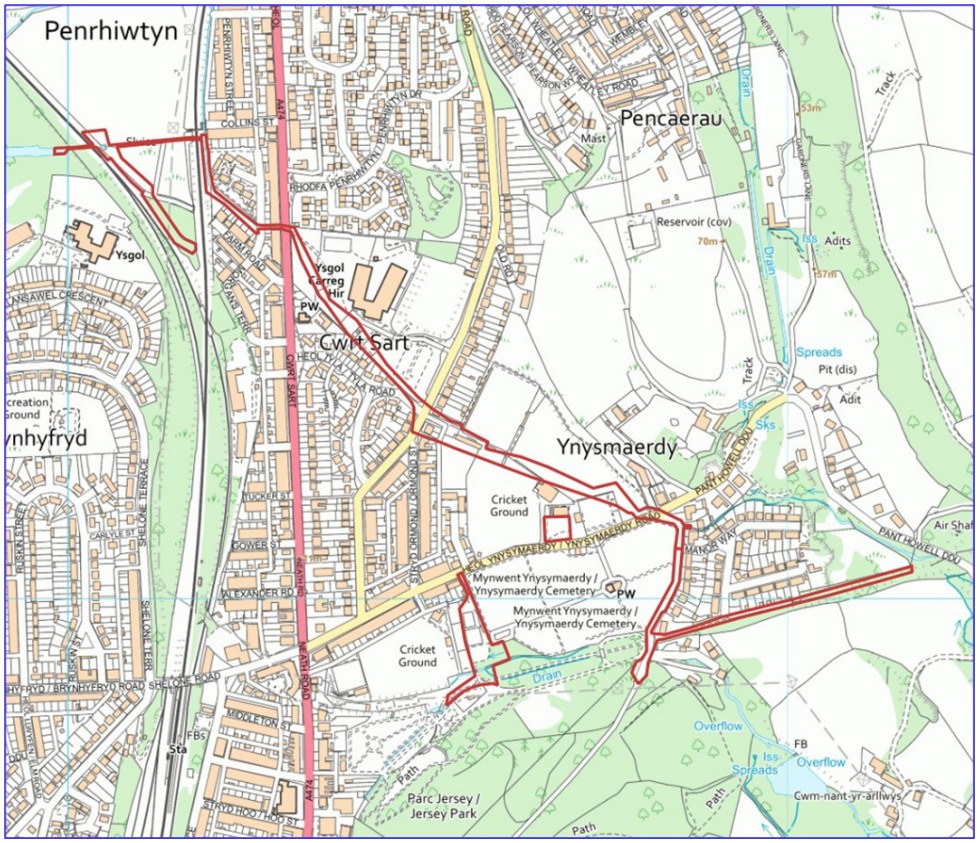


Figure 2-1 - Site Location plan and proposed Red Line Boundary

Briton Ferry lies approximately 8 km northeast of Swansea and 3 km south of Neath. The Proposed Scheme is set predominantly within the residential zones of Briton Ferry within the Grandison Brook, located outside of the tidal extent of Neath Estuary. The Proposed Scheme encompasses key infrastructure, community facilities, and undeveloped areas.

The site includes a range of notable features, such as a large cemetery on Ynysymaerdy Road, Carreg Hir School, and multiple recreational facilities. These facilities comprise a public park, a bowling green, sports clubs for rugby and cricket, football pitches, and allotments. Additionally, the area contains undeveloped scrubland that was previously used for industrial purposes. Critical transport infrastructure also forms part of the site, including the main A474 road and sections of railway, such as the South Wales main line.

Beyond the Proposed Scheme's scope to the south lies a park and woodland. Briton Ferry is positioned to the east of the River Neath, which flows along a northeast to southwest axis through the

Neath Valley. The upper sections of the valley are characterised by steep, wooded slopes that rise above 100 metres Above Ordnance Datum (AOD) on both the north and south sides. The town is centred around the A474 road (Neath Road and Pant Yr Heol), a key district thoroughfare, while densely populated housing dominates the western side of this road. The Proposed Scheme is situated at an average elevation of approximately 7 metres AOD. However, the terrain within the site varies significantly, with the south-eastern boundary of the Grandison Brook culvert reaching 42 metres AOD. More broadly, the topography of the area surrounding Briton Ferry displays considerable variation, with elevations generally declining towards the west.

2.2 Scheme Details

The proposed works will involve installation of a new culvert in the A474 highway and through green/open spaces, plus the enclosing of the current open channel within a culvert in some sections. A full overall scheme layout is presented in Appendix A. The Proposed Scheme is outside of the tidal limit, but the new culvert will rejoin the existing watercourses further downstream before it discharges into the River Neath. The Proposed Scheme includes the following key elements.

Culvert Installations

- A new culvert will be installed along the A474 highway and through green/open spaces, replacing some sections of the existing open channel. The new culvert will re-join the existing watercourse downstream before discharging into the River Neath.
- Localised raising of the existing bank along Rhodfa Clarke Walk by 0.5m to help control flood waters.
- Excavation and replacement of existing culverts, particularly along Ynysymaerdy Road, where a new 1200mm diameter culvert will be installed in open trench across the playing fields and through allotments behind Llansawel AFC grounds to Old Road.

Jersey Park

- A buried surface water storage tank will be constructed beneath the play area, which will include a new inlet structure, pipe inlet, and a new section of watercourse with a pedestrian footbridge.
- Refurbishment of the existing inlet structure at Ynysymaerdy Road, replacing the galvanised steel trash and security screen with a new screen.
- Replacement of the parapet and handrail of the existing footbridge at Jersey Park, designed to reflect the early 20th-century architectural style prevalent throughout the park.

Culvert Work

- The culvert will change form at Pant Yr Heol from a 1200mm diameter pipe culvert to twin culverts (1250 x 750mm). It will be installed across the road and through a gap between houses, continuing towards the railway crossing.
- A new 1750 x 1000mm box culvert will be constructed east of the mainline railway, connecting to the existing brick arch culvert near Collins Street, with the land raised slightly along the route of the culverts. Gabion baskets will be used to support the earthworks.

Flood Defence

A proposed flood defence bund, with a crest level at 6.5m AOD, will be built to protect the railway line from increased flood levels during extreme storms. A small section of concrete retaining wall will be constructed around an existing culvert parapet wall.

Landscaping and Reinstatement

Reinstatement of disturbed areas along the construction route, particularly where the culverts cross highways and playing fields. Some trees will be removed in the school grounds and near the cricket pitch, with mitigation planting planned off the line of the new culvert.

Additional works

- Existing rail culvert under the district rail line to be cleared of sediment.
- Drainage channel clearing works between Mainline passenger railway and district line passenger railway.

3. Baseline

This section details the results of a desk study which was undertaken to:

- Identify WFD water bodies within and downstream of the Proposed Scheme.
- Review ecological records, hydrological data and other relevant project data sets (e.g., site photographs) to determine geomorphological and ecological baselines for the identified WFD water bodies.
- Review current WFD status for the identified WFD water bodies.

The section also details the WFD screening which was undertaken to determine those water bodies with the potential to be impacted by the Proposed Scheme which are to be taken forward for assessment.

3.1 Desk Study

A full scheme layout with detailed drawings can be found in Appendix A. Other data sources include:

- Water Watch Wales[4]
- Magic Map[5]
- BGS GeoIndex[6]
- Environment Agency Ecology and Fish Data Explorer[7]

The location of the Proposed Scheme is within Grandison Brook, outside of the tidal limit and upstream of the Neath Estuary Transitional waterbody (GB541005800700).

3.1.1 Geomorphology and Hydrodynamics

The Grandison Brook is located upstream of the tidal limit and flows mainly through residential areas before flowing into the River Neath. The River Neath is tidal and has semi-diurnal tides, meaning two high water and two low water per lunar day. The river flows into Swansea Bay within the Bristol Channel and provides water to two canals, the Neath Canal and Tennant Canal.

3.1.2 Aquatic Ecology

3.1.2.1 Biology- Fish

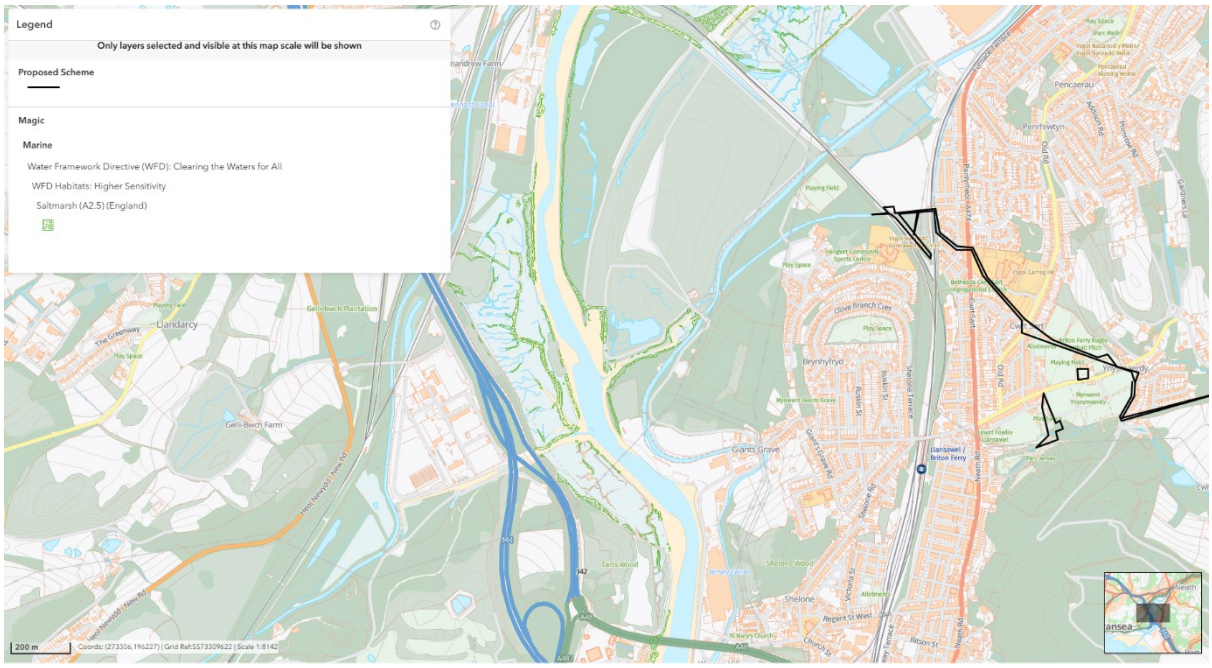
There are no NRW marine fish survey records in the River Neath which can be found on DataMap Wales.[8] However, the National Biodiversity Network Atlas Wales[9] holds records of fish ecology in

[4] Water Watch Wales
[5] MAGiC Map
[6] BGS GeoIndex Onshore
[7] Ecology & Fish Data Explorer
[8] DataMap Wales
[9] https://wales.nbnatlas.org/

Wales. The previous Ecological Impact Assessment (ECiA)[10] for Grandison Brook stated that the substrate of the culverts within the site do not provide opportunities for fish species. However, it is possible that the culverts are used by migratory Eels, as the brook is hydrologically connected to the River Neath.

3.1.2.2 Biology- Habitat

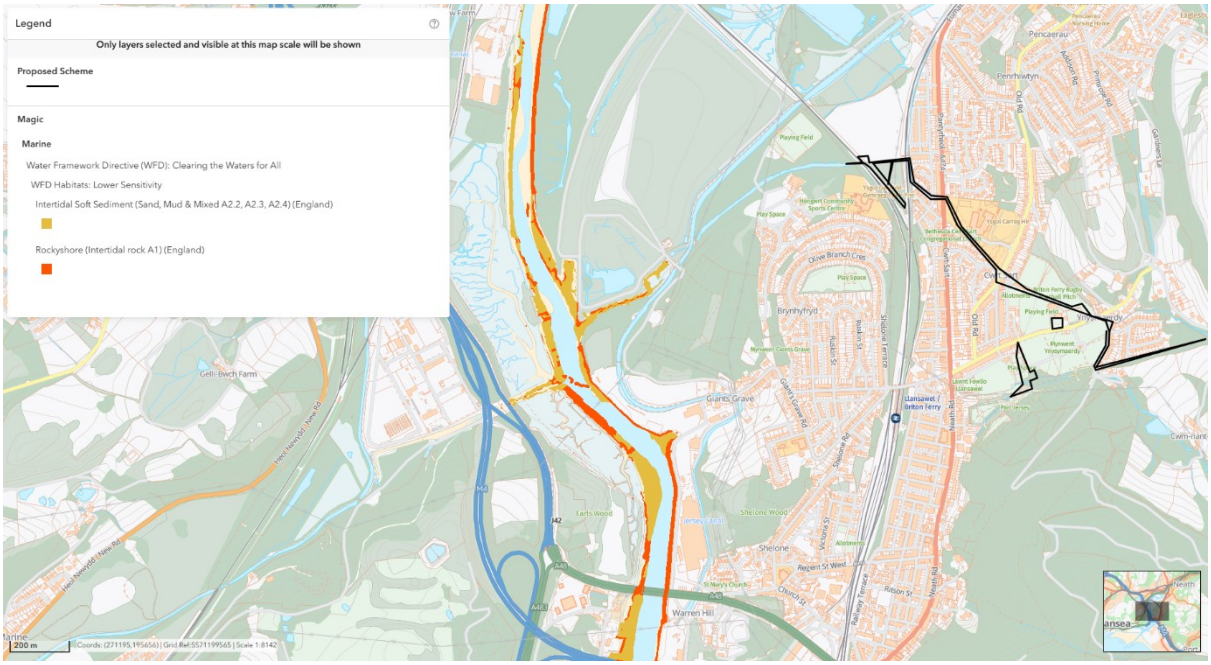
On the mouth of the River Neath, High sensitivity habitat 'Saltmarsh', is present along most of the bank and lower sensitivity habitat 'Intertidal Substrate (Mud, Mud/Shingle, Sand, and Rock)' extends along the mouth of the River Neath. The full suite of lower and higher sensitivity habitats adjacent and in close proximity to the Proposed Scheme is presented in Figure 3.1 and 3.2 below.



Source: *This is from MAGIC5 map

Figure 3-1 - WFD Higher Sensitivity Habitats

[10] Grandison Brook Ecological Impact Assessment. TACP, Available at: 60940B_Grandison brook_ECIA_2022_S0_P1.pdf [Accessed 25th March 2025].



Source: *This is from MAGIC[5] map.

Figure 3-2 - WFD Lower Sensitivity Habitats

3.1.3 Geology

According to the British Geological Survey (BGS) GeoIndex Onshore, the bedrock geology of Briton Ferry is underlain by various formations. However, the Proposed Scheme is underlain by Sandstone, Mudstone and Siltstone.

3.1.4 Environmental designations

The Proposed Scheme is not within any European Designated Sites. The nearest site is Crymlyn Burrows Site of Special Scientific Interest (SSSI) located at the mouth of the River Neath 1.5km south west of the site and is designated for its sand dune and saltmarsh habitat.

4. Screening

4.1 Screening of WFD Water Bodies

This screening exercise was completed to identify waterbodies that are relevant to the Grandison Brook Flood Alleviation Scheme. A study boundary also known as zone of influence was set for the screening, which was the Scheme area, plus (for surface waters) one waterbody upstream and downstream of the Proposed Scheme. For groundwater, only immediately underlying groundwater bodies are included in the screening, as individual groundwater bodies are designated as "hydraulically coherent" systems that do not have interactions with other groundwater bodies.

Briton Ferry is in the Western Wales River Basin District (RBD) and the management strategies for the District are stated in the Western Wales RBMP. The first RBMP was published in 2009 and set out the management plan for the first six years 2009-2015. The plan was updated in 2015 to cover the second period 2015-2021 and will be updated again in 2027, and so on. The purpose of the RBMP is to protect and improve the water environment for the wider benefits to people and wildlife – to achieve 'Good' status. The majority of baseline data in the study area was obtained from NRW's Water Watch Wales[4].

4.1.1 Surface Water Bodies

The following surface water bodies are classified as in the zone of influence:

- Neath Estuary Transitional waterbody (GB541005800700) – 700m downstream of the Proposed Scheme.
- Baglan brook – headwaters to confluence with River Neath waterbody (GB10058026350) – approximately 1km south from the Proposed Scheme.
- Clydach- headwaters to confluence with River Neath waterbody (GB110058026390) – approximately 1.6km upstream of the Proposed Scheme.

Clydach headwaters to confluence with River Neath is outside of the Site boundary and footprint of the Proposed Scheme. Due to its location and distance from the Proposed Scheme, it has been screened out from further assessment.

On Water Watch Wales, the 'River Waterbodies' layer which is based off the Detailed River Network (DRN) suggests part of the Proposed Scheme is within the Baglan brook – headwaters to confluence with River Neath River waterbody (GB110058026350). However, through detailed investigations of the DRN and associated drainage network in the Briton Ferry area, Neath Port Talbot Council confirmed that the Proposed Scheme is not within the Baglan Brook waterbody, and the watercourse has been incorrectly connected through OS background mapping as shown in Figure 4.1 below. Therefore, due to its location, distance and lack of hydrological connectivity, the waterbody has been screened out from further assessment.

The rest of the Proposed Scheme lies within or adjacent to the Grandison Brook which flows into the tidal Neath Estuary Transitional waterbody (GB541005800700). Therefore, the waterbody has been screened in for further assessment.

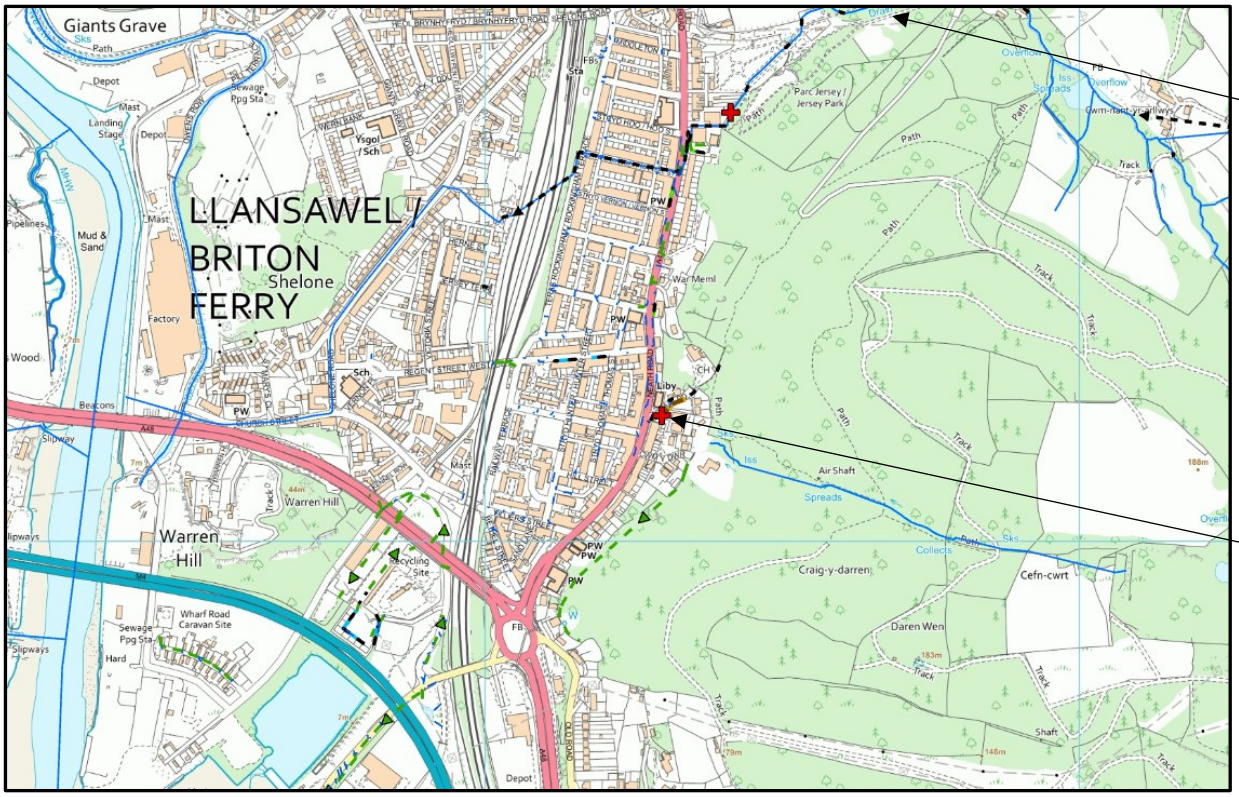


Figure 4-1 - Evidence of Baglan Brook watercourse

4.1.2 Groundwater Bodies

The groundwater body underlying Briton Ferry is the Swansea Carboniferous Coal Measures (ID: GB41002G20100). It covers an area of 758.38km^2. Under the Western Wales RBD, this groundwater body forms part of a Drinking Water Protected Area (DWPA). Swansea Carboniferous Coal Measures groundwater body has been assessed as 'Poor'. The RBMP determined some of the following sources that can impact on groundwater bodies not being able to achieve 'Good' status as:

- Unregulated discharges e.g. from abandoned mines, leaking subsurface sewers; and
- Pollution from rural areas e.g. excessive use of nutrients such as nitrates.

All works related to the Proposed Scheme will be undertaken at a depth less than 4m deep that is not likely to impact the groundwater body. Therefore, the Swansea Carboniferous Coal Measures has been screened out from further assessment. A screening summary for waterbodies is presented in Table 4.1.

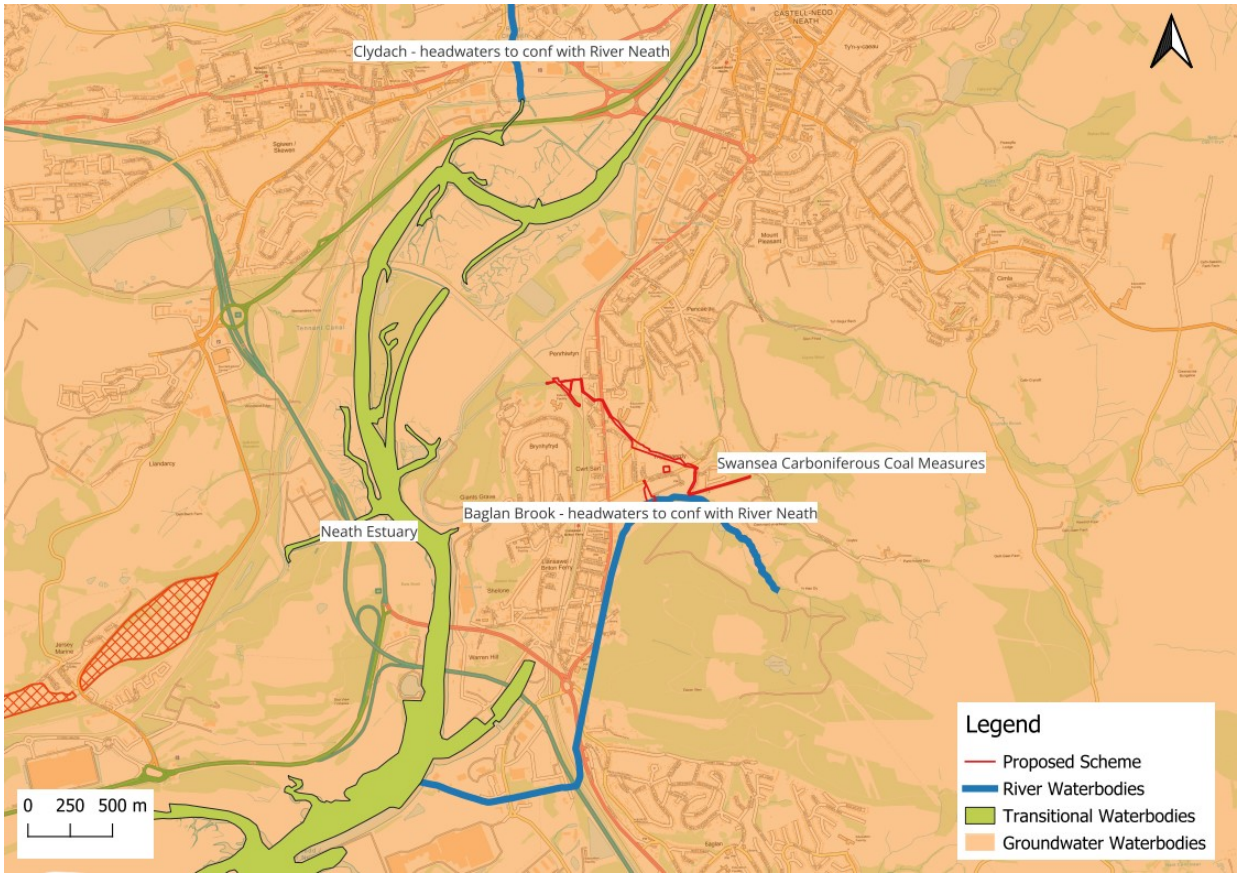


Figure 4-2 - Location of the site and WFD waterbodies in the vicinity

Table 4-1 - Screening outcome for the waterbodies surrounding the works

Waterbody name	Screen in or out	Explanation for screening outcome
Clydach headwaters to confluence with River Neath waterbody (GB110058026390)	Out	The Proposed Scheme is approximately 1.6km upstream and is outside of the Site boundary and footprint. Due to its location and distance from the Proposed Scheme, it has been **screened out from further assessment.**
Baglan Brook - headwaters to confluence with River Neath waterbody (GB110058026350)	Out	Although the map above from Water Watch Wales data shows the Proposed Scheme is within the waterbody, evidence from detailed investigations of the DRN and associated drainage network in the Briton Ferry area by Neath Port Talbot Council show the waterbodies are not connected (Figure 4.1) and not within or hydrologically linked to this waterbody. Therefore, this waterbody has been **screened out from any further assessment.**
Neath Estuary transitional waterbody (GB541005800700)	In	The Proposed Scheme is hydrologically linked to Neath Estuary with the closest point being approximately 700m from the WFD waterbody, and therefore, it will be **taken forward for scoping exercise.**
Swansea Carboniferous Coal Measures groundwater body (GB41002G201000)	Out	Although the surface-groundwater pathways in the area are unknown. All works will be undertaken at a depth that is unlikely to impact the groundwater body, this waterbody is therefore **screened out from any further assessment.**

5. Scoping assessment

5.1 Waterbody Baseline Data

5.1.1 Neath Estuary Transitional Waterbody

Table 5-1 - WFD Classification Information: Neath Estuary

Waterbody ID: GB541005800700
Waterbody Name: Neath Estuary
Waterbody Type: Transitional
Overall Status: Moderate
Ecological Status: Moderate
Chemical States: High

Biological elements	Physiochemical quality elements	Hydromorphological supporting elements.
Fish: Not Assessed	Temperature: Not Assessed	Hydrological Regime: Not high
Invertebrates: High	Ph: Not Assessed	Morphology: Not High
Macroalgae: High	Dissolved Oxygen: High	HMWB: Yes
Phytoplankton: Good	Dissolved Inorganic: Good	

The WFD impact assessment of the Neath Estuary WFD transitional waterbody follows the UK Government guidance 'Clearing the Waters for All'.[11]

The scoping exercise is facilitated by a number of questions that are required to be answered in order to determine if the activity is compliant or whether an impact assessment is required. This is undertaken for each of the WFD receptors for the waterbody. These WFD receptors are defined in the guidance as the following:

- Hydromorphology
- Biology – habitats
- Biology – fish
- Water quality
- Protected areas

Besides these receptors, which are based on the waterbody's quality elements, and in line with the Government guidance, the scoping exercise also considered the potential risk of introducing and / or spreading:

- Invasive non-native species (INNS)

[11] https://www.gov.uk/guidance/water-framework-directive-assessment-estuarine-and-coastal-waters

5.2 Scoping assessment

5.2.1 Neath Estuary Transitional Waterbody

The potential risks to the Neath Estuary WFD transitional waterbody identified in the scoping stage are summarised in Table 5-2.

Table 5-2 - Possible risks to Neath Estuary WFD receptors

WFD receptors	Potential risk to receptor	Issues for impact assessment
Hydromorphology	No	The Proposed Scheme is taking place outside of this waterbody. The overall waterbody status is not classified as high. Although the waterbody is designated as a HMWB the designation is for 'Navigation, ports and harbours use'. There is no link to the proposed activities and therefore no impacts to hydromorphology of the waterbody is anticipated as a result of the works.
Biology: habitats	No	No sensitive habitats or habitats of importance are located near the works. The nearest sensitive habitat is located at the mouth of the River Neath located over 2km away.
Biology: fish	Yes	The Proposed Scheme is not located within the waterbody and is 700m away. However, in channel ditch works located at the closest point to Neath Estuary (Appendix 3) could cause impacts to migratory eels through noise, vibration or increases in sediment due to hydrological linkage to the waterbody. The habitat outside this location is concrete pipes and culverts in residential areas and not suitable for migratory eels.
Water quality	Yes	The Proposed Scheme could impact water quality through re-suspended sediment, increased turbidity during excavation works, as well as accidental pollution which could flow into the waterbody.
Protected areas	No	The closest WFD protected area is Swansea Bay Shellfish waters located approximately 4km away.
Invasive non-native species	Yes	Possible risk of spread of INNS from equipment and tools used by the crew.

6. Impact Assessment

6.1 Neath Estuary Transitional Waterbody

Table 6.1 below shows the impact of the scheme on the WFD receptors identified as potentially at risk in the scoping stage for the Neath Estuary transitional waterbody.

Table 6-1 - Level of impact on the WFD receptors for the Neath Estuary.

WFD Receptor	Level of Impact
Water quality Questions: *Consider if the footprint of your activity:* *- Could affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)* *- Is in a waterbody with a phytoplankton status of moderate, poor or bad* *- Is in a waterbody with a history of harmful algae*	Although the Proposed Scheme is above the tidal limit and outside of the Neath Estuary waterbody, it has the potential to impact surface water quality through sediment redistribution during in channel works and through the accidental release of contaminants which can flow downstream into the waterbody. Any potential disturbance during in channel works and sediment disturbance are likely to be temporary in nature and be dissipated by a tidal cycle. A Work Method Statement will be submitted to the Local Authority prior to the works commencing, which will include a number of measures to mitigate any impacts (Please see below). The impact on water quality through pollution can be mitigated through a Work Method Statement along with a Construction Environmental Management Plan (CEMP) which will be submitted to the Local Authority. This plan will incorporate standard pollution prevention measures such as: • Minimising the potential of runoff by minimising the area over which materials are stockpiled. • Covering/sealing exposed soil/spoil to reduce silt runoff. • Preventing spoil from being stockpiled for prolonged periods. • Controlling carefully the use of cement and concrete. • Provision of measures to control potentially contaminated surface water runoff from construction activities.

	• Provision for the proper storage and handling of all on-site chemicals, fuel and oil, for example away from watercourses and drains with adequate hardstanding and bunding to contain accidental spillage/leakages entering controlled waters. • Ensuring that appropriate consents/licences are obtained in accordance with relevant legislation. The scheme will also follow Guidance for Pollution Prevention 5 works and maintenance in or near water to reduce any impact of a pollution event on water quality and this will be included in the CEMP. With the adoption of the mitigation measures listed above, the Scheme is unlikely to have any significant effects on water quality.
Biology - fish	Part of the Proposed Scheme has in channel works located at the closest point to Neath Estuary (Appendix C) which could cause impacts to migratory eels through noise, vibration and increased turbidity from sediment suspension due to hydrological linkage and functionally linked habitat. The in-channel works at this location should be restricted to outside the Natural Resources Wales embargo period of October 15th to May 15th. Habitat outside of this location is concrete pipes and culverts located in residential areas which are not suitable habitat for migratory fish. With the adoption of the mitigation measures listed above the Proposed Scheme is unlikely to have any significant effects on fish behaviour and migration.
Invasive non-native species *Questions:* *Consider if your activity could:* *Introduce or spread INNS*	The construction of the Proposed Scheme and in channel works may result in the introduction of INNS which could spread downstream to the Neath Estuary waterbody, affecting local biodiversity. This can be mitigated through an Invasive Non-Native Species Management Plan, which would cover the clearance works, construction and post-construction period and methods to control the spread of INNS via the water course.

	With the adoption of the mitigation measures listed above, the Proposed Scheme is unlikely to have any signification effect linked to INNS.

In summary, embedded mitigation will be implemented and adhered to during construction of the Proposed Scheme and with this, there is no anticipated impact of the Proposed Scheme on the Neath Estuary transitional waterbody.

7. Western Wales River Basin Programme Measures

Within the Western Wales RBMP[12] the following programme measures have been identified:

- Welsh Governments Water Strategy for Wales
- NRW's WFD Regulations 2017 driven programme
- Catchment scale improvements, River Restoration and Sustainable Fisheries opportunities
- Protected Areas including the SAC Rivers Project
- Flood and coastal risk management
- Water Industry Investment Programme including the storm overflow roadmap
- Water resources sustainability measures
- Sustainable land management - agriculture
- Sustainable land management - woodland and forestry
- Welsh Governments Capital fund
- Opportunity Catchments

The Proposed Scheme will not preclude the implementation or effectiveness of any of the proposed programme measures for this area. The Proposed Scheme will help towards the flood and coastal risk management measures by managing the risk of flooding to the people and communities in and around Briton Ferry and increasing community resilience.

[12] Western Wales River Basin Management Plan 2021-2027 Summary. Available from: Western Wales RBMP 2021_2027 Summary [Accessed 7th April 2025].

8. Good Working Methods and Mitigation Measures.

The appointed contractor will be asked to prepare a Work Method Statement along with a Construction Environmental Management Plan (CEMP), which will be submitted to the Local Authority, that will incorporate standard pollution prevention measures such as:

- Minimising the potential of runoff by minimising the area over which materials are stockpiled.
- Covering/sealing exposed soil/spoil to reduce silt runoff.
- Preventing spoil from being stockpiled for prolonged periods.
- Controlling carefully the use of cement and concrete.
- Provision of measures to control potentially contaminated surface water runoff from construction activities.
- Provision for the proper storage and handling of all on-site chemicals, fuel and oil, for example away from watercourses and drains with adequate hardstanding and bunding to contain accidental spillage/leakages entering controlled waters.
- Ensuring that appropriate consents/licences are obtained in accordance with relevant legislation.
- Information on Guidance for Pollution Prevention 5 Works and maintenance in or near water.

The appointed contractor will also be asked to prepare an Invasive Non-Native Species Management Plan to cover clearance works, construction and post construction periods. The management plan will include appropriate methodologies for vegetation clearance, soil excavation and disposal, and ongoing management during and post construction. The methodologies to be applied would depend on the work required and the level of disturbance associated with these. There are notable stands of INNS within the site, most notably surrounding the railway and along the railway line itself. A deliberate and specific method statement is recommended to be undertaken by contractors qualified to do so in accordance with Welsh government advice. Wider site works should adhere to specific biosecurity measures to reduce the potential for spread of these species. This would include (but not be limited to); the use of specialist contractors, wheel wash / brush down areas, area specific working, and methods to control the spread via the watercourses. It is recommended that the county ecologist is consulted prior to works with regards to these species.

Any in water works located within Appendix C at the closest point to the Estuary during the time of the migratory fish embargo (15th October – 15th May) will be restricted unless agreed with the county ecologist. This is to avoid impacting Eels potentially using this section of the watercourse during migration periods.

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

- Use of directional and low-level lighting to reduce additional light spill into retained and adjacent habitats.

- Careful consideration of working methodologies to minimise noise and vibration impacts, particularly during more sensitive period such as breeding, hibernation, and migration seasons.

- Closure or covering of any excavations overnight to prevent trapping or injuring animals. Where this is not possible, excavations should be fenced off and a means of escape provided.

- 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.

- Construction working hours will be limited to between 7:30 and 18.30 Monday to Friday, and 08:00 and 13:00 on Saturdays. No construction activity will be undertaken on Sundays or Public Holidays.

- If any unknown contamination is discovered during the works, the contractor shall ensure works stop immediately, isolate the affected area or segregate the affected material (if already excavated) if it is safe to do so. Following which a contaminated land specialist will be consulted.

9. Conclusion

This assessment has concluded that the Grandison Brook Flood Alleviation Scheme and associated works will not result in a permanent impact on any WFD quality elements at a waterbody scale. As such, the Proposed Scheme is not considered to have the potential to cause a deterioration to the WFD quality elements or the overall WFD status of the Neath Estuary transitional waterbody.

There may be some localised temporary impacts during construction, however these will be managed to an acceptable (WFD compliant) level by following the mitigation outlined in the Impact Assessment (Section 6) and Good Working Methods and Mitigation Measures (Section 7) of this report.

There is no other scheme nor activity taking place, to the best of our current knowledge, that would result in a cumulative impact or act in-combination with this scheme.

This assessment concludes that the Proposed Scheme is WFD compliant. As a result, WFD compliance does not present any risk in respect to a planning application.

APPENDICES

Appendix A. Overview Drawings of the Proposed Scheme

Low

100
Millimetres
0 10
DO NOT SCALE

EXISTING RAIL CULVERT TO BE CLEARED OF SEDIMENT
NEW FLOOD DEFENCE BUND
RAIL CULVERT GROUTING AND SEALING WORKS
COLLINS ST.
SW MH 21
PENRHIWTIN
DRAINAGE CHANNEL CLEARING WORKS
EXISTING WATERCOURSE TO RECEIVE OVERLAND FLOWS FROM ADJACENT PROPERTIES TO MAINTAIN BIODVERSITY VALUE
PANT YR HEOL
NEW FLOOD DEFENCE RC WALL BUILT OVER EXISTING CULVERT
PROPOSED 1750 x 1000 PRECAST BOX CULVERT WITH EARTHWORK RAISING OVER CULVERT
BROOK CT.
MORGAN'S TERRACE
PENRHIWTYN DR.
DISTRICT RAIL LINE
SW MH 20
SECTION OF OPEN CHANNEL TO BE INFILLED AND NEW 1250 x 750 TWIN CELL CULVERTS INSTALLED
HARVARD JONES CL.
YSGOL GYNRADD GYMRAEG TYLE'R YNN
PROPOSED 1750 x 1000 PRECAST BOX CULVERT WITH EARTHWORK RAISING OVER CULVERT
EXMH22
SW MH 18
PROPOSED 1750 x 750 PRECAST BOX CULVERT
SW MH 17
FARM RD.
SW MH 19
ROUTE THROUGH LANE AND ROUTE OF EXISTING WATERCOURSE
SW MH 16B
MAINLINE PASSENGER RAILWAY
BOTH NEW 1750 x 750 BOX CULVERT AND EXISTING 1000 DIA. CULVERTS TO JOIN AT NEW MH18
SW MH 16A
SW MH 16
PROPOSED 1200 DIA. CULVERT
EXMH21A
EXISTING 1000 DIA. CULVERT TO REMAIN IN USE
YSGOL CARREG HIR
OLD RD.
SW MH 15
EXMH21
EXMH20
SW MH 14
STATION RD.
ENTIRE LENGTH OF EXISTING CULVERT BETWEEN MH05 AND MH19 TO BE CLEARED OF SILT AND DEBRIS
TYLA RD.
EXISTING 900 DIA. CULVERT TO REMAIN IN USE
EXMH19
SW MH 13
EXMH18
SW MH 12
SW MH11
SW MH10
BRITON FERRY / LLANSAWEL AFC
EXISTING 1200 x 600 BOX CULVERT TO REMAIN IN USE
SW MH08D
EXMH17
DARREN RD.
SW MH 09
EXMH15
EXMH14
SHORT ST.
SW MH08
SW MH08B
PROPOSED 1200 DIA. CULVERT
SW MH08A
SW MH08C
EXMH13
EXISTING 750 DIA. CULVERT TO REMAIN IN USE
EXMH12
SW MH 07
SW MH 06
NEW CONNECTION AT MH05 TO SPLIT FLOW
EXMH11
BRITON FERRY RUGBY & CRICKET SOCIAL CLUB
PANT HOWELL DDU
EXMH10
SW MH 04
SW MH 03
SW MH 02
SW MH 01
EXMH09
SW MH 05
NEW TRASH SCREEN AND PLATFORM TO REPLACE EXISTING AT INLET STRUCTURE CUL_0015
MANOR WAY
EXMH08
EXMH06A
EXMH07
EXMH06
SW MHF
PROPOSED SITE COMPOUND (SUBJECT TO AGREEMENT)
REPLACEMENT 1000 x 1000 BOX CULVERT AT LOCATION OF EXISTING INLET STRUCTURE
SW MHG
YNYSYMAERDY RD.
TUCKER ST.
ORMOND ST.
OLD RD.

N

SHEET 1 OF 2
SHEET 2 OF 2

PLAN
1:1250

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 Penrhiwtin)
- 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 Penrhiwtin)
- Maintaining of existing surface water flows
- Sudden increase in flows

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
2. 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

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

Drawing Suitability: WORK IN PROGRESS
Status: S0

SNC·LAVALIN ATKINS
Member of the SNC-Lavalin Group

West Glamorgan House
12 Orchard Street
Swansea
West Glamorgan
SA1 5AD
Tel: +44 (0)1792 641172
Fax: +44 (0)1792 472019
www.atkinsglobal.com

Client: NEATH PORT TALBOT COUNTY BOROUGH COUNCIL

Project Title: GRANDISON BROOK

Drawing Title: PROPOSED SCHEME OVERVIEW SHEET 1 OF 2

Drawing Number: NE05_001 - ATK - GEN - SWMWREC - DR - CD - 000001
Location | Type | Role | Number

Original Size: A1 | Scale: 1:1250 | Project Ref. No: 5192793 | Sheet: 1 of 2 | Rev: P01.3

DO NOT SCALE

Millimetres 100 0 10

SHORT ST.
TUCKER ST.
GOWER ST.
DARREN RD.
OLD RD.
ORMOND ST.
CWRT SART
YNYSYMAERDY RD.
MANOR WAY
PANT HOWELL DDU
THE INCLINE
PLAYGROUND
JERSEY PARK
CAR PARK
YNYSYMAERDY CEMETERY
BRITON FERRY RUGBY & CRICKET SOCIAL CLUB

EXMH17
EXMH15
EXMH14
EXMH13
EXMH12
EXMH11
EXMH10
EXMH09
EXMH08
EXMH07
EXMH06A
EXMH06
EXMH04

SW MH 10
SW MH 08D
SW MH 08A
SW MH 08
SW MH 08B
SW MH 08C
SW MH 07
SW MH 06
SW MH 04
SW MH 03
SW MH 02
SW MH 01
SW MH F
SW MHG
SW MH E / EX MH03
SW MHD
SW MHC
SW MHB
EX MH02
EX MH01
EX MH01A

PROPOSED 1200 DIA. CULVERT
EXISTING 750 DIA. CULVERT TO REMAIN IN USE
NEW CONNECTION AT MH05 TO SPLIT FLOW
CONNECTION OF 1000 x 1000 BOX CULVERT AT LOCATION OF EXISTING INLET STRUCTURE
NEW TRASH SCREEN AND PLATFORM TO REPLACE EXISTING
POTENTIAL SITE COMPOUND (SUBJECT TO AGREEMENT)
FLAT TOP ROAD HUMP
PIPE BEND
PROPOSED DRAINAGE DITCH AND INLET HEADWALL
WORKS TO REGULARISE EXISTING BANK
PROPOSED SITE COMPOUND

N

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

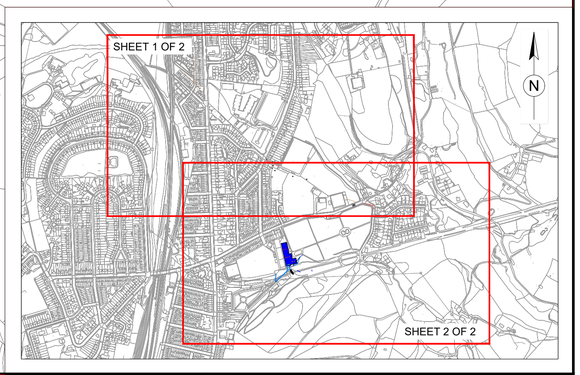
In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).

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 Penrhiwtin)
- 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 Penrhiwtin)
- Maintaining of existing surface water flows
- Sudden increase in flows



PLAN
1:1250

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
2. 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
	S0	P01.3	ME	---	---	---	07/04/25

Drawing Suitability: WORK IN PROGRESS
Status: S0

SNC·LAVALIN ATKINS
Member of the SNC-Lavalin Group

West Glamorgan House
12 Orchard Street
Swansea
West Glamorgan
SA1 5AD
Tel: +44 (0)1792 641172
Fax: +44 (0)1792 472019
www.atkinsglobal.com

Client: NEATH PORT TALBOT COUNTY BOROUGH COUNCIL

Project Title: GRANDISON BROOK

Drawing Title: PROPOSED SCHEME OVERVIEW SHEET 2 OF 2

Drawing Number
Project | Originator | Volume
NE05_001 - ATK - GEN -
Location | Type | Role | Number
SWMWREC - DR - CD - 000002

Original Size: A1 | Scale: 1:2500 | Project Ref. No: 5192793 | Sheet: 2 of 2 | Rev: P01.3

This Drawing is saved on ProjectWise. Plotted:

Appendix B. Scoping Stage: Transitional Waterbody Assessment

Water Framework Directive assessment: scoping template for activities in estuarine and coastal waters

Use this template to record the findings of the scoping stage of your Water Framework Directive (WFD) assessment for an activity in an estuary or coastal water.

If your activity will:

- take place in or affect more than one waterbody, complete a template for each waterbody
- include several different activities or stages as part of a larger project, complete a template for each activity as part of your overall WFD assessment

The WFD assessment guidance for estuarine and coastal waters will help you complete the table.

Your activity	Description, notes or more information
Applicant name	Neath Port Talbot Council
Application reference number (where applicable)	N/A
Name of activity	Grandison Brook Flood Alleviation Scheme
Brief description of activity	The Proposed Scheme is concerned with the Grandison Brook Flood Alleviation Scheme which involves a series of works, such as installing new culverts, excavation works, bank raising, and parapet replacement, among other activities, aimed at reducing flood risks in Briton Ferry, specifically along the Grandison brook.
Location of activity (central point XY coordinates or national grid reference)	SS74499524
Footprint of activity (ha)	Approximately 3.4ha
Timings of activity (including start and finish dates)	Works carried out over a 2-year period
Extent of activity (for example size, scale frequency, expected volumes of output or discharge)	Culvert Installations ▪ A new culvert will be installed along the highway and through green/open spaces, replacing some sections of the existing open channel. The new culvert will re-join the existing watercourse downstream before discharging into the River Neath. ▪ Localised raising of the existing bank along Rhodfa Clarke Walk by 0.5m to help control flood waters. ▪ Excavation and replacement of existing culverts, particularly along Ynysymaerdy Road, where a new 1200mm diameter culvert will be installed in open trench across the playing fields and through allotments behind Llansawel AFC grounds to Old Road. Jersey Park ▪ A buried surface water storage tank will be constructed beneath the play area, which will include a new inlet structure, pipe inlet, and a new section of watercourse with a pedestrian footbridge. ▪ Refurbishment of the existing inlet structure at Ynysymaerdy Road, replacing the galvanised steel trash and security screen with a new screen. ▪ Replacement of the parapet and handrail of the existing footbridge at Jersey Park, designed to reflect the early 20th-century architectural style prevalent throughout the park. Culvert Work ▪ The culvert will change form at Pant Yr Heol from a 1200mm diameter pipe culvert to twin culverts (1250 x 750mm). It will be installed across the road and through a gap between houses, continuing towards the railway crossing. ▪ A new 1750 x 1000mm box culvert will be constructed east of the mainline railway, connecting to the existing brick arch culvert near Collins Street, with the land raised slightly along the route of the culverts. Gabion baskets will be used to support the earthworks. Additional works • Existing rail culvert under the district rail line to be cleared of sediment. • Drainage channel clearing works between Mainline passenger railway and district line passenger railway.
Use or release of chemicals (state which ones)	*No*

Waterbody[1]	Description, notes or more information
WFD waterbody name	Neath Estuary
Waterbody ID	GB541005800700
River basin district name	Western Wales
Waterbody type (estuarine or coastal)	Transitional
Waterbody total area (ha)	3555408.188477
Overall waterbody status (2015)	Moderate
Ecological status	Moderate
Chemical status	High

Target water body status and deadline	Good status by 2027
Hydromorphology status of waterbody	Not High
Heavily modified waterbody and for what use	HMWB for Navigation, Ports and Harbours
Higher sensitivity habitats present	Saltmarsh
Lower sensitivity habitats present	Intertidal Substrate (Mud, Mud/Shingle, Sand, and Rock)
Phytoplankton status	N/A
History of harmful algae	No
WFD protected areas within 2km	No

[1] Water body information can be found in the Environment Agency's catchment data explorer and the water body summary table. Magic maps provide additional information on habitats and protected areas. Links to these information sources can be found in the WFD assessment guidance for estuarine and coastal waters.

Specific risk information

Consider the potential risks of your activity to each of these receptors: hydromorphology, biology (habitats and fish), water quality and protected areas. Also consider invasive non-native species (INNS).

Section 1: Hydromorphology

Consider if hydromorphology is at risk from your activity.

Use the water body summary table to find out the hydromorphology status of the water body, if it is classed as heavily modified and for what use.

Consider if your activity:	Yes	No	Hydromorphology risk issue(s)
Could impact on the hydromorphology (for example morphology or tidal patterns) of a water body at high status	Requires impact assessment	Impact assessment not required	No, the water body is not classified as High status.
Could significantly impact the hydromorphology of any water body	Requires impact assessment	Impact assessment not required	No, the Proposed Scheme is outside of the waterbody with no in channel works or construction taking place. Therefore, the activity is unlikely to have a significant impact on the hydromorphology of the water body.
Is in a water body that is heavily modified for the same use as your activity	Requires impact assessment	Impact assessment not required	No, the Proposed Scheme is not within the waterbody and although it is designated as a HMWB.

Record the findings for hydromorphology and go to section 2: biology.

Section 2: Biology

Habitats

Consider if habitats are at risk from your activity.

Use the waterbody summary table and Magic maps, or other sources of information if available, to find the location and size of these habitats.

Higher sensitivity habitats [2]	Lower sensitivity habitats [3]
chalk reef	cobbles, gravel and shingle
clam, cockle and oyster beds	intertidal soft sediments like sand and mud
intertidal seagrass	rocky shore
maerl	subtidal boulder fields
mussel beds, including blue and horse mussel	subtidal rocky reef
polychaete reef	subtidal soft sediments like sand and mud
saltmarsh	
subtidal kelp beds	
subtidal seagrass	

[2] *Higher sensitivity habitats have a low resistance to, and recovery rate, from human pressures.*

[3] *Lower sensitivity habitats have a medium to high resistance to, and recovery rate from, human pressures.*

Consider if the footprint[4] of your activity is:	Yes	No	Biology habitats risk issue(s)
0.5km^2 or larger	Yes, to one or more – requires impact assessment	No to all – impact assessment not required	No – Proposed Scheme is outside of the WFD waterbody.
1% or more of the waterbody's area			No – Proposed Scheme is outside of the WFD waterbody.
Within 500m of any higher sensitivity habitat			No, higher sensitivity habitat is more than 500m away.
1% or more of any lower sensitivity habitat			No, the lower sensitivity habitat is more than 500m away.

[4] *Note that a footprint may also be a temperature or sediment plume. For dredging activity, a footprint is 1.5 times the dredge area.*

Fish

Consider if fish are at risk from your activity, but only if your activity is in an estuary or could affect fish in or entering an estuary.

Consider if your activity:	Yes	No	Biology fish risk issue(s)
Is in an estuary and could affect fish in the estuary, outside the estuary but could delay or prevent fish entering it or could affect fish migrating through the estuary	Continue with questions	Go to next section	Yes – although the works are located outside of the waterbody. The brook is hydrologically linked to Neath Estuary and noise, vibration and sediment disturbance while carrying out in water works in the Grandison Brook could impact migratory eels.
Could impact on normal fish behaviour like movement, migration or spawning (for example creating a physical barrier, noise, chemical change or a change in depth or flow)	Requires impact assessment	Impact assessment not required	Yes – although the works are located outside of the waterbody. The brook is hydrologically linked to Neath Estuary and noise, vibration and sediment disturbance while carrying out in water works in the Grandison Brook could impact migratory eels.
Could cause entrainment or impingement of fish	Requires impact assessment	Impact assessment not required	No – the proposed habitat outside of the ditch works are concrete culverts and pipes within a residential area not suitable for migratory fish.

Record the findings for biology habitats and fish and go to section 3: water quality.

Section 3: Water quality

Consider if water quality is at risk from your activity.

Use the waterbody summary table to find information on phytoplankton status and harmful algae.

Consider if your activity:	Yes	No	Water quality risk issue(s)
Could affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)	Requires impact assessment	Impact assessment not required	Yes – there is a risk of construction works within the Grandison Brook which could increase sediment affecting turbidity and water clarity downstream. Additionally, a pollution event from equipment used in construction could impact water quality.
Is in a waterbody with a phytoplankton status of moderate, poor or bad	Requires impact assessment	Impact assessment not required	No.
Is in a waterbody with a history of harmful algae	Requires impact assessment	Impact assessment not required	No

Consider if water quality is at risk from your activity through the use, release or disturbance of chemicals.

If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if:	Yes	No	Water quality risk issue(s)
The chemicals are on the Environmental Quality Standards Directive (EQSD) list	Requires impact assessment	Impact assessment not required	No - No chemicals are released.
It disturbs sediment with contaminants above Cefas Action Level 1	Requires impact assessment	Impact assessment not required	No - No chemicals are released. If any unknown contamination is discovered during the works, the contractor shall ensure works stop immediately, isolate the affected area or segregate the affected material (if already excavated) if it is safe to do so. Following which a contaminated land specialist will be consulted.

If your activity has a mixing zone (like a discharge pipeline or outfall) consider if:	Yes	No	Water quality risk issue(s)
The chemicals released are on the Environmental Quality Standards Directive (EQSD) list	Requires impact assessment[5]	Impact assessment not required	No - No chemicals are released.

[5] *Carry out your impact assessment using the Environment Agency's surface water pollution risk assessment guidance, part of Environmental Permitting Regulations guidance.*

Record the findings for water quality go on to section 4: WFD protected areas.

Section 4: WFD protected areas

Consider if WFD protected areas are at risk from your activity. These include:

- special areas of conservation (SAC)
- special protection areas (SPA)
- shellfish waters
- bathing waters
- nutrient sensitive areas

Use Magic maps to find information on the location of protected areas in your waterbody (and adjacent water bodies) within 2km of your activity.

Consider if your activity is:	Yes	No	Protected areas risk issue(s)
Within 2km of any WFD protected area[6]	Requires impact assessment	Impact assessment not required	No WFD protected areas within 2km of the Proposed Scheme. The closest WFD protected area is Swansea Bay shellfish waters located approximately 4km away.

[6] *Note that a regulator can extend the 2km boundary if your activity has an especially high environmental risk.*

Record the findings for WFD protected areas and go to section 5: invasive non-native species.

Section 5: Invasive non-native species (INNS)

Consider if there is a risk your activity could introduce or spread INNS.

Risks of introducing or spreading INNS include:

- materials or equipment that have come from, had use in or travelled through other waterbodies
- activities that help spread existing INNS, either within the immediate water body or other waterbodies

Consider if your activity could:	Yes	No	INNS risk issue(s)
Introduce or spread INNS	Requires impact assessment	Impact assessment not required	Yes - Works could potentially facilitate the local spread of INNS

Record the findings for INNS and go to the summary section.

Summary

Summarise the results of scoping here.

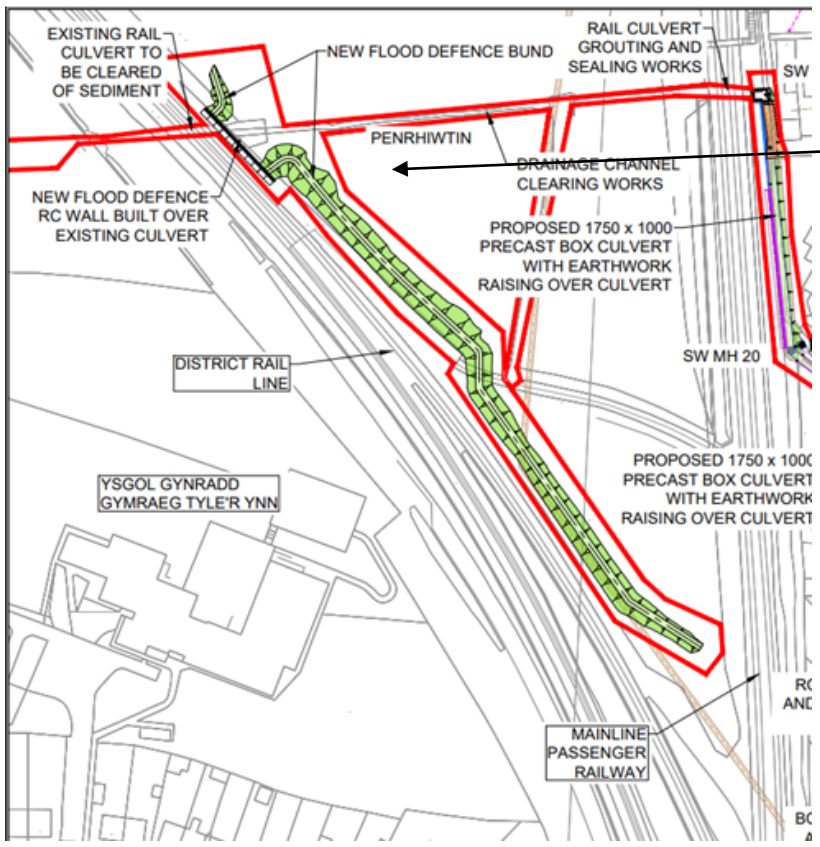
Receptor	Potential risk to receptor?	Note the risk issue(s) for impact assessment
Hydromorphology	No	No
Biology: habitats	No	No, more than 500m away.
Biology: fish	Yes	Yes- risk of changes to water quality through sediment causing changes in turbidity and through a pollution incident and risk of disturbance through noise and vibration.
Water quality	Yes	Yes- risk of changes to water quality from sediment causing changes in turbidity and through a pollution incident.
Protected areas	No	No WFD protected sites
Invasive non-native species	Yes	Yes - Works could potentially promote the spread of INNS

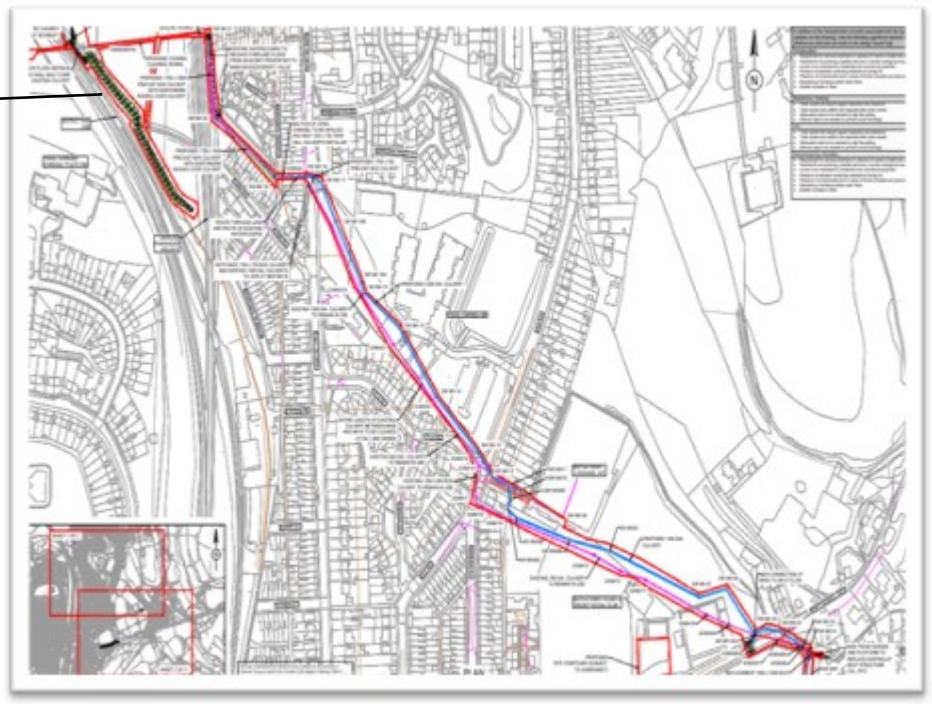
If you haven't identified any receptors at risk during scoping, you don't need to continue to the impact assessment stage and your WFD assessment is complete.

If you've identified one or more receptors at risk during scoping, you should continue to the impact assessment stage.

Include your scoping results in the WFD assessment document you send to your activity's regulator as part of your application for permission to carry out the activity.

Appendix C. Location of Works with Migratory Fish Restrictions





AtkinsRéalis

AtkinsRéalis UK Limited
West Glamorgan House
12 Orchard Street
Swansea
SA1 5AD

Tel: +44 (0)1792 641172
Fax: +44 (0)1792 472019