Gwydir Mawr, Trefor

Water Framework Directive Initial Assessment

CPF 8443

Document Control Sheet

Document Title:	Water Framework Directive Assessment
Document Author(s):	Bethany Fisher
Project Ref / Title:	CPF12814 – Gwydir Mawr Trefor
Project Manager:	Bethan Moseley

Revision History

Date	Version No.	Summary of Changes
14/03/2025	0.01	Initial draft
24/04/2025	1.00	Final draft following review

Reviews

Name	Title	Date	Version
Petra U Irvine	Principal Engineer	23/04/2025	0.01
Petra U Irvine	Principal Engineer	30/04/2025	1.00

Approvals

Name	Title	Date	Version
Petra U Irvine	Principal Engineer	30/04/2025	1.00

Distribution

Name	Title	Date	Version
Peter Jones	Contract co-ordinator Alun Griffiths Ltd.	02/05/2025	1.00

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1. The Project

YGC have been commissioned by Alun Griffiths Contractors Ltd. to undertake a Water Framework Directive (WFD) Compliance Assessment in relation to works due to be undertaken in Gwydir Mawr, Trefor located at SH 37691 47260 (Appendix A) which involves work in the southern section of Caernarfon Bay. This WFD Assessment is to be submitted as supporting evidence for the Marine Licence application to Natural Resources Wales (NRW) in line with the Water Framework Directive 2000 requirements.

1.1 Context

This WFD Assessment is required as per the EU Water Framework Directive 2000. The purpose of the Directive is to establish a framework for the protection of inland surface waters (rivers and lakes), transitional waters (estuaries), coastal waters and groundwater. It aims to ensure that all aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands meet 'good status'.

The proposed works involve the repair of a damaged 28 m section of a 150 mm cast iron foul outfall pipe located at Gwydir Mawr, Trefor serving Welsh Water's Waste Water Treatment Works (WWTW). The scope includes the excavation and removal of the damaged section, which will be replaced with a new 150 mm pipe. The replacement pipe will be securely fixed onto precast concrete blocks with the use of galvanised sheets fixed by threaded bars. The blocks will be laid to maintain the existing profile, ensuring alignment with the existing discharge point. The connection will be re-established at the damaged end of the pipe using suitable bandseals.

The study area lies within Caernarfon Bay (Appendix A). Caernarfon Bay is designated coastal inlet and is therefore in NRW's jurisdiction.

This report will outline the works to be undertaken including background context of the area where the works are located, asses the WFD requirements based on the proposed works and will summarise the final findings and conclusions.

Coastal Waterbodies

Caernarfon Bay South is to be considered in terms of water quality, habitats and its protected areas as part of this WFD assessment.

Cycle 3 of the WFD classification assessment undertaken in 2021 classed Caernarfon Bay South overall as status 'Good'. Table 1-0 provides an overall summary of Caernarfon Bay South's WFD Status.

Table 1-0 Summary of WFD Caernarfon Bay South Overall Classification (2021)

WFD Coastal Waterbodies Cycle 3	
WBID	GB651010610000
Name	Caernarfon Bay South
Country	Wales
RBD_ID	10.0
RBDDesc	Western Wales
HMWB	No
OverallSta	Good
ChemStatus	High
EcoPotent	Good
EcoStatus	Good
EcoCert	Not Applicable
DrivEcoQE	Inverts; Phytoplankton

Designated Areas

Within 2.5 km of the works the following designated sites have been identified (Appendix B):

- SSSI:
  - Gwydir Bay
  - Coed Elernion
  - Cappas Lwyd
  - Yr Eifl

Coastal Environments

There are no designated sites within the area of the works, with the nearest site being Gwydir Bay Site of Special Scientific Interest (SSSI), 147m east. Gwydir Bay is designated for its geomorphological features and evidence of the Quaternary of Wales when the first ice sheet enveloped Wales and the adjacent sea. There are no direct connections between the site and the proposed works, therefore impacts on the protected sites are not expected.

As the proposed works are to be carried out on the foreshore, there will need to be a clear commitment to ensure that there are no elevated levels of pollutants or sediments that could have an adverse effect on the water quality or ecosystem.

Appendix C illustrates the extent of the tidal floodplain in relation to the works. The works are situated outside of the Mean High-Water Line (Appendix D).

1.2 The Works to be undertaken

Table 1.2-1 highlights the works that are to be undertaken. These have been included within the main Method Statement of works (Appendix E). See Appendix H for proposed works drawings.

Table 1.2-1 Works to be undertaken

Work type	Carried out:
The designated access route to the working area and location of the WWTW will be agreed with both the NRW and the landowners, who will have been consulted and have confirmed to have no objection to the works being carried out. The route will be marked out and explained to the workforce prior to commencement.	May 2025
Erect temporary warning signs to pedestrians using the foreshore area of the presence of heavy plant and equipment and brief all site personnel of the need for extra vigilance when travelling to the working area. A Banksman to be present during transportation along the foreshore. Access to the working area will be via Trefor Car Park, LL54 5LB and along the foreshore	May 2025
Excavate and expose the damaged and collapsed pipe by the WWTW and determine where a connection onto the end of the pipe can be carried out, casting the excavated material to one side prior to re using as re fill around the pipe and new concrete structure once constructed.	May 2025
Excavate and remove the 'visible' damaged length of outfall pipe and concrete structure and prepare the ground for laying new precast concrete blocks for accommodating the new 150mm dia. Outfall pipe.	May 2025
Lay and position the new Precast Concrete Blocks to the existing profile, maintaining the existing gradient and level to the length and location of the existing Discharge Point.	May 2025
The blocks are to be fixed together by 4No. 1000 x 100 x 12 galvanised sheets with 20mm threaded bars with galvanised washers and nuts.	May 2025
The pipe is to be fixed to the surface of the blocks with 600 x 100 x 12 galvanised sheets on neoprene fixed by 20mm threaded bars into the blocks.	May 2025
The damaged length of pipe and concrete surround structure to be broken up to enhance removal and transported off the foreshore to a stockpile area on the Car Park to facilitate removal to a Licensed Tip.	May 2025
Remove all Temporary material and backfill up against the sides by means of previously excavated material.	May 2025
Make good and reinstate the surrounding ground and disturbed areas, remove all plant, equipment and tidy up.	May 2025

1.2.1 Work to be carried out prior to main works:

- Review information relating to any environmental requirement, or restriction identified within the information provided by the Client.
- Review information on any existing statutory undertaker's apparatus which may be present within the confines of the site. CAT scan the area of excavation and clearly mark out all existing services, (above and below ground) where there is a possibility of interface, these services shall be protected if necessary.
- Carry out risk assessments of all identified work activities.
- Use risk assessments to produce written safe methods of working.
- Site induction of all personnel employed in the construction of the works.
- Give a method statement explanation to all employees associated with the work.
- Assess the area of work and where access may pose a risk to the work force, working adjacent to the sea, which is tidal and time constraints minimal,(work to be carried out on suitable low tides only), animals or the public, temporary fencing of an appropriate type will need to be erected.
- Ensure any consents and Licences required from NRW are obtained and current before work proceeds, and prior to gaining access onto the foreshore with construction plant and keep a copy of the Marine Licence to hand at all times.
- Monitor weather conditions and Tidal influences for the next few days following the proposed start day to ensure that tides are suitable and a dry weather period is forecast.
- The NTSLF's surge forecast for Holyhead (the nearest station with such data) will be monitored to check whether a storm surge to result in higher than anticipated tide levels (https://ntslf.org/storm-surges/latest-surge-forecast?port=Holyhead&chrt=1).

Figure 1: Damaged length of outfall pipe and concrete structure

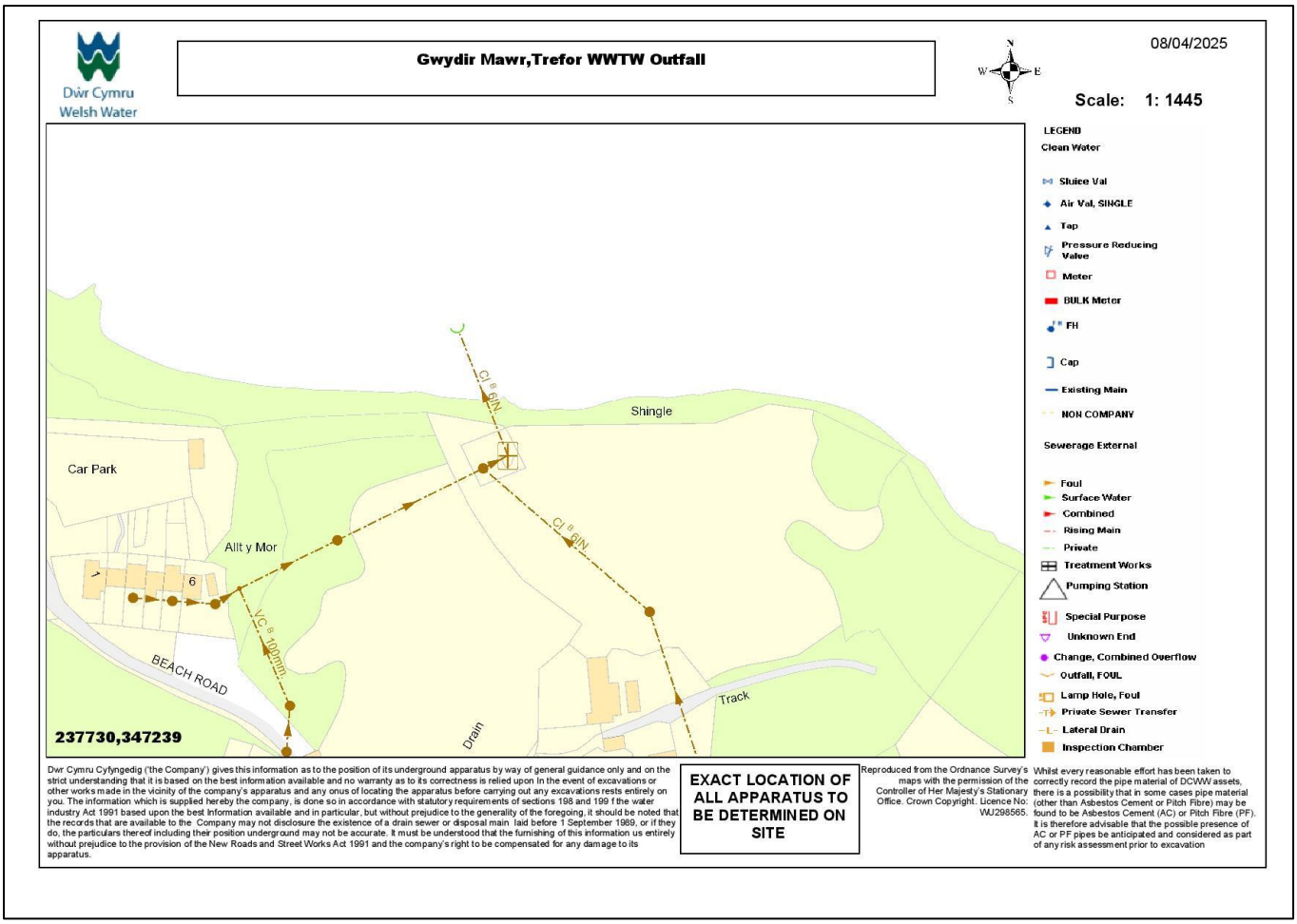


Figure 2: DCWW's mapping showing the alignment of the WWTW outfall

1.2.2 Main works

Main Works will be of approximately 4 weeks duration

Once all known services have been located, the excavation to locate the end of the damaged section of outfall pipe will be carried out. The designated access route to the working area will be agreed with NRW and the landowners, who will have been consulted and have confirmed to have no objection to the works being carried out. The route will be marked out and explained to the workforce prior to commencement. Access to the working area will be via Trefor Car Park, LL54 5LB, travelling along the foreshore.

Access to the working area will be via Lon Nant Iago road LL53 7TR, travelling along the beach in the direction of the existing outfall pipe Marker Post.

2. Legislative background

2.1 Introduction to the Water Framework Directive

The Water Framework Directive (WFD) 2001 requires all-natural waterbodies to achieve both Good Chemical Status (GCS) and Good Ecological Status (GES). The River Basin Management Plans (RBMPs) outline the actions required to enable natural waterbodies to achieve GES. Artificial and Heavily Modified Water Bodies (A/HMWBs) may be prevented from reaching GES due to the modifications necessary to maintain their function. They are, however, required to achieve Good Ecological Potential (GEP), through the implementation of a series of mitigation measures outlined in the applicable RBMP.

New activities and schemes that affect the water environment may adversely impact biological, hydromorphological and physico-chemical and/ or chemical quality elements (WFD quality elements), leading to a deterioration in water body status. They may also render proposed improvement measures ineffective, leading to the water body failing to meet its water body status or prevent a water body from meeting GES/ GEP by invalidating improvement measures.

Hydromorphology is a term used in the WFD to describe the physical form of a water body and the physical processes operating there. Hydromorphology encompasses both hydrological and geomorphological characteristics that, in combination, help support a healthy ecology within these freshwater and marine environments.

The overall ecological status of a water body is primarily based on consideration of its biological quality elements and determined by the lowest scoring of these elements. These biological elements are, however, in turn supported by the physico- chemical and hydromorphological quality elements. Assessment of hydromorphological quality is not explicitly required for a water body to achieve Moderate Ecological Status or lower. However, to achieve the overall

WFD aim of GES or higher, hydromorphological quality must be considered within the classification assessment.

In addition, to achieve the overall WFD aim of GES, a water body must pass a separate chemical status assessment, relating to pass/fail checks on the concentrations of various identified priority/ dangerous substances.

2.2 Temporary Impacts

WFD does make allowances for temporary deterioration caused by natural causes that are exceptional or could not reasonably have been foreseen, for example, extreme floods or prolonged droughts.

The main objectives of the WFD 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 2015 (2021 or 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.

2.3 Purpose of the report and WFD compliance assessment approach

This document sets out the initial WFD screening assessment and comprises a summary overview, quality element assessment, results and recommendations. The assessment considers water quality, habitats and the protected areas of Caernarfon Bay South. This assessment has been based on general arrangement drawings for the proposed scheme and detailed discussions with the project engineers.

NRW do not currently have guidance for the WFD compliance assessment, therefore this assessment is based on Environment Agency (EA) guidance. The EA WFD guidance suggests that temporary impacts, such as those resulting from construction works can normally be screened out during the initial WFD compliance assessment – provided that any impacts will be short duration in nature and the site will recover quickly.

Figure 3 illustrates the three sequential stages of WFD assessments. This will be utilised through this assessment to establish the appropriate stage of assessment for the proposed works.

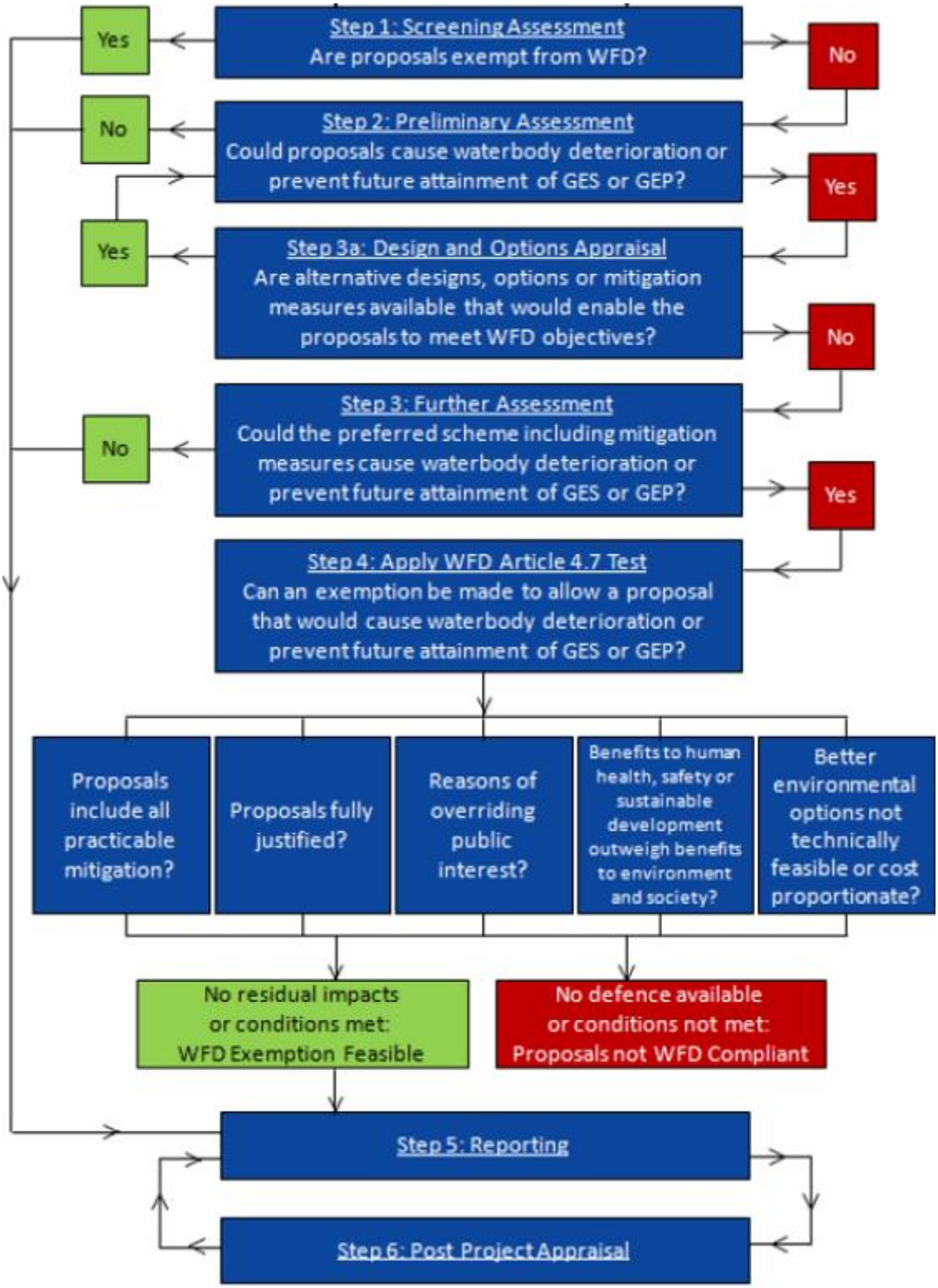


Figure 3: WFD Assessment Process

2.4 Environmental objectives

The following environmental objectives (based on Articles 4.1, 4.8 and 4.9 of the WFD) were used to make recommendations on WFD compliance in relation to the works.

The objectives have been devised specifically for the works:

- Objective 1: The works will not cause deterioration in any element of water body classification.
- Objective 2: The works will not prevent the WFD status objectives from being reached within the water body or other downstream water bodies.
- Objective 3: The works will not negatively impact critical or sensitive habitats within the scheme area.
- Objective 4: The works will ensure that an increased level of hydrocarbons into watercourse does not occur.
- Objective 5: The works will not impact upon any European designated sites within the area of the works.

2.5 WFD Classification

The WFD classification for a defined water body is produced by assessment of a wide variety of different 'elements' which includes:

- 'biological elements' such as fish, invertebrates, phytobenthos (which includes plants, macro-algae and phytoplankton);
- 'supporting elements' that include chemical measurements such as ammonia, dissolved oxygen, pH, phosphate, copper, zinc and temperature; and
- 'supporting conditions' (sometimes referred to as hydromorphology), that assess the physical attributes of the water body such as 'quality and dynamics of flow' and 'morphology'.

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

2.6 WFD Compliance

The first two WFD Objectives listed in section 2.4 above, must be met to avoid infraction of the overarching aims of the WFD. The delivery of the third objective is central to the overall WFD purpose, where practical and feasible the proposed works will work towards improving water quality status in line with the WFD. At the very minimum, it will ensure that no adverse changes to water quality will occur during the works.

If it is considered that the works are likely to cause deterioration in water body status or prevent a water body from meeting its ecological objectives then an assessment would be made against the conditions listed in Article 4.7 of the WFD. Article 4.7 can be invoked if; 'new modifications' are of overriding public interest and/ or the environmental and social benefits of achieving the WFD 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.

3. WFD screening assessment

3.1 Screening of temporary works

The works have been identified and discussed in detail in section 1.2 above. In summary the works will NOT:

- Permanently alter the riverbed
- Permanently alter the river channel
- Alter the conveyance of flow
- Have a detrimental impact on downstream receptors
- Increase flood risk
- Reduce the water quality of the waterbody
- Change the hydrogeomorphology of the waterbody
- Permanently increase sedimentation or pollution within the waterbody

The works are temporary in nature and the repair works will result in no change to the route of the pipeline.

3.2 Initial conclusion of the WFD screening assessment

The works to be undertaken involves repairing the damaged section of 150 mm cast iron outfall. The works are temporary, only lasting approximately 4 weeks and would not result in any permanent changes to the beach's morphology. Stated in the works risk assessment, work will be completed during extreme low tide as dictated by Met Office's local tide forecast. A plan will be in place to ensure that all workers and equipment is removed in sufficient time before the working area becomes submerged.

Tidal influences to be monitored at all times, prior to commencement and during excavations and pipe repair. The NTSLF's surge forecast for Holyhead (the nearest station with such data) will be monitored to check whether a storm surge to result in higher than anticipated tide levels (https://ntslf.org/storm-surges/latest-surge-forecast?port=Holyhead&chrt=1).

The WFD Screening assessment process has been utilised to assess the required stages of WFD assessment based on the works to be undertaken (see Figure 4 & Figure 5) and has concluded that no further detailed assessment is required.

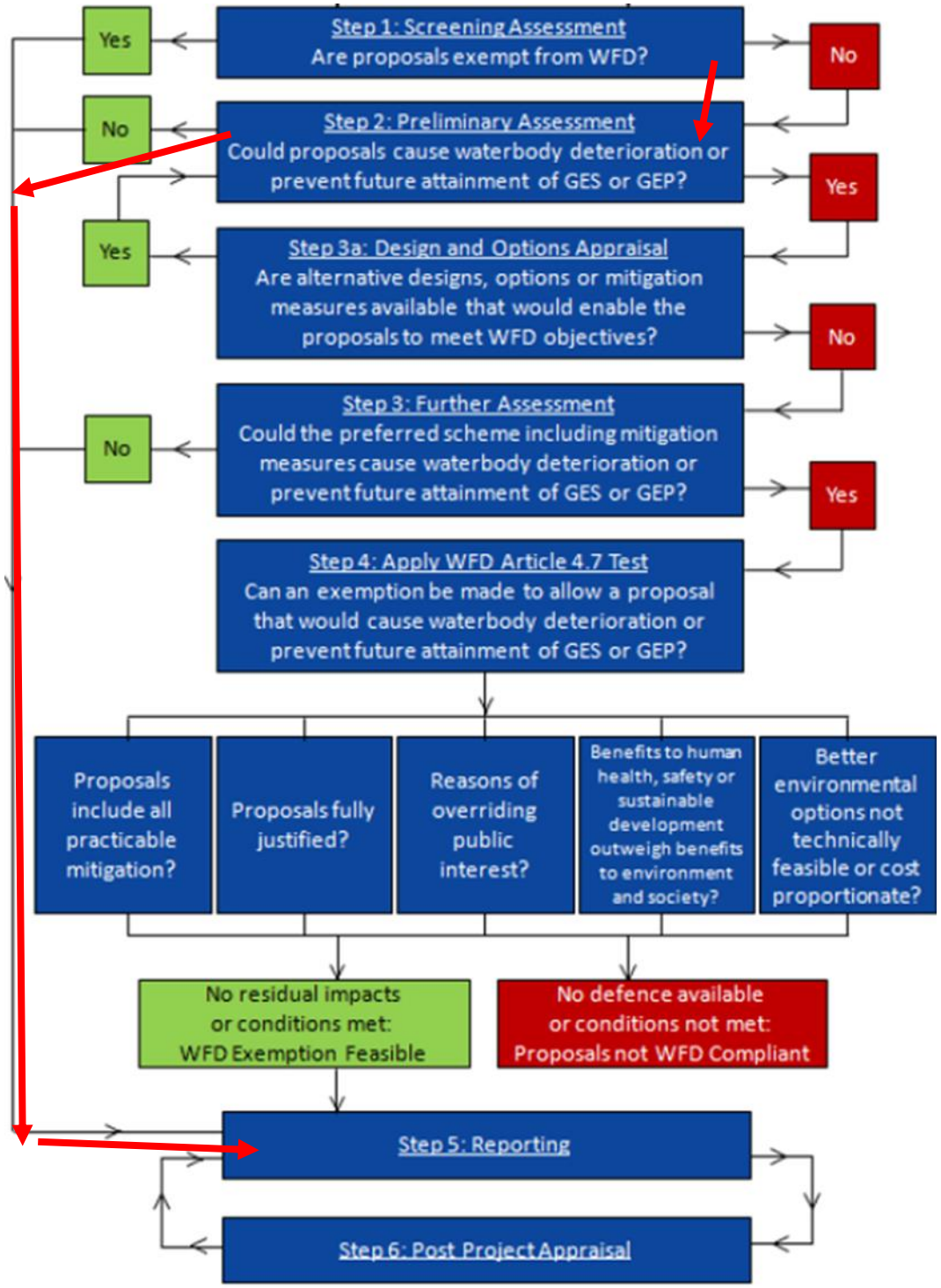


Figure 4: WFD Screening assessment part 1

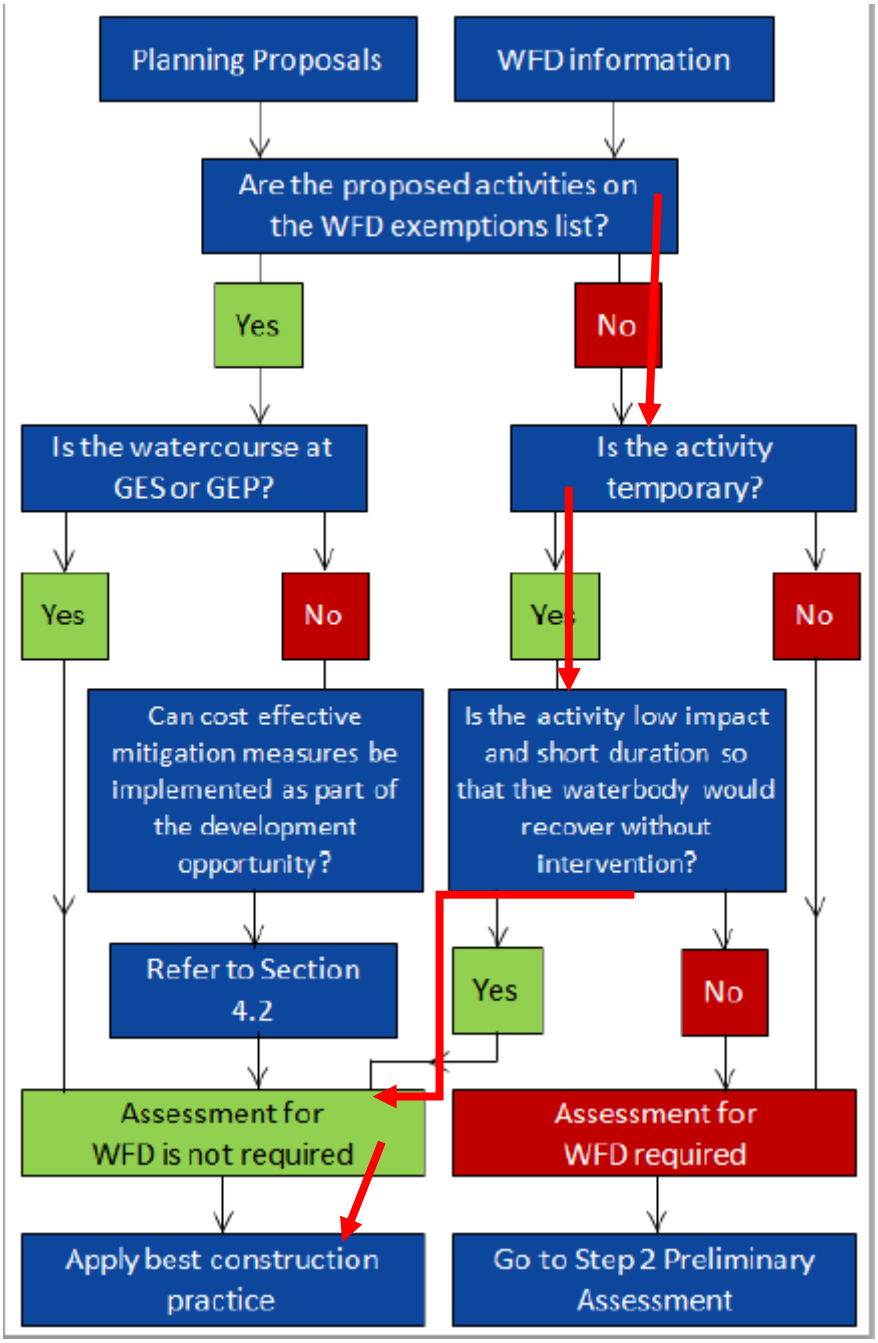


Figure 5: WFD Screening assessment part 2

3.3 Further mitigation measures & Construction Best Practice

The overall risk to the coastal waterbody is seen to be LOW.

No further detailed WFD Compliance assessment is required for the works in Caernarfon Bay South. However, the following best practice and guidance should be consulted prior to the works and adhered to at all times during the works.

- GPP 5: Works and maintenance in or near water
- PPG 7: Safe storage - The safe operation of refuelling facilities
- GPP 13 Vehicle washing and cleaning
- GPP 22: Dealing with spills

Where works are carried out over water, methods to ensure that debris is not dropped into the water should be in place.

Where there is a risk of an inadvertent spillage, an Emergency Procedure should be in place which may be followed during a pollution incident.

If during the works should a storm event rise, all materials or machinery within the area should be swiftly removed from the area to reduce the risk of pollution.

It is recommended to include a detailed plan for each working day within the method statement outlining precisely how the works will manage around high tide. The plan should identify the critical stop and start working times, the processes to safely remove workers and vehicles from the site and how the working area will be stabilised between each high tide. The plans should reflect any adverse changes in weather/tide times that may alter the work schedule.

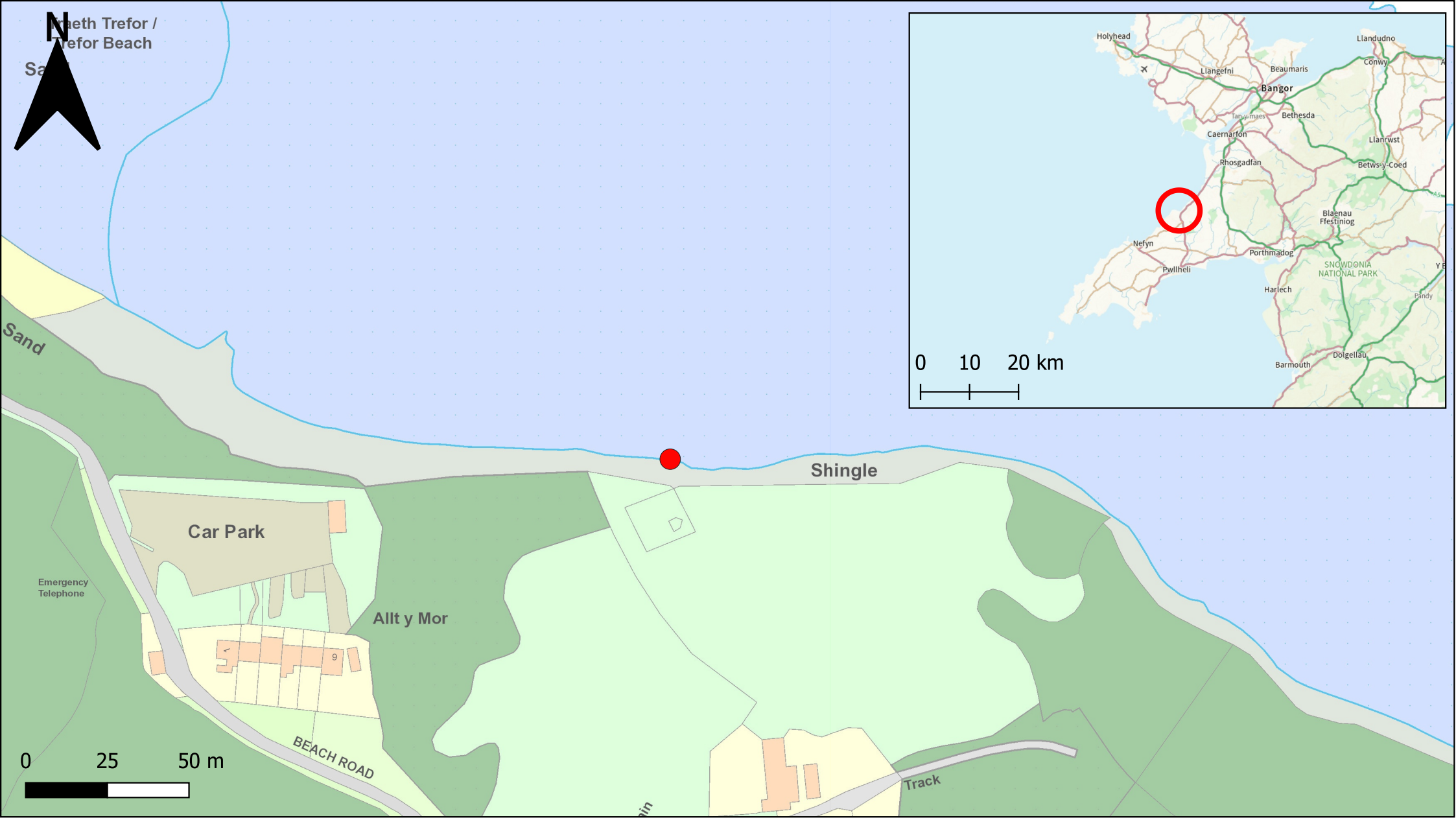
4. Conclusions

The proposed works are temporary in nature. In view of the temporary nature of the work, the proposed work has been screened as not having a detrimental impact on the status of the waterbody. There is therefore no requirement for further detailed WFD assessment.

To minimise short-term impacts, best practice and good working practices should be implemented on site and any changes to the working method statement should be agreed with the approving body (NRW) before the works are undertaking to ensure that changes do not have a negative impact.

5. Appendices

Appendix A- Location Plan



Teitl y Prosiect/ Project Title:

CPF12814: Gwydir Mawr Trefor

Teitl y Cynllun/ Drawing Title:

Proposed works location plan

Allwedd/ Key

Existing outfall

Darlunwyd Gan: Drawn By:	BF	Dyddiad Darllunwyd: Date Drawn:	10/04/2025
Gwiriwyd Gan: Checked By:	PUI	Dyddiad Gwiriwyd: Date Checked:	10/04/2025
Taflen: Sheet:	1 of 1	Graddfeydd: Scales: @ A3	1:1,500
Rhif Lluniad: Drawing No:	YGC/2025	Cywi: Rev:	P00.1

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EXISTING OUTFALL PIPE TO BE REPLACED

TREFOR GWYDIR MAWR STW

SCALE 1 : 125

m 5 0 5 m

NOTES

1. ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES ABOVE ORDNANCE DATUM UNLESS SHOWN OTHERWISE.
2. THIS DESIGN IS PROPOSED ON THE BASIS OF CLIENT BRIEF, SPECIFICATIONS, BEST PRACTICE AND RISK REDUCTION / ELIMINATION. THE DESIGNER MUST BE CONSULTED ON ANY PROPOSED CHANGES, BEFORE THEY ARE CONSIDERED FOR IMPLEMENTATION.
3. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH CESWI 8 ['CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY (8TH EDITION)'] SUPPLEMENTED BY THE 'DCWW CIVIL ENGINEERING SPECIFICATION CS501A'.

SITE LOCATION

GRID REFERENCE: 237690, 347244

SITE ADDRESS: BEACH ROAD, TREFOR, CAERNARFONSHIRE, LL54 5LB

CAUTION: THE MANAGEMENT AND DESIGN OF ANY AND ALL TEMPORARY WORKS REQUIRED TO EXECUTE THIS DESIGN ARE THE RESPONSIBILITY OF THE CONTRACTOR.

REV	DATE	DESCRIPTION	ORIG	CHK	APP
P01	10/04/2025	FIRST ISSUE	BL	KJP	TM

CLIENT: Dŵr Cymru Welsh Water

PRINCIPAL DESIGNER: DCWW

Waterco Ltd., Eden Court, Lon Parcwr Business Park, Ruthin LL15 1NJ
tel (+44) 1824 702220
www.waterco.co.uk

SCHEME: TREFOR GWYDIR MAWR STW

TITLE: LOCATION PLAN

ORIGINATOR	CHECKER	APPROVER
B. LAVIN	K. PICKERING	T. MITCHELL

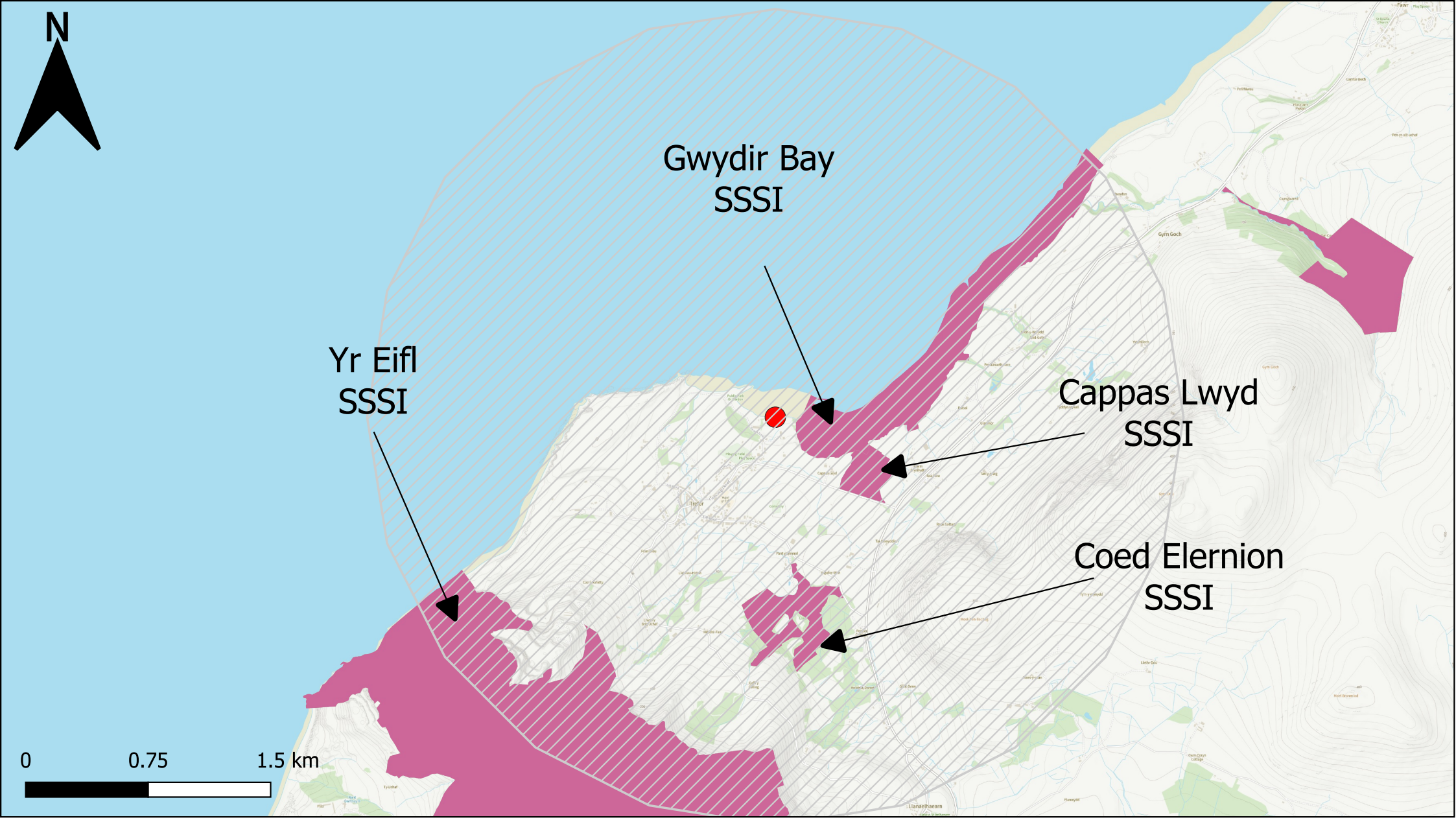
STATUS: PRELIMINARY

SCALE / SHEET SIZE: AS SHOWN / A3

REV: P01

DRAWING NO.: 16337-0001

Appendix B- Designated sites location



Teitl y Prosiect/ Project Title:

CPF12814: Gwydir Mawr Trefor

Teitl y Cynllun/ Drawing Title:

SSSI Designated Areas

Allwedd/ Key

- Existing outfall
- SSSI
- 2.5 km radius

Darlunwyd Gan: Drawn By:	BF	Dyddiad Darllunwyd: Date Drawn:	10/04/2025
Gwiriwyd Gan: Checked By:	PUI	Dyddiad Gwiriwyd: Date Checked:	10/04/2025
Taflen: Sheet:	1 of 1	Graddfeydd: Scales: @ A3	1:30,000
Rhif Lluniad: Drawing No:	YGC/2025	Cywi: Rev:	P00.1

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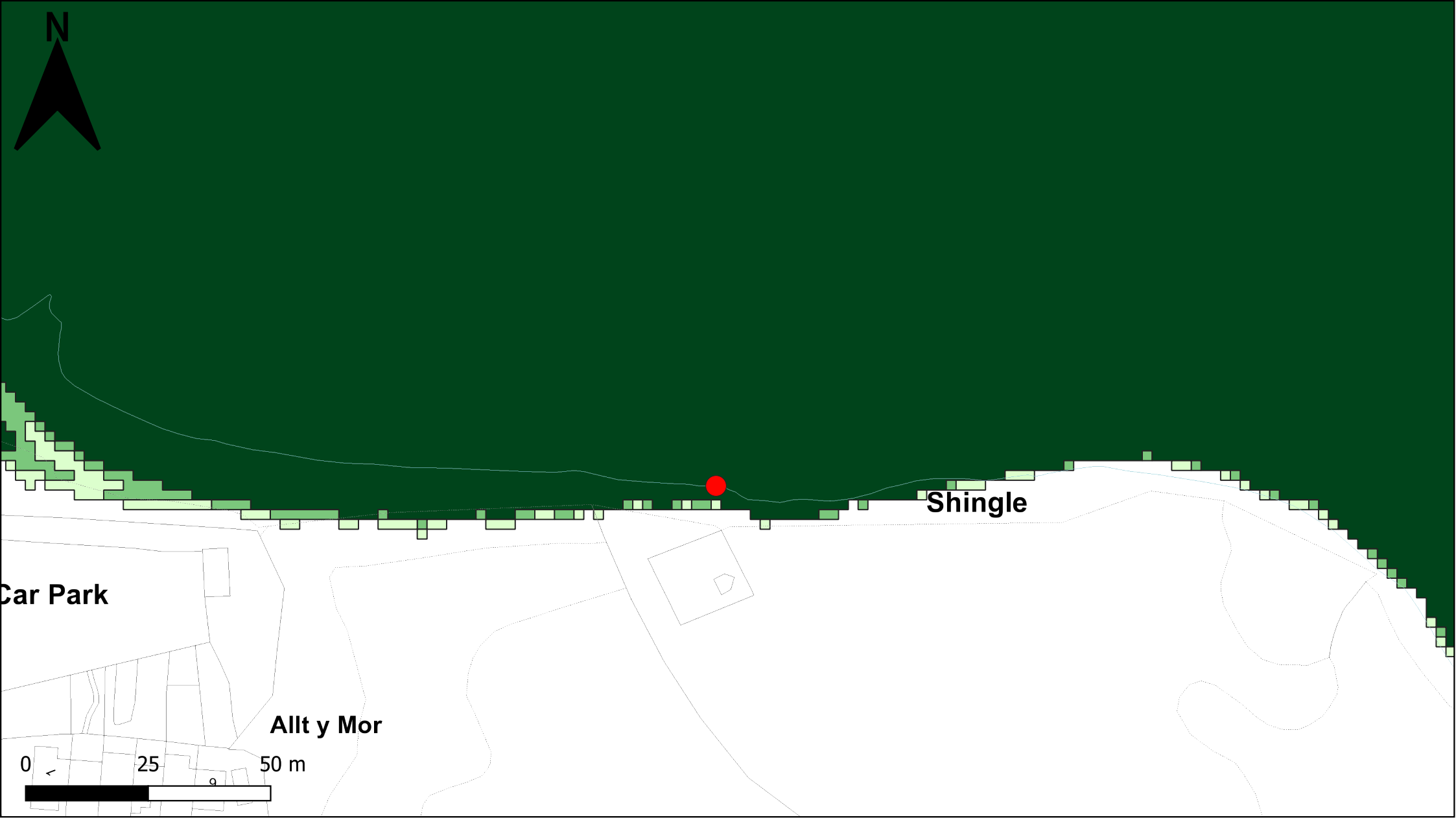
Appendix C- Location of tidal flooding in relation to the proposed works



Teitl y Prosiect/ Project Title:

CPF12814: Gwydir Mawr Trefor

Teitl y Cynllun/ Drawing Title:

NRW's Flood Risk Assessment Wales (FRAW) for tidal flooding

Allwedd/ Key

Existing outfall

FRAW Sea:

High

Medium

Low

Darlunwyd Gan: Drawn By:	BF	Dyddiad Darllunwyd: Date Drawn:	10/04/2025
Gwiriwyd Gan: Checked By:	PUI	Dyddiad Gwiriwyd: Date Checked:	10/04/2025
Taflen: Sheet:	1 of 1	Graddfeydd: Scales: @ A3	1:1,000
Rhif Lluniad: Drawing No:	YGC/2025	Cywi: Rev:	P00.1

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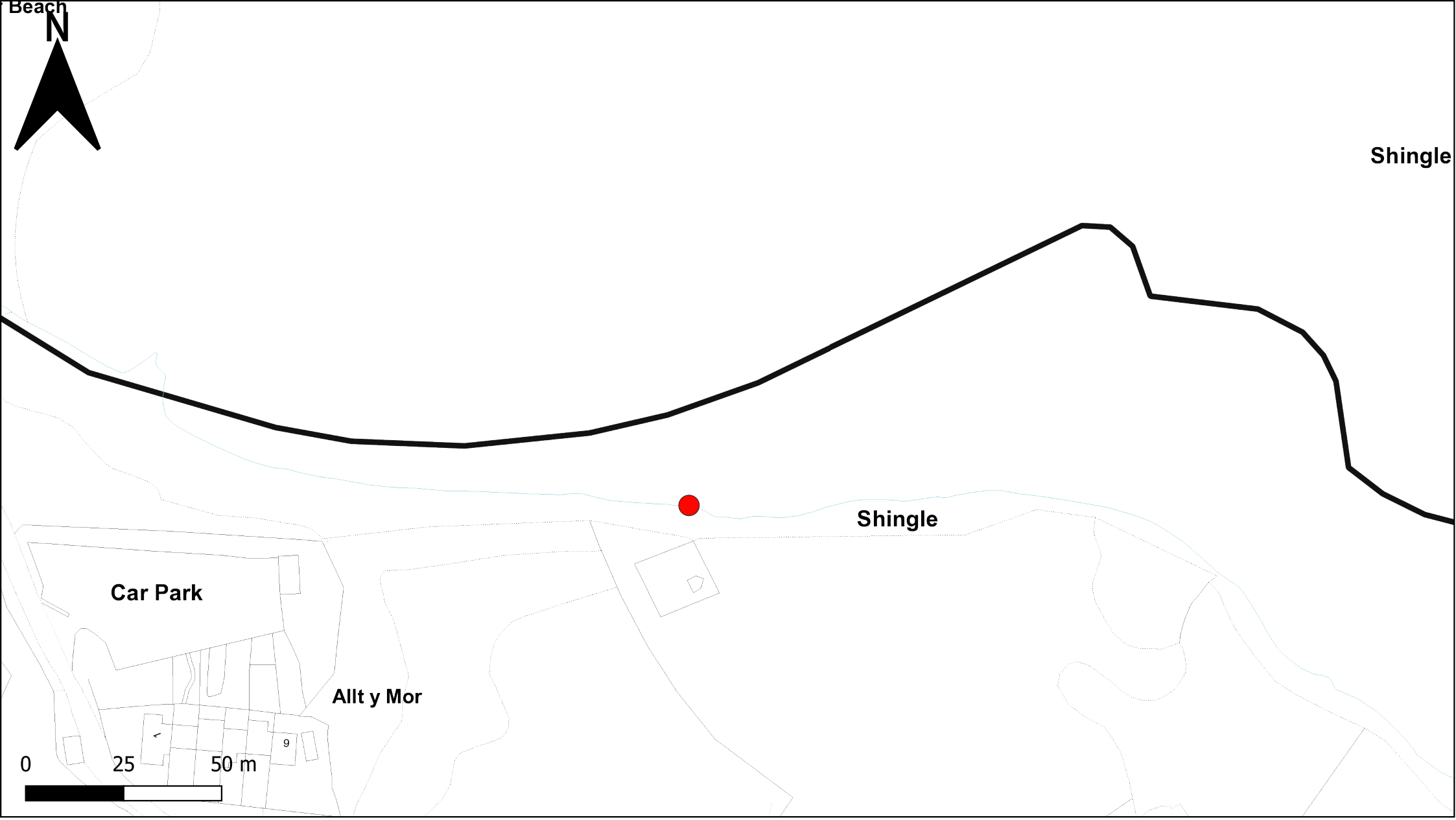
Appendix D - Mean High Water Line



Teitl y Prosiect/ Project Title:

CPF12814: Gwydir Mawr Trefor

Teitl y Cynllun/ Drawing Title:

Mean High Water Line

Allwedd/ Key

- Existing outfall
- Mean High Water Line

Darlunwyd Gan: Drawn By:	BF	Dyddiad Darllunwyd: Date Drawn:	10/04/2025
Gwiriwyd Gan: Checked By:	PUI	Dyddiad Gwiriwyd: Date Checked:	10/04/2025
Taflen: Sheet:	1 of 1	Graddfeydd: Scales: @ A3	1:1,250
Rhif Lluniad: Drawing No:	YGC/2025	Cywi: Rev:	P00.1

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Appendix E – Method Statement

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Dwr Cymru / Welsh Water
Wastewater Network R & M Framework
Trefor (Gwydir Mawr) WWTW - Outfall Pipe

METHOD STATEMENT NO – MS 01

SUBJECT:

Trefor (Gwydir Mawr) WWTW – Repairs to Outfall Pipe

Originated by: P Jones Date: 28/03/2025	Construction Approval: John P Evans Date: 28.03.2025	Environmental Approval: Date:	Works-Supervisor Approval: Date:
P.M. Acceptance: Date:		Work to commence Approval: Date:	

Revision	Date	Change	Revision	Date	Change

Distribution:	John Evans Project Manager	Brendon Jones Works Manager	Site Copy	DCWW					H&S FILE
	1	1	1	1					1

1.0 Introduction.

This method statement relates to the work required to repair the damaged and exposed 28m of 150mm dia. Outfall pipe from Trefor (Gwydir Mawr) WWTW. This method statement should be read in conjunction with the Scope Plans enclosed.

2.0 Responsibilities.

Name	Position	Emergency contact No.
John Evans	Operations Manager	07966 318111
Brendon Jones	Works Supervisor	07788 793604
Peter Jones	Co-ordinator	07812 003023

3.0 Method/Procedure.

Prior to commencing work.

- Review information relating to any environmental requirement, or restriction identified within the information provided by the Client.
- Review information on any existing statutory undertaker's apparatus which may be present within the confines of the site. CAT scan the area of excavation and clearly mark out all existing services, (above and below ground) where there is a possibility of interface, these services shall be protected if necessary.
- Carry out risk assessments of all identified work activities.
- Use risk assessments to produce written safe methods of working.
- Site induction of all personnel employed in the construction of the works.
- Give a method statement explanation to all employees associated with the work.
- Assess the area of work and where access may pose a risk to the work force, working adjacent to the sea which is tidal and time constraints minimal,(work to

be carried out on suitable low tides only), animals or the public, temporary fencing of an appropriate type will need to be erected.

- Obtain a permit to excavate from the Works Supervisor.
- Ensure any consents required from the NRW are obtained and current before work proceeds, and ensure a copy of the Licence and SSSI Assent is to hand at all times.
- Ensure that the necessary land entry permissions are in place with the landowners.
- Monitor weather conditions and Tidal influences for the next few days following the proposed start day to ensure that a dry weather period is forecast.
- Confirm tidal conditions are suitable prior to any excavation.

Method of working

- The designated access route to the working area and to the location of the WWTW will be agreed with both the NRW and the landowners, who will have been consulted and have confirmed to have no objection to the works being carried out. The route will be marked out and explained to the workforce prior to commencement.
- Access to the working area will be via Trefor Car Park, LL54 5LB and along the foreshore.(Ensure tidal influences are checked before accessing the foreshore)
- Erect temporary warning signs to pedestrians using the foreshore area of the presence of heavy plant and equipment and brief all site personnel of the need for extra vigilance when travelling to the working area. A Banksman to be present during transportation along the foreshore.
- Complete a Certificate of Isolation for flows through the outfall pipe.(Isolation by DCWW Operators)
- To gain access to the Existing Outfall location the proposed route from the Car Park area is along the foreshore.
- Once all known services have been located, the excavation around the damaged end of the existing outfall pipe will be carried out.
- Excavate and expose the damaged and collapsed pipe by the WWTW and determine where a connection onto the end of the pipe can be carried out, casting the excavated material to one side prior to re using as re fill around the pipe and new concrete structure once constructed.
- Excavate and remove the ‘visible’ damaged length of outfall pipe and concrete structure and prepare the ground for laying new precast concrete blocks for accommodating the new 150mm dia. Outfall pipe.
- The new Precast Concrete Blocks (1600 x 800 x 450) are to be delivered to the Trefor Car Park and transported along the foreshore with a dumper to the working area by the WWTW.

- Lay and position the new Precast Concrete Blocks to the existing profile, maintaining the existing gradient and level to the length and location of the existing Discharge Point.
- The blocks are to be fixed together by 4No. 1000 x 100 x 12 galvanised sheets with 20mm threaded bars with galvanised washers and nuts.
- The pipe is to be fixed to the surface of the blocks with 600 x 100 x 12 galvanised sheets on neoprene fixed by 20mm threaded bars into the blocks.
- The damaged length of pipe and concrete surround structure to be broken up to enhance removal and transported off the foreshore to a stockpile area on the Car Park to facilitate removal to a Licensed Tip.
- Remove all Temporary material, and backfill up against the sides by means of previously excavated material.
- Make good and reinstate the surrounding ground and disturbed areas, remove all plant, equipment and tidy up.

4.0 Principal Equipment.

- 2 No.360^{o} Excavators – 8t
- 1 No. 4t dumper (tracked)
- 1 No. Transit Type Van & Trailer
- 1 No. Transit Pick up
- 1 No. Cable Avoidance Tool
- 1 No. pipe stopper
- Stihl saw and small hand tools.
- Bog Mats if required
- Hiab Lorry-24t
- Confined space entry equipment
- Buoyancy aids
- Lifesaving equipment
- Welfare Unit
- Spill Kits

5.0 Environmental Considerations

- Erect localised site fencing to prevent unauthorised entry onto the work site by unauthorised personnel, animals or the general public, where necessary.
- Site access and egress to be kept clear at all times.
- Refuelling of plant is to be carried out away from the place of work, where a risk of inadvertent spillage exists, and carried out to the procedures in the Control of Pollution (Oil Storage) Regulations 2001
- Daily checks on plant, hoses and any pumping equipment to be undertaken and recorded
- Noise levels to be minimised where possible and within site working hours

- Disturbance to the sea bed area to be kept to an absolute minimum.
- Contact DCWW to ensure WWTW Primary Tank is emptied prior to commencement of the work and operating efficiently to avoid any premature discharge through the outfall pipe.

6.0 COSHH

- Sewage,
- Diesel,
- Petrol
- Pipe Grease.
- Sea water (risk of Weil's Disease)
- Concrete
- Aggregate

7.0 Specific Requirements for Risk Assessment

- All main contractor activities.
- Environmental considerations.

8.0 P.P.E. Requirements

- Hard hats.
- Safety footwear.
- High visibility clothing.
- Impervious Gloves.
- Safety Glasses
- Light Eye protection / Goggles
- Ear Defenders
- Dust Protection
- Life jackets

9.0 Communication and liaison

9.1 Identity of specific contacts

Refer to CTR B and C for details of specific contacts within DCWW.

Emergency plans

9.2 Contact phone numbers (in order)

John Evans	**07966 318111**
Peter Wyn Jones	**07812 003023**
Tom James	**01766 496204**
Bodelwyddan Office	**01745 616582**
NRW	**03000 653000**

10.0 Appendices

Appendix A	Construction Risk assessment
Appendix B	Scope Plans
Appendix C	Method Statement Explanation Form

Appendix A

Construction Risk Assessment

Appendix B

Scope Plan

Appendix C

Method Statement Explanation Form

ALUN GRIFFITHS CONTRACTORS LTD
Dwr Cymru / Welsh Water
Wastewater Network R & M Framework
Trefor (Gwydir Mawr) WWTW Outfall Pipe

METHOD STATEMENT EXPLANATION FORM

Method statement	**Trefor (Gwydir Mawr) WWTW – Outfall Pipe**
Method Statement No.	**01**
Date of explanation	
Explanation given by	
Topics covered:	**Method statement explanation including toolbox talks on:- Environmental and Ecological Constraints, Contamination of watercourses.**

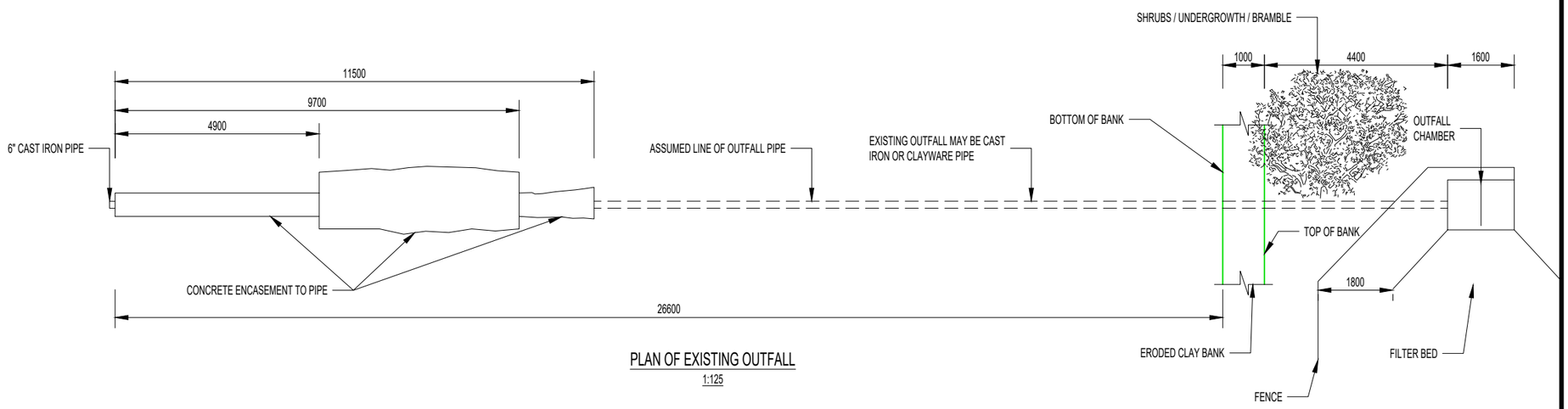
No.	Attendee	Signature	No.	Attendee	Signature
1			14		
2			15		
3			16		
4			17		
5			18		
6			19		
7			20		
8			21		
9			22		
10			23		
11			24		
12			25		
13			26		

Signature of person giving explanation: ……

Signature of attendee confirms understanding of explanation given

For comments/questions raised during explanation please refer to back of form

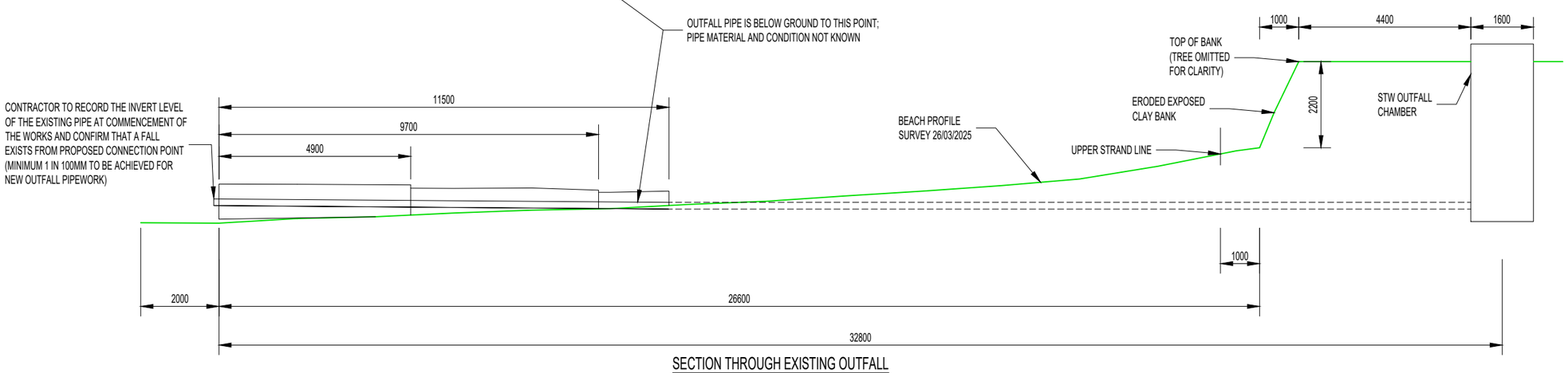
Appendix F – Proposed works drawings



PLAN OF EXISTING OUTFALL
1:125

OUTFALL PIPE IS BELOW GROUND TO THIS POINT; PIPE MATERIAL AND CONDITION NOT KNOWN

GENERAL VIEW OF ABOVE GROUND STRUCTURE OF OUTFALL



SECTION THROUGH EXISTING OUTFALL
1:125

SCALE 1 : 125

m 5 0 5 m

NOTES

1. ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES ABOVE ORDNANCE DATUM UNLESS SHOWN OTHERWISE.
2. THIS DESIGN IS PROPOSED ON THE BASIS OF CLIENT BRIEF, SPECIFICATIONS, BEST PRACTICE AND RISK REDUCTION / ELIMINATION. THE DESIGNER MUST BE CONSULTED ON ANY PROPOSED CHANGES, BEFORE THEY ARE CONSIDERED FOR IMPLEMENTATION.
3. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH CESWI 8 ['CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY (8TH EDITION)'] SUPPLEMENTED BY THE 'DCWW CIVIL ENGINEERING SPECIFICATION CS501A'.

SITE LOCATION

GRID REFERENCE: 237690, 347244
SITE ADDRESS: BEACH ROAD, TREFOR, CAERNARFONSHIRE, LL54 5LB

CAUTION: THE MANAGEMENT AND DESIGN OF ANY AND ALL TEMPORARY WORKS REQUIRED TO EXECUTE THIS DESIGN ARE THE RESPONSIBILITY OF THE CONTRACTOR.

REV	DATE	DESCRIPTION	ORIG	CHK	APP
P01	10/04/2025	FIRST ISSUE	BL	KJP	TM

CLIENT: Dŵr Cymru Welsh Water

PRINCIPAL DESIGNER: DCWW

Waterco Ltd., Eden Court, Lon Parcwr Business Park, Ruthin LL15 1NJ
tel (+44) 1824 702220
www.waterco.co.uk

SCHEME: TREFOR GWYDIR MAWR STW

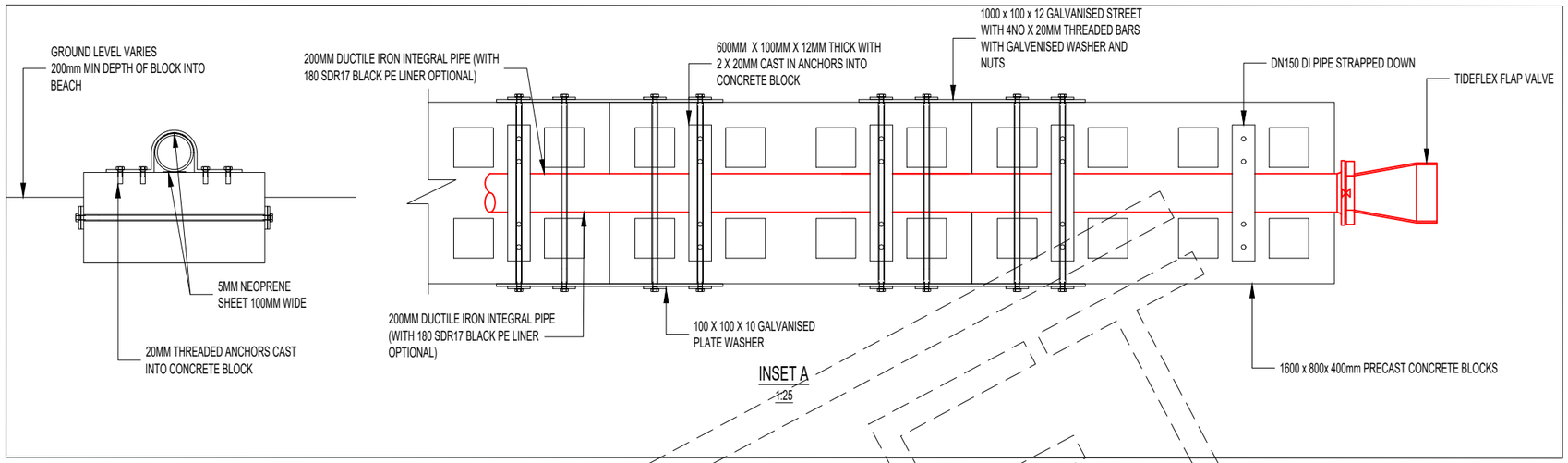
TITLE: EXISTING OUTFALL PIPE

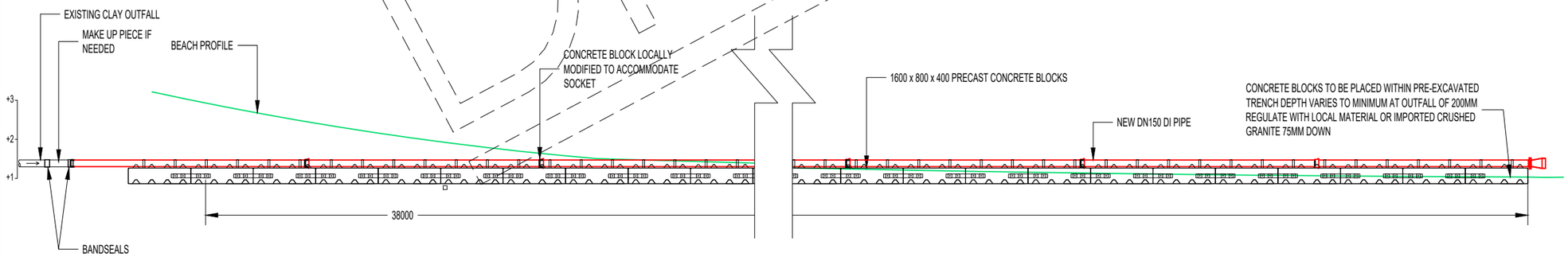
ORIGINATOR	CHECKER	APPROVER
B. LAVIN	K. PICKERING	T. MITCHELL

STATUS: PRELIMINARY

SCALE / SHEET SIZE: 1:125 / A3
REV: P01

DRAWING NO.: 16337-2404





OPTION 7

SCALE 1 : 125

m 5 0 5 m

NOTES

1. ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES ABOVE ORDNANCE DATUM UNLESS SHOWN OTHERWISE.
2. THIS DESIGN IS PROPOSED ON THE BASIS OF CLIENT BRIEF, SPECIFICATIONS, BEST PRACTICE AND RISK REDUCTION / ELIMINATION. THE DESIGNER MUST BE CONSULTED ON ANY PROPOSED CHANGES, BEFORE THEY ARE CONSIDERED FOR IMPLEMENTATION.
3. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH CESWI 8 ['CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY (8TH EDITION)'] SUPPLEMENTED BY THE 'DCWW CIVIL ENGINEERING SPECIFICATION CS501A'.
4. IN-SITU CONCRETE SHALL BE TESTED IN ACCORDANCE WITH CESWI 8 CL 2.8 - TYPE OF STRUCTURE - CRITICAL STRUCTURE (CL. 2.8.1). ADDITIONALLY FIELD CURES TO BE TAKEN TO VERIFY ACTUAL BEFORE TRANSPORT AND PLACING.

CAUTION: THE MANAGEMENT AND DESIGN OF ANY AND ALL TEMPORARY WORKS REQUIRED TO EXECUTE THIS DESIGN ARE THE RESPONSIBILITY OF THE CONTRACTOR.

REV	DATE	DESCRIPTION	ORIG	CHK	APP
P01	18/02/2025	FIRST ISSUE	BL	KJP	GJ

CLIENT

Dŵr Cymru Welsh Water

PRINCIPAL DESIGNER

DCWW

Waterco Ltd., Eden Court,
Lon Parcwr Business Park, Ruthin LL15 1NJ
tel (+44) 1824 702220
www.waterco.co.uk

SCHEME

TREFOR GWYDIR MAWR STW

TITLE

PIPE PROTECTION DETAIL OPTION 7

ORIGINATOR	CHECKER	APPROVER
B. LAVIN	K. PICKERING	G. JONES

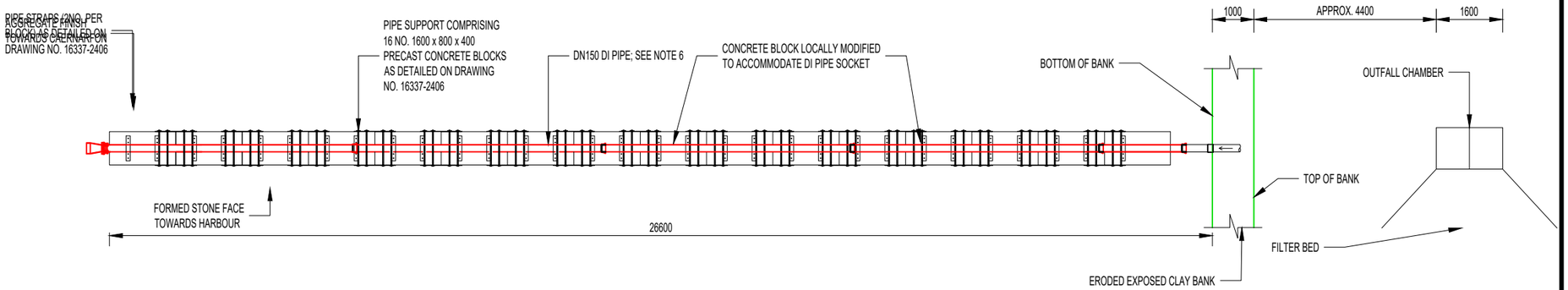
STATUS

PRELIMINARY

SCALE / SHEET SIZE	REV
AS SHOWN / A3	P01

DRAWING NO.

16337-2403

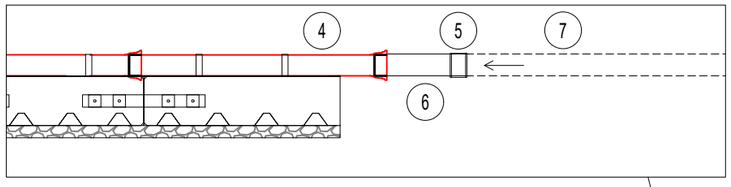


SCALE 1 : 25

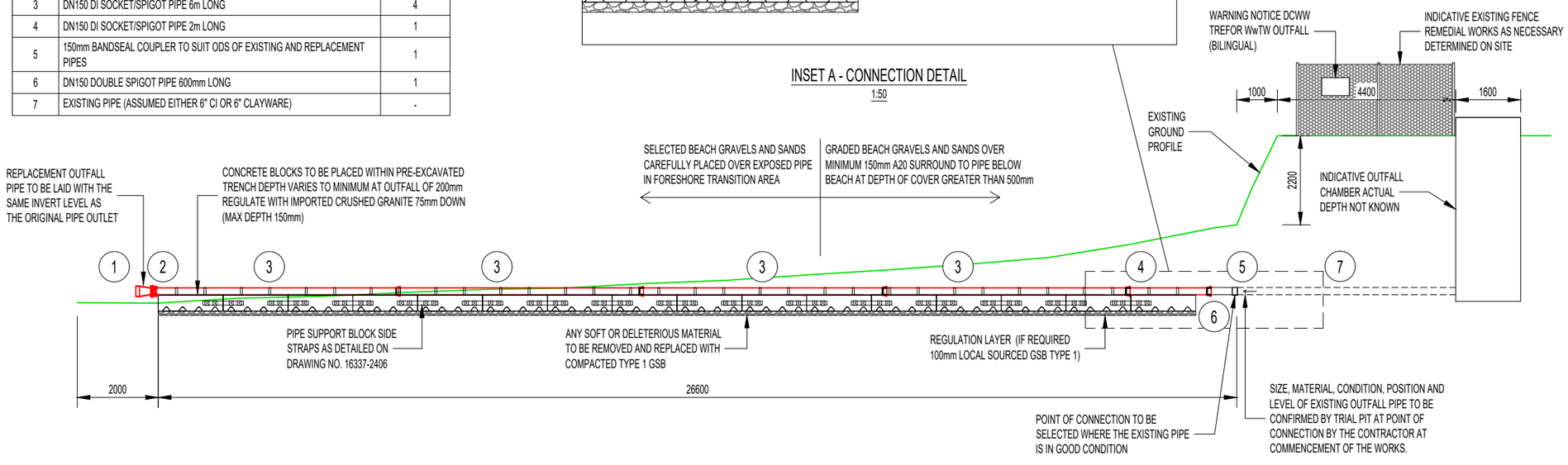
m 1 0 1m

PLAN VIEW OF PIPE SUPPORT
1:25

FITTINGS SCHEDULE		
NO.	FITTING	NO. OF FITTINGS
1	150mm TIDEFLEX S35 VALVE WITH PN16 FLANGE	1
2	DN150 VJ FLEXLOCK FLANGE ADAPTOR	1
3	DN150 DI SOCKET/SPIGOT PIPE 6m LONG	4
4	DN150 DI SOCKET/SPIGOT PIPE 2m LONG	1
5	150mm BANDSEAL COUPLER TO SUIT ODS OF EXISTING AND REPLACEMENT PIPES	1
6	DN150 DOUBLE SPIGOT PIPE 600mm LONG	1
7	EXISTING PIPE (ASSUMED EITHER 6" CI OR 6" CLAYWARE)	-



INSET A - CONNECTION DETAIL
1:50



SECTION VIEW OF PIPE SUPPORT
1:125

SCALE 1 : 125

m 5 0 5 m

NOTES

1. ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES ABOVE ORDNANCE DATUM UNLESS SHOWN OTHERWISE.
2. THIS DESIGN IS PROPOSED ON THE BASIS OF CLIENT BRIEF, SPECIFICATIONS, BEST PRACTICE AND RISK REDUCTION / ELIMINATION. THE DESIGNER MUST BE CONSULTED ON ANY PROPOSED CHANGES, BEFORE THEY ARE CONSIDERED FOR IMPLEMENTATION.
3. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH CESWI 8 ['CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY (8TH EDITION)'] SUPPLEMENTED BY THE 'DCWW CIVIL ENGINEERING SPECIFICATION CS501A'.
4. DCWW SELECTED OPTION FOR OUTFALL REPLACEMENT.
5. EXISTING OUTFALL PIPE TO BE REMOVED AS FAR AS THE BOTTOM OF THE BANK, AND THE NEW OUTFALL PIPE LAID IN ITS PLACE TO THE SAME OUTFALL POSITION AND LEVEL.
6. ALL DUCTILE IRON PIPEWORK AND FITTINGS FOR USE WITH SEWERAGE/RAW WATER MUST BE IN ACCORDANCE WITH BS EN 598. THE PIPES SHALL HAVE A FACTORY APPLIED PROTECTIVE TAPE WRAP WITH 55% OVERLAP, SUITABLE FOR USE IN TIDAL WATERS.
7. BOLTED JOINTS AND FLANGES TO BE WRAPPED AS CESWI CL. 5.14 P2 ORP3. (TO BE UV STABLILISED)
8. QUOTATION AND DETAIL PROVIDED FOR CONCRETE BLOCKS FROM MONA PRECAST GAERWEN BLOCKS HAVE A CAST STONE FINISH TO FACE HARBOUR AND AGGREGATE FINISH TO FACE TOWARDS CAERNARFON TOTAL REQUIRED 16NOS EXCLUDING SPARES

SITE LOCATION

GRID REFERENCE: 237690, 347244
SITE ADDRESS: BEACH ROAD, TREFOR, CAERNARFONSHIRE, LL54 5LB

CAUTION: THE MANAGEMENT AND DESIGN OF ANY AND ALL TEMPORARY WORKS REQUIRED TO EXECUTE THIS DESIGN ARE THE RESPONSIBILITY OF THE CONTRACTOR.

REV	DATE	DESCRIPTION	ORIG	CHK	APP
P01	10/04/2025	FIRST ISSUE	BL	KJP	TM

CLIENT: Dŵr Cymru Welsh Water

PRINCIPAL DESIGNER: DCWW

Waterco Ltd., Eden Court, Lon Parcwr Business Park, Ruthin LL15 1NJ
tel (+44) 1824 702220
www.waterco.co.uk

SCHEME: TREFOR GWYDIR MAWR STW

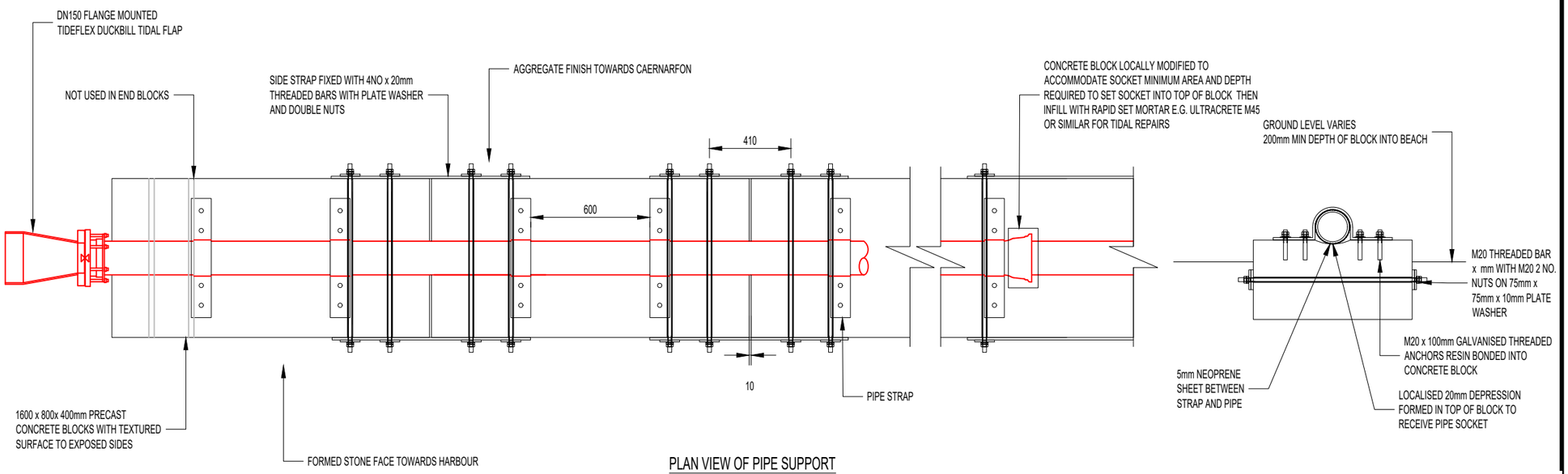
TITLE: PIPE SUPPORT DETAIL

ORIGINATOR	CHECKER	APPROVER
B. LAVIN	K. PICKERING	T. MITCHELL

STATUS: PRELIMINARY

SCALE / SHEET SIZE	REV
AS SHOWN / A3	P01

DRAWING NO. 16337-2405



PLAN VIEW OF PIPE SUPPORT
1:25

SCALE 1 : 25

m 1 0 1m

NOTES

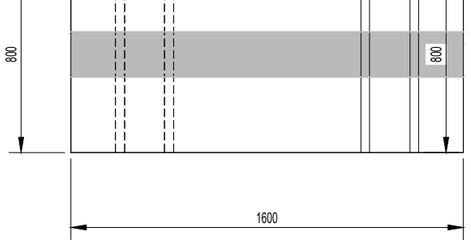
1. ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES ABOVE ORDNANCE DATUM UNLESS SHOWN OTHERWISE.
2. THIS DESIGN IS PROPOSED ON THE BASIS OF CLIENT BRIEF, SPECIFICATIONS, BEST PRACTICE AND RISK REDUCTION / ELIMINATION. THE DESIGNER MUST BE CONSULTED ON ANY PROPOSED CHANGES, BEFORE THEY ARE CONSIDERED FOR IMPLEMENTATION.
3. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH CESWI 8 ['CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY (8TH EDITION)'] SUPPLEMENTED BY THE 'DCWW CIVIL ENGINEERING SPECIFICATION CS501A'.
4. DCWW SELECTED OPTION FOR SHORT OUTFALL REPLACEMENT.
5. ALL STEEL FITTINGS AND FIXINGS SHALL BE HOT DIPPED GALVANISED TO BS EN ISO 1461 WITH A TOTAL NOMINALTHICKNESS AS SPECIFIED IN BS EN ISO 14713 AS SUITABLE FOR 'HIGH SALINITY - COASTAL'. GALVANISING SHALL BE UNDERTAKEN AFTER FABRICATION, WITH NO FURTHER CUTTING OR MODIFICATION ALLOWED.
8. QUOTATION AND DETAIL PROVIDED FOR CONCRETE BLOCKS FROM MONA PRECAST GAERWEN BLOCKS HAVE A CAST STONE FINISH TO FACE HARBOUR AND AGGREGATE FINISH TO FACE TOWARDS CAERNARFON TOTAL REQUIRED 16NOS EXCLUDING SPARES.
9. FIXINGS USE DOUBLE NUTS WHICH SHALL BE TIGHTENED AGAINST EACH OTHER TO FORM A LOCKED NUT.

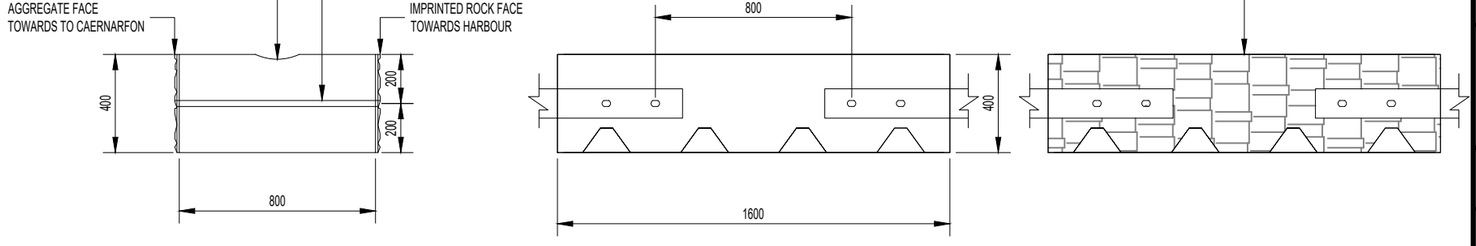
SITE LOCATION

GRID REFERENCE: 237690, 347244

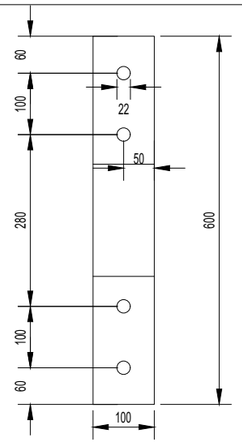
SITE ADDRESS: BEACH ROAD, TREFOR, CAERNARFONSHIRE, LL54 5LB

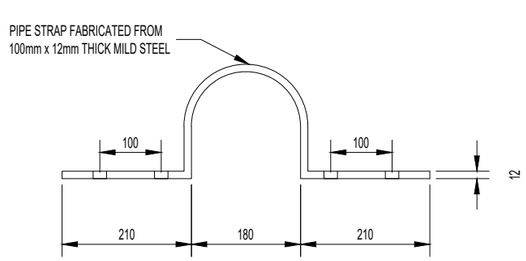
CAUTION: THE MANAGEMENT AND DESIGN OF ANY AND ALL TEMPORARY WORKS REQUIRED TO EXECUTE THIS DESIGN ARE THE RESPONSIBILITY OF THE CONTRACTOR.



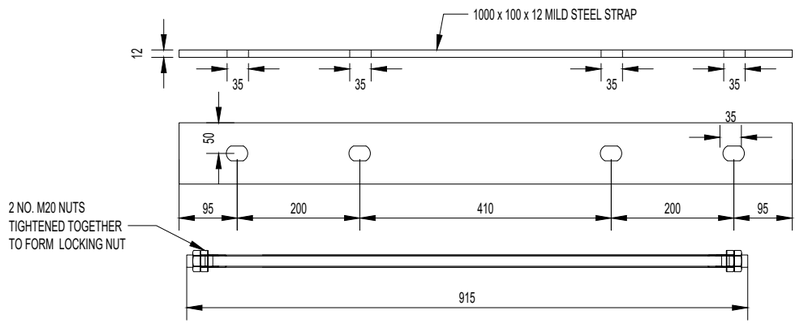


PRECAST CONCRETE BLOCK DETAILS
1:25





PIPE STRAP DETAIL
1:10



SIDE STRAP AND THREADED BAR DETAILS
1:10

SCALE 1 : 125

m 5 0 5 m

REV	DATE	DESCRIPTION	ORIG	CHK	APP
P01	10/04/2025	FIRST ISSUE	BL	KJP	TM

CLIENT: Dŵr Cymru Welsh Water

PRINCIPAL DESIGNER: DCWW

Waterco Ltd., Eden Court,
Lon Parcwr Business Park, Ruthin LL15 1NJ
tel (+44) 1824 702220
www.waterco.co.uk

SCHEME: TREFOR GWYDIR MAWR STW

TITLE: PIPE SUPPORT DETAIL, BLOCK DETAIL AND STRAP DETAIL

ORIGINATOR	CHECKER	APPROVER
B. LAVIN	K. PICKERING	T. MITCHELL

STATUS: PRELIMINARY

SCALE / SHEET SIZE: AS SHOWN / A3

REV: P01

DRAWING NO.: 16337-2406

Appendix G – Designers Risk Assessment

DESIGNER'S RISK ASSESSMENT

Project:	Trefor Short Sea Outfall	**Project No:**	16337
Client:	DCWW		

Prepared by:	Keith J Pickering	**Date:**	22/04/2025
Checked by:	Melanie Jones	**Date:**	23/04/2025
Approved by:	Gethin Jones	**Date:**	23/04/2025

Revision	Date	Revision Detail
1	24/04/2025	First Issue

Requirement:

The CDM regulations place an obligation on the Designer to eliminate hazards so far as is reasonably practicable, and reduce the risk from remaining hazards during the design process. The Designer has undertaken this assessment to identify any extra-ordinary risks, or those that would not be expected on this particular project by an experienced and competent Contractor. The aim is to avoid needless paperwork and bureaucracy and ensure the assessment is project specific, relevant and proportionate to the risk.

DRA Summary

Each of the following risk areas has been considered using the question below. Is a risk present which is considered to be **extra-ordinary or unexpected** in this instance?

If **YES** - A detailed risk assessment is required and attached accordingly
If **NO** - No further action is required.

Hazard Ref.	Risk Areas	YES or NO
	Utilities: Gas	NO
	Utilities: Electric	NO
	Utilities: Water & Sewers	NO
	Utilities: Other (Telecom, Virgin, GTC, Fibre)	NO
1	Ground Conditions	YES
2	Contaminated Land	YES
3	Hazardous Environment	YES
4	Proximity to Other Activities	YES
5	Proximity to Other Structure(s)	YES
	Sequence of Construction	NO
	Flood Risk / Near to Waterbody	NO
6	Access	YES
	Traffic Management	NO
	Interfaces	NO
	Confined Space Working	NO
	Working at Height	NO
	Steep Slopes	NO
	Maintenace Considerations	NO
	Demolition / Refurbishment / Repair	NO
	Welfare / Occupational Health	NO
	Environmental Issues	NO
	Other Significant Hazards not Identified Above	NO
7	Residual Risk to Future Users	YES

DRA Guidance

Risk Ranking (RR) System

			SEVERITY / CONSEQUENCE (HAZARD)				
			MINOR 1	SLIGHT 2	MODERATE 3	HIGH 4	VERY HIGH 5
LIKELIHOOD (RISK)	EXTREMELY UNLIKELY	1	1	2	3	4	5
	UNLIKELY	2	2	4	6	8	10
	LIKELY	3	3	6	9	12	15
	VERY LIKELY	4	4	8	12	16	20
	CERTAIN	5	5	10	15	20	25

Severity / Consequences Definitions

5	Very High	Death(s) / Permanent incapacity / Widespread loss
4	High	Major Injury (reportable category) / severe incapacity / serious loss
3	Moderate	Injury / illness requiring 3 days or more absence (reportable category) / moderate loss
2	Slight	Minor injury / illness - immediate first aid only - slight loss
1	Minor	No or trivial injury / illness / loss

Priority of Action

Score	1 - 5	6 - 10	Above 10
Rating	Low Risk	Medium Risk	High Risk
Minimum Acceptable Action	PPE, Signage, Best working practice	Isolate, Control	Eliminate, Reduce by substitution

Project: Trefor Short Sea Outfall
Client: DCWW
Project No: 16337

Haz Ref	Risk Area	Activity	Construction / Operation / Maintenance / Decommissioning / Environmental?	Associated Hazard(s)	Affected Parties	Possible Consequences for Affected Parties	Initial RR S	Initial RR L	Initial RR R	How has the hazard been eliminated by design?	If not eliminated by design, how has the risk been reduced by design?	Revised RR S	Revised RR L	Revised RR R	Residual Risk Description	Residual Risk Significant? (Y/N)	Reason for significance	If not eliminated or reduced sufficiently by design, how has the risk been controlled?
1	Ground Conditions	Installing pipework near sea eroded steep slope	Construction	Steep slopes which may collapse	Contractor; Public; Utility	Death, Injury; Repair costs; Project delays; Disruption to treatment process	5	3	15	Not eliminated	Not reduced	5	3	15	Risks remain	Yes	Potential for collapse	Contractor to undertake review of work required and develop suitable methodology to ensure persons working near the clay bank face are protected when making the pipework connection. SSoW required
2	Contaminated Land	Installing pipework	Construction	Existing pipework contains treated effluent. Observed septic discharge when on site	Contractor; Public; Utility	Death, or illness	5	4	20	Not eliminated	Not reduced	5	4	20	Risks remain	Yes	Treated effluent with septic (black effluent puddles) observed on the beach	Contractor to ensure all operatives are made aware of the health risks of treated sewage. Contractor provide suitable welfare facilities & PPE. Consider erection of signage warning other beach users. SSoW required.
3	Hazardous Environment	Installing pipework in a tidal zone	Construction	loss of equipment or plant, risk of drowning	Contractor; Public; Utility	Death; Injury; Repair costs; Project delays; Environmental Damage	5	5	25	Not eliminated	Not reduced	5	5	25	Risk remains	Yes	unexpected tidal surge or storm conditions	Contractor to monitor weather and tidal conditions and make suitable adjustments and allowances for access and egress and working time on the foreshore. No plant or equipment to be left at outfall location all plant returned to compound. Consider use of green fuels and oils. SSoW required.
4	Proximity to Other Activities	Public using car park and facilities	Construction	risk of injury by collision or slip trip or falls	Contractor; Public; Utility	Injury or death of public . Repair costs; Project delays;	5	4	20	Not eliminated	Not reduced	5	4	20	Risks remain	Yes	Interaction of plant movements and users of car park and toilet facilities	Contractor to provide maintain and manage a suitable safe access and passage system to include fencing, signing and use of banks persons. SSoW required.
5	Proximity to Other Structure(s)	Installing pipework close to existing waste water treatment works	Construction	potential for ground collapse supporting the existing filter bed or discharge chamber	Utility, Contractor,	Project delay; Supply disruption	3	3	9	Not eliminated	Not reduced	3	3	9	Risks remain	Yes	Need to maintain discharge treated effluent during installation of new outfall	DCWW/Contractor to liaise and agree methodology for discharging treated flows from works whilst outfall pipework is installed - SSoW required
6	Access	Use of public car park and access along tidal foreshore	Construction	Risk of operator / maintainer being struck by passing vehicles. Unable to operate apparatus due to obstructions (e.g. parked cars).	Operatives, Public	Death, serious injury; Delay to required operation	5	4	20	Not eliminated	Not reduced	5	4	20	Risks remain	Yes	Careful management of the risk is required during operation.	Operator / maintainer to ensure suitable traffic & pedestrian management measures are in place and erect suitable barriers around extent of works prior to undertaking any maintenance. SSoW required

Appendix H - WFD Scoping Template for activities in estuarine and coastal waters

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 water body, complete a template for each water body
- 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	Alun Griffiths Contractors Ltd. (Prepared by YGC on behalf of Alun Griffiths)
Application reference number (where applicable)	TBC
Name of activity	Gwydir Mawr Trefor Outfall
Brief description of activity	The proposed works involve the repair of a damaged 28 m section of a 150 mm cast iron foul outfall pipe located at Gwydir Mawr, Trefor serving Welsh Water's Waste Water Treatment Works (WWTW). The scope includes the excavation and removal of the damaged section, which will be replaced with a new 150 mm pipe. The replacement pipe will be securely fixed onto precast concrete blocks with the use of galvanised sheets fixed by threaded bars. The blocks will be laid to maintain the existing profile, ensuring alignment with the existing discharge point. The connection will be re-established at the damaged end of the pipe using suitable bandseals.
Location of activity (central point XY coordinates or national grid reference)	SH 37691 47260

Footprint of activity (ha)	<0.003 ha
Timings of activity (including start and finish dates)	Works proposed to be carried out in May 2025 to last approximately 4 weeks.
Extent of activity (for example size, scale frequency, expected volumes of output or discharge)	The extent of the activity is within Caernarfon Bay South. Discharge rates are minimal and should only occur in emergency / severe rainfall situations
Use or release of chemicals (state which ones)	Potential for the **accidental** release of diesel, petrol, pipe grease, concrete, aggregate and sewage during construction

Water body[1]	**Description, notes or more information**
WFD water body name	Caernarfon Bay South
Water body ID	GB651010610000
River basin district name	Western Wales
Water body type (estuarine or coastal)	Coastal
Overall water body status (2015)	Good
Ecological status	Good
Chemical status	Good
Target water body status and deadline	Good status by 2015
Hydromorphology status of water body	*N/A*
Heavily modified water body and for what use	*N/A*
Higher sensitivity habitats present	*N/A*

Lower sensitivity habitats present	N/A
Phytoplankton status	Good
History of harmful algae	N/A
WFD protected areas within 2km	SSSI: • Gwydir Bay • Coed Elernion • Cappas Lwyd • Yr Eifl

[1] *Water body information for Welsh waters can be found in the 'Water Watch Wales' interactive map. Additional information on habitats and protected areas can be found on NRW's interactive 'protected areas of land and sea' map. 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		Impact assessment not required	
Could significantly impact the hydromorphology of any water body		Impact assessment not required	
Is in a water body that is heavily modified for the same use as your activity		Impact assessment not required	

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 water body 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		No to all – impact assessment not required	N/A
1% or more of the water body's area			N/A
Within 500m of any higher sensitivity habitat			N/A
1% or more of any lower sensitivity habitat			N/A

[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		Go to next section	
Could impact on normal fish behaviour like movement, migration or spawning (for example creating a physical barrier,		Impact assessment not required	

noise, chemical change or a change in depth or flow)			
Could cause entrainment or impingement of fish		Impact assessment not required	

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 water body 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)		Impact assessment not required	
Is in a water body with a phytoplankton status of moderate, poor or bad		Impact assessment not required	
Is in a water body with a history of harmful algae		Impact assessment not required	

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	Yes	No	Water quality risk issue(s)

sediment disturbance or building works) consider if:			
The chemicals are on the Environmental Quality Standards Directive (EQSD) list		Impact assessment not required	
It disturbs sediment with contaminants above Cefas Action Level 1		Impact assessment not required	

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		Impact assessment not required	

[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 water body (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]		Scale and nature of the works are not considered to cause an impact or alter the status. Best practice and additional site measures to be implemented.	SSSI: - Gwydir Bay - Coed Elernion - Cappas Lwyd - Yr Eifl

[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 water bodies
- activities that help spread existing INNS, either within the immediate water body or other water bodies

Consider if your activity could:	Yes	No	INNS risk issue(s)
Introduce or spread INNS		Impact assessment not required	

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	
Biology: habitats	NO	
Biology: fish	NO	
Water quality	NO	
Protected areas	NO	

Invasive non-native species	NO	

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.