

Pell Frischmann

Exmouth Sea Outfall

Water Framework Directive Assessment

November 2025

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1 Introduction

1.1 Introduction and Purpose of the Report

Pell Frischmann have been commissioned by Galliford Try (GT), on behalf of South West Water (SWW), to undertake a Water Framework Directive (WFD) Assessment to support a Marine Management Organisation (MMO) application, for a new sea outfall at Straight Point, near Sandy Bay, Exmouth.

The purpose of this report is to capture the findings of the WFD Assessment in accordance with the Water Framework Directive (and corresponding UK law) and to demonstrate how the Proposed Scheme will comply with the Directive. The WFD Assessment is also required to demonstrate that the Proposed Scheme will not cause deterioration of relevant water bodies or prevent achievement of status targets. Where any potential impacts have been identified, appropriate measures have been proposed.

1.2 Need for the Proposed Scheme

The Proposed Scheme is driven by requirements to improve the Exe Estuary Shellfish Water. The strategy results in more flow being passed forward from Phear Park and Maer Road pumping stations towards Maer Lane Sewage Treatment Works (STW), to reduce discharges from Phear Park and Maer Road overflows to less than 10 spills per annum on average in compliance with Shellfish Water standards. A subsequent phase of works to be complete by March 2028 will involve increasing treatment capacity at Maer Lane STW to reduce STW settled overflow discharges to less than 10 spills per annum on average in compliance with Shellfish Water standards.

Phear Park overflow discharges into the Exe Estuary Shellfish Waters and Maer Road overflow discharges into the Outer Exe Shellfish Waters and also Exmouth Bathing Waters. Maer Lane STW overflow discharges to the coast via Straight Point Sea Outfall which is just inside the newly designated Sandy Bay Shellfish Waters.

Once the increased treatment capacity at Maer Lane STW has been delivered there will be a significant decrease in the frequency and volume of storm discharges across the catchment including the STW settled storm overflow.

In the interim, before treatment capacity is increased, there will be an increase in settled storm sewage discharge volumes from the STW overflow but spill frequencies and spill durations in the Exmouth sewerage catchment as a whole will decrease when compared with the current operational performance. However, the new outfall location coupled with doubling the number of diffusers to 16 should reduce the impact on the shellfish waters within and at the mouth of the Exe Estuary and significantly improve the dilution of the treated discharge.

The predicted spill frequencies and volumes are provided within the table below.

Table 1-1: Predicted Spill Frequencies and Volumes

	Baseline Model		AMP7 Post Shellfish Project		AMP8 Post STW Upgrade (Full Flow to Treatment (FFT) = 546 l/s)	
	Number of Spills per annum (12/24)	Annual Spill Volume (m ³)	Number of Spills per annum (12/24)	Annual Spill Volume (m ³)	Number of Spills per annum (12/24)	Annual Spill Volume (m ³)
Maer Road PS CSO	42.0	204,376	7.5	20,923	7.5	20,923
Phear Park PS CSO	25.0	70,072	7.5	18,644	7.5	18,644
Maer Lane STW SSO	45.5	89,778	41.0	333,317	10.0	35,943
Total Volume		364,226		372,884		75,510

The existing outfall pipe is nearing the end of its design life and it needs to be upsized in order to accommodate the additional flow.

1.3 Location of the Proposed Scheme

The land-based section of the Proposed Scheme is located on Straight Point, which is a headland located between the coastal areas of Exmouth and Budleigh Salterton in Devon. The Proposed Scheme then extends from under the headland into a section of the sea that is designated as the Lyme Bay West water body. The proposed pipeline is approximately 785m in length.

The northern point of the Proposed Scheme is located at Grid Reference: SY 03585 79844 and is located within the Haven Devon Cliffs Holiday Park. The southern point of the Proposed Scheme is located at Grid Reference: SY 03948 79191, and as stated above, is located within the sea in front of the headland. The Proposed Scheme location can be observed within Figure 1.1, overleaf. The Proposed Scheme will replace the existing sea outfall owned by SWW, which is located at Grid Reference: SY 03978 79191.

It is noted that the section of works on which this WFD Assessment focuses is only the sea-based elements of the works (i.e. those shown within the indicative diffuser works area on Figure 1.1 overleaf). This is because this WFD is being produced to support the MMO licence application, which focuses on areas of works below mean high water. Most of the outfall will be directionally drilled through the solid geology from land and only the 'breakout' area of the drilling and the outfall diffuser section will involve works on the seabed (as referred to within Section 1.4).



Figure 1.1: Scheme Location Figure

1.4 Proposed Scheme Description

A new sea outfall for final effluent and settled storm sewage is proposed at Straight Point, to the east of Sandy Bay, Exmouth. It is to be installed in close proximity to the existing outfall, circa 30m to the west.

An outfall transfer pipe is required to connect an incoming trench-laid gravity pipeline at Devon Cliffs Holiday Park to the proposed seabed discharge (diffuser) outlet offshore. The outfall pipe is required to be 800mm internal diameter and around 785 m long (in plan). Trenchless 'horizontal directional drilling' (HDD) pipe installation method has been proposed for installation of the outfall pipe. A diffuser system will be installed on the seabed and will be connected to the directionally drilled outfall. CORMIX modelling has been undertaken by HR Wallingford to assess dilution and dispersion in the near-field.

The current outfall and diffuser system takes a maximum flow of 350l/s (273l/s of final effluent and 77l/s of settled storm flow). The proposed outfall and diffuser system will be sized to accommodate 991 l/s. Initially this will consist of 273 l/s of treated final effluent and 718 l/s of settled storm flow in line with the catchment strategy. Investment is planned during AMP8 to reduce the spill frequency from Maer Lane STW to 10 spills per annum. This will result in maximum flows of 546l/s of final effluent and 445l/s of settled storm flow being discharged at the outfall.

2 Water Framework Directive Assessment

2.1 WFD Context

The Water Framework Directive was established in 2000¹ by the European Parliament to provide a framework for action in the European community for the water environment. The purpose of the WFD is *‘to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater.’*

The Water Framework Directive was transposed into UK law in 2003 as The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003. The Regulations have since been amended in 2015 and 2016 and, most recently, in 2017².

The objectives of the WFD and WFD Regulations include:

- Preventing deterioration of a water body and protecting and improving the ecological and chemical condition of surface water;
- Protecting, enhancing and restoring water bodies, with the aim of achieving good ecological and chemical status by a specified target date;
- Meeting the requirements of WFD Protected Areas (including Shellfish Waters, Bathing Waters, Special Areas of Conservation, Special Protection Areas and Coastal Sensitive Areas);
- Promoting sustainable use of water as a natural resource;
- Conserving habitats and species that depend directly on water;
- Aiming to progressively reduce pollution from priority substances and aiming to cease or phase out emissions, discharges and losses of priority hazardous substances;
- Progressively reducing pollution of groundwater and prevent or limiting the entry of pollutants; and
- Contributing to mitigating the effects of floods and droughts.

Under the WFD Regulations, the Environment Agency has established 16 River Basin District (RBD) within England (although some districts cover parts of Scotland and Wales). Each RBD has a River Basin Management Plan (RBMP). The RBMP includes details of the current condition of water bodies in UK catchments, as well identifying objectives and measures for individual water bodies, as well as wider catchments.

2.2 WFD Status Classifications

There are five status classifications that can be assigned to a WFD element, including high, good, moderate, poor and bad (with the aim of achieving at least good status). If a watercourse is classified as artificial or heavily modified, then it cannot achieve good status, but it can reach good ecological potential. For chemical status, the status can either be good or fail.

Table 2.1, below, describes the meaning assigned to each status level (as status by the Environment Agency³).

¹ Official Journal of the European Communities (2000) Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.

² The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017.

³ Environment Agency (2022) Guidance – River basin management plans, updated 2022: current condition and environmental objectives. Available at: [River basin management plans: updated 2022 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/river-basin-management-plans-updated-2022)

Table 2.1: WFD Status Level and Definitions

WFD Status	Definition
High	Near natural conditions ➤ No restriction on the beneficial uses of the water body; and ➤ No impacts on amenity, wildlife or fisheries.
Good	Slight change from natural conditions because of human activity ➤ No restriction on the beneficial uses of the water body; ➤ No impact on amenity or fisheries; and ➤ Protects all but the most sensitive wildlife.
Moderate	Moderate change from natural conditions because of human activity ➤ Some restriction on the beneficial uses of the water body; ➤ No impact on amenity; and ➤ Some impact on wildlife and fisheries.
Poor	Major change from natural conditions because of human activity ➤ Some restrictions on the beneficial uses of the water body; ➤ Some impact on amenity; and ➤ Moderate impact on wildlife and fisheries.
Bad	Severe change from natural conditions because of human activity ➤ Significant restriction on the beneficial uses of the water body; ➤ Major impact on amenity; and ➤ Major impact on wildlife and fisheries with many species not present.

2.3 South West River Basin Management Plan

A River Basin Management Plan (RBMP) sets *'legally binding locally specific environmental objectives that underpin water regulation (such as permitting and planning activities)'*⁴. RBMPs follow 6-yearly review cycles and have been prepared/updated in 2009, 2015 and 2022.

The Proposed Scheme is located within the South West River Basin District (RBD), for which measures within the South West RBMP⁵ apply. The RBMP covers threats to the water environment and suggests ways that the challenges and threats can be managed and mitigated. Challenges listed for the South West RBMP include the climate emergency, biodiversity crisis, physical modifications, pollution from agriculture and rural areas, pollution from water industry waste water, invasive non-native species, pollution from towns, cities and transport, changes to water levels and flows, chemicals in the water environment, pollution from abandoned mines, and plastics pollution. Not all of the listed challenges will apply to the water bodies assessed within this report.

The 2022 updated RBMP provides some information about progress and changes since the 2015 RBMP. The ecological status has stayed on a similar level, with a 1% decrease in the proportion of surface waters at good ecological status. It is noted that there has been little underlying change in status for most substances assessed as part of chemical status for surface waters, but that the overall picture presented for chemical status has changed significantly due to identification of new substances and changes to techniques and methods. For groundwater status, there has been a net increase in the number of groundwater bodies achieving good quantitative status, although there has been a net decrease in the number of groundwater bodies meeting good chemical status.

Section 3.4 of this report presents more detail about measures specific to the water bodies assessed within this WFD Assessment.

⁴ Environment Agency (2022) Guidance – River basin management plans, updated 2022: current condition and environmental objectives. Available at: [River basin management plans: updated 2022 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/river-basin-management-plans-updated-2022).

⁵ Environment Agency (2022) Guidance – South West river basin district river management plan: updated 2022. Available at: [South West river basin district river basin management plan: updated 2022 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/south-west-river-basin-district-river-management-plan-updated-2022).

2.4 WFD Assessment Methodology

Guidance and Sources

In order to comply with the WFD and UK Regulations, an assessment needs to be carried out (this document). Guidance used when writing this report includes the following:

- Environment Agency's (EA) Clearing the Waters for All⁶;
- EA's WFD risk assessment guidance⁷; and
- Planning Inspectorate's Advice Note Eighteen: The Water Framework Directive⁸.

References for other sources of information are covered in footnotes during later parts of this report, such as the Environment Agency Catchment Data Explorer, South West RBMP and other websites used to provide context regarding the assessed water bodies and WFD elements.

SWW also provided a 2022 Exmouth Shellfish No Deterioration SW_ND AMP7 Projects Technical Report which was taken into account when writing this report.

Some internal reports and drawings have also been considered, including:

- 53488-PFC-01-XX-DR-C-0004 HDD Pipe Installation Plan with Borehole Locations;
- 53488-PFC-01-XX-SP-C-0001 HDD Outfall Pipe – Technical Brief for Specialist Contractor Design and Installation; and
- 53488-PFC-01-XX-DR-C-0007 Details of Proposed Diffusers at Sea Outfall Plan & Sections.

Process

There are three parts to the WFD Assessment process. These include:

- Screening – excludes any activities that do not need to go through the scoping or impact assessment stages;
- Scoping – identifies the receptors that are potentially at risk from your activity and needs impact assessment; and
- Impact Assessment – considers the potential impacts of your activity, identified ways to avoid or minimise impacts, and shows if your activity may cause deterioration or jeopardise the water body achieving good status. This part of the process includes a detailed assessment water bodies and their quality elements.

No site visits have been carried out and it is not anticipated that any specific surveys will be required in order to complete this assessment report.

In line with EA guidance, the methodology used in this impact assessment includes:

- A review of the current WFD status of relevant water bodies (refer to section 3 of this document). This includes a review of WFD data, existing measures in relation to WFD objectives and any recorded reasons for why WFD objectives have not yet been met (i.e., reasons for not achieving good status);

⁶ Environment Agency (2017) Guidance – Water Framework Directive assessment: estuarine and coastal waters. Available at: [Water Framework Directive assessment: estuarine and coastal waters - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/water-framework-directive-assessment-estuarine-and-coastal-waters)

⁷ Environment Agency (2016) Water Framework Directive risk assessment. Available at: [Water Framework Directive risk assessment \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/government/publications/water-framework-directive-risk-assessment)

⁸ Planning Inspectorate (2017) National Infrastructure Planning – Advice Note Eighteen: The Water Framework Directive (2017), Version 1. Available at: [Advice Note Eighteen: The Water Framework Directive | National Infrastructure Planning \(planninginspectorate.gov.uk\)](https://www.planninginspectorate.gov.uk/publications/advice-note-eighteen-the-water-framework-directive/)

- Assessment of the impact of the Proposed Scheme on WFD receptors (such as water quality, hydromorphology, protected areas, biological receptors etc.). This should include assessing the likelihood and severity of an impact, and suggesting appropriate mitigation measures where relevant; and
- Assessment of the Proposed Scheme against the aims of the relevant RBMP to establish whether the works will prevent targets and objectives from being reached.

2.5 Consultation

No consultation has been carried out specifically for this WFD Assessment, nor for the MMO licence application itself.

However, it is noted that SWW have had contact or discussions with the EA on various occasions in 2019, 2020 and 2021 regarding the scheme proposals and issues relating to the nearby Bathing and Shellfish Waters.

3 WFD Baseline Information

3.1 Water Bodies Present

The sea-based extents of the Proposed Scheme are located within the Lyme Bay West Water Body⁹, as shown within Figure 3.1, below. This water body falls within the Lyme Bay West Operational Catchment and the South West TraC Management Catchment of the South West RBD.

The Exe Water Body (as shown within Figure 3.1) is also within 2km of the outfall point and also has the potential to be impacted by the Proposed Scheme due to the hydrological connectivity. The Exe falls within the Exe Estuary Operational Catchment and the South West TRaC Management Catchment.

The inset within the below figure shows the extent of the Lyme Bay West and Exe Water Bodies.



Figure 3.1: Lyme Bay West and Exe Water Bodies Location Figure

According to the Catchment Data Explorer, the land-based extents of the Proposed Scheme overlay the Central Devon and Exe – Aylesbeare Mudstone Water Body, which is a groundwater body. This water body falls within the Central Devon and Exe – Aylesbeare Mudstone Operational Catchment and the South West GW (Groundwater) Management Catchment within the South West RBD.

However, the Central Devon and Exe – Aylesbeare Mudstone Water Body will not be assessed as part of the WFD Assessment within Table 4.2 of this report because this WFD Assessment is to support an MMO licence

⁹ Environment Agency (2022) Catchment Data Explorer – Lyme Bay West Water Body. Available at: [Lyme Bay West | Catchment Data Explorer | Catchment Data Explorer](#)

application, which only focuses upon the elements of the works below mean high water. The boundary of the Central Devon and Exe – Aylesbeare Mudstone Water Body does not enter into the area covered by sea.

3.2 WFD Status Information

3.2.1 Lyme Bay West Water Body

Table 3.1, below, presents information about the current status of the Lyme Bay West water body.

It should be noted that some objectives are for a time period already passed (i.e., 2015). This means that good status has already been achieved.

Table 3.1: Lyme Bay West Water Body WFD Status Details

River Basin District	South West TraC	
Water Body Name	Lyme Bay West	
Water Body ID	GB650806420000	
Water Body Type	Coastal Water	
Hydromorphological Designation	Not designated artificial or heavily modified	
Catchment Area	13696.638ha	
Linked Protected Areas	Ecological designations: ➤ South Hams (SAC), Lyme Bay and Torbay (SAC), Exe Estuary (SPA, and Ramsar), and Sidmouth to West Bay (SAC). Bathing Water Directive: ➤ Teignmouth Holcombe, Babbacombe, Sandy Bay, Meadfoot, Maidencombe, Sidmouth Jacobs Ladder, Dawlish Coryton Cove, Oddicombe, Budleigh Salterton, Teignmouth Town, Ness Cove, Sidmouth Town, Watcombe, Ladram Bay, Dawlish Town, St Mary's Bay (Devon), and Anstey's Cove (Torquay). Shellfish Water Directive: ➤ Sandy Bay, and Lyme Bay (West)	
WFD Element	2019 Status (Cycle 3)	Objective
Ecological Status	Moderate	Good by 2027 – Low confidence
Biological Quality Elements	Moderate	Good by 2027 – Low confidence
<i>Invertebrates</i>	Moderate	Good by 2027 – Low confidence
<i>Infaunal Quality Index</i>	Moderate	-
<i>Phytoplankton</i>	Good	Good by 2015
Physico-Chemical Quality Elements	High	Good by 2015
<i>Dissolved Oxygen</i>	High	Good by 2015
Hydromorphological Supporting Elements	Supports good	-
<i>Morphology</i>	Supports good	-
Specific pollutants	High	High by 2015
<i>Iron</i>	High	High by 2015
Chemical	Fail	Good by 2063
Priority Hazardous Substances	Fail	Good by 2063
<i>Benzo(a)pyrene</i>	Good	Good by 2015
<i>Dioxins and dioxin-like compounds</i>	Good	Good by 2015
<i>Heptachlor and cis-Heptachlor epoxide</i>	Good	Good by 2021

WFD Element	2019 Status (Cycle 3)	Objective
Hexabromocyclododecane (HBCDD)	Good	Good by 2015
Hexachlorobenzene	Good	Good by 2015
Hexachlorobutadiene	Good	Good by 2015
Mercury and its Compounds	Fail	Good by 2040
Perfluorooctane sulphonate (PFOS)	Good	Good by 2015
Polybrominated diphenyl ethers (PBDE)	Fail	Good by 2063
Priority Substances	Good	Good by 2015
Fluoranthene	Good	Good by 2015
Other Pollutants	Does not require assessment	Does not require assessment / 2015

3.2.2 Exe Water Body

Table 3.2, below, presents information about the current status of the Exe water body.

As outlined for the Lyme Bay West Water Body, some objectives are for a time period already passed, meaning that good status has already been achieved.

Table 3.2: Exe Water Body WFD Status Details

River Basin District	South West TraC	
Water Body Name	Exe	
Water Body ID	GB510804505600	
Water Body Type	Transitional	
Hydromorphological Designation	Heavily modified	
Catchment Area	1822.913 ha	
Linked Protected Areas	Ecological designations: ➤ Exe Estuary (SPA and Ramsar), Dawlish Warren (SAC) Bathing Water Directive: ➤ Dawlish Warren, Exmouth Shellfish Water Directive: ➤ Exe Estuary, Outer Exe	
WFD Element	2019 Status (Cycle 3)	Objective
Ecological Status	Moderate	Moderate by 2015
Biological Quality Elements	Moderate	Good by 2027 – Low confidence
Angiosperms	Moderate	Good by 2027 – Low confidence
Saltmarsh	Moderate	-
Seagrass	High	-
Fish	Good	Good by 2015
Invertebrates	Good	Good by 2015
Infaunal Quality Index	Good	-
Macroalgae	Good	Good by 2015
Fucoid Extent	Good	-
Opportunistic Macroalgae	High	-
Phytoplankton	Good	Good by 2015
Physico-Chemical Quality Elements	Moderate	Moderate by 2015

WFD Element	2019 Status (Cycle 3)	Objective
<i>Dissolved Inorganic Nitrogen</i>	Moderate	Moderate by 2015
<i>Dissolved Oxygen</i>	High	Good by 2015
Hydromorphological Supporting Elements	Supports good	Supports good by 2015
<i>Hydrological Regime</i>	Supports good	Supports good by 2015
Supporting elements (Surface Water)	Moderate	Good by 2027 – Low confidence
<i>Mitigation Measures Assessment</i>	Moderate or less	Good by 2027 – Low confidence
Specific pollutants	High	High by 2015
<i>Arsenic</i>	High	High by 2015
<i>Chromium (VI)</i>	High	High by 2015
<i>Copper</i>	High	High by 2015
<i>Iron</i>	High	High by 2015
<i>Un-ionised ammonia</i>	High	High by 2015
<i>Zinc</i>	High	High by 2015
Chemical	Fail	Good by 2063
Priority Hazardous Substances	Fail	Good by 2063
<i>Anthracene</i>	Good	Good by 2015
<i>Benzo(a)pyrene</i>	Good	Good by 2015
<i>Benzo(b)fluoranthene</i>	Good	Good by 2015
<i>Benzo(g-h-i)perylene</i>	Fail	Good by 2033
<i>Benzo(k)fluoranthene</i>	Good	Good by 2015
<i>Cadmium and its Compounds</i>	Good	Good by 2015
<i>Dioxins and dioxin-like compounds</i>	Good	Good by 2015
<i>Heptachlor and cis-Heptachlor epoxide</i>	Good	Good by 2015
<i>Hexabromocyclododecane (HBCDD)</i>	Good	Good by 2015
<i>Hexachlorobenzene</i>	Good	Good by 2015
<i>Hexachlorobutadiene</i>	Good	Good by 2015
<i>Hexachlorocyclohexane</i>	Good	Good by 2015
<i>Mercury and its Compounds</i>	Fail	Good by 2040
<i>Nonylphenol</i>	Good	Good by 2015
<i>Pentachlorobenzene</i>	Good	Good by 2015
<i>Perfluorooctane sulphonate (PFOS)</i>	Good	Good by 2015
<i>Polybrominated diphenyl ethers (PBDE)</i>	Fail	Good by 2063
<i>Quinoxifen</i>	Good	Good by 2015
<i>Tributyltin Compounds</i>	Good	Good by 2015
Priority Substances	Good	Good by 2015
<i>Aclonifen</i>	Good	Good by 2015
<i>Alachlor</i>	Good	Good by 2015
<i>Bifenox</i>	Good	Good by 2015
<i>Fluoranthene</i>	Good	Good by 2015
<i>Lead and its Compounds</i>	Good	Good by 2015

WFD Element	2019 Status (Cycle 3)	Objective
<i>Napthalene</i>	Good	Good by 2015
<i>Nickel and Its Compounds</i>	Good	Good by 2015
<i>Octylphenol</i>	Good	Good by 2015
<i>Trichloromethane</i>	Good	Good by 2015
Other Pollutants	Good	Good by 2015
<i>Aldrin, Dieldrin, Endrin & Isodrin</i>	Good	Good by 2015
<i>DDT Total</i>	Good	Good by 2015
<i>Tetrachloroethylene</i>	Good	Good by 2015
<i>Para – para DDT</i>	Good	Good by 2015

3.3 Reasons for Not Achieving Good

The EA Catchment Data Explorer also gives reasons as to why a water body may not achieve good, or above, status. No reasons for deterioration are listed for either water body. Table 3.3, below, presents the reasons for the Lyme Bay West Water Body.

Table 3.3: Lyme Bay West Water Body Reasons for Not Achieving Good

Reason Type	Significant Water Management Issue (SWMI)	Activity	Category	Business Sector	Classification Element
Reason for not achieving good (RNAG)	Measures delivered to address reason, awaiting recovery	N/A	No sector responsible	N/A	Mercury and its Compounds
RNAG	Measures delivered to address reason, awaiting recovery	N/A	No sector responsible	N/A	Polybrominated diphenyl ethers (PBDE)

Whilst the RNAG information does not make mention of why invertebrates did not achieve 'good status', the objectives section of the EA Catchment Data Explorer webpage states that the 'cause of adverse impact is unknown'. This means that sewage discharges have not been identified as a reason for not achieving a good status.

Table 3.4 includes the reasons for the Exe Water Body for not achieving good status.

Table 3.4: Exe Water Body Reasons for not Achieving Good

Reason Type	Significant Water Management Issue (SWMI)	Activity	Category	Business Sector	Classification Element
RNAG	Diffuse source	Poor soil management	Agriculture and rural land management	Agriculture - Arable	Dissolved Inorganic Nitrogen
RNAG	Diffuse source	Poor livestock management	Agriculture and rural land management	Agriculture - Livestock	Dissolved Inorganic Nitrogen
RNAG	Diffuse source	Poor nutrient management	Agriculture and rural land management	Agriculture - Livestock	Dissolved Inorganic Nitrogen
RNAG	Point source	Private sewage treatment	Urban and transport	Urban	Dissolved Inorganic Nitrogen
RNAG	Point source	Sewage discharge (continuous)	Water industry	Waste water treatment	Dissolved Inorganic Nitrogen

Reason Type	Significant Water Management Issue (SWMI)	Activity	Category	Business Sector	Classification Element
RNAG	Unknown (pending investigation)	Unknown (pending investigation)	Sector under investigation	N/A	Benzo(g-h-i)perylene
RNAG	Physical modification	Other (not in list, must add details in comments)	Local and Central Government	N/A	Mitigation Measures Assessment
RNAG	Physical modification	Urbanisation - transport	Urban and transport	Railways	Angiosperms
RNAG	Measures delivered to address reason, awaiting recovery	N/A	No sector responsible	N/A	Polybrominated diphenyl ethers (PBDE)
RNAG	Measures delivered to address reason, awaiting recovery	N/A	No sector responsible	N/A	Mercury and Its Compounds

3.4 River Basin Management Plan Measures

The updated RBMPs for the various RBDs across England were released in 2022. Part of the purpose of RBMPs is to include measures that should be implemented by various groups (such as the water industry, Government (public sector), rural land management, amongst others) to contribute to environmental objectives.

With use of the RBD summary spreadsheet, it was possible to identify that there are no measures specific to the Lyme Bay West Water Body, the Lyme Bay West Operational Catchment, the Exe Water Body or the Exe Estuary Operational Catchment. However, there are a large number of measures that exist for all RBDs and the South West RBD. The South West TraC Management Catchment also has two measures, but none of these make reference to the Lyme Bay West coastal waters or Exe transitional waters.

There are some measures which are relevant to all RBDs. These include measures relating to habitat restoration and creation, managing agricultural nutrients and pollution, sustainable abstraction management, pollution control initiatives, invasive non-native species control measures, and improving resilience against flooding, amongst many others.

4 Impact Assessment

4.1 Scoping Water Bodies for the WFD Assessment

As detailed above, the sea-based extents of the Proposed Scheme lie within the Lyme Bay West Water Body, and the Exe Water Body lies less than 2km to the north-west.

As mentioned previously, the WFD Assessment does not consider impacts to groundwater relating to the Central Devon and Exe – Aylesbeare Mudstone Water Body.

A Scoping activity has been carried out for both the Lyme Bay West and Exe water bodies, using the Environment Agency's scoping template for activities in estuarine and coastal waters¹⁰. These can be viewed within Appendices A and B, respectively, at the end of this report.

A figure showing some of the WFD Protected Areas within proximity to the proposed outfall / diffuser area are shown in Appendix C of this report.

4.2 Assessment Against WFD Elements

The Scoping activity considers six topics of impacts:

- Hydromorphology;
- Biology – Habitats;
- Biology – Fish;
- Water Quality;
- WFD Protected Areas; and
- Invasive non-native species (INNS).

Based on the findings of the Scoping activity, it is not considered likely that the proposed works would have a potential impact on all of those topics of impacts. The topics for which potential impacts are considered likely include water quality and protected areas. Additionally, certain impacts are only relevant to the Lyme Bay West Water Body. For instance, only impacts which could occur through hydrological connectivity (such as release of discharge) have been assessed for the Exe Water Body due to no works taking place directly within that water body.

The potential impacts on the WFD quality elements and receptors are discussed in Table 4.2. The table provides a summary of the risks / impacts associated with the proposed works and indicates the magnitude and likelihood of these risks / impacts, as well as proposed mitigation and management.

The magnitude of an impact has been characterised as high, medium, low or negligible with respect to how serious the potential impact is considered to be. The magnitude criteria applied in this assessment is set out in Table 4.1, overleaf.

The likelihood is categorised as likely or unlikely and considers how likely it is that the proposed works will cause this negative impact to the receptor.

The residual risk is categorised in the same way as magnitude and considers whether the risk / impact is still significant after mitigation and management.

¹⁰ Environment Agency (2017) Water Framework Directive assessment: scoping template for activities in estuarine and coastal waters. Available at: [wfd_scoping_template.odt \(live.com\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/618811/wfd_scoping_template.odt)

Table 4.1: Estimating the Magnitude of an Impact on an Attribute

Magnitude	Criteria
High	Results in loss of attribute and / or quality and integrity of the attribute. (For example: loss or extensive change to a fishery; loss of regionally important public water supply; loss or extensive change to a designated nature conservation site; reduction the water body WFD classification status.)
Medium	Results in effect on integrity of attribute, or loss of part of attribute, and potential for reduction the water body WFD classification status.
Low	Results in some measurable change but would not affect the integrity or quality of the attribute or in WFD status.
Negligible	Insufficient magnitude to be measurable and/or unlikely to affect the integrity or quality of the attribute.

Table 4.2: Impact Assessment Table

WFD Element / Receptor	Potential Impact or Risk	Magnitude	Likelihood	Assessment / Mitigation	Residual Risk
Lyme Bay West Water Body					
Hydromorphology / Physical Habitat	<u>Construction Phase</u> The proposed works have the potential to impact the seabed at the breakout point of the outfall, which could alter the physical habitat <u>Operational Phase</u> No potential impacts identified	Negligible	Likely	Considering the size and nature of the works, any disturbance or alteration to the physical seabed habitat during construction will be minimal. There will be no impacts upon hydromorphology when considering the scale of the water body during construction or operation. Consequently, no mitigation is considered necessary.	Negligible
Biology: Habitats	<u>Construction and Operational Phases</u> The proposed works have the potential to impact upon habitats within this water body surrounding the outfall, such as habitat loss	Negligible	Unlikely	The EA's Scoping template has highlighted that the footprint of the activity at the outfall site is below 0.5km ² and is less than 1% of the water body's area, which helps reduce the severity of any potential impacts on biological habitats as less loss or disturbance of seabed is required. There are no higher sensitivity habitats within proximity to the works area. In terms of lower sensitivity habitats, whilst there is an area of subtidal soft sediment (sand, mud and mixed sediment) above the seabed at the site of the outfall, no loss of habitat is anticipated. No loss of habitat is anticipated at areas of nearby subtidal rocky reef either. Equally, the works area covers only a very tiny portion of these habitats (less than 1%) and therefore, no significant impacts are thought likely. Consequently, no mitigation is considered necessary.	Negligible
Biology: Fish	<u>Construction and Operational Phases</u> The proposed works have the potential to impact upon fish within the water body	Negligible	Unlikely	Both the construction and operational areas of the works will be minimal, and will not affect the ability of fish species to reach or enter the nearby Exe estuary. The placement of the diffuser will first involve some preparation of the seabed and, due to distance between the water surface and seabed, a long-arm excavator from a barge or platform is unlikely to be suitable. This means that some dredging activity will take place. However, this will be kept to a small area within the wider 40m x 15m diffuser works area (as shown on Figure 1.1). Whilst it is possible that some fish could get caught up in the movement of sediment during the construction phase, any effects will be short-lived, temporary, and very localised. It is therefore considered that this activity will not have significant effects on present fish populations. During operation there will be a release of discharge from the outfall. However, there is already an existing outfall nearby (which will no longer be used once the new outfall is operational). Therefore, it is not considered likely that there would be an impact on normal fish behaviour even with an increase in the volume of discharge, particularly considering the works are in the sea with no constraints on the space available for the fish to swim and carry out their behavioural activities. Consequently, no mitigation is considered necessary.	Negligible

WFD Element / Receptor	Potential Impact or Risk	Magnitude	Likelihood	Assessment / Mitigation	Residual Risk
Water Quality	<u>Construction Phase</u> The proposed works have the potential to cause impacts to water quality associated with construction activities, such as through disturbance of sediment or use of substances to aid the directional drilling process	Low	Likely	During construction, there is the potential for some very localised and minor adverse impacts on water quality associated with the disturbance of sediment on the seafloor. If any contaminants are present, they could be disturbed and released. However, as only a very small area will be disturbed during construction, and most of the mobile sediment is sand or gravel, it is not anticipated that there would be a significant adverse effect associated with this. There is historical evidence to suggest that the area of the coast at Exmouth and Sandy Bay is prone to coastal erosion, which can cause large-scale sediment disturbance and movement of fine sediment within the Lyme Bay West waters (such as online historical Google Earth images, and news articles of cliffs falls at Sandy Bay¹¹). The suspended sediment can be at sufficient concentrations to give a reddish appearance to the waters close to the coast. In comparison to such sediment movement, it is not anticipated that the breakthrough of the drill or the placement of a diffuser would cause significant sediment disturbance and therefore have any adverse impact on the benthic fauna and flora. As part of the directional drilling process, it is expected that bentonite will be used as a drilling aid as part of a fluid mixture with fresh water and potentially benign polymers. There is the potential for drilling fluid to escape to the sea during the breakthrough portion of the drilling works, which could have a localised impact upon water quality. However, the volume of fluid released is expected to be minimised through the proposed optimised drilling methodology, such as use of a pilot hole at a predetermined distance from the planned drill exit point and use of forward reaming or push hole-opening techniques to minimise drilling fluid losses to the seabed and to enable a maximum amount of drilling fluid to return onshore for processing and recycling. If appropriate, an alternative drilling fluid mixture containing biodegradable contents or just water could be utilised for the final section of the bore to minimise potential impacts to the marine environment. In terms of the duration of the construction works, it is not expected that works would be undertaken continuously for more than a spring neap tidal cycle. Whilst the expected programme for installation of the diffuser is 3-4 weeks total, this is not likely to occur continuously. Inclement weather at sea can also have an impact upon the programme. Overall, the residual effect is considered to be Low as it is not considered likely to affect the integrity of the watercourse.	Low
	<u>Operational Phase</u>	Medium	Likely	The purpose of the Proposed Scheme is to provide a new outfall to cope with the additional volume of discharge associated with increased flows from	Medium

¹¹ The Independent (2022) Cliff fall leaves hundreds of caravans on the edge. Available at: [Cliff fall leaves hundreds of caravans on the edge | The Independent](#)

WFD Element / Receptor	Potential Impact or Risk	Magnitude	Likelihood	Assessment / Mitigation	Residual Risk
	The use of the outfall to release final effluent and settled storm sewage could release pollutants and have an adverse effect on the water quality of the immediate and surrounding vicinity			Maer Road and Phear Park pumping stations being passed forward to the Maer Lane STW. This means that a higher volume of flow which may contain suspended solids and bacteria (for example E. coli and intestinal enterococci) could enter into the surrounding water environment. However, the use of a diffuser at the outfall site will provide some initial dilution of the discharge, while secondary dispersion will provide further mixing and dilution within the waters of the Water Body. A near-field dispersion assessment has been carried out by HR Wallingford, using CORMIX modelling, for peak flows and flows to full treatment (FFT) over both a mean spring and a mean neap tidal cycle. Based on the preliminary results, the proposed new diffuser arrangement is able to provide better dilution for FFT conditions. However, during peak flow conditions, the dilution performance of the proposed new diffuser is slightly less than the existing diffuser. During these peak flow conditions, concentrations of contaminants within the near-field will consequently be higher than those during the existing peak flow conditions, which could lead to a temporary reduction in water quality. The probability of these peak flow conditions to occur is expected to be low, and therefore the impact is also considered to be low. The proposed works will reduce the spill frequency from the Maer Road and Phear Park pumping stations to less than 10 spills per annum on average (the target amount). This means that there will be an improvement in the water quality in the Exe Estuary and Outer Exe Shellfish Waters. However, there will be an increase in spill volumes from Maer Lane STW, even though the spill frequency will remain similar to that at present. This increase in spill volume from Maer Lane STW has the potential to result in a temporary deterioration in water quality in the vicinity of the discharge location during peak flows. In terms of mitigation, the potential deterioration and adverse effects on water quality are considered to be temporary. Investment during AMP8 (the water industry's asset management plan period for 2025-2030) will enable a reduction of spill frequency from Maer Lane STW to 10 spills per annum on average by March 2028 at the latest. This would also involve a reduction of the proportion of settled storm flow, and an increased proportion of treated final effluent, within the discharge at the outfall.	
Protected Areas: Sandy Bay Bathing Water	<u>Construction Phase</u> Due to distance from the outfall point, no significant construction phase impacts are considered likely	Negligible	Unlikely	Potential impacts associated with release of bentonite associated with drilling are covered within the water quality assessment section of this table. In terms of the Sandy Bay Bathing Water, it is not anticipated that there would be any significant impacts considering the optimised drilling methodology (such as use of pilot hole, forwarding reaming or push hole-opening and potential to use an alternative drilling fluid for the section closest to the breakout point). If any fluids were to be released, there is some distance between the outfall point and the Bathing Water. Equally, the key concerns for the water quality at a Bathing Water is the presence of	Negligible

WFD Element / Receptor	Potential Impact or Risk	Magnitude	Likelihood	Assessment / Mitigation	Residual Risk
				intestinal enterococci and E.coli. Potential release of bentonite is not likely to have an effect on the measured criteria.	
	<u>Operational Phase</u> The operation of the outfall will involve release of discharge, which could contain contaminants and therefore, there is potential for adverse impacts upon the Bathing Water	Negligible	Likely	As discussed within the operational water quality assessment box above, there will be an increase in the volume of discharge at the proposed outfall (which could lead to an increase in contaminants or pollutants entering into the surrounding waters). This could be a concern for the Bathing Waters, however detailed coastal modelling has been undertaken and it shows that there is no detriment to existing designated Bathing Waters under any of the modelled wind conditions and under continuous discharge conditions. Overall, this means that there is a negligible impact upon Sandy Bay Bathing Water regardless of spill frequency or volume of discharge. In 2022, the bathing water quality was assigned as good ¹² . The proposed works should have no detrimental impact upon this classification.	Negligible
Protected Areas: Sandy Bay Shellfish Water	<u>Construction Phase</u> The proposed works have the potential to cause impacts relating to use of substances to aid the directional drilling process	Low	Likely	Potential impacts associated with the release of bentonite associated with drilling are covered within the water quality section of this table. As stated, it is expected that the potential release of bentonite will be minimised through the optimised methodology. If some bentonite fluid was to escape, it is not considered likely to affect the integrity of the Shellfish Water or any shellfish within the Water. It is also noted that an online bentonite safety sheet information does not denote any shellfish species as finding the material toxic, and that the criteria and thresholds for Shellfish Waters (relating to the shellfish safety for human consumption) mainly relates to E.coli upon which the potential release of bentonite would have no impact upon. The main possible issue with any bentonite release is the potential smothering of shellfish, but as any release will be very localised and temporary, its impact is not considered to be significant, especially considering the evidence of large-scale fine sediment disturbance and movement in the area as a result of coastal erosion (as discussed above in this table).	Low
	<u>Operational Phase</u> The outfall will enter directly into the Shellfish Water. The discharge released could contain contaminants and therefore, there is potential for adverse impacts upon the Shellfish Water	Medium	Likely	As covered within the operational water quality assessment box earlier in this table, there is the potential for temporary adverse impacts upon water quality in the area surrounding the outfall as a result of an increase in the volume of settled storm flows and the potential consequent increase in contaminants entering the Shellfish Water. However, as discussed in the water quality assessment, the mitigation for this will be the AMP8 reduction of spill frequency from the Maer Lane STW to 10 spills per annum on average (by March 2028 at the latest). Whilst there is the potential for temporary adverse effects at this Shellfish Water, there will be improvements for the Exe Estuary and Outer Exe Shellfish Waters within the Exe Estuary Water Body as a result of the decrease in spill frequency for the Phear Park and Maer Road outfalls.	Medium

¹² Environment Agency (2023) 2023 Bathing Water Profile for Sandy Bay. Available at: [Bathing water profile \(data.gov.uk\)](https://data.gov.uk/bathing-water-profiles/sandy-bay)

WFD Element / Receptor	Potential Impact or Risk	Magnitude	Likelihood	Assessment / Mitigation	Residual Risk
Protected Areas: Lyme Bay (West) Shellfish Water	<u>Construction Phase</u> The proposed works have the potential to cause impacts relating to use of substances to aid the directional drilling process	Low	Likely	Refer to the construction phase box for the Sandy Bay Shellfish Water, above.	Low
	<u>Operational Phase</u> The operation of the outfall will involve release of discharge, which could contain contaminants and therefore, there is potential for adverse impacts upon the Shellfish Water	Medium	Likely	As stated within the Sandy Bay Shellfish Water assessment above, the proposed increase in the volume of settled storm flows means that there is the potential for an adverse effect upon Shellfish Waters. The Lyme Bay (West) Shellfish Water is located approximately 350m to the east of the proposed outfall. This distance means that there could be a lesser potential impact than upon the Sandy Bay Shellfish Water due to the dispersion and dilution of potential contaminant concentrations, but it does not rule out the potential for an increase in comparison to the existing outfall levels. This means that there could be an adverse impact in the short-term, dependent on tide, current and winds conditions. As stated above, the mitigation will be the AMP8 reduction of spill frequency from Maer Lane STW to 10 spills per annum on average.	Medium
Protected Areas: Exe Estuary Special Protection Area (SPA)	<u>Construction Phase</u> No potential impacts identified due to distance	Negligible	Likely	Due to distance, it is not considered likely that there would be any significant impacts during the construction phase. Even if a small amount of drilling fluid containing bentonite was to be released, it is not considered likely to be of any significant volume by the time it reaches the SPA location. It is unlikely to affect the qualifying features of the SPA.	Negligible
	<u>Operational Phase</u> The operation of the outfall will involve release of discharge, which could contain contaminants and therefore, there is the potential for impacts to the water environment the SPA is designated for	Low	Likely	It should be noted that a Habitats Regulations Assessment (HRA) Stage 1 Screening has been carried out to support the MMO licence application too. The HRA assessed the potential impacts on nearby European designations, including the Exe Estuary SPA. Whilst the assessment criteria for the HRA and WFD is not the same, there are some overlapping elements. The operation of the outfall will release discharge into the water body which could spread to the SPA-designated area of the water as the discharge disperses. However, because of distance, it is expected that the discharge would become significantly diluted by the time it reaches the SPA area (around 1.6km to the west / north-west) which would reduce the likelihood and severity of potential pollution to the designation. The associated reduction in spill frequency from the Phear Park and Maer Road pumping stations, which enter directly into the Exe Estuary (which forms part of the Exe Estuary SPA) would likely cause a beneficial impact on the water quality within the designation. Equally, the reason for the designation of the SPA is for a number of non-breeding bird and waterbird species. The proposed works will not affect the bird species and therefore, the risk and severity of impact to the SPA is considered to be low.	Low

WFD Element / Receptor	Potential Impact or Risk	Magnitude	Likelihood	Assessment / Mitigation	Residual Risk
INNS	<u>Construction Phase</u> There is the potential for INNS to be introduced or spread into the surrounding water environment through use of equipment, boats and workers (such as barges, vessels and divers)	Low	Unlikely	Whilst any works in the water environment have the potential to introduce or spread INNS, it is expected that the Contractor and any workers will adhere to biosecurity measures, such as the Check-Clean-Dry principle, and may implement a full Biosecurity Management Plan. If invasive species are identified during the construction phase, it is expected that they will be reported to the relevant authority and specialist advice may need to be sought. As a result, the residual risk is expected to be negligible.	Negligible
INNS	<u>Operational Phase</u> No impacts anticipated as maintenance of the outfall is expected to be minimal	Low	Unlikely	No impacts considered likely due to limited pathways for introduction or spread.	Negligible
Exe Water Body					
Hydromorphology / Physical Habitat	As no direct works are occurring within this water body, no impacts on hydromorphology are being considered	N/A	N/A	N/A	N/A
Biology: Habitats	As no direct works are occurring within this water body and the proposed works are located approximately 1.9km to the east, no impacts on the biological habitats within the Exe water body are being considered	N/A	N/A	N/A	N/A
Biology: Fish	As no direct works are occurring within this water body and the proposed works are located approximately 1.9km to the east, no impacts on fish or their behaviour are considered likely	Negligible	Unlikely	As no direct works are occurring within this water body and the proposed works are located approximately 1.9km to the east, no impacts on fish or their behaviour are considered likely	Negligible
Water Quality	<u>Construction Phase</u> The proposed works have the potential to cause impacts to water quality associated with construction activities, such as through disturbance of sediment or use of	Negligible	Likely	During construction, there is the potential for some very localised and minor adverse impacts on water quality associated with disturbance of sediment on the seabed. If any contaminants are present, they could be disturbed and released. However, the Exe water body is not located within close proximity to the outfall and therefore, impacts are considered to be negligible. As discussed earlier in this table, it is acknowledged that bentonite will be used as part of a mixture to make a drilling fluid to aid placement of outfall pipework. Bentonite, if released, can act as a pollutant. However, optimised	Negligible

WFD Element / Receptor	Potential Impact or Risk	Magnitude	Likelihood	Assessment / Mitigation	Residual Risk
	substances to aid the directional drilling process			drilling methods will be used which should reduce potential for release of drilling fluid. Distance is also likely to be a factor in reducing the magnitude of potential impact associated with this.	
	<u>Operational Phase</u> The increased discharge from the proposed outfalls could release pollutants and have an adverse effect on the water quality of the surrounding water environment	Low	Likely	As iterated previously in this report, the wider purpose of the proposed works is to improve the Exe Estuary Shellfish Water. This is proposed to be done by reducing the spill frequencies from the Phear Park and Maer Road pumping station outfalls. This should have a consequent beneficial effect upon the Exe Estuary water quality. This means that no adverse impact is identified and no mitigation is required. However, it should be considered that it is possible that the increase volume of discharge and potential increase in contaminants released from the proposed Straight Point outfall could be spread via wind and tidal movements towards the Exe Estuary. This is likely to be a minor adverse effect, particularly due to distance and the amount of dilution that would occur over such distances. The WFD Scoping template noted that there is a history of harmful algae within the Exe Estuary Water Body, however the proposed works will not adversely affect this. If anything, the improvement in water quality associated with the reduced spill frequencies from Phear Park and Maer Road outfalls would reduce the likelihood of impacts upon factors affecting algal blooms, such as dissolved oxygen concentrations and eutrophication.	Low
Protected Areas: Sandy Bay Bathing Water	Discussed within the corresponding section of the Lyme Bay West Water Body assessment, above. The assessment of protected areas focuses on those within 2km of the proposed works area and not necessarily the water body. Regardless, the detailed coastal modelling completed suggests that there will be no detriment or significant impacts to the bathing waters at Dawlish Town, Dawlish Warren, Exmouth or Sandy Bay (those within proximity to the Exe Estuary Water Body).				
Protected Areas: Sandy Bay Shellfish Water	Discussed within the corresponding section of the Lyme Bay West Water Body assessment, above. The assessment of protected areas focuses on those within 2km of the proposed works area and not necessarily the water body.				
Protected Areas: Lyme Bay (West) Shellfish Water	Discussed within the corresponding section of the Lyme Bay West Water Body assessment, above. The assessment of protected areas focuses on those within 2km of the proposed works area and not necessarily the water body.				
Protected Areas: Exe Estuary, and Outer Exe Shellfish Water	Whilst these Shellfish Waters are more than 2km from the proposed outfall and therefore do not need to be assessed according to the EA's Scoping criteria template, it should be noted that the wider strategy that the proposed outfall forms part of will lead to an improvement in the water quality of these two Shellfish Waters because the spill frequency will be reduced at the Phear Park and Maer Road outfalls (which enter into the Exe Estuary and Outer Exe Shellfish Waters, respectively). The improvement of the Exe Estuary Shellfish Water is one of the driving forces behind the project need, as discussed within Section 1.2 of this report.				
Protected Areas: Exe Estuary Special Protection Area (SPA)	Discussed within the corresponding section of the Lyme Bay West Water Body assessment, above. The assessment of protected areas focuses on those within 2km of the proposed works area and not necessarily the water body.				
INNS	As the residual risk of the introduction or spread of INNS is considered to be negligible for the Lyme Bay West Water	Negligible	Unlikely	As the residual risk of the introduction or spread of INNS is considered to be negligible for the Lyme Bay West Water Body for both construction and operation, there are not considered to be any significant adverse risk to the Exe Water Body either due to distance from the outfall point	Negligible

WFD Element / Receptor	Potential Impact or Risk	Magnitude	Likelihood	Assessment / Mitigation	Residual Risk
	Body for both construction and operation, there are not considered to be any significant adverse risk to the Exe Water Body either due to distance from the outfall point				

4.3 Assessment against WFD Mitigation Measures

In respect of WFD mitigation measures, whilst there may be some measures within the South West TraC Management Catchment, no measures apply to the proximity of the works (as discussed in Section 3.4 of this report). Therefore, it can be deemed that the Proposed Scheme will not adversely impact on any WFD measures.

4.4 Assessment against WFD Status Objectives – Deterioration Assessment

The proposed works have the potential to lead to a temporary reduction in water quality during operation as a result of the increased volume of settled storm flows. This could have a consequent adverse effect upon certain WFD status elements, such as phytoplankton and dissolved oxygen concentrations. However, it is not considered likely that the overall water body status would deteriorate as a result of the proposals, particularly considering the planned reduction of spill frequencies during AMP8.

It should also be noted that the Proposed Scheme also enables an improvement in water quality within the Exe Estuary as a result of a reduction of spill frequency and volume from the Phear Park and Maer Road pumping station outfalls. This improvement can help safeguard against the deterioration in overall status.

4.5 Assessment against WFD Status Objectives – Improvement Assessment

In the short-term, the Proposed Scheme does not provide any opportunities for improvement in respect to the relevant WFD status objectives, however as explained within Section 1.2 of this report, the longer-term aims of SWW are to reduce the spill frequency of the Maer Lane STW to the desired 10 spills per annum on average. This would have a consequent beneficial impact at the number of spills at the proposed Straight Point outfall, thereby reducing the likelihood and severity of contaminating events to the surrounding water body.

The AMP7 improvements will also lead to a minor reduction in spill frequency per annum for Maer Lane STW, but this is not thought likely to significantly improve the water quality surrounding the outfall, particularly considering the volume of spills would be greater than the existing.

5 Conclusions

During the construction phase, there are not considered to be any significant impacts due to the optimised methodology for the drilling, such as use of pilot holes and forward reaming or push hole-opening methods to reduce the potential for drilling fluids to escape into the surrounding water environment. There is also the potential to use an alternative fluid as the drill comes near to the breakout point, which would further reduce likelihood of release of potentially polluting fluids. Even if fluid was to escape, the amount should be minimal and should not affect the integrity of the Water Body or any designations.

The Proposed Scheme has the potential to have a temporary adverse effect upon water quality during operation as a result of increased volumes of settled storm flows being released from the proposed Straight Point outfall into the surrounding Lyme Bay West Water Body. This has the potential to impact upon the surrounding Sandy Bay and Lyme Bay (West) Shellfish Waters.

However, the works will lead to a beneficial effect upon the Shellfish Waters associated with the Exe (Exe Estuary and Outer Exe) and the water quality within the Exe Water Body itself. Equally, modelling suggests that the Proposed Scheme should have no adverse effect upon the nearby Sandy Bay Bathing Water.

Whilst it is not considered that the overall status of Lyme Bay West Water Body would experience a deterioration, it is possible that some of the WFD status elements could undergo a temporary deterioration or reduction. This will only be a temporary impact as there are planned improvements to reduce overall spill frequency, as well as altering the proportion of final treated effluent and settled storm flows within the discharge volumes.

Appendix A Lyme Bay West Water Body WFD Scoping Template

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	South West Water
Application reference number (where applicable)	N/A
Name of activity	Exmouth Sea Outfall
Brief description of activity	A new sea outfall for final effluent and screened storm sewage is being proposed at Straight Point, to the east of Sandy Bay, Exmouth. This Scoping template and the associated WFD Assessment will focus on the area of proposed works at the seabed which includes the installation of a diffuser system.
Location of activity (central point XY coordinates or national grid reference)	Outfall location: NGR SY 03948 79191 Start point of drilling location: NGR SY 03585 79844
Footprint of activity (ha)	The working area at the point of outfall is considered to be 40m by 15m (600m ²). It is important to note that this focuses on the area of works below MHW as that is what is assessed within this WFD Assessment – not the total drilling and terrestrial elements of the works.

Your activity	Description, notes or more information
Timings of activity (including start and finish dates)	The diffuser installation is estimated to occur within June 2023, taking approximately 3-4 weeks total. It is noted that the works programme may be impacted by inclement weather.
Extent of activity (for example size, scale frequency, expected volumes of output or discharge)	As stated above, the working area for the diffuser and seabed works area is to be 600m ² . In terms of operational discharge, the volumes are anticipated to be 273 l/s of treated final effluent and 718 l/s of screened storm flow (a total of 991 l/s).
Use or release of chemicals (state which ones)	During the construction of the outfall pipe, a combination of bentonite and fresh water will be used as a drilling fluid. It is possible that some of this drilling fluid may be released in the water at the breakout point. It is difficult to state what specific chemicals may be released during the operation of the outfall, although it is acknowledged that there may be chemicals within the screened storm sewage flows.

Water body ¹	Description, notes or more information
WFD water body name	<i>Lyme Bay West</i>
Water body ID	<i>GB650806420000</i>
River basin district name	<i>South West TraC</i>
Water body type (estuarine or coastal)	<i>Coastal</i>
Water body total area (ha)	<i>13696.638</i>
Overall water body status (2015)	<i>Good</i>
Ecological status	<i>Good</i>
Chemical status	<i>Fail</i>

Water body ¹	Description, notes or more information
Target water body status and deadline	<i>Ecological 2027, Chemical 2063</i>
Hydromorphology status of water body	<i>Supports good</i>
Heavily modified water body and for what use	<i>Not designated artificial or heavily modified</i>
Higher sensitivity habitats present	<i>Chalk reef, Maerl, Subtidal kelp beds, Subtidal seagrass</i>
Lower sensitivity habitats present	<i>Cobbles, gravel & shingle, Intertidal soft sediment, Rockyshore, Subtidal rocky reef, Subtidal soft sediments</i>
Phytoplankton status	<i>Good</i>
History of harmful algae	<i>No</i>
WFD protected areas within 2km	<i>The following protected areas are located within 2km of the proposed works:</i> <i>• Special Protection Area (SPA): Exe Estuary (which is also a Ramsar site and Site of Special Scientific Interest)</i> <i>• Shellfish waters: Sandy Bay, Lyme Bay (West)</i> <i>• Bathing Waters: Sandy Bay</i> <i>It should be noted that there are other protected areas within 2km of Lyme Bay West as a whole (that are outside of 2km of the proposed works area). These include:</i> <i>• Special Area of Conservation (SAC): South Hams, Lyme Bay and Torbay, Sidmouth to West Bay</i> <i>• Shellfish Waters: Outer Exe, Exe Estuary, Labrador Bay, Teign Estuary</i> <i>• Bathing Waters: Teignmouth Holcombe, Babbacombe, Meadfoot, Maidencombe, Sidmouth Jacobs Ladder, Dawlish Coryton Cove, Oddicombe, Budleigh Salterton, Teignmouth Twon, Ness Cove, Sidmouth Town, Watcombe, Ladram Bay, Dawlish Town, St Mary's Bay (Devon), Anstey's Cove (Torquay)</i>

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	Water body is not at high status so not applicable.
Could significantly impact the hydromorphology of any water body	Requires impact assessment	Impact assessment not required	Proposed works are not likely to alter the hydromorphology of the water body considering the size and nature of the works, and the scale 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	The water body is not heavily modified so not applicable.

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	Yes to one or more – requires impact assessment	No to all – impact assessment not required	The proposed diffuser and outfall point falls within a 600m ² area (0.0006km ²), which is less than 0.5km ² .
1% or more of the water body's area			No, the footprint of the works is smaller than 1% of the water body's area (approximately <0.001%).
Within 500m of any higher sensitivity habitat			No higher sensitivity habitats are present within 500m of the works
1% or more of any lower sensitivity habitat			There is a lower sensitivity habitat of subtidal soft sediment surrounding the outfall area, although the works area is less than <0.001% of this). Equally, no loss of this

Consider if the footprint ⁴ of your activity is:	Yes	No	Biology habitats risk issue(s)
			habitat is anticipated. There are also some other lower sensitivity habitats present within the surrounding area, including gravel & cobbles, rocky shore and subtidal rocky reef. No physical works are planned in these other habitat areas so no loss or direct impacts are anticipated, and the works area does not form 1% or more of the habitat area.

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	No - The works are outside of the Exe Estuary and will not delay or prevent fish entering into, or migrating through, the estuary. The works will not alter the movement of fish or block access to the estuary.
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	No physical barrier will be created by the works, nor will there be a change in depth or flow of the water. Whilst there may be some localised noise and vibration during construction at the breakout point of the outfall, no impacts on normal fish behaviour are anticipated considering the geographic scale of the water body. As the proposed works are to provide a new sea outfall to discharge storm overflows, it is possible for localised chemical change to occur. However, considering that there is already an existing outfall nearby (which will be

Consider if your activity:	Yes	No	Biology fish risk issue(s)
			defunct once the new outfall is operational), it is not anticipated that there would be any significant change in content of the discharge (even with an increase in volume). There may also be a potential temporary impact to the water quality surrounding the breakout point if drilling fluid (containing bentonite) is released into the surrounding waters.
Could cause entrainment or impingement of fish	Requires impact assessment	Impact assessment not required	No entrainment or impingement is considered likely. The method of installing the diffuser at the outfall point will involve barges and divers. No cofferdam or structure for where fish could become trapped will be used.

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)	Requires impact assessment	Impact assessment not required	Whilst the total period of time for installation of the diffuser is expected to be 3-4 weeks, the works are not anticipated to occur continuously for longer than a spring neap tidal cycle and therefore, it is not considered that there would be any significant continuous impact on water clarity, temperature, oxygen levels, nutrients or microbial patterns. The works are likely to be dependent

Consider if your activity:	Yes	No	Water quality risk issue(s)
			on the weather and therefore may be intermittent. Whilst this could prolong the total duration of the works, the impacts upon the water environment would not be continuous.
Is in a water body with a phytoplankton status of moderate, poor or bad	Requires impact assessment	Impact assessment not required	Phytoplankton status of good so not applicable
Is in a water body with a history of harmful algae	Requires impact assessment	Impact assessment not required	No history of harmful algae so not applicable

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. The directional drilling activity will require use of bentonite to assist with the drilling and laying of the outfall pipework but this is not a chemical on the EQSD list.
It disturbs sediment with contaminants above Cefas Action Level 1	Requires impact assessment	Impact assessment not required	At the breakout point, the seabed will be disturbed during installation. It is possible that sediments and contaminants in that sediment could be disturbed by the works. However, it is not considered likely that if sediments were disturbed, that the contaminants would be above Cefas Action Level 1. Equally, the size of the area disturbed would be minimal in comparison to the size of the seabed within the water body. A search of the Environment Agency's Water Quality Archive was undertaken. The closest sampling point was 'Miscellaneous Tidal Exe', which is located along Sandy Bay

If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if:	Yes	No	Water quality risk issue(s)
			(approximately 905m west of the start point of the proposed drilling location). No recent samples (since 2017) had recorded any of the chemicals or contaminants listed on the Cefas Action Level 1 list. Whilst this does not mean that they are not present, it does reduce the likelihood of the works causing such an impact.
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	As the proposed works involve a discharge pipeline and outfall, it is anticipated that some chemicals may be released if they are present within the screened storm flows.

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	Requires impact assessment	Impact assessment not required	As stated earlier within this document, there are four WFD protected areas within 2km of the proposed works. These include: • Exe Estuary SPA (also Ramsar site and SSSI) • Sandy Bay Shellfish Water • Lyme Bay (West) Shellfish Water • Sandy Bay Bathing Water It should be noted that a Habitats Regulations Assessment is also been completed for the Exe Estuary SPA and associated designations as part of the wider MMO licence application. It is not anticipated that there would be any likely significant adverse effects upon the integrity of such European designations.

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	Requires impact assessment	Impact assessment not required	A search of the NBN Atlas does not suggest that any INNS have been recorded or observed within a 1km area surrounding the site. However, this does not mean that non are present and that the proposed works could not introduce or spread INNS. It is expected though that the works would adhere to biosecurity measures, such as the Check-Clean-Dry principle, to reduce the likelihood of introducing or spreading 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 impacts to hydromorphology are anticipated considering the nature of the works.
Biology: habitats	No	The proposed works do not fall under any of the criteria for assessing impacts on WFD-related biological habitats.

Receptor	Potential risk to receptor?	Note the risk issue(s) for impact assessment
Biology: fish	No	Considering the nature of the proposed works and the scale of the water body, no significant adverse effects are anticipated in terms of the criteria for assessing impacts on fish.
Water quality	Yes	Whilst the construction phase may not lead to significant adverse effects on water quality, the operation of the outfall will involve an increase in the volume of discharge released. This will be assessed further within the WFD Assessment, with particular consideration of spill frequency and volumes, and potential for dilution and dispersion
Protected areas	Yes	The proposed works are within 2km of an SPA, Bathing Waters and two Shellfish Waters. Whilst impacts are not considered likely to the SPA (which is also a SSSI and Ramsar site), there could be potential impacts upon the Bathing Waters and Shellfish Waters due to the potential increase in discharge from the outfall. Impacts to the SPA are also assessed within a Habitats Regulations Assessment (completed to assist with the MMO licence application).
Invasive non-native species	No	With the implementation of construction phase biosecurity measures, it is considered unlikely that the proposed works would introduce or spread 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 B Exe Water Body WFD Scoping Template

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	South West Water
Application reference number (where applicable)	N/A
Name of activity	Exmouth Sea Outfall
Brief description of activity	A new sea outfall for final effluent and screened storm sewage is being proposed at Straight Point, to the east of Sandy Bay, Exmouth. This Scoping template and the associated WFD Assessment will focus on the area of the proposed works at the seabed, which includes the installation of a diffuser system.
Location of activity (central point XY coordinates or national grid reference)	Outfall location: NGR SY 03948 79191 Start point of drilling location: NGR SY 03585 79844
Footprint of activity (ha)	The working area at the point of outfall is considered to be 40m by 15m (600m ²). It is important to note that this focuses on the area of works below MHW as that is what is assessed within this WFD Assessment – not the total drilling and terrestrial elements of the works.

Your activity	Description, notes or more information
Timings of activity (including start and finish dates)	The diffuser installation is estimated to occur within June 2023, taking approximately 3-4 weeks total. It is noted that the works programme may be impacted by inclement weather.
Extent of activity (for example size, scale frequency, expected volumes of output or discharge)	As stated above, the working area for the diffuser and seabed works area is to be 600m ² . In terms of operational discharge, the volumes are anticipated to be 273 l/s of treated final effluent and 718 l/s of screened storm flow (a total of 991 l/s).
Use or release of chemicals (state which ones)	During the construction of the outfall pipe, a combination of bentonite and fresh water will be used as a drilling fluid. It is possible that some of this drilling fluid may be released in the water at the breakout point. It is difficult to state what specific chemicals may be released during the operation of the outfall, although it is acknowledged that there may be chemicals within the screened storm sewage flows.

Water body ¹	Description, notes or more information
WFD water body name	<i>Exe Water Body</i>
Water body ID	<i>GB510804505600</i>
River basin district name	<i>South West TraC</i>
Water body type (estuarine or coastal)	<i>Estuarine</i>
Water body total area (ha)	<i>1822.913</i>
Overall water body status (2015)	<i>Moderate</i>
Ecological status	<i>Moderate</i>
Chemical status	<i>Fail</i>

Water body ¹	Description, notes or more information
Target water body status and deadline	<i>Ecological (moderate) 2015, Chemical 2063</i>
Hydromorphology status of water body	<i>Supports good</i>
Heavily modified water body and for what use	<i>Heavily modified, Flood protection</i>
Higher sensitivity habitats present	<i>Intertidal seagrass, Mussel beds (including blue and horse mussel), Saltmarsh, and Subtidal kelp beds</i>
Lower sensitivity habitats present	<i>Intertidal soft sediment, Rocky shore, Subtidal rocky reef, and Subtidal soft sediments</i>
Phytoplankton status	<i>Good</i>
History of harmful algae	<i>Yes</i>
WFD protected areas within 2km	<i>The following protected areas are located within 2km of the proposed works:</i> <i>• Special Protection Area (SPA): Exe Estuary (which is also a Ramsar site and Site of Special Scientific Interest)</i> <i>• Shellfish waters: Sandy Bay, Lyme Bay (West)</i> <i>• Bathing Waters: Sandy Bay</i> <i>It should be noted that there are other protected areas within 2km of Exe (that are outside of 2km of the proposed works area). These include:</i> <i>• Shellfish Waters: Exe Estuary, Outer Exe</i> <i>• Bathing Waters: Dawlish Warren, Exmouth, Dawlish Town</i> <i>• Special Area of Conservation (SAC): Dawlish Warren</i>

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	Water body is not at high status so not applicable.
Could significantly impact the hydromorphology of any water body	Requires impact assessment	Impact assessment not required	No direct works will occur within this water body and therefore, no impacts upon hydromorphology are anticipated.
Is in a water body that is heavily modified for the same use as your activity	Requires impact assessment	Impact assessment not required	The water body is heavily modified but for flood protection. The proposed works are not related to this issue and therefore, it is not applicable.

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	Yes to one or more – requires impact assessment	No to all – impact assessment not required	The proposed diffuser and outfall point falls within a 600m ² area (0.0006km ²), which is less than 0.5km ² .
1% or more of the water body's area			No, the footprint of the works is smaller than 1% of the water body's area (approximately <0.01%).
Within 500m of any higher sensitivity habitat			No higher sensitivity habitats are present within 500m of the works
1% or more of any lower sensitivity habitat			Whilst there are lower sensitivity habitats within the Exe water body, none of these are within proximity to the proposed works and therefore, the works do not form 1% or more of any lower sensitivity habitat associated with the water body.

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	No - The works are outside of the Exe Estuary and will not delay or prevent fish entering into, or migrating through, the estuary. The works will not alter the movement of fish or block access to the estuary.
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	No physical barrier will be created by the works, nor will there be a change in depth or flow of the water. Due to distance from the Exe water body, there is not considered likely to be any noise and vibration or other disturbance impacts during construction. As the proposed works are to provide a new sea outfall to discharge storm overflows, chemicals may be released within the discharge. However, due to distance from the proposed works it is likely that any such impacts would be diluted significantly by the time the discharge reaches the water body area. The proposed works also form part of a wider improvement scheme, with a reduction in spill frequency and volume planned for two pumping stations which outfall directly into the Exe Estuary.
Could cause entrainment or impingement of fish	Requires impact assessment	Impact assessment not required	No entrainment or impingement is expected, particularly as no physical works will occur directly within the Exe water body.

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)	Requires impact assessment	Impact assessment not required	Whilst the total period of time for installation of the diffuser is expected to be 3-4 weeks, the works are not anticipated to occur continuously for longer than a spring neap tidal cycle and therefore, it is not considered that there would be any significant continuous impact on water clarity, temperature, oxygen levels, nutrients or microbial patterns. The works are likely to be dependent on the weather and therefore may be intermittent. Whilst this could prolong the total duration of the works, the impacts upon the water environment would not be continuous.
Is in a water body with a phytoplankton status of moderate, poor or bad	Requires impact assessment	Impact assessment not required	Phytoplankton status of good so not applicable
Is in a water body with a history of harmful algae	Requires impact assessment	Impact assessment not required	Yes

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. The directional drilling activity will require use of bentonite to assist with the drilling and laying of the outfall pipework but this is not a chemical on the EQSD list.
It disturbs sediment with contaminants above Cefas Action Level 1	Requires impact assessment	Impact assessment not required	At the breakout point, the seabed will be disturbed during installation. It is possible that sediments and contaminants in that sediment could be disturbed by the works. However, it is not considered likely that if sediments were disturbed, that the contaminants would be above Cefas Action Level 1. The size of the area disturbed would be minimal in comparison to the size of the seabed within the water body. Additionally, the works area is not within the immediate vicinity of the Exe water body and therefore, even if sediments were disturbed they are unlikely to reach the Exe water body area, or significantly affect water quality there. A search of the Environment Agency's Water Quality Archive was undertaken. The closest sampling point was 'Miscellaneous Tidal Exe', which is located along Sandy Bay (approximately 905m west of the start point of the proposed drilling location). No recent samples (since 2017) had recorded any of the chemicals or contaminants listed on the Cefas Action Level 1 list. Whilst this does not mean that they are not present, it does reduce the likelihood of the works causing such an impact.
If your activity has a mixing zone	Yes	No	Water quality risk issue(s)

(like a discharge pipeline or outfall) consider if:			
The chemicals released are on the Environmental Quality Standards Directive (EQSD) list	Requires impact assessment ⁵	Impact assessment not required	As the proposed works involve a discharge pipeline and outfall, it is anticipated that some chemicals may be released if they are present within the screened storm flows.

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	Requires impact assessment	Impact assessment not required	As stated earlier within this document, there are four WFD protected areas within 2km of the proposed works. These include: • Exe Estuary SPA (also Ramsar site and SSSI) • Sandy Bay Shellfish Water

Consider if your activity is:	Yes	No	Protected areas risk issue(s)
			• Lyme Bay (West) Shellfish Water • Sandy Bay Bathing Water It should be noted that a Habitats Regulations Assessment is also been completed for the Exe Estuary SPA and associated designations as part of the wider MMO licence application. It is not anticipated that there would be any likely significant adverse effects upon the integrity of such European designations.

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	Requires impact assessment	Impact assessment not required	A search of the NBN Atlas does not suggest that any INNS have been recorded or observed within a 1km area surrounding the site. However, this does not mean that non are present and that the proposed works could not introduce or spread INNS. It is expected though that the works would adhere to biosecurity measures, such as the Check-Clean-Dry principle, to reduce the likelihood of introducing or spreading 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 impacts to hydromorphology are anticipated considering the nature of the works and also distance from the proposed works to the Exe water body
Biology: habitats	No	The proposed works do not fall under any of the criteria for assessing impacts on WFD-related biological habitats

Receptor	Potential risk to receptor?	Note the risk issue(s) for impact assessment
Biology: fish	No	Considering the nature of the proposed works, scale of the water body and distance from the proposed works to the Exe water body, no significant adverse effects are anticipated in terms of the criteria for assessing impacts on fish
Water quality	Yes	Whilst the construction phase may not lead to significant adverse effects on water quality, the operation of the outfall will involve an increase in the volume of discharge released. This will be assessed further within the WFD Assessment, with particular consideration of spill frequency and volumes, and potential for dilution and dispersion
Protected areas	Yes	The proposed works are within 2km of an SPA, Bathing Waters and two Shellfish Waters. Whilst impacts are not considered likely to the SPA (which is also a SSSI and Ramsar site), there could be potential impacts upon the Bathing Waters and Shellfish Waters due to the potential increase in discharge from the outfall. Impacts to the SPA are also assessed within a Habitats Regulations Assessment (completed to assist with the MMO licence application).
Invasive non-native species	No	With the implementation of construction phase biosecurity measures, it is considered unlikely that the proposed works would introduce or spread 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.

Legend

- Outfall Point CSV
- ▭ Diffuser Works Area
- ▭ 2km Buffer
- ▭ 500m Buffer
- Marine**
 - Sandy Bay Bathing Water
 - ▭ Sandy Bay Bathing Water (Sensitive Area)
 - ▭ Shellfish Waters (named on figure)
- Ecology**
 - ▭ Exe Estuary Special Protection Area
 - ▭ Exe Estuary Ramsar Site
 - ▭ Exe Estuary Site of Special Scientific Interest

Exmouth Sea Outfall
107201

WFD Assessment
Appendix Figure
showing Protected
Areas

Scale 1:23000

