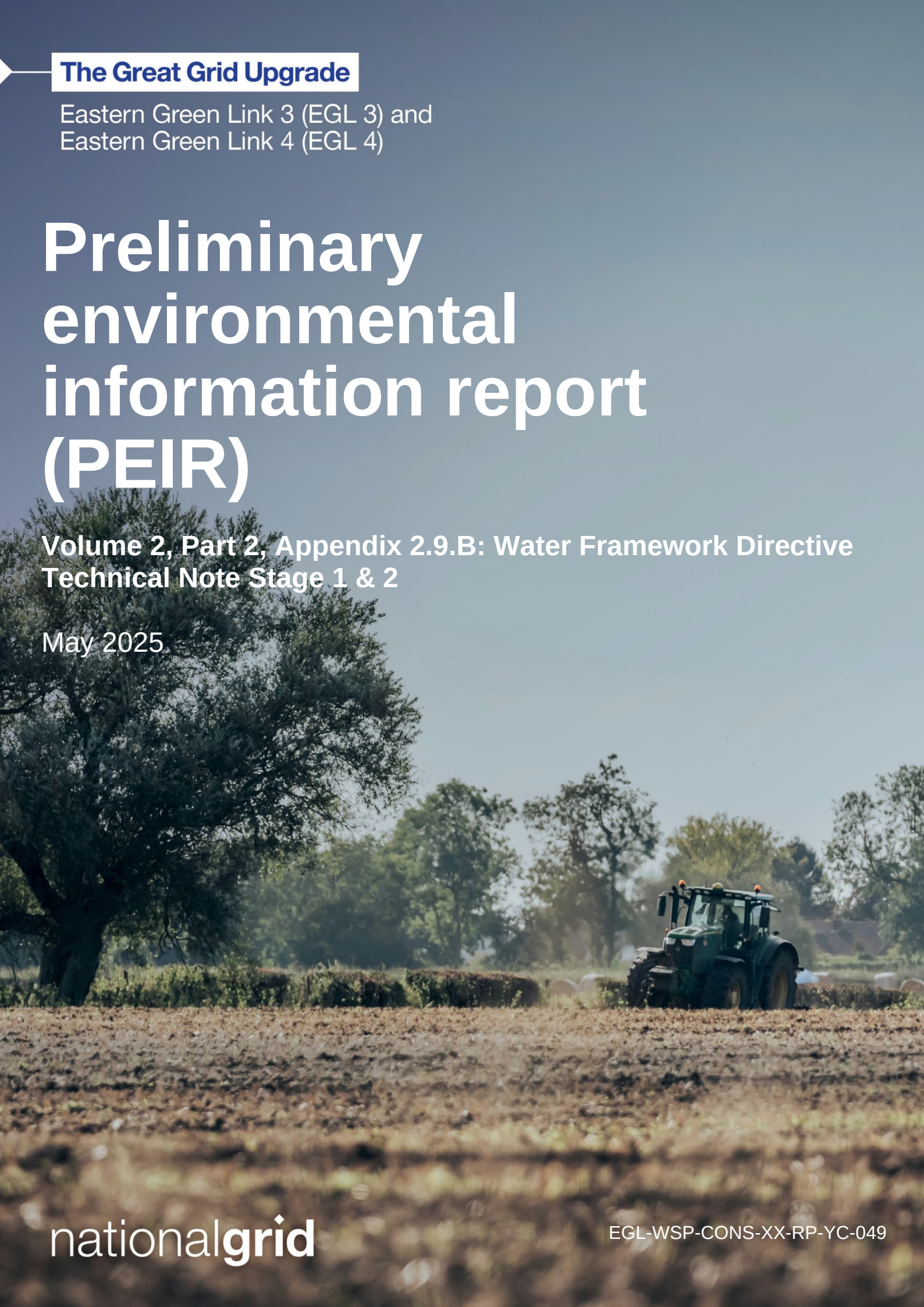
The Great Grid Upgrade

Eastern Green Link 3 (EGL 3) and
Eastern Green Link 4 (EGL 4)

Preliminary environmental information report (PEIR)

Volume 2, Part 2, Appendix 2.9.B: Water Framework Directive Technical Note Stage 1 & 2

May 2025



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Contents

2.9.B. Water Framework Directive Technical Note Stage 1 & 2

2.9.B.1. Introduction

Background and Purpose of this Note

2.9.B.1.1 This note sets out the intended approach to undertaking a Water Framework Directive (WFD) assessment for both the English Onshore and Offshore Schemes (termed collectively 'the Projects') forming part of Eastern Green Link 3 (EGL 3) and Eastern Green Link 4 (EGL 4), including the methodology and findings of Stage 1 and 2 of the WFD assessment.

2.9.B.1.2 This note has been prepared with reference to the Planning Inspectorate WFD advice (Ref 2.9.B.1), which encourages early engagement with statutory consultation bodies, and to set out and agree intended Zones of Influence (ZoI), guidance to be followed, sources of baseline data, and the approach to assessing the activities of the Projects on waterbodies without a WFD Status. The note concludes with a description of the intended approach to reporting the WFD assessment.

2.9.B.1.3 The purpose of this note is to identify waterbodies and protected areas within the Anglian River Basin District (RBD) within the proposed ZoI of the English Onshore Scheme and screen those waterbodies for the potential to be impacted by the Projects (WFD Stage 1). It also provides baseline data for those waterbodies (WFD Stage 2) and the preliminary Scoping undertaken for the English Offshore Scheme with respect to the Lincolnshire water body (GB640402492000), which has followed the Clearing the Waters for All guidance.

2.9.B.1.4 This note is shared with a view to gaining agreement with the Environment Agency on these key parameters.

2.9.B.1.5 Feedback was provided by the Environment Agency on 4 March 2025. The comments have been reviewed and incorporated into the proposed scope of the assessment that is described below.

Policy and Guidance

2.9.B.1.6 The assessment will draw on guidance published by the Environment Agency and the Planning Inspectorate, namely:

- Protecting and improving the water environment – WFD compliance of physical works in rivers. Doc No. 488_10 (Ref 2.9.B.2);
- Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive (Ref 2.9.B.1);
- Clearing the Waters for All (Ref 2.9.B.3);
- Water Framework Directive Assessment: estuarine and coastal waters (Ref 2.9.B.4); and

- Water Framework Directive Risk Assessment – How to Assess the Risk of your Activity (Ref 2.9.B.5).

Approach to Reporting

2.9.B.1.7 It is proposed to undertake the WFD assessment in four stages:

- Stage 1: Identify the WFD waterbodies and protected areas within the ZoI and screen them for the potential to be impacted by the activities of the Projects, based on the source – pathway – receptor principle;
- Stage 2: Define the baseline status, objectives and measures for screened-in waterbodies;
- Stage 3: Screen activities of the Projects (construction, operation and maintenance) and identify embedded and good practice measures (to be secured through their inclusion within a commitments register, which will sit alongside an Outline Code of Construction Practice (CoCP) (**Volume 2, Part 1, Appendix 1.5.B: Outline Code of Construction Practice (CoCP)**) that reduce the potential for deterioration of screened-in waterbodies; and
- Stage 4: Assess the effects of screened-in activities on screened-in waterbodies.

2.9.B.1.8 It is proposed to share reporting on the findings of each stage of the assessment with the Environment Agency for review, providing for the opportunity to address any comments, prior to moving to the next stage of assessment, with the aim of agreeing all matters prior to the submission of the Development Consent Order (DCO) application. The current status of agreements is presented in **Table 2.9.B.1.** These will be updated through the course of discussions with the Environment Agency.

2.9.B.1.9 This note will set out Stage 1 of the WFD assessment.

Table 2.9.B.1 - Matter for Inclusion in the Statement of Common Ground and Status

Matter	Consultee comment / Position	Applicant comment / position	Document Ref	Status
Scope of the assessment		Agreed		Not Agreed Under Discussion Agreed

2.9.B.2. Water Framework Directive Waterbodies and the Projects' Zones of Influence

Anglian River Basin District

2.9.B.2.1 The English Onshore Scheme is wholly located within the Anglian RBD. Following consideration of the ZoI of the Projects (as described in **Section 2.9.B.4**), the Anglian River Basin Management Plan (RBMP) (Ref 2.9.B.6), updated for the third cycle of the WFD in December 2022, has been reviewed to identify potentially affected WFD

waterbodies. The Environment Agency's Catchment Data Explorer online tool (Ref 2.9.B.7) has also been used to assist in this task.

2.9.B.2.2 The Anglian RBD is divided into a number of surface water, artificial water and groundwater management catchments. Those catchments that the Projects cross through comprise:

- Anglian groundwater management catchment. This catchment is located north of Little Steeping and the English Onshore Scheme crossing through this catchment between the landfall on the Lincolnshire coastline and Little Steeping;
- Nene surface water management catchment. This catchment is located northwest of Wisbech;
- Northwest Norfolk surface water management catchment, located southeast of Wisbech;
- Welland surface water management catchment, located south of Boston; and
- Witham surface water management catchment, located north of Boston.

2.9.B.2.3 There are no relevant artificial water management catchments.

2.9.B.2.4 The landfall and approximately the first 3 km of the English Offshore Schemes lie within the Lincolnshire water body within the Anglian RBD.

2.9.B.3. Water Framework Directive Objectives and Measures

2.9.B.3.1 The objective is the planned status of a WFD waterbody that must be achieved or maintained.

2.9.B.3.2 There are two different status objectives for each WFD waterbody. For surface waters these are the ecological status or potential, and the chemical status objective; for groundwater these are quantitative status and chemical status objectives.

2.9.B.3.3 Several of the WFD surface waterbodies in the Anglian RBD within the ZoI have an ecological status objective of 'Moderate'. The majority achieved this in 2015, however, three waterbodies did not achieve this in time for the 2015 target. The remainder of the waterbodies have an ecological status objective of 'Good' and are expected to achieve this by 2027.

2.9.B.3.4 All the surface waterbodies in the Anglian RBD have a chemical status objective of 'Good' by 2063.

2.9.B.3.5 There are several programmes of measures described in the Anglian RBMP which apply across multiple management catchments. These are actions that funding has been committed to or there is an established funding mechanism to support and examples include measures required to address physical modifications, measures required to manage changes to natural flow and levels of water and measures required for peatland restoration, amongst others.

2.9.B.4. Zones of Influence

2.9.B.4.1 The study area for a WFD assessment is defined by a ZoI or ZoIs. ZoI are set following consideration of the nature, scale and duration of a projects' construction

and operational activities. The ZoIs proposed for the WFD assessment have also been selected to be consistent with other recent similar linear DCO schemes.

2.9.B.4.2 For the onshore activities proposed by the Projects, the proposed ZoI will include all surface and groundwater bodies regulated by the WFD that could be directly impacted (i.e., within the direct footprint of the Projects) and those within 500 m of the draft Order Limits (once defined for the DCO application) to account for potential indirect impacts. Protected areas with a surface or groundwater dependency within 500 m of the draft Order Limits will also be included in the scope of the assessment following consideration of the distance over which the Projects' activities (see **Section 2.9.B.5**) can reasonably have the potential to cause significant effects/influence the achievement of the WFD status.

2.9.B.4.3 To address the Projects' offshore activities, transitional/coastal waterbodies that the Projects cross or are within the ZoI will be assessed within the WFD Assessment.

2.9.B.5. Assessment of Activities by the Projects on Water Framework Directive Waterbodies

Introduction

2.9.B.5.1 For the purposes of this note, affected waterbodies across surface water, groundwater and transitional/coastal water have been identified and tabulated using both the ZoI and the draft Order Limits. The screened in waterbodies are presented in **Volume 3, Part 2, Figure 9-1: Water Environment Study Area and Features**.

Surface Waterbodies and Water Framework Directive Baseline Status

2.9.B.5.2 Surface waterbodies within the ZoI and their current WFD status are described in **Table 2.9.B.2**. The route of the English Onshore Scheme has been split into three sections, representing the landfall, the cable section between landfall and the indicative zone for converter stations at Walpole.

Table 2.9.B.2 - WFD Surface Waterbodies and Baseline Status

Section	Waterbody ID	Waterbody Name	2019/2022* Waterbody Classification
Landfall	GB105029061730	Anderby Main Drain	Hydromorphological designation: Artificial Ecological: Moderate Chemical: Fail
Landfall to Walpole	GB105029061720	Boygrift Drain	Hydromorphological designation: Artificial Ecological: Moderate Chemical: Fail

Section	Waterbody ID	Waterbody Name	2019/2022* Waterbody Classification
Landfall to Walpole	GB105029061710	Willoughby High Drain	Hydromorphological designation: Heavily modified Ecological: Moderate Chemical: Fail
Landfall to Walpole	GB105029061700	Ingoldmells Main Drain	Hydromorphological designation: Artificial Ecological: Moderate Chemical: Fail
Landfall to Walpole	GB105030062430	Lymn / Steeping	Hydromorphological designation: Heavily Modified Ecological: Moderate Chemical: Fail
Landfall to Walpole	GB205030056465	Maud Foster and Fen Catchwater Drains	Hydromorphological designation: Artificial Ecological: Moderate Chemical: Fail
Landfall to Walpole	GB205030056405	East & West Fen Drains	Hydromorphological designation: Artificial Ecological: Bad Chemical: Fail
Landfall to Walpole	GB205030062426	Lower Witham - conf Bain to Grand Sluice	Hydromorphological designation: River Ecological: Moderate Chemical: Fail
Landfall to Walpole	GB205030051515	Black Sluice IDB draining to the South Forty Foot Drain	Hydromorphological designation: Heavily modified Ecological: Poor Chemical: Fail
Landfall to Walpole	GB205031055535	Fosdyke Bridge Outfall	Hydromorphological designation: Artificial Ecological: Bad Chemical: Fail

Section	Waterbody ID	Waterbody Name	2019/2022* Waterbody Classification
Landfall to Walpole	GB205031055525	Risegate Eau	Hydromorphological designation: Artificial Ecological: Poor Chemical: Fail
Landfall to Walpole	GB205031055495	Whaplode River	Hydromorphological designation: Artificial Ecological: Moderate Chemical: Fail
Landfall to Walpole	GB205032050405	South Holland Main Drain	Hydromorphological designation: Artificial Ecological: Moderate Chemical: Fail
Landfall to Walpole	GB205032050395	North Level Main Drain	Hydromorphological designation: Artificial Ecological: Moderate Chemical: Fail
Walpole		No Surface Waterbodies	

*Ecological 2022, chemical 2019

Transitional Waterbodies and Water Framework Directive Baseline Status

2.9.B.5.3 The estuarine (transitional) waterbodies within the ZoI and their current WFD status are described in **Table 2.9.B.3**. The table also includes details of downstream coastal waterbodies, included at this stage, adopting a precautionary approach.

Table 2.9.B.3 - WFD Transitional and Coastal Waterbodies and Baseline Status

Section	Waterbody ID	Waterbody Name	2019/2022* Waterbody Classification
Landfall	GB640402492000	Lincolnshire	Hydromorphological designation: Heavily modified Ecological: Moderate Chemical: Fail

Section	Waterbody ID	Waterbody Name	2019/2022* Waterbody Classification
Landfall to Walpole	GB530503100400	Welland	Hydromorphological designation: Heavily modified Ecological: Moderate Chemical: Fail
Walpole	GB530503200200	Nene	Hydromorphological designation: Heavily modified Ecological: Moderate Chemical: Fail
Landfall to Walpole and Walpole	GB530503311300	Wash Inner	Hydromorphological designation: not designated artificial or heavily modified Ecological: Moderate Chemical: Fail
Walpole	GB530503016300	Steeping	Hydromorphological designation: Heavily modified Ecological: Moderate Chemical: Fail
Walpole	GB640523160000	Wash Outer	Hydromorphological designation: not designated artificial or heavily modified Ecological: Moderate Chemical: Fail

*Ecological 2022, chemical 2019

Groundwater Bodies and Water Framework Directive Baseline Status

2.9.B.5.4 Groundwater bodies within the ZoI and their current WFD status are described in **Table 2.9.B.4**.

Table 2.9.B.4 - WFD Groundwater Bodies and Baseline Status

Waterbody ID	Waterbody Name	2019 Waterbody Classification
GB40501G401600	South Lincolnshire Chalk Unit	Overall: Poor

Waterbody ID	Waterbody Name	2019 Waterbody Classification
		Quantitative: Good Chemical: Poor
GB40501G401700	Spilsby Sandstone Unit	Overall: Poor Quantitative: Poor Chemical: Good

Protected Areas

2.9.B.5.5 A number of protected areas within the ZoI have been identified that have a known or potential surface or groundwater dependency.

2.9.B.5.6 The ZoI also incorporates numerous Source Protection Zones including Zone I – Inner Protection Zone, Zone II – Outer Protection Zone and Zone III – Total Catchment. There are no Drinking Water Safeguard Zones for either surface or groundwater bodies.

2.9.B.5.7 It would be the aim that the Projects (during both construction and operational phases) would not compromise the objectives or designated features of these protected areas and safeguarding zones. However, as a precaution and until all ecological surveys are complete and a full understanding of the hydrological connectivity and reliance of the protected areas interest features on surface or groundwater flows is more fully understood, all protected areas within the ZoI are screened in.

Assessment of the Activities of the Projects on Waterbodies without a Water Framework Directive Status

2.9.B.5.8 It is anticipated that many watercourses that are not designated WFD waterbodies (with a Waterbody ID) but are located within the WFD operational catchments and drain to WFD waterbodies will be crossed by the Projects.

2.9.B.5.9 Potential effects on these watercourses will be considered cumulatively within the WFD assessment, with effects on the WFD waterbody to include the indirect effects associated with works to its ‘non designated’ tributaries. This approach is precedented by being applied on recent linear DCO schemes of similar nature to the Projects and has been accepted by the Regulator (the Environment Agency).

2.9.B.6. Proposed Activities of the Projects

Overview

2.9.B.6.1 Activities associated with the construction and operation (including maintenance) of the Projects with the potential to impact on WFD waterbodies within the proposed ZoI, prior to implementation of mitigation measures, are described in **Table 2.9.B.5.**

Construction Phase Activities

2.9.B.6.2 **Table 2.9.B.5** summarises the preliminary screening of the construction phase activities of the Projects.

Table 2.9.B.5 - Construction Phase Activities and Preliminary Potential Risks to WFD Waterbody Status

Activities	Risk	Waterbodies Potentially Affected
General construction	Discharges, spills and leaks of potentially polluting materials degrading receiving water quality	Surface waters, groundwater, protected areas
General construction in the marine environment	Discharges, spills and leaks of potentially polluting materials degrading receiving water quality Underwater noise changes that could act as a barrier to fish migration Changes to water clarity from sediment plumes Disturbance of contaminated sediments Potential to introduce Marine Invasive Non Native Species	Transitional and coastal waterbodies, protected areas
Construction waste handling/treatment	Discharge of potentially polluting materials/effluents degrading receiving water quality	Surface waters, groundwater, protected areas
Soil stripping and earthworks, interactions with existing land drainage systems	Discharge of potentially polluting materials leading to adverse flow regime, water quality, ecological and hydrogeomorphological effects	Surface waters, protected areas
Watercourse crossings	Physical modifications leading to adverse water quality, ecological and hydrogeomorphological effects and potential fragmentation of habitat. Potential to introduce Invasive Non-Native Species (INNS).	Surface waters, groundwater, protected areas
Drilling for trenchless crossings and landfall Piling and ground improvements	Opening pollution pathways to water environment receptors, outbreaks of drilling muds degrading receiving water quality, connection of aquifers. Generation of noise impacts on fish populations (harm/mortality/behavioural effects).	Surface waters, groundwater, transitional and coastal waterbodies, protected areas
Dewatering of excavations	Opening pollution pathways to water environment receptors,	Surface waters, groundwater, protected areas

Activities	Risk	Waterbodies Potentially Affected
	potential to reduce groundwater levels and impact groundwater flows	

Operational Phase Activities (including maintenance)

2.9.B.6.3 **Table 2.9.B.6** summarises the preliminary screening of the operational phase activities of the Projects.

2.9.B.6.4 There are no risks identified to transitional and coastal waterbodies associated with operational phase activities.

Table 2.9.B.6 - Operational Phase Activities (including Maintenance) and Preliminary Potential Risks to WFD Waterbody Status

Activities	Risk	Waterbodies Potentially Affected
Operation of permanent infrastructure within the draft Order Limits	Water quality degradation and impacts on the land drainage regime. Impacts on fish from electro-magnetic fields (EMF) and/or thermal emissions associated with cables buried beneath waterbodies.	Surface waters, groundwater, transitional and coastal waterbodies, protected areas
Maintenance (and repair) of permanent infrastructure within the draft Order Limits	Discharges, spills and leaks of potentially polluting materials degrading receiving water quality Underwater noise changes that could act as a barrier to fish migration Changes to water clarity from sediment plumes Disturbance of contaminated sediments Potential to introduce Marine Invasive Non Native Species	Transitional and coastal waterbodies, protected areas

2.9.B.7. Summary

2.9.B.7.1 This note presents the methodology and conclusions of Stage 1 and 2 of the WFD assessment and has been produced as a basis for consultation with the Environment Agency for the Projects. The English Onshore Scheme is located entirely within the Anglian RBD and the English Offshore Scheme crosses through the Lincolnshire water body.

2.9.B.7.2 Surface water, transitional and groundwater bodies have been identified within the Projects' ZoI and are presented in **Table 2.9.B.2, Table 2.9.B.3 and Table 2.9.B.4**. In addition, protected areas that have a known or potential surface or groundwater dependency within the Projects' ZoI have been identified.

2.9.B.7.3 All of the waterbodies within the ZoI are screened in, and as noted above, all protected areas within the ZoI are precautionarily screened in.

2.9.B.7.4 Activities that pose a risk to the WFD status of waterbodies within the ZoI, and WFD compliance of these waterbodies, prior to mitigation, have been identified. These include general construction activities and several specific construction activities such as watercourse crossings and drilling for watercourse crossings, as well as operational and maintenance activities.

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