



The Sizewell C Project

8.14 Water Framework Directive Compliance Assessment Report Part 4 of 4

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SIZEWELL C PROJECT: WFD COMPLIANCE ASSESSMENT

PART 4: CUMULATIVE EFFECT ASSESSMENT

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Plates

None provided.

Figures

None provided.

Appendices

None provided.

4 Part 4: Cumulative Effect Assessment

4.1 Introduction to Part 4

a) Introduction

4.1.1. SZC Co.¹ is currently developing proposals to build and operate a new nuclear power station comprising two UK European Pressurised Reactors™ (EPRs) at Sizewell in Suffolk, north of the existing Sizewell B power station: ‘the Sizewell C Project’. This report provides part of an assessment of whether the Sizewell C Project is compliant with the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (SI 2017/407), which implement Directive of the European Parliament and Council (EC) 2000/60/EC establishing a framework for community action in the field of water policy (generally known as the Water Framework Directive (WFD)) in the UK.

4.1.2. The report is provided in support of SZC Co.’s Development Consent Order (DCO) application to the Planning Inspectorate for the Sizewell C Project. This DCO application is also accompanied by an Environmental Statement (ES) (Doc Ref.6) and a Shadow Habitats Regulations Assessment Report (HRA) (Doc Ref. 5.10).

4.1.3. The WFD Compliance Assessment is divided into four parts, as follows:

- **Part 1:** Introduction and method;
- **Part 2:** Main development site;
- **Part 3:** Associated development sites; and
- **Part 4:** Cumulative effect assessment.

b) Approach to this assessment

4.1.4. This document (**Part 4**) considers whether any of the identified effects associated with activities of the Sizewell C Project could be additive or combine in such a manner that they could lead to a change in a WFD water body beyond the effect predicted for the individual components alone. It also considers whether the identified effects associated with the combined elements of the Sizewell C Project could combine with activities of ‘other

¹ NNB Generation Company (SZC) Limited, whose registered office is at 90 Whitfield Street, London, W1T 4EZ; referred to in this document as ‘SZC Co.’.

projects' in such a manner that they could lead to a change in a WFD water body beyond the effect predicted for the Sizewell C Project alone.

4.1.5. Following the overall approach used in the Cumulative Effects Assessment that forms part of the ES (**Volume 10, Chapter 1** (Doc Ref. 6.11)), the assessment presented in this report will consider:

- Project-wide effects (intra-project): Effects that occur when environmental impacts from different elements of the Sizewell C Project combine, resulting in the potential for a significant effect (for example, from the combination of construction of one element and road traffic noise from another Sizewell C project on a residential receptor). If considered in isolation, the individual environmental impacts may not lead to significant effects.
- Cumulative effects with other projects: Cumulative effects arise when impacts from the proposed development combine with impacts from other third party projects (normally in the vicinity of the site), resulting in a change to the overall magnitude of impact acting on a receptor and potentially resulting in a significant effect.

4.1.6. Note that **Parts 2 and 3** of this assessment have demonstrated that the effects of the proposed development are restricted to water bodies within the Anglian River Basin District. There are therefore no transboundary effects, which occur when the impacts of the proposed development extend beyond the United Kingdom to Espoo Convention signatory states.

c) [Structure of Part 4](#)

4.1.7. This report is divided into four further sections:

- **Section 2:** Summary of output from Parts 2 and 3 to identify which activities could potentially combine to give rise to cumulative effects.
- **Section 3:** Assessment of project wide effects (includes the main development site and associated development sites).
- **Section 4:** Assessment of cumulative effects with other projects, plans and programmes (includes the main development site and associated development sites).
- **Section 5:** Summary of the main findings of the assessment.

4.2 Summary of output from Parts 2 and 3

a) Introduction

4.2.1. A detailed assessment of the potential impacts of each component of the Sizewell C Project (including the main development site and associated development sites) on WFD parameters is presented in **Parts 2** and **3** of this WFD compliance assessment respectively. The location of each part of the assessment is summarised in **Table 4.1** for ease of reference.

Table 4.1: Location of WFD compliance assessments for the main development site and associated development sites

Part	Section	WFD compliance assessment
2	2.4	Main development site (scoping)
	2.5	Main development site (detailed assessment)
3	3.3	Northern park and ride (scoping)
	3.4	Southern park and ride (scoping)
	3.5	Two village bypass (scoping and detailed assessment)
	3.6	Sizewell link road (scoping and detailed assessment)
	3.7	Yoxford and other highway improvements (scoping)
	3.8	Freight management facility (scoping)
	3.9	Rail (scoping)

4.2.2. These assessments consider all construction and operational activities that could potentially impact upon surface or groundwater and, where applicable, consider the potential for cumulative effects within a defined activity (for example the effects of the thermal plume from the main development site on physico-chemical parameters such as dissolved oxygen). This section summarises the findings from each of these assessments.

b) Summary of individual site and activity assessments

4.2.3. **Table 4.2** summarises the results of the scoping (Stage 2) assessment for construction and operation activities at the main development site and the associated development sites. Note that although all activities for the main

development site were scoped in for further assessment in Stage 3, only two associated development sites (Sizewell link road and the two village bypass) were scoped in.

- 4.2.4. **Table 4.3** and **Table 4.4** summarise the output of the further assessment (Stage 3) for the construction and operational phases at main development respectively. The outputs of the Stage 3 assessment for the Sizewell link road and two village bypass are summarised for the construction stage in **Table 4.5** and operational phase in **Table 4.6**.

Table 4.2: Summary of scoping for all activities relating to the main development site and associated development sites

Site	Activity	Scoped in	Water bodies in which activities would take place
Main development site	C1 Initial Site preparation	✓	Leiston Beck, Minsmere Old River, Waveney and East Suffolk Crag
	C2 Earthworks for platform	✓	Leiston Beck, Minsmere Old River, Waveney and East Suffolk Crag
	C3 Construction of marine structures	✓	Suffolk
	C4 Discharge of foul, surface and other water	✓	Leiston Beck, Minsmere Old River, Suffolk, Waveney and East Suffolk Crag
	C5 Discharge of commissioning water via the Combined Discharge Outfall (CDO)	✓	Suffolk
	O1 Presence of power station	✓	Leiston Beck, Minsmere Old River, Waveney and East Suffolk Crag
	O2 Presence of permanent Site of Special Scientific Interest (SSSI) crossing/access road	✓	Leiston Beck, Minsmere Old River, Waveney and East Suffolk Crag
	O3 Presence of marine structures	✓	Suffolk
	O4 Presence of flood defences	✓	Suffolk
	O5 Surface and foul water discharge via the cooling water system	✓	Suffolk
	O6 Intake of cooling water	✓	Suffolk
	O7 Discharge of trade effluent from cooling water system	✓	Suffolk
	O8 Discharge of polluting matter via Fish Recovery and Return (FRR) System	✓	Suffolk
Northern park and ride	C1 Site preparation, earthworks and construction	✗	Leiston Beck, Waveney and East Suffolk Crag
	O1 Management of foul water and drainage	✗	
	R1 Removal and reinstatement	✗	
Southern park and ride	C1 Site preparation, earthworks and construction	✗	River Deben (Brandeston Bridge - Melton), River Ore, Waveney and East Suffolk Crag
	O1 Management of foul water and drainage	✗	
	R1 Removal and reinstatement	✗	
Two village bypass	C1 Site preparation, earthworks and construction	✗	River Alde, River Fromus, Waveney and East Suffolk Crag
	C2 Construction of watercourse crossings	✓	
	O1 Management of surface water drainage	✗	

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Site	Activity	Scoped in	Water bodies in which activities would take place
	O2 Presence of structure through which the River Alde will flow	✓	
Sizewell link road	C1 Site preparation, earthworks and construction	✗	Minsmere Old River, Waveney and East Suffolk Crag
	C2 Construction of watercourse crossings	✓	
	O1 Management of drainage	✗	
	O2 Presence of watercourse crossings	✓	
Yoxford and other highways improvements	C1 Site preparation, earthworks and construction at Yoxford roundabout	✗	Minsmere Old River, Waveney and East Suffolk Crag
	C2 Site preparation, earthworks and construction at A12/A144 junction south of Bramfield	✗	
	O1 Surface water management at Yoxford Roundabout	✗	
	O2 Surface water management at A12/A144 junction south of Bramfield	✗	
Freight management facility	C1 Site preparation, earthworks and construction	✗	Orwell, Felixstowe Peninsula Crag & Chalk
	O1 Management of drainage	✗	
	R1 Removal and reinstatement	✗	
Rail	C1 Site preparation, earthworks and construction	✗	Leiston Beck, Waveney and East Suffolk Crag
	O1 Management of drainage	✗	
	R1 Removal and reinstatement	✗	

Table 4.3: Summary of assessment for the main development site (construction phase)

Water body	Quality elements	Indirect effects	Mitigation measures	Protected areas	Summary of assessment
C1 Initial Site Preparation					
Leiston Beck	Hydromorphology: Hydrological regime, morphological conditions, river continuity	Minsmere Old River Suffolk	Sediment management (not in place)	415 661	Following implementation of the suite of control measures embedded in the Code of Construction Practice (CoCP) (Doc Ref. 8.11), any changes to the surface waters and groundwater are predicted to be insufficient to result in a change in the status of these or adjoining water bodies.
	Physico-chemistry: General, specific pollutants	Waveney and East Suffolk Chalk and Crag			
	Biology: Aquatic flora, benthic invertebrates, fish				
Minsmere Old River	Hydromorphology: Hydrological regime, morphological conditions	Leiston Beck Suffolk	Sediment management (in place)	661 415	Following implementation of the suite of control measures embedded in the CoCP (Doc Ref. 8.11), any changes to the surface waters and groundwater are predicted to be insufficient to result in a change in the status of these or adjoining water bodies.
	Physico-chemistry: General, specific pollutants	Waveney and East Suffolk Chalk and Crag			
	Biology: Aquatic flora, benthic invertebrates, fish				
Waveney and East Suffolk Chalk and Crag	Quantity: Groundwater levels and Groundwater Dependent Terrestrial Ecosystems (GWDTEs), saline intrusion, water balance, dependent surface waters	Leiston Beck Minsmere Old River	N/A	78 116	Following implementation of the suite of control measures embedded in the CoCP (Doc Ref. 8.11), any changes to the surface waters and groundwater are predicted to be insufficient to result in a change in the status of these or adjoining water bodies.
	Quality: Diffuse pollution, GWDTEs, saline intrusion, quality				

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Water body	Quality elements	Indirect effects	Mitigation measures	Protected areas	Summary of assessment	
	of drinking waters, pollutant trends, 'prevent or limit' objective					
C2 Earthworks for platform development						
Leiston Beck	Hydromorphology: Hydrological regime, morphological conditions	Minsmere Old River	Sediment management (not in place)	415 661	<p>Disruption of patterns of groundwater flow and surface water levels, and creation of pollutant pathways during piling of the cut-off wall, were predicted to be the main effects. Based on surface water and groundwater modelling, effects are not predicted on surface water hydromorphological parameters.</p> <p>Discernible impacts from the proposed construction activities relate almost entirely to construction dewatering within the cut-off wall of the platform area. As water from the dewatering process will be discharged to the marine environment therefore impacts on the Leiston Beck water body catchment are not predicted.</p> <p>Given the effects above are not predicted to lead to a deterioration in status, no effects on adjoining water bodies are predicted.</p>	
	Physico-chemistry: General, specific pollutants	Suffolk	Floodplain connectivity (not in place)			
	Biology: Aquatic flora, benthic invertebrates, fish	Waveney and East Suffolk Chalk and Crag				
Minsmere Old River	Hydromorphology: Hydrological regime, morphological conditions	Leiston Beck	Sediment management (in place)	661 415	<p>Disruption of patterns of groundwater flow and surface water levels, and creation of pollutant pathways during piling of the cut-off wall, were predicted to be the main effects. Based on surface water and groundwater modelling, effects are not predicted on surface water hydromorphological parameters.</p> <p>Discernible impacts from the proposed construction activities relate almost entirely to construction dewatering within the cut-off wall of the platform area. As water from the dewatering process will be discharged to the marine environment</p>	
	Physico-chemistry: General, specific pollutants	Suffolk				
	Biology: Aquatic flora, benthic invertebrates, fish	Waveney and East Suffolk Chalk and Crag				

NOT PROTECTIVELY MARKED

Water body	Quality elements	Indirect effects	Mitigation measures	Protected areas	Summary of assessment
					<p>therefore impacts on the Minsmere Old River water body catchment are not predicted.</p> <p>Given the effects above are not predicted to lead to a deterioration in status, no effects on adjoining water bodies are predicted.</p>
Waveney and East Suffolk Chalk and Crag	<p>Quantity: Groundwater levels and GWDTEs, saline intrusion, water balance, dependent surface waters</p> <p>Quality: Diffuse pollution, GWDTEs, saline intrusion, quality of drinking waters, pollutant trends, 'prevent or limit' objective</p>	Leiston Beck Minsmere Old River	N/A	78 116	<p>Disruption of patterns of groundwater flow and surface water levels, and creation of pollutant pathways during piling of the cut-off wall, were predicted to be the main effects.</p> <p>The output of the modelling study was considered against the groundwater tests for quantity and determined that there is no potential for deterioration within the groundwater body associated with this activity.</p> <p>Based on surface water and groundwater modelling, discernible impacts from the proposed construction activities relate almost entirely to construction dewatering within the cut-off wall of the platform area. Changes to groundwater levels in this water body are less than those attributable to different climate change projections in the absence of development and the period of impacts is confined to the period of construction dewatering itself and a subsequent period of up to three years, as groundwater levels recover to their natural levels.</p> <p>Given the effects above are not predicted to lead to a deterioration in status, no effects on adjoining water bodies are predicted.</p>

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Water body	Quality elements	Indirect effects	Mitigation measures	Protected areas	Summary of assessment
C3 Construction of marine structures					
Suffolk	Water quality - chemical and physico-chemical	N/A	N/A	N/A	Release of sediments and any contamination within them were predicted to be the main effects. No deterioration predicted due to short term and localised nature of effects and relatively low levels of contamination within the sediments.
	Biology – Habitats				
C4 Discharge of waste water					
Leiston Beck	Hydromorphology: Hydrological regime, morphological conditions	Minsmere Old River	Align and attenuate flows (not in place)	415 661	Only small areas localised to the CDO (located within the Suffolk coastal water body) will exceed the various Environmental Quality Standards (EQS)/substitute EQS and therefore no deterioration in the water body is predicted or in adjoining water bodies.
	Physico-chemistry: General, specific pollutants	Suffolk			
	Biology: Aquatic flora, benthic invertebrates, fish	Waveney and East Suffolk Chalk and Crag			
Minsmere Old River	Hydromorphology: Hydrological regime, morphological conditions	Leiston Beck	Align and attenuate flows (not in place)	415 661	Only small areas localised to the CDO (located within the Suffolk coastal water body) will exceed the various EQS/substitute EQS and therefore no deterioration in the water body is predicted or in adjoining water bodies.
	Physico-chemistry: General, specific pollutants	Suffolk			
	Biology: Aquatic flora, benthic invertebrates, fish	Waveney and East Suffolk Chalk and Crag			
Waveney and East Suffolk	Quantity: Groundwater levels and GWDTes	Leiston Beck	N/A	N/A	Only small areas localised to the CDO (located within the Suffolk coastal water body) will exceed the various

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Water body	Quality elements	Indirect effects	Mitigation measures	Protected areas	Summary of assessment
Chalk and Crag		Minsmere Old River			EQS/substitute EQS and therefore no deterioration in the water body is predicted or in adjoining water bodies (including groundwater).
	Quality: Diffuse pollution, GWDTEs, quality of drinking waters, pollutant trends, 'prevent or limit' objective	Leiston Beck Minsmere Old River			
Suffolk	Water quality – chemical and physico-chemical	Walberswick Marshes	N/A	N/A	Only small areas localised to the CDO (located within the Suffolk coastal water body) will exceed the various EQS/substitute EQS and therefore no deterioration in the water body is predicted or in adjoining water bodies.
	Biology - habitats	Blyth (S) Alde and Ore			
C5 Discharge of cold test commissioning water					
Suffolk	Water quality – chemical and physico-chemical	Leiston Beck Minsmere Old River Walberswick Marshes Blyth (S) Alde and Ore	N/A	N/A	<p>Discharge concentrations of ethanalamine are sufficiently low so as not to significantly impact on the water body. Additional assessment for hydrazine and unionised ammonia identified that a very small area of the water body would be impacted, and therefore the potential for within class or between class deterioration due to water quality is not predicted.</p> <p>Given that the area of the discharge plume with significant concentrations of harmful chemicals is limited to the immediate vicinity around the CDO, and is only released intermittently, effects on habitats on a water body scale are not predicted.</p> <p>The potential effects on adjacent water bodies are not predicted, as elevated concentrations of harmful chemicals would not coincide with sluice opening and would in any case</p>

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Water body	Quality elements	Indirect effects	Mitigation measures	Protected areas	Summary of assessment
					be likely to degrade rapidly prior to reaching water bodies not immediately adjacent to the CDO.

Table 4.4: Summary of assessment for the main development site (operational phase)

Water body	Quality elements	Indirect effects	Mitigation measures	Protected areas	Summary of assessment
O1 Presence of power station platform and cut-off wall					
Leiston Beck	Hydromorphology: Hydrological regime, morphological conditions	Minsmere Old River Suffolk Waveney and East Suffolk Chalk and Crag	Floodplain connectivity (not in place)	N/A	<p>The operational phase would not lead to any significant effects on the flow regime or changes in groundwater storage as a result of the proposed development. The artificially modified geomorphological structure of the drains would be retained. Surface water runoff and foul effluent will be captured and discharged to sea so no physico-chemical impacts are predicted.</p> <p>Given that there are minimal changes predicted in both the groundwater and surface waters as a result of the presence of the platform, effects on biology are not predicted.</p> <p>Given the effects above are not predicted to lead to a deterioration in status, no effects on adjoining water bodies are predicted.</p>
	Physico-chemistry: General				
Minsmere Old River	Hydromorphology: Hydrological regime, morphological conditions	Leiston Beck Suffolk	N/A	N/A	<p>The operational phase would not lead to any significant effects on the flow regime or changes in groundwater storage as a result of the proposed development. The artificially modified geomorphological structure of the</p>
	Physico-chemistry: General				

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Water body	Quality elements	Indirect effects	Mitigation measures	Protected areas	Summary of assessment
		Waveney and East Suffolk Chalk and Crag			<p>drains would be retained. Surface water runoff and foul effluent will be captured and discharged to sea so no physico-chemical impacts are predicted.</p> <p>Given that there are minimal changes predicted in both the groundwater and surface waters as a result of the presence of the platform, effects on biology are not predicted.</p> <p>Given the effects above are not predicted to lead to a deterioration in status, no effects on adjoining water bodies are predicted.</p>
Waveney and East Suffolk Chalk and Crag	<p>Quantity: Groundwater levels and GWDTEs, saline intrusion, water balance, dependent surface waters</p> <p>Quality: Diffuse pollution, GWDTEs, saline intrusion, quality of drinking waters, pollutant trends, 'prevent or limit' objective</p>	Leiston Beck Minsmere Old River	N/A	N/A	<p>The operational phase would not lead to any significant effects on the flow regime or changes in groundwater storage as a result of the proposed development. Surface water runoff and foul effluent will be captured and discharged to sea so no water quality impacts are predicted.</p> <p>Given that there are minimal changes predicted in both the groundwater and surface waters as a result of the presence of the platform, effects on dependent ecosystems are not predicted.</p> <p>Given the effects above are not predicted to lead to a deterioration in status, no effects on adjoining water bodies are predicted.</p>

NOT PROTECTIVELY MARKED

Water body	Quality elements	Indirect effects	Mitigation measures	Protected areas	Summary of assessment
O2 Presence of permanent access road					
Leiston Beck	Hydromorphology: Hydrological regime, morphological conditions, river continuity	Minsmere Old River Waveney and East Suffolk Chalk and Crag	Floodplain connectivity (not in place)	N/A	Direct loss of river habitat, upstream and downstream changes in hydromorphological processes and changes in groundwater/ surface water interactions were predicted to be the main effects. No deterioration predicted in this water body or adjoining water bodies due to the minor and localised nature of effects.
	Physico-chemistry: General, specific pollutants				
	Biology: Aquatic flora, benthic invertebrates, fish				
O3 Presence of marine structures					
Suffolk	Hydromorphology	N/A	N/A	N/A	Given most of these structures will be below the sea surface and only relatively small head structures would be present above the sea bed, only very localised effects are predicted. Note that the intakes and outfall are located outside of the water body boundary. The Beach Landing Facility (BLF) requires dredging during the operational phase but volumes are relatively small and sediment would remain within the system. As a result, effects on hydromorphology are not anticipated. Effects on water quality are not predicted given that sediment contamination is low. Given no effects on water quality and hydromorphology are predicted, effects on habitats are not predicted.
	Water quality – chemical and physico-chemical				
	Biology - habitats				

Water body	Quality elements	Indirect effects	Mitigation measures	Protected areas	Summary of assessment
O4 Presence of flood defences					
Suffolk	Hydromorphology	N/A	N/A	N/A	The hard coastal defence feature in the immediate future would not be located within the WFD water body. The soft coastal defence feature would add additional material to the sediment transport processes but would not alter them, additionally effects would only occur during storm conditions. In the future, sea level rise might be such that the hard coastal defence could impact on hydromorphological parameters.
O5 Surface and foul water discharge via cooling water system					
Suffolk	Water quality – chemical and physico-chemical	Leiston Beck Minsmere Old River Walberswick Marshes Blyth (S) Alde and Ore	N/A	661 Southwold The Denes Southwold The Pier	Modelling predicted potential changes to thermal properties of the WFD water body. However additional modelling to consider the potential effects of the increased temperature on physico-chemical parameters did not indicate any effects. Additionally, the species located within the thermal plume were not considered sensitive to the predicted changes to temperature. In terms of chemistry, a screening assessment identified the chemicals that could potentially exceed either the EQS or substitute EQS. However further modelling did not indicate significant mixing zones, most of which were located outside of the WFD water body boundary. In terms of protected areas, bacteria concentrations with the proposed treatment levels were predicted to be compliant with bathing water standards on discharge to the water environment. As a result, a deterioration in the water body is not predicted.
	Biology - Habitats				

NOT PROTECTIVELY MARKED

Water body	Quality elements	Indirect effects	Mitigation measures	Protected areas	Summary of assessment
					The potential for effects on adjoining water bodies were also considered.
O6 Intake of cooling water					
Suffolk	Biology – phytoplankton and fish. Fish is not a compliance parameter for coastal water bodies so the potential effect is considered on the transitional water bodies only which could be impacted indirectly.	Blyth (S) Alde and Ore	N/A	N/A	Assessment of both impingement and entrainment did not identify any significant risks to key taxa against the thresholds identified. As a result, a deterioration in the transitional WFD water bodies located adjacent to the Suffolk coast water body is not predicted.
O7 Discharge of trade effluent from cooling water system					
Suffolk	Water quality – chemical and physico-chemical, Biology - Habitats under plume	Leiston Beck Minsmere Old River Walberswick Marshes Blyth (S) Alde and Ore	N/A	661	See O5.
O8 Discharge of polluting matter via the FRR					
Suffolk	Water Quality – physico-chemical	None	N/A	661	Modelling undertaken to look at the potential effects of the dead flora and fauna on water quality indicated very localised effects to the Fish Recovery and Return (FRR)

Water body	Quality elements	Indirect effects	Mitigation measures	Protected areas	Summary of assessment
					system outfalls. As a result, a deterioration in the WFD water body is not predicted.

Table 4.5: Summary of assessment for the associated development sites (construction phase)

Water body	Quality elements	Indirect effects	Mitigation measures	Protected areas	Summary of assessment
Two village bypass: C2 Construction of watercourse crossings					
River Alde	Hydromorphology Biology	Alde-Ore downstream of confluence	Removal or easement of barriers to fish migration; Increase in-channel morphological diversity; Habitat improvements	N/A	Although the proposed construction activities could result in temporary and/or highly localised effects on hydromorphology and biology, any changes are not considered to be sufficient to result in deterioration in the status of any quality elements in the River Alde (within or between status classes). Furthermore, any effects on improvement measures identified for the water body would not prevent the implementation or counteract the effects of these measures. This means that these activities would not result in deterioration in the status of this river water body or prevent WFD objectives being achieved in this water body in the future.
Sizewell link road: C2 Construction of watercourse crossings					
Minsmere Old River	Hydromorphology Biology	N/A	Remove or soften hard bank protection; Increase in-channel morphological diversity; Preserve or restore habitats; Enhance ecology	N/A	Although the proposed activities could result in temporary and/or highly localised effects on hydromorphology and biology, the changes are not predicted to be sufficient to result in deterioration of the status of any quality elements in the Minsmere Old River (within or between status classes). Furthermore, any effects would not prevent the implementation or counteract the effects of the mitigation measures identified in the RBMP. This means that these activities would not result in deterioration in the status of this river water body or prevent WFD objectives being achieved in this water body in the future.

Table 4.6 Summary of assessment for the associated development sites (operational phase)

Water body	Quality elements	Indirect effects	Mitigation measures	Protected areas	Summary of assessment
Two village bypass: O2 Presence of permanent bridge and culverts					
River Alde	Hydromorphology Biology	Alde-Ore downstream of confluence	Removal or easement of barriers to fish migration; Increase in-channel morphological diversity; Habitat improvements	N/A	Although the proposed operational activities could result in temporary and/or highly localised effects on hydromorphology and biology, any changes are not considered to be sufficient to result in deterioration in the status of any quality elements in the River Alde (within or between status classes). Furthermore, any effects on improvement measures identified for the water body would not prevent the implementation or counteract the effects of these measures. This means that these activities would not result in deterioration in the status of this river water body or prevent WFD objectives being achieved in this water body in the future.
Sizewell link road: O2 Presence of watercourse crossings					
Minsmere Old River	Hydromorphology Biology	N/A	Remove or soften hard bank protection; Increase in-channel morphological diversity; Preserve or restore habitats; Enhance ecology	N/A	Although the proposed activities could result in highly localised effects on hydromorphology and biology, any changes are not predicted to be sufficient to result in deterioration in the status of any quality elements in the River Alde (within or between status classes). Furthermore, any effects on mitigation measures identified in the River Basin Management Plan (RBMP) would not prevent the implementation or counteract the effects of these measures. This means that these activities would not result in deterioration in the status of this river water

Water body	Quality elements	Indirect effects	Mitigation measures	Protected areas	Summary of assessment
					body or prevent WFD objectives being achieved in this water body in the future.

4.3 Project Wide Effects

a) Introduction

4.3.1. This section considers whether the individual activities for the main development site and the associated development sites could potentially give rise to project wide cumulative effects. The subsequent sections consider the potential for cumulative effects to be caused by the different activities proposed at the main development site (**section 4.3b**), and the potential cumulative effects resulting from the main development site and the associated development sites (**section 4.3c**).

b) Project wide effects: Main development site

i. Identification of potential cumulative effects

4.3.2. The assessment presented in **Part 2** considers the potential impact of each construction and operational activity at the main development site separately but does not consider the likelihood of cumulative effects occurring due to these activities being undertaken in combination. The potential for cumulative effects on WFD quality elements and water body status resulting from the proposed activities is therefore considered in this assessment.

4.3.3. The potential for within-project cumulative effects during the construction phase are considered in the following tables:

- C1 Initial site preparation: **Table 4.7**.
- C2 Earthworks for platform development: **Table 4.8**.
- C3 Construction of marine structures: **Table 4.9**.
- C4 Discharge of waste water: **Table 4.10**.
- C5 Discharge of cold test commissioning water: **Table 4.11**.

4.3.4. The potential for within-project cumulative effects during the operational phase are considered in the following tables:

- O1 Presence of power station platform and cut-off wall: **Table 4.12**.
- O2 Presence of permanent access road: **Table 4.13**.

- O3 Presence of marine structures and Beach Landing Facility (BLF): **Table 4.14.**
- O4 Presence of flood defence structures: **Table 4.15.**
- O5 Discharge of foul and surface water via the cooling water system: **Table 4.16.**
- O6 Intake of cooling water: **Table 4.16.**
- O7 Discharge of trade effluent via the cooling water system: **Table 4.16.**
- O8 Discharge of polluting matter from the Fish Recovery and Return (FRR) system: **Table 4.16.**

4.3.5. The assessment presented in **Table 4.7** to **Table 4.11** has identified the following potential within project cumulative effects during the construction stage:

- Construction of marine structures (C3) and discharge of waste water (C4) – potential cumulative effects on water quality.
- Construction of marine structures (C3) and discharge of cold test commissioning water (C5).

4.3.6. Furthermore, the assessment presented in **Table 4.12** to **Table 4.16** has identified the following potential within project cumulative effects during the operational stage:

- The combined effect of presence of marine structures (O3) and coastal defence structure (O4).
- Effect of the operational discharge of polluting matter via the FRR system (O8) cumulatively with the operational discharge from the cooling water outfall (O5 and O7).
- Effects of impingement, changes to thermal regime and discharge of contaminants on fish (O3, O5, O6, O7, O8) and intake of fish (O6).

4.3.7. These effects are considered in more detail in the subsequent section.

Table 4.7: Assessment of the potential for cumulative effects between C1 Initial site preparation and all other main development site activities during construction

Activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
C2 Earthworks for platform development	Leiston Beck Minsmere Old River Waveney and East Suffolk Crag	<p>As demonstrated in Table 4.3, activities C1 and C2 could both have direct effects on the hydromorphology, physico-chemistry and biology of Leiston Beck and the Minsmere Old River as a result of changes to surface water runoff, the supply of fine sediment from bare ground and the supply of contaminants from construction materials and machinery. Furthermore, both activities could potentially affect the quantity and quality of the Waveney and East Suffolk Chalk and Crag groundwater body as a result of changes to surface and subsurface flows and the introduction of new sources of contaminants to groundwater.</p> <p>However, the implementation of the CoCP (Doc Ref. 8.11) during the construction phase would prevent any changes to the status of the surface and groundwater bodies. It is therefore not expected that the combined impact of both activities on each water body would be greater than those effects predicted for each activity alone.</p>	No
C3 Construction of marine structures	Leiston Beck Minsmere Old River Suffolk	<p>Activity C1 could directly impact upon the hydromorphology, physico-chemistry and biology of Leiston Beck and the Minsmere Old River as a result of changes to surface water runoff, the supply of fine sediment from bare ground and the supply of contaminants from construction materials and machinery. Any changes to these water bodies could potentially affect the Suffolk coastal water body downstream. This could combine with Activity C3 through the release of sediment and contaminants to impact on the tidal sections of the two river water bodies and the Suffolk coastal water body.</p> <p>However, the implementation of the CoCP (Doc Ref. 8.11) would remove the risk to the freshwater bodies and prevent cumulative effects occurring on the downstream coastal water body. Furthermore, the operation of Minsmere Sluice limits the ingress of water from the coastal water body into the rivers (Volume 2 of Chapter 19 of the ES, Appendix 19E (Doc Ref. 6.3)). It is therefore not expected that the combined impact of both activities on each water body would be greater than those effects predicted for each activity alone.</p>	No
C4 Discharge of waste water	Leiston Beck	Activity C1 could potentially impact on the chemistry and physico-chemistry of Leiston Beck and the Minsmere Old River through the accidental release of contaminants from	No

NOT PROTECTIVELY MARKED

Activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
	Minsmere Old River Suffolk	<p>construction materials and machinery. This could potentially also affect the downstream Suffolk coastal water body. Activity C4 could potentially affect the physico-chemistry and chemistry of the Suffolk coastal water body as a result of the direct discharge of waste water through the CDO. There is therefore potential for cumulative effects from both activities on the Suffolk coastal water body, and on tidal sections of the two river water bodies.</p> <p>However, the implementation of the CoCP (Doc Ref. 8.11) would remove the risk to the freshwater bodies and prevent cumulative effects occurring on the downstream coastal water body. Furthermore, the operation of Minsmere Sluice limits the ingress of water from the coastal water body into the rivers (Volume 2 of Chapter 19 of the ES, Appendix 19E (Doc Ref. 6.3)). It is therefore not expected that the combined impact of both activities on each water body would be greater than those effects predicted for each activity alone.</p>	
C5 Discharge of cold test commissioning water	Leiston Beck Minsmere Old River Suffolk	<p>Activity C1 could potentially impact on the chemistry and physico-chemistry of Leiston Beck and the Minsmere Old River through the accidental release of contaminants from construction materials and machinery. This could potentially also affect the downstream Suffolk coastal water body. Activity C5 could potentially affect the physico-chemistry and chemistry of the Suffolk coastal water body as a result of direct discharges through the CDO. There is therefore potential for cumulative effects from both activities on the Suffolk coastal water body, and on tidal sections of the two river water bodies.</p> <p>However, the implementation of the CoCP (Doc Ref. 8.11) would remove the risk to the freshwater bodies and prevent cumulative effects occurring on the downstream coastal water body. Furthermore, the operation of Minsmere Sluice limits the ingress of water from the coastal water body into the rivers (cf. ES Volume 2, Chapter 19, Appendix 19E (Doc Ref. 6.3)). It is therefore not expected that the combined impact of both activities on each water body would be greater than those effects predicted for each activity alone.</p>	No

Table 4.8: Assessment of the potential for cumulative effects between C2 Earthworks for platform development and all other main development site activities during construction

Activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
C1 Initial site preparation	Considered in Table 4.7.		No
C3 Construction of marine structures	Leiston Beck Minsmere Old River Suffolk	<p>As demonstrated in Table 4.3, activity C2 could potentially affect the hydromorphology, physico-chemistry and biology of Leiston Beck and the Minsmere Old River as a result of changes to surface water runoff, the supply of fine sediment from bare ground and the supply of contaminants from construction materials and machinery. Any changes to these water bodies could potentially affect the Suffolk coastal water body downstream. Activity C3 could affect the physico-chemistry and biology of the Suffolk coastal water body through the release of sediment and contaminants. There is potential for cumulative effects from both activities on the Suffolk coastal water body, and on tidal sections of the two river water bodies.</p> <p>However, the implementation of the CoCP (Doc Ref. 8.11) would remove the risk to the freshwater bodies and prevent cumulative effects occurring on the downstream coastal water body. Furthermore, the operation of Minsmere Sluice limits the ingress of water from the coastal water body into the rivers (cf. ES Volume 2, Chapter 19, Appendix 19E (Doc Ref. 6.3)). It is therefore not expected that the combined impact of both activities on each water body would be greater than those effects predicted for each activity alone.</p> <p>Although activity C2 could potentially affect the quantity and quality of the Waveney and East Suffolk Chalk and Crag groundwater body as a result of changes to surface and subsurface flows and the introduction of new sources of contaminants to groundwater, activity C3 will not affect the groundwater body and there is therefore no potential for cumulative effects on groundwater.</p>	No
C4 Discharge of waste water	Leiston Beck Minsmere Old River Suffolk	Activity C2 could potentially affect the hydromorphology, physico-chemistry and biology of Leiston Beck and the Minsmere Old River as a result of changes to surface water runoff, the supply of fine sediment from bare ground and the supply of contaminants from construction materials and machinery. Any changes to these water	No

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Activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
		<p>bodies could potentially affect the Suffolk coastal water body downstream. Activity C4 could potentially affect the physico-chemistry and chemistry of the Suffolk coastal water body as a result of the direct discharge of waste water through the CDO. There is therefore potential for cumulative effects from both activities on the Suffolk coastal water body, and on tidal sections of the two river water bodies.</p> <p>However, the implementation of the CoCP (Doc Ref. 8.11) would remove the risk to the freshwater bodies and prevent cumulative effects occurring on the downstream coastal water body. Furthermore, the operation of Minsmere Sluice limits the ingress of water from the coastal water body into the rivers (cf. ES Volume 2, Chapter 19, Appendix 19E (Doc Ref. 6.3)). It is therefore not expected that the combined impact of both activities on each water body would be greater than those effects predicted for each activity alone.</p> <p>Although activity C2 could potentially affect the quantity and quality of the Waveney and East Suffolk Chalk and Crag groundwater body as a result of changes to surface and subsurface flows and the introduction of new sources of contaminants to groundwater, activity C4 will not affect the groundwater body and there is therefore no potential for cumulative effects on groundwater.</p>	
C5 Discharge of cold test commissioning water	Leiston Beck Minsmere Old River Suffolk	<p>Activity C2 could potentially affect the hydromorphology, physico-chemistry and biology of Leiston Beck and the Minsmere Old River as a result of changes to surface water runoff, the supply of fine sediment from bare ground and the supply of contaminants from construction materials and machinery. Any changes to these water bodies could potentially affect the Suffolk coastal water body downstream. Activity C5 could potentially affect the physico-chemistry and chemistry of the Suffolk coastal water body as a result of direct discharges through the CDO. There is therefore potential for cumulative effects from both activities on the Suffolk coastal water body, and on tidal sections of the two river water bodies.</p> <p>However, the implementation of the CoCP (Doc Ref. 8.11) would remove the risk to the freshwater bodies and prevent cumulative effects occurring on the downstream</p>	No

NOT PROTECTIVELY MARKED

Activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
		<p>coastal water body. Furthermore, the operation of Minsmere Sluice limits the ingress of water from the coastal water body into the rivers (cf. ES Volume 2, Chapter 19, Appendix 19E (Doc Ref. 6.3)). It is therefore not expected that the combined impact of both activities on each water body would be greater than those effects predicted for each activity alone.</p> <p>Although activity C2 could potentially affect the quantity and quality of the Waveney and East Suffolk Chalk and Crag groundwater body as a result of changes to surface and subsurface flows and the introduction of new sources of contaminants to groundwater, activity C5 will not affect the groundwater body and there is therefore no potential for cumulative effects on groundwater.</p>	

Table 4.9: Assessment of the potential for cumulative effects between C3 Construction of marine structures and all other main development site activities during construction

Activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
C1 Initial site preparation	Considered in Table 4.7 .		No
C2 Earthworks for platform development	Considered in Table 4.8 .		No
C4 Discharge of waste water	Leiston Beck Minsmere Old River Suffolk	As demonstrated in Table 4.3 , activity C3 could affect the physico-chemistry and biology of the Suffolk coastal water body through the release of sediment and contaminants. Activity C4 could potentially affect the physico-chemistry and chemistry of the Suffolk coastal water body as a result of the direct discharge of waste water through the CDO. There is therefore potential for cumulative effects from both activities on the Suffolk coastal water body, and on tidal sections of the two connected river water bodies.	Yes
C5 Discharge of cold test commissioning water	Leiston Beck Minsmere Old River	Activities C3 and C5 could both affect the physico-chemistry and biology of the Suffolk coastal water body through the release of sediment and contaminants.	Yes

Activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
	Suffolk	These two activities could potentially combine to impact on water quality of the coastal water body and the connected freshwater bodies via the Minsmere Sluice.	

Table 4.10: Assessment of the potential for cumulative effects between C4 Discharge of waste water and all other main development site activities during construction

Activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
C1 Initial site preparation	Considered in Table 4.7.		No
C2 Earthworks for platform development	Considered in Table 4.8.		No
C3 Construction of marine structures	Considered in Table 4.9.		Yes
C5 Discharge of cold test commissioning water	Leiston Beck Minsmere Old River Suffolk	As demonstrated in Table 4.3 , activities C4 and C5 could both affect the physico-chemistry and biology of the Suffolk coastal water body through the release of sediment and contaminants. These two activities could potentially combine to impact on water quality of the coastal water body and the connected freshwater bodies via the Minsmere Sluice.	Yes

Table 4.11: Assessment of the potential for cumulative effects between C5 Discharge of cold test commissioning water and all other main development site activities during construction

Activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
C1 Initial site preparation	Considered in Table 4.7.		No
C2 Earthworks for platform development	Considered in Table 4.8.		No
C3 Construction of marine structures	Considered in Table 4.9.		Yes
C4 Discharge of waste water	Considered in Table 4.10.		Yes

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Table 4.12: Assessment of the potential for cumulative effects with O1 Presence of power station platform and cut-off wall and all other main development site activities during construction

Activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
O2 Presence of permanent access road	Leiston Beck Minsmere Old River Suffolk Waveney and East Suffolk Crag	<p>As demonstrated in Table 4.4, activity O1 could potentially affect the hydromorphology and physico-chemistry of Leiston Beck and the Minsmere Old River and the quantity and quality of the Waveney and East Suffolk Chalk and Crag groundwater body as a result of changes to surface and subsurface flows. The activity could also result in indirect effects on the Suffolk coastal water body. Activity O2 could directly affect the hydromorphology, physico-chemistry and biology of Leiston Beck and result in indirect effects on the Minsmere Old River and the Waveney and East Suffolk Chalk and Crag groundwater body.</p> <p>However, the Outline Drainage Strategy (Appendix 2A of Volume 2 of the ES) will minimise changes resulting from activity O1, and the design of the access road will minimise impacts on surface and groundwater receptors (cf. ES Volume 2, Chapter 19 (Doc Ref. 6.3)). It is therefore not expected that the combined impact of both activities on each water body would be greater than those effects predicted for each activity alone.</p>	No
O3 Presence of marine structures and BLF	Suffolk	<p>Activity O1 could potentially affect the hydromorphology and physico-chemistry of Leiston Beck and the Minsmere Old River and result in indirect effects on the Suffolk coastal water body. Activity O3 could directly impact upon the hydromorphology, physico-chemistry and biology of the Suffolk coastal water body.</p> <p>However, the Outline Drainage Strategy (Appendix 2A of Volume 2 of the ES) will minimise changes resulting from activity O1, and the small scale of impacts arising from activity O3 mean that no changes to hydromorphology or physico-chemistry are predicted. It is therefore not expected that the combined impact of both activities on each water body would be greater than those effects predicted for each activity alone.</p>	No
O4 Presence of flood defence structures	Suffolk	Activity O1 could potentially affect the hydromorphology and physico-chemistry of Leiston Beck and the Minsmere Old River and result in indirect effects on the Suffolk	No

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Activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
O5 Discharge of foul and surface water via the cooling water system	Leiston Beck Minsmere Old River Suffolk	coastal water body. Activity O4 could potentially impact on the hydromorphology of the Suffolk coastal water body. Activities O5, O6, O7 and O8 could impact upon the physico-chemistry and biology of the Suffolk coastal water body and result in indirect effects on the Leiston Beck, Minsmere Old River, Walberswick Marshes, Blyth (S) and Alde and Ore water bodies. However, the Outline Drainage Strategy Outline Drainage Strategy (Appendix 2A of Volume 2 of the ES) will minimise changes resulting from activity O1. It is therefore not expected that the combined impact of these activities on each water body would be greater than those effects predicted for each activity alone.	No
O6 Intake of cooling water	Suffolk		No
O7 Discharge of trade effluent via the cooling water system	Leiston Beck Minsmere Old River Suffolk		No
O8 Discharge of polluting matter from the FRR system	Leiston Beck Minsmere Old River Suffolk		No

Table 4.13: Assessment of the potential for cumulative effects with O2 Presence of permanent access road and all other main development site activities during construction

Activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
O1 Presence of power station platform and cut-off wall	See Table 4.12.		No
O3 Presence of marine structures and BLF	Suffolk	As demonstrated in Table 4.4 , activity O2 could potentially affect the hydromorphology, physico-chemistry and biology of Leiston Beck and result in indirect effects on the Minsmere Old River but is not expected to result in any changes to the Suffolk coastal water body. Activities O3 and O4 could directly impact upon the hydromorphology, physico-chemistry and biology of the Suffolk coastal water body, while activities O5, O6, O7 and O8 could affect the physico-chemistry and biology of the coastal water body.	No
O4 Presence of flood defence structures	Suffolk		No
O5 Discharge of foul and surface water via the cooling water system	Leiston Beck Minsmere Old River		No

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Activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
	Suffolk	Given that activity O2 will not affect the coastal water body, the combined impact between O2 and each other activity would not be greater than those effects predicted for each activity alone.	
O6 Intake of cooling water	Suffolk		No
O7 Discharge of trade effluent via the cooling water system	Leiston Beck Minsmere Old River Suffolk		No
O8 Discharge of polluting matter from the FRR system	Leiston Beck Minsmere Old River Suffolk		No

Table 4.14: Assessment of the potential for cumulative effects with O3 Presence of marine structures and BLF and all other main development site activities during construction

Activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
O1 Presence of power station platform and cut-off wall	See Table 4.12.		No
O2 Presence of permanent access road	See Table 4.13.		No
O4 Presence of flood defence structures	Suffolk	Activities O3 and O4 could both affect the hydromorphology of the Suffolk coastal water body if the coastal defence is within the water body following sea level rise. There could therefore be a cumulative effect on the hydromorphology of the water body in the future.	Yes
O5 Discharge of foul and surface water via the cooling water system	Leiston Beck Minsmere Old River Suffolk	There is the potential that water quality effects caused by each activity could lead to a cumulative effect. With respect to O7, cumulative effects on fish via impingement and reduced water quality effects that are greater than those associated with each activity alone could occur.	Yes
O6 Intake of cooling water	Suffolk		

Activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
O7 Discharge of trade effluent via the cooling water system	Leiston Beck Minsmere Old River Suffolk		
O8 Discharge of polluting matter from the FRR system	Leiston Beck Minsmere Old River Suffolk		

Table 4.15: Assessment of the potential for cumulative effects with O4 Presence of flood defence structures and all other main development site activities during construction

Activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
O1 Presence of power station platform and cut-off wall	See Table 4.12.		No
O2 Presence of permanent access road	See Table 4.13.		No
O3 Presence of marine structures and BLF	See Table 4.14.		Yes
O5 Discharge of foul and surface water via the cooling water system	Leiston Beck Minsmere Old River Suffolk	As demonstrated in Table 4.4 , activity O4 could potentially affect the hydromorphology of the Suffolk coastal water body but would not affect physico-chemistry. Conversely, activities O5, O6, O7 and O8 could potentially affect physico-chemistry but are not expected to impact upon hydromorphology. There is therefore no overlap in WFD compliance parameters at risk between each activity. It is therefore not expected that the combined impact of these activities on each water body would be greater than those effects predicted for each activity alone.	No
O6 Intake of cooling water	Suffolk		
O7 Discharge of trade effluent via the cooling water system	Leiston Beck Minsmere Old River Suffolk		

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Activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
O8 Discharge of polluting matter from the FRR system	Leiston Beck Minsmere Old River Suffolk		

Table 4.16: Assessment of the potential for cumulative effects between O5 Discharge of foul water and surface water, O6 Intake of cooling water, O7 Discharge of trade effluent, O8 Discharge of polluting matter from the FRR and all other main development site activities during construction

Activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
O1 Presence of power station platform and cut-off wall	See Table 4.12.		No
O2 Presence of permanent access road	See Table 4.13.		No
O3 Presence of marine structures and BLF	See Table 4.14.		Yes
O4 Presence of flood defence structures	See Table 4.15.		No
O5 Discharge of foul and surface water via the cooling water system	Leiston Beck	As demonstrated in Table 4.4 , activities O5, O6, O7 and O8 could potentially affect physico-chemistry of the Suffolk coastal water body and connected river water bodies. There is therefore the potential that water quality effects from each activity could lead to a cumulative effect that is greater than those associated with each activity alone. With respect to O6, cumulative effects could occur on fish via impingement and reduced water quality effects.	Yes
O6 Intake of cooling water	Minsmere Old River		
O7 Discharge of trade effluent via the cooling water system	Suffolk		
O8 Discharge of polluting matter from the FRR system			

ii. Further assessment of potential cumulative effects

- 4.3.8. The potential for within project cumulative effects identified in the previous section has been further assessed in the sections below.

Construction of marine structures (C3) and discharge of waste water (C4)

- 4.3.9. Construction of marine structures (C3) and discharge of waste water (C4) could result in potential cumulative effects on the physico-chemistry of the Suffolk coastal and adjoining transitional water bodies. Although the dredging of the marine structures would impact on physico-chemical parameters over the time dredging is undertaken, the effects are relatively short lived and disperse following cessation of the activities.

- 4.3.10. Additionally, several marine structures are offshore thus further reducing the potential for cumulative effects given the CDO discharge is located close to the coast. The predicted scale of effect for the waste water discharge is relatively small and localised to the outfall. As a result, although there may be temporary overlaps in plumes, the sediment plume will disperse following cessation of the activities. Overall, therefore, it is not expected that the combined impact would be greater than those effects predicted for each activity alone.

Construction of marine structures (C3) and discharge of cold test commissioning water (C5)

- 4.3.11. Construction of marine structures (C3) and discharge of cold test commissioning water (C5) could potentially result in cumulative effects on the physico-chemistry of the Suffolk coastal and adjoining transitional water bodies. Although the dredging of the marine structures will impact on physico-chemical parameters over the time dredging is undertaken, the effects are relatively short lived and disperse following cessation of the activities.

- 4.3.12. Additionally, several marine structures are offshore thus further reducing the potential for cumulative effects given the CDO discharge is located close to the coast. The predicted scale of effect for the commissioning discharge is larger for some parameters, however, it is likely that majority of dredging would be complete before commencement of the commissioning discharge occurs. Overall, therefore, it is not expected that the combined impact would be greater than those effects predicted for each activity alone.

Presence of marine structures (O3) and coastal defence structures (O4)

- 4.3.13. The combined effect of presence of marine structures (O3) and coastal defence structure (O4) during operation could potentially result in cumulative effects on the hydromorphology of the Suffolk coastal and adjoining

transitional water bodies. The marine structures are relatively small scale and only associated with the presence of head structures (six offshore and three close to the coast). Furthermore, the Hard Coastal Defence Feature (HCDF) would not be located within the water body (i.e. it would be located above the mean high water) and the intake and outfall head structures would be located outside the 1nm boundary (i.e. outside the water body).

- 4.3.14. Expert Geomorphological Assessment (EGA) shows that, without secondary mitigation, shoreline recession (a shifting future baseline) is very likely to expose the HCDF within the operational life of the Sizewell C station (i.e. it would become part of the WFD water body). An exposed HCDF could disrupt, and eventually block, shingle transport, leading to potential event-based and net downdrift erosion. However, given that the presence of the other marine structures is predicted to have only small scale localised and for the intake and outfall structures, would be outside of the WFD water body, cumulative effects on hydromorphology are not predicted to be greater than those for these activities alone.

[Operational discharge of polluting matter via the FRR \(O8\) and operational discharges from the cooling water outfall \(O5 and O7\)](#)

- 4.3.15. Effect of the operational discharge of polluting matter via the FRR system (O8) cumulatively with the operational discharge from the cooling water outfall (O5 and O7) could potentially result in cumulative effects on the physico-chemistry of the Suffolk coastal water body. However, with the exception of the thermal plume, modelling of the operational discharge from the cooling water system indicates that the mixing zones for chemical parameters would not intersect with Suffolk coastal WFD water body. As a result, there is no potential for cumulative effects given that the effects of the FRR only occur within the water body and are localised to the outfalls.
- 4.3.16. The combined effect of the operational cooling water discharge and the FRR is considered in **section 2.5s** of **Part 2** of the WFD Compliance Assessment. This demonstrates that the impacts of additional nutrient loading (phosphorus and nitrogen) to the waters off Sizewell as a result of decaying biomass from the FRR is considered to have a negligible influence on phytoplankton growth when considered together with the cooling water discharge input of these nutrients. For the combined nutrient data, a model run over an annual cycle predicts a less than 0.3% difference in annual gross production and this level of change would not be discriminated above natural background variation. Evaluation of the daily average unionised ammonia loading contributed by decaying biomass following discharge from the FRR estimates that it could be at or above the unionised ammonia annual average EQS of $21\mu\text{g l}^{-1}$ $\text{NH}_3\text{-N}$ (taking account of natural background and input from the cooling water discharge with thermal influence included) over an area of 1.2ha around the

FRR. This accounts for 0.008% of the coastal water body and is not, therefore, expected to result in deterioration in water body status.

- 4.3.17. The influence of biomass decay on BOD was also assessed and daily re-aeration over an area of 14ha would be enough to meet the additional demand when considered with that of the operational discharge and this takes no account of water exchange for the Greater Sizewell Bay. Therefore, biomass decay is expected to have a negligible influence on dissolved oxygen concentration.

[Effects of impingement, changes to thermal regime and discharge of contaminants on fish \(O3, O5, O6, O7, O8\) and intake of fish \(O6\)](#)

- 4.3.18. Effects of impingement, changes to thermal regime and discharge of contaminants on fish (O3, O5, O6, O7, O8) and intake of fish (O6) during the operational phase could potentially result in cumulative effects on the physico-chemistry and chemistry of the Suffolk coastal and adjoining transitional water bodies. Based on hydrodynamic modelling, the intake locations have been selected to avoid recirculation of thermal load and contaminants discharged from the cooling water system. Additionally, maintenance dredging required for the BLF will occur close to the coast and any effects would be short term and localised.

- 4.3.19. The combination of physical separation and control of discharges will minimise any possibility that a fish that has experienced any minor effects from passing through the mixing zone of the discharge plume will then enter the cooling water intakes within a short time period while still affected. Overall, therefore, it is not expected that the combined impact would be greater than those effects predicted for each activity alone.

Summary

- 4.3.20. This demonstrates that any cumulative effects resulting from activities at the main development site would not be greater than those effects predicted for each activity alone.

c) [Project wide effects: Main development site and associated development sites](#)

i. [Identification of potential cumulative effects](#)

- 4.3.21. The potential for cumulative impacts on WFD quality elements and water body status resulting from the proposed activities at the main development site and associated development sites is assessed in the following tables:

- Northern park and ride: **Table 4.17.**

- Southern park and ride: **Table 4.18**.
- Two village bypass: **Table 4.19**.
- Sizewell link road: **Table 4.20**.
- Yoxford and other highway improvements: **Table 4.21**.
- Freight management facility: **Table 4.22**.
- Rail: **Table 4.23**.

ii. [Further assessment of potential cumulative effects](#)

4.3.22. The assessment of the potential for cumulative effects resulting from the associated development sites and the main development site did not identify any potential cumulative effects that have not already been considered in Part 2 and Part 3 of this WFD Compliance Assessment.

d) [Summary of project wide effects](#)

4.3.23. The analysis presented in **sections 4.3b)** and **4.3c)** of this Part has demonstrated that within-project cumulative effects on WFD quality elements would, as the worst case, be no worse than those predicted for each activity undertaken at the main development site and associated development sites alone. As a result, the cumulative effect of the proposed activities is considered compliant with the requirements of the WFD.

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Table 4.17: Assessment of the potential for cumulative effects between the northern park and ride, main development site and other associated development sites

Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
Associated development site	Southern park and ride	Waveney and East Suffolk Chalk and Crag	The implementation of the CoCP (Doc Ref 8.11) during the construction phase would remove risks to the groundwater body. During the operational phase, the proposals for both the northern and southern park and rides are to treat foul waters in a package treatment works and discharge the treated effluent to ground. However, the degree of treatment required would prevent cumulative impacts on nutrient supply in the receiving groundwater body. For surface water drainage, control measures will be adopted through the drainage management strategy. Overall, it is not expected that the combined impact would be greater than those effects predicted for groundwater alone.	No
	Two village bypass	Waveney and East Suffolk Chalk and Crag	The implementation of the CoCP (Doc Ref 8.11) during the construction phase would remove risks to the groundwater body. The operational drainage strategy would remove risks during the operational phase. No foul water arrangements are required for the operational phase of the link road. Overall, it is not expected that the combined impact would be greater than those effects predicted for groundwater alone.	No
	Sizewell link road	Minsmere Old River Waveney and East Suffolk Chalk and Crag	The effects of the Sizewell link road on the Minsmere Old River are associated with effects on hydromorphology (and therefore biology) due to the proposed river crossings. Given that the park and ride does not require significant alterations to the hydromorphology of any watercourses in the Minsmere Old River catchment there is no potential for overlap on the Minsmere Old River. The implementation of the CoCP (Doc Ref 8.11) in the construction phase would remove risks to both the surface and groundwater body and the surface water drainage strategy would remove risks during the operational phase. There is no requirement for foul water discharge from the link road. Overall, it is not expected that the combined impact would be greater than those effects predicted for groundwater alone.	No

NOT PROTECTIVELY MARKED

Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
	Yoxford and other highways improvements	Minsmere Old River Waveney and East Suffolk Chalk and Crag	The implementation of the CoCP (Doc Ref 8.11) in the construction phase would remove risks to both the surface and groundwater body and the surface water drainage strategy would remove risks during the operational phase. There is no requirement for foul water discharge from the Yoxford and other highways improvements. Overall, it is not expected that the combined impact would be greater than those effects predicted for the surface water and groundwater alone.	No
	Freight management facility	None	Activities are located within different water body catchments (both surface and groundwater). No pathway for cumulative effects.	No
	Rail	Waveney and East Suffolk Chalk and Crag	The implementation of the CoCP (Doc Ref 8.11) in the construction phase would remove risks to the groundwater body and the surface water drainage strategy would remove risks during the operational phase. There is no requirement for foul water discharge for green rail route and other rail improvements. Overall, it is not expected that the combined impact would be greater than those effects predicted for the groundwater alone.	No
Main development site	C1 Initial site preparation	Minsmere Old River Waveney and East Suffolk Chalk and Crag	The implementation of the CoCP (Doc Ref 8.11) in the construction phase would remove risks to both the surface and groundwater body and the surface water drainage strategy would remove risks during the operational phase. Foul water will be discharged to the marine environment during construction and via the cooling water outfall during operation. Overall, it is not expected that the combined impact would be greater than those effects predicted for the surface water and groundwater alone.	No
	C2 Earthworks for platform development	Waveney and East Suffolk Chalk and Crag	The main effects from activity C2 considered to be on groundwater quantity. The implementation of the CoCP (Doc Ref 8.11) in the construction phase would remove risks to the groundwater body and the surface water drainage strategy would remove risks during the operational phase. Overall, it is not expected that the combined impact would be greater than those effects predicted for the groundwater alone.	No
	C3 Construction of marine structures	None	No overlap in water body potentially at risk	No

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Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
	C4 Discharge of waste water	Minsmere Old River	The implementation of the CoCP (Doc Ref 8.11) in the construction phase would remove risks to the surface water body and the surface water drainage strategy would remove risks during the operational phase. Activity C4 will only discharge to the coastal water body and further assessment demonstrated only localised effects to the CDO outfall location. Overall, it is not expected that the combined impact would be greater than those effects predicted for the groundwater alone.	No
	C5 Discharge of cold test commissioning water	Minsmere Old River	The implementation of the CoCP (Doc Ref 8.11) in the construction phase would remove risks to the surface water body and the surface water drainage strategy would remove risks during the operational phase. Activity C5 will only discharge to the coastal water body and further assessment demonstrated that elevated concentrations of harmful chemicals would not coincide with sluice opening and would degrade rapidly prior to reaching water bodies not immediately adjacent to the CDO. Overall, it is not expected that the combined impact would be greater than those effects predicted for the groundwater alone.	No
	O1 Presence of power station platform and cut-off wall	Time frames will not overlap. The park and ride would have been removed and returned to agricultural land when these activities take place.		No
	O2 Presence of permanent access road			
	O3 Presence of marine structures and BLF			
	O4 Presence of flood defence structures			
	O5 Discharge of foul and surface water via the cooling water system			
	O6 Intake of cooling water			
	O7 Discharge of trade effluent via the cooling water system			

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Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap of effects	Further consideration required?
	O8 Discharge of polluting matter from the FRR system			

Table 4.18: Assessment of the potential for cumulative effects between the southern park and ride, main development site and other associated development sites

Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap	Further consideration required?
Associated development sites	Northern park and ride	Already considered in Table 4.17 .		No
	Two village bypass	Waveney and East Suffolk Chalk and Crag	The implementation of the CoCP (Doc Ref 8.11) during the construction phase would remove risks to the groundwater body. For surface water drainage, control measures will be adopted through the drainage management strategy. No foul water arrangements are required for the operational phase of the bypass. Overall, it is not expected that the combined impact would be greater than those effects predicted for groundwater alone.	No
	Sizewell link road	Waveney and East Suffolk Chalk and Crag	The implementation of the CoCP (Doc Ref 8.11) during the construction phase would remove risks to the groundwater body. For surface water drainage, control measures will be adopted through the drainage management strategy. No foul water arrangements are required for the operational phase of the link road. Overall, it is not expected that the combined impact would be greater than those effects predicted for groundwater alone.	No
	Yoxford and other highways improvements	Waveney and East Suffolk Chalk and Crag	The implementation of the CoCP (Doc Ref 8.11) during the construction phase would remove risks to the groundwater body. For surface water drainage, control measures will be adopted through the drainage management strategy. No foul water arrangements are required for the operational phase of the road improvements. Overall, it is not expected that the combined impact would be greater than those effects predicted for groundwater alone.	No
	Freight management facility	None	Activities are located within different water body catchments (both surface and groundwater). No pathway for cumulative effects	No

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Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap	Further consideration required?	
	Rail	Waveney and East Suffolk Chalk and Crag	The implementation of the CoCP (Doc Ref 8.11) during the construction phase would remove risks to the groundwater body. For surface water drainage, control measures will be adopted through the drainage management strategy. No foul water arrangements are required for the operational phase of the rail improvements. Overall, it is not expected that the combined impact would be greater than those effects predicted for groundwater alone.	No	
Main development site	C1 Initial site preparation	Waveney and East Suffolk Chalk and Crag	The implementation of the CoCP (Doc Ref 8.11) in the construction phase would remove risks to both the surface and groundwater body and the surface water drainage strategy would remove risks during the operational phase. Foul water will be discharged to the marine environment during construction and via the cooling water outfall during operation. Overall, it is not expected that the combined impact would be greater than those effects predicted for the surface water and groundwater alone.	No	
	C2 Earthworks for platform development	Waveney and East Suffolk Chalk and Crag	The main effects from activity C2 considered to be on groundwater quantity. The implementation of the CoCP (Doc Ref 8.11) in the construction phase would remove risks to the groundwater body and the surface water drainage strategy would remove risks during the operational phase. Overall, it is not expected that the combined impact would be greater than those effects predicted for the groundwater alone.	No	
	C3 Construction of marine structures	None	No overlap in water body potentially at risk.	No	
	C4 Discharge of waste water	None	No overlap in water body potentially at risk.	No	
	C5 Discharge of cold test commissioning water	None	No overlap in water body potentially at risk.	No	
	O1 Presence of power station platform and cut-off wall	Time frames will not overlap. The park and ride would have been removed and returned to agricultural land when these activities take place.			No
	O2 Presence of permanent access road				

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Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap	Further consideration required?
	O3 Presence of marine structures and BLF			
	O4 Presence of flood defence structures			
	O5 Discharge of foul and surface water via the cooling water system			
	O6 Intake of cooling water			
	O7 Discharge of trade effluent via the cooling water system			
	O8 Discharge of polluting matter from the FRR system			

Table 4.19: Assessment of the potential for cumulative effects between the two village bypass, main development site and other associated development sites

Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap	Further consideration required?
Associated development sites	Northern park and ride	Considered in Table 4.17.		No
	Two village bypass	Considered in Table 4.18.		No
	Sizewell link road	Waveney and East Suffolk Chalk and Crag	The implementation of the CoCP (Doc Ref 8.11) during the construction phase would remove risks to the groundwater body. The operational drainage strategy would remove risks during the operational phase. No foul water arrangements are required for the operational phase for either the bypass or the link road. Overall, it is not expected that the combined impact would be greater than those effects predicted for groundwater alone.	No

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Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap	Further consideration required?
	Yoxford and other highways improvements	Waveney and East Suffolk Chalk and Crag	The implementation of the CoCP (Doc Ref 8.11) during the construction phase would remove risks to the groundwater body. The operational drainage strategy would remove risks during the operational phase. No foul water arrangements are required for the operational phase for either the bypass or Yoxford and other highways improvements. Overall, it is not expected that the combined impact would be greater than those effects predicted for groundwater alone.	No
	Freight management facility	None	Activities are located within different water body catchments (both surface and groundwater). No pathway for cumulative effect.	No
	Rail	Waveney and East Suffolk Chalk and Crag	The implementation of the CoCP (Doc Ref 8.11) during the construction phase would remove risks to the groundwater body. The operational drainage strategy would remove risks during the operational phase. No foul water arrangements are required for the operational phase for either site. Overall, it is not expected that the combined impact would be greater than those effects predicted for groundwater alone.	No
Main development site	C1 Initial site preparation	Waveney and East Suffolk Chalk and Crag	The implementation of the CoCP (Doc Ref 8.11) in the construction phase would remove risks to both the surface and groundwater body and the surface water drainage strategy would remove risks during the operational phase. Foul water will be discharged to the marine environment during construction and via the cooling water outfall during operation. Overall, it is not expected that the combined impact would be greater than those effects predicted for the surface water and groundwater alone.	No
	C2 Earthworks for platform development	Waveney and East Suffolk Chalk and Crag	The main effects from activity C2 considered to be on groundwater quantity. The implementation of the CoCP (Doc Ref 8.11) in the construction phase would remove risks to the groundwater body and the surface water drainage strategy would remove risks during the operational phase. Overall, it is not expected that the combined impact would be greater than those effects predicted for the groundwater alone.	No

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Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap	Further consideration required?
	C3 Construction of marine structures	None	No overlap in water body potentially at risk.	No
	C4 Discharge of waste water	None	No overlap in water body potentially at risk.	No
	C5 Discharge of cold test commissioning water	None	No overlap in water body potentially at risk.	No
	O1 Presence of power station platform and cut-off wall	Waveney and East Suffolk Chalk and Crag	The implementation of the surface water drainage strategy would remove risks during the operational phase of both sites. Overall, it is not expected that the combined impact would be greater than those effects predicted for the surface water and groundwater alone.	No
	O2 Presence of permanent access road	Waveney and East Suffolk Chalk and Crag	The implementation of the surface water drainage strategy would remove risks during the operational phase of both sites. Overall, it is not expected that the combined impact would be greater than those effects predicted for the surface water and groundwater alone.	No
	O3 Presence of marine structures and BLF	None	No overlap in water body potentially at risk.	No
	O4 Presence of flood defence structures	None	No overlap in water body potentially at risk.	No
	O5 Discharge of foul and surface water via the cooling water system	None	No overlap in water body potentially at risk.	No
	O6 Intake of cooling water	None	No overlap in water body potentially at risk.	No
	O7 Discharge of trade effluent via the cooling water system	None	No overlap in water body potentially at risk.	No
	O8 Discharge of polluting matter from the FRR system	None	No overlap in water body potentially at risk.	No

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Table 4.20: Assessment of the potential for cumulative effects between the Sizewell link road, main development site and other associated development sites

Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap	Requires further consideration?
Associated Development sites	Northern park and ride	Considered in Table 4.17.		No
	Two village bypass	Considered in Table 4.18.		No
	Sizewell link road	Considered in Table 4.19.		No
	Yoxford and other highways improvements	Minsmere Old River Waveney and East Suffolk Chalk and Crag	The effects on the Minsmere Old River for the link road are associated with effects on hydromorphology (and therefore biology) due to the river crossing required. Given that Yoxford and other road improvements does not require significant alterations to the hydromorphology of any watercourses in the Minsmere Old River catchment there is no potential for overlap on the Minsmere Old River. The implementation of the CoCP (Doc Ref 8.11) in the construction phase would remove risks to both the surface and groundwater body and the surface water drainage strategy would remove risks during the operational phase. There is no requirement for foul water discharge for these two sites. Overall, it is not expected that the combined impact would be greater than those effects predicted for groundwater and surface waters alone.	No
	Freight management facility	None	Activities are located within different water body catchments (both surface and groundwater). No pathway for cumulative effect.	No
	Rail	Waveney and East Suffolk Chalk and Crag	The implementation of the CoCP (Doc Ref 8.11) in the construction phase would remove risks to the groundwater body and the surface water drainage strategy would remove risks during the operational phase. There is no requirement for foul water discharge for green rail route and other rail improvements. Overall, it is not expected that the combined impact would be greater than those effects predicted for the groundwater alone.	No
Main development site	C1 Initial site preparation	Minsmere Old River Waveney and East Suffolk	The implementation of the CoCP (Doc Ref 8.11) in the construction phase would remove risks to both the surface and groundwater body and the surface water drainage strategy would remove risks during the operational phase. Foul water for the main development site activities will be discharged to the marine environment during construction and via the cooling water outfall during operation. Overall, it is	No

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Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap	Requires further consideration?
		Chalk and Crag	not expected that the combined impact would be greater than those effects predicted for the surface water and groundwater alone.	
	C2 Earthworks for platform development	Waveney and East Suffolk Chalk and Crag	The main effects from activity C2 considered to be on groundwater quantity. The implementation of the CoCP (Doc Ref 8.11) in the construction phase for the link road would remove risks to the groundwater body and the surface water drainage strategy would remove risks during the operational phase. Overall, it is not expected that the combined impact would be greater than those effects predicted for the groundwater alone.	No
	C3 Construction of marine structures	None	No overlap in water body potentially at risk.	No
	C4 Discharge of waste water	None	No overlap in water body potentially at risk.	No
	C5 Discharge of cold test commissioning water	None	No overlap in water body potentially at risk.	No
	O1 Presence of power station platform and cut-off wall	Waveney and East Suffolk Chalk and Crag	The implementation of the surface water drainage strategy would remove risks during the operational phase for both sites. Overall, it is not expected that the combined impact would be greater than those effects predicted for the groundwater alone.	No
	O2 Presence of permanent access road	Waveney and East Suffolk Chalk and Crag	The implementation of the surface water drainage strategy would remove risks during the operational phase for both sites. Overall, it is not expected that the combined impact would be greater than those effects predicted for the groundwater alone.	No
	O3 Presence of marine structures and BLF	None	No overlap in water body potentially at risk.	No
	O4 Presence of flood defence structures			

Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap	Requires further consideration?
	O5 Discharge of foul and surface water via the cooling water system			
	O6 Intake of cooling water			
	O7 Discharge of trade effluent via the cooling water system			
	O8 Discharge of polluting matter from the FRR system			

Table 4.21: Assessment of the potential for cumulative effects between the Yoxford and other highways improvements, main development site and other associated development sites

Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap	Further consideration required?
Associated development sites	Northern park and ride	Considered in Table 4.17.		No
	Two village bypass	Considered in Table 4.18.		No
	Sizewell link road	Considered in Table 4.19.		No
	Yoxford and other highways improvements	Considered in Table 4.20.		No
	Freight management facility	None	Activities are located within different water body catchments (both surface and groundwater). No potential for cumulative effects predicted.	No
	Rail	Waveney and East Suffolk Chalk and Crag	The implementation of the CoCP (Doc Ref 8.11) during the construction phase would remove risks to the groundwater body. The operational drainage strategy would remove risks during the operational phase. No foul water arrangements are required for the operational phase of either site. Overall, it is not expected that the combined impact would be greater than those effects predicted for groundwater alone.	No

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Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap	Further consideration required?
Main development site	C1 Initial site preparation	Minsmere Old River Waveney and East Suffolk Chalk and Crag	The implementation of the CoCP (Doc Ref 8.11) in the construction phase would remove risks to both the surface and groundwater body and the surface water drainage strategy would remove risks during the operational phase. Foul water will be discharged to the marine environment during construction and via the cooling water outfall during operation. Overall, it is not expected that the combined impact would be greater than those effects predicted for the surface water and groundwater alone.	No
	C2 Earthworks for platform development	Minsmere Old River Waveney and East Suffolk Chalk and Crag	The main effects from activity C2 considered to be on groundwater quantity. The implementation of the CoCP (Doc Ref 8.11) in the construction phase would remove risks to the groundwater body and the surface water drainage strategy would remove risks during the operational phase. Overall, it is not expected that the combined impact would be greater than those effects predicted for the surface water and groundwater alone.	No
	C3 Construction of marine structures	None	No overlap in water body potentially at risk.	No
	C4 Discharge of waste water	None	No overlap in water body potentially at risk.	No
	C5 Discharge of cold test commissioning water	None	No overlap in water body potentially at risk.	No
	O1 Presence of power station platform and cut-off wall	Minsmere Old River Waveney and East Suffolk Chalk and Crag	The implementation of the surface water drainage strategy would remove risks during the operational phase at both sites. Overall, it is not expected that the combined impact would be greater than those effects predicted for the surface water and groundwater alone.	No
	O2 Presence of permanent access road	Minsmere Old River	The implementation of the surface water drainage strategy would remove risks during the operational phase at both sites. Overall, it is not expected that the combined impact would be greater than those effects predicted for the surface water and groundwater alone.	No

Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap	Further consideration required?
		Waveney and East Suffolk Chalk and Crag		
	O3 Presence of marine structures and BLF	None	No overlap in water body potentially at risk.	No
	O4 Presence of flood defence structures			
	O5 Discharge of foul and surface water via the cooling water system			
	O6 Intake of cooling water			
	O7 Discharge of trade effluent via the cooling water system			
	O8 Discharge of polluting matter from the FRR system			

Table 4.22: Assessment of the potential for cumulative effects between the freight management facility, main development site and other associated development sites

Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap	Potential for overlap
Associated development sites	Northern park and ride	Considered in Table 4.17.		No
	Two village bypass	Considered in Table 4.18.		No
	Sizewell link road	Considered in Table 4.19.		No

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Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap	Potential for overlap
	Yoxford and other highways improvements	Considered in Table 4.20 .		No
	Freight management facility	Considered in Table 4.21 .		No
	Rail	None	Activities are located within different water body catchments (both surface and groundwater). No pathway for cumulative effects.	No
Main development site	C1 Initial site preparation	None	Activities are located within different water body catchments (both surface and groundwater). No pathway for cumulative effects.	No
	C2 Earthworks for platform development			
	C3 Construction of marine structures			
	C4 Discharge of waste water			
	C5 Discharge of cold test commissioning water			
	O1 Presence of power station platform and cut-off wall	Timeframes will not overlap.		No
	O2 Presence of permanent access road			
	O3 Presence of marine structures and BLF			
	O4 Presence of flood defence structures			
	O5 Discharge of foul and surface water via the cooling water system			
	O6 Intake of cooling water			

Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap	Potential for overlap
	O7 Discharge of trade effluent via the cooling water system			
	O8 Discharge of polluting matter from the FRR system			

Table 4.23: Assessment of the potential for cumulative effects between rail, main development site and other associated development sites

Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap	Requires further consideration?
Associated development sites	Northern park and ride	Considered in Table 4.17.		No
	Two village bypass	Considered in Table 4.18.		No
	Sizewell link road	Considered in Table 4.19.		No
	Yoxford and other highways improvements	Considered in Table 4.20.		No
	Freight management facility	Considered in Table 4.21.		No
	Rail	Considered in Table 4.22.		No
Main development site	C1 Initial site preparation	Leiston Beck Waveney and East Suffolk Chalk and Crag	The implementation of the CoCP (Doc Ref 8.11) in the construction phase would remove risks to both the surface and groundwater body and the surface water drainage strategy would remove risks during the operational phase. Foul water from the main development site will be discharged to the marine environment during construction. Overall, it is not expected that the combined impact would be greater than those effects predicted for the surface water and groundwater alone.	No

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Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap	Requires further consideration?
	C2 Earthworks for platform development	Leiston Beck Waveney and East Suffolk Chalk and Crag	The implementation of the CoCP (Doc Ref 8.11) in the construction phase would remove risks to both the surface and groundwater body and the surface water drainage strategy would remove risks during the operational phase. Foul water from the main development site will be discharged to the marine environment during construction. Overall, it is not expected that the combined impact would be greater than those effects predicted for the surface water and groundwater alone.	No
	C3 Construction of marine structures	None	No overlap in water body potentially at risk.	No
	C4 Discharge of waste water			
	C5 Discharge of cold test commissioning water			
	O1 Presence of power station platform and cut-off wall	Time frames will not overlap.		No
	O2 Presence of permanent access road			
	O3 Presence of marine structures and BLF			
	O4 Presence of flood defence structures			
	O5 Discharge of foul and surface water via the cooling water system			
	O6 Intake of cooling water			
	O7 Discharge of trade effluent via the cooling water system			

Sizewell C	Site name or activity	Do activities overlap in a WFD water body?	Consideration of the potential for overlap	Requires further consideration?
	O8 Discharge of polluting matter from the FRR system			

4.4 Cumulative Effects with other projects

a) Introduction

4.4.1. This section considers whether any of the identified effects associated with the Sizewell C Project could combine in such a manner with the effects of other projects such that they could lead to a greater effect on the water environment. This cumulative assessment considers only those projects that are predicted to include effects on WFD water bodies.

b) Method

4.4.2. A staged process has been followed to assess cumulative effects, which has been aligned with the Environmental Impact Assessment (EIA) Cumulative Effects Assessment (CEA) methodology provided in **Volume 10** of the Environmental Statement (ES) (Doc Ref. 6.11).

4.4.3. This method, which includes the following four stages, is described in more detail in **Part 1** of this WFD Compliance Assessment:

- Stage 1 Establishing a Zone of Influence (ZOI) and long list of non-Sizewell C projects.
- Stage 2 Establishing a short list of projects.
- Stage 3 Information gathering.
- Stage 4 Assessment.

4.4.4. The results of Stages 1 – 3 are described in **section 4.4c)**, and the results of Stage 4 are presented in **Table 4.24**.

c) Assessment Stages 1-3

4.4.5. The corresponding ‘long list’ of projects (stage 1) agreed as part of the EIA process is included in **Appendix 1A** of **Volume 10** of the ES (Doc Ref. 6.11). This section presents the outcomes of stages 2 and 3 which were carried out with specific regard to WFD quality elements.

4.4.6. **Table 4.24** lists the projects included within the EIA short list (stage 2) and collates information where available (stage 3) to inform an assessment as to whether the project should be screened in for further consideration (further consideration constitutes stage 4).

Table 4.24: Screening of other projects for cumulative effects on WFD water bodies

Licence ref.	Developer	Project title and description	Current status and availability of information	Spatial link to the project	Temporal link to the project	Distance to main development site or identified associated development site	WFD water body at risk	Additional assessment required?	Justification for screening decision
DC/17/1617/FUL	[REDACTED]	Abbey View Lodges, Orchard House, 105 Abbey Road, Leiston, Suffolk, IP16 4TA Redevelopment of the site for 8 dwellings	Approved	Yes	Scheme likely to be operational prior to construction of Sizewell C commencing	83m 24m to Green Rail	Leiston Beck	No	All effects on water quality and quantity from this project were predicted to not be significant. It is assumed that potential impacts on rivers and groundwater will be managed through the implementation of best practice strategies and control measures. Given the very low significance of the effects

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Licence ref.	Developer	Project title and description	Current status and availability of information	Spatial link to the project	Temporal link to the project	Distance to main development site or identified associated development site	WFD water body at risk	Additional assessment required?	Justification for screening decision
									predicted and the receptors likely to be impacted, it is considered that there is limited potential for any cumulative effects with the Sizewell C project.
DC/15/3954/AME	SZC Co.	<p>Land South And West Of Lovers Lane Leiston Suffolk</p> <p>Creation of approximately 6ha of wetland habitat, including wet reedbed, open-water and perimeter ditches within 4 groundwater basins together</p>	Approved	Yes	Yes	215m	<p>Leiston Beck</p> <p>Waveney and East Suffolk Chalk & Crag</p>	No	All effects on water quality and quantity from this project were predicted to not be significant. It is assumed that potential impacts on rivers, groundwater and coastal waters will be

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Licence ref.	Developer	Project title and description	Current status and availability of information	Spatial link to the project	Temporal link to the project	Distance to main development site or identified associated development site	WFD water body at risk	Additional assessment required?	Justification for screening decision
		with marginal drier reed habitat. Soils excavated to create the basins, would be used across the wider site to establish a landscape including grassland, heathland, scrub and scattered trees. Other associated works include realignment of the existing watercourse, the relocation of groundwater abstraction boreholes, a new pump house and fencing.							managed through the implementation of best practice strategies and control measures. Given the very low significance of the effects predicted and the parameters likely to be impacted, it is considered that there is limited potential for any cumulative effects with the Sizewell C project.

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Licence ref.	Developer	Project title and description	Current status and availability of information	Spatial link to the project	Temporal link to the project	Distance to main development site or identified associated development site	WFD water body at risk	Additional assessment required?	Justification for screening decision
DC/16/0444/COU		<p>Middleton Village Hall, Mill Street, Middleton, Suffolk</p> <p>Change of Use of part of Agricultural Field to provide overflow car parking</p>	Approved	Yes	Scheme likely to be operational prior to construction of Sizewell C commencing	453m to Sizewell Link Road	Minsmere Old River	No	<p>All effects on water quality and quantity from this project were predicted to not be significant. It is assumed that potential impacts on rivers and groundwater will be managed through the implementation of best practice strategies and control measures.</p> <p>Given the very low significance of the effects predicted and the parameters</p>

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Licence ref.	Developer	Project title and description	Current status and availability of information	Spatial link to the project	Temporal link to the project	Distance to main development site or identified associated development site	WFD water body at risk	Additional assessment required?	Justification for screening decision
									likely to be impacted, it is considered that there is limited potential for any cumulative effects with the Sizewell C project.
DC/15/0325/FUL		<p>Land Adjoining Green Garth Mill Street Middleton Suffolk</p> <p>Construct 3 detached and 4 semi-detached dwellings, together with car parking and construction of service approach drive, utilising existing access point.</p>	Approved	Yes	No	477m to Sizewell Link Road	Minsmere Old River	No	All effects on water quality and quantity from this project were predicted to not be significant. It is assumed that potential impacts on rivers and groundwater will be managed through the implementation

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									of best practice strategies and control measures. Given the very low significance of the effects predicted and the parameters likely to be impacted, it is considered that there is limited potential for any cumulative effects with the Sizewell C project.
DC/14/0420/OUT		Land Between Station Garage And Railway Cottage, Main Road, Darsham, Suffolk	Approved Reserved matters application approved 23	Yes	Potential for construction and/or operation overlap	29m to Darsham Park and Ride	Minsmere Old River Waveney and East Suffolk	No	All effects on water quality and quantity from this project were predicted to not be significant. It

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		Erection of 82 bedroom hotel, car parking and associated works	June 2017 - DC/17/1769/ARM				Chalk & Crag		<p>is assumed that potential impacts on rivers and groundwater will be managed through the implementation of best practice strategies and control measures.</p> <p>Given the very low significance of the effects predicted and the parameters likely to be impacted, it is considered that there is limited potential for any cumulative effects with the</p>

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Licence ref.	Developer	Project title and description	Current status and availability of information	Spatial link to the project	Temporal link to the project	Distance to main development site or identified associated development site	WFD water body at risk	Additional assessment required?	Justification for screening decision
									Sizewell C project.
DC/14/3937/FUL		<p>The Scaffold Yard, Middleton Road, Yoxford, Suffolk</p> <p>Demolition of existing derelict building and erection of 4 dwellings with associated landscaping work.</p>	<p>Approved</p> <p>Non material amendments application refused 5 June 2017 - DC/17/2321/AME</p>	Yes	No	62m to Yoxford Roundabout	Minsmere Old River	No	<p>All effects on water quality and quantity from this project were predicted to not be significant. It is assumed that potential impacts on rivers and groundwater will be managed through the implementation of best practice strategies and control measures.</p> <p>Given the very low significance of the effects</p>

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									predicted and the parameters likely to be impacted, it is considered that there is limited potential for any cumulative effects with the Sizewell C project.
DC/18/0702/FUL		<p>Part Land East Of Northern End Beech Road, Saxmundham, Suffolk</p> <p>Development of 59 residential dwellings and associated landscaping and public open space, together with a new vehicular access from</p>	<p>Application permitted</p> <p>Under construction</p>	Yes	Potential for construction and/or operation overlap	164m to the Branch Line	<p>Fromus</p> <p>Waveney and East Suffolk Chalk & Crag</p>	No	All effects on water quality and quantity from this project were predicted to not be significant. It is assumed that potential impacts on rivers and groundwater will be managed

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		existing development and associated highway infrastructure							through the implementation of best practice strategies and control measures. Given the very low significance of the effects predicted and the parameters likely to be impacted, it is considered that there is limited potential for any cumulative effects with the Sizewell C project.
DC/14/3286/CLE	██████████	Watering Farm Watering Lane Sternfield Suffolk IP17 1QS	Approved	Yes	No	920m to Two Village Bypass	Fromus	No	All effects on water quality and quantity from this project were

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Licence ref.	Developer	Project title and description	Current status and availability of information	Spatial link to the project	Temporal link to the project	Distance to main development site or identified associated development site	WFD water body at risk	Additional assessment required?	Justification for screening decision
		Lawful development certificate for existing use: converted studio used as three holiday letting units							<p>predicted to not be significant. It is assumed that potential impacts on rivers and groundwater will be managed through the implementation of best practice strategies and control measures.</p> <p>Given the very low significance of the effects predicted and the parameters likely to be impacted, it is considered that there is limited potential for</p>

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Licence ref.	Developer	Project title and description	Current status and availability of information	Spatial link to the project	Temporal link to the project	Distance to main development site or identified associated development site	WFD water body at risk	Additional assessment required?	Justification for screening decision
									any cumulative effects with the Sizewell C project.
DC/14/3227/FUL		<p>Land Adjoining New Cottages, Chapel Road, Eastbridge, Theberton, Suffolk</p> <p>Erection of 2 semi-detached dwellings, outbuildings and parking</p>	Approved	Yes	No	794m	Minsmere Old River	No	All effects on water quality and quantity from this project were predicted to not be significant. It is assumed that potential impacts on rivers and groundwater will be managed through the implementation of best practice strategies and control measures.

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									Given the very low significance of the effects predicted and the parameters likely to be impacted, it is considered that there is limited potential for any cumulative effects with the Sizewell C project.
DC/16/2077/OUT		<p>Cavan Cottage, High Street, Yoxford, Saxmundham, Suffolk, IP17 3EU</p> <p>New additional detached 3 Bed dwelling within the curtilage of Cavan Cottage</p>	Approved	Yes	Scheme likely to be operational prior to construction of Sizewell C commencing	79m to Yoxford Roundabout	Minsmere Old River	No	All effects on water quality and quantity from this project were predicted to not be significant. It is assumed that potential impacts on rivers and

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									<p>groundwater will be managed through the implementation of best practice strategies and control measures.</p> <p>Given the very low significance of the effects predicted and the parameters likely to be impacted, it is considered that there is limited potential for any cumulative effects with the Sizewell C project.</p>

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Licence ref.	Developer	Project title and description	Current status and availability of information	Spatial link to the project	Temporal link to the project	Distance to main development site or identified associated development site	WFD water body at risk	Additional assessment required?	Justification for screening decision
DC/18/0322/FUL		<p>Glemham Estate Reservoir Land North Of Hill Farm Road Farnham IP17 1LU</p> <p>To construct an 80,000 cubic metre reservoir covering an area of approximately 3.5 hectares, with the reservoir basin water surface area being 2.48 hectares. The reservoir is to be located within the site so that: the embankment toe is set back 25 m from public highway, the NW toe is 10 m distance from overhead power cables. The</p>	<p>Approved</p> <p>Discharge of conditions of approved 6 September 2019</p>	Yes	Potential for construction and/or operation overlap	153m to Two Village Bypass	<p>Fromus</p> <p>Waveney and East Suffolk Chalk & Crag</p>	No	<p>All effects on water quality and quantity from this project were predicted to not be significant. It is assumed that rivers and groundwater will be managed through the implementation of best practice strategies and control measures.</p> <p>Given the very low significance of the effects predicted and the parameters likely to be impacted, it is</p>

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		reservoir will be used to store and supply water to the in-hand farming business for the irrigation of crops during the summer months.							considered that there is limited potential for any cumulative effects with the Sizewell C project.
MLA/2019/00124		<p>Galloper offshore wind farm maintenance</p> <p>Ongoing maintenance activities during the operation of the offshore wind farm.</p>	Consented	Yes	No	0km cable corridor; 39km windfarm site	<p>Leiston Beck</p> <p>Waveney and East Suffolk Chalk & Crag</p> <p>Suffolk</p>	No	Only small scale, temporary and localised effects are predicted during maintenance activities. Therefore, it is considered that there is no potential for cumulative effects to arise.

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PINS		<p>Galopper offshore windfarm operations and maintenance facility and ongoing maintenance</p> <p>Construction of an operations and maintenance facility at Harwich to service Galopper</p>	Consented. Construction of operation and maintenance facility completed December 2019	Yes	No	36km 7.8km to Freight Management	<p>Stour (Essex)</p> <p>Orwell</p> <p>Harwich Approaches</p> <p>Essex</p> <p>Ramsey River</p>	No	All effects on water quality and quantity were predicted to not be significant. The construction periods do not overlap, and it is assumed that potential impacts on fluvial, coastal and groundwater during operation will be managed through the implementation of best practice strategies and control measures.

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									Furthermore, the project is unlikely to have far reaching effects into water bodies given the distance to the site from the Sizewell C project. Therefore, it is considered that there is limited potential for cumulative effects with the Sizewell C project.
MLA/2017/00033 (desilting)	EDF Energy	Sizewell B Nuclear Power	Consented	Yes	Yes	Adjacent	Leiston Beck Suffolk	No	The desilting activity is normally carried out

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		<p>Station Decommissioning Planned decommissioning of Sizewell B power station. Decommissioning is anticipated to commence in 2035. Current licence for de-silting and maintenance works</p>							<p>during statutory outages at a 3-year interval frequency. It takes approximately 12 days to complete the work, with de-silting occurring intermittently during this period. Whilst the activity could give rise to increases in suspended solids concentrations, the effects are likely to be small scale and localised to the discharge location.</p>

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									Additionally, the operational discharges of sediment associated with Sizewell C are very low compared to naturally varying baseline.
PINS	Scottish Power Renewables (UK) Ltd	East Anglia ONE Offshore Wind Farm. Development of an offshore wind farm consisting of up to 325 wind turbine generators and associated infrastructure, with an installed capacity of 1200MW	Consented-Onshore construction commenced in Q2 2017 and offshore in 2018.	Yes	Scheme likely to be operational prior to construction of Sizewell C commencing	9km cable corridor; 50km windfarm site	Export cable in Suffolk coastal water body	No	The East Anglia ONE project is currently under construction and is anticipated to be completed by the end of 2020. Therefore, the only anticipated cumulative

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									<p>effects would be from the operation and decommissioning phases of the project.</p> <p>Only the export cable is within the Suffolk coastal water body boundary (1nm). The array is located offshore, outside of WFD water body boundaries.</p> <p>All effects on water quality were predicted to not be significant.</p>

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Licence ref.	Developer	Project title and description	Current status and availability of information	Spatial link to the project	Temporal link to the project	Distance to main development site or identified associated development site	WFD water body at risk	Additional assessment required?	Justification for screening decision
									Given the very low significance of the effects predicted and the parameters likely to be impacted, it is considered that there is no potential for cumulative effects to arise.
DC/17/4883/SCO	Scottish Power Renewables (UK) Ltd	East Anglia ONE North Offshore Wind Farm. An offshore wind farm which could consist of up to 115 turbines, generators and associated infrastructure, with an installed	EIA Scoping Opinion issued 08.12.2017. Registration of interest to PINS closed as of 27.01.20.	Yes	Potential for construction and/or operation overlap	0km cable corridor; 48km windfarm site	Export cable in Suffolk coastal water body	No	Only the export cable element is within the Suffolk coastal water body boundary (1nm). The array is located offshore, outside of WFD

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		capacity of 600MW to 800MW.							water body boundaries. The potential effects of the proposed East Anglia ONE North project will be highly localised and small scale. Given the very low significance of the effects predicted and the parameters likely to be impacted, it is considered that there is no potential for cumulative effects to arise.

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Licence ref.	Developer	Project title and description	Current status and availability of information	Spatial link to the project	Temporal link to the project	Distance to main development site or identified associated development site	WFD water body at risk	Additional assessment required?	Justification for screening decision
DC/17/4884/SCO	Scottish Power Renewables (UK) Ltd	<p>East Anglia TWO Offshore Wind Farm</p> <p>An offshore wind farm which could consist of up to 115 turbines, generators and associated infrastructure, with an installed capacity of 600MW to 800MW.</p>	EIA Scoping Opinion issued 08.12.2017. Registration of interest to PINS closed as of 27.01.20.	Yes	Yes	0km cable corridor; 31km windfarm site	Export cable in Suffolk coastal water body	No	Only the export cable element of the proposals is within the Suffolk coastal water body boundary (1nm). The array is located offshore, outside of WFD boundaries. Through the construction, operation and decommissioning phases of the project, there would be limited potential for adverse

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									<p>effects on water quality, due to the implementation of the Project Environmental Management Plan.</p> <p>The potential effects of the proposed East Anglia TWO project will be highly localised and small scale and cumulative impacts are unlikely to occur. Given the very low significance of the effects predicted and the parameters</p>

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Licence ref.	Developer	Project title and description	Current status and availability of information	Spatial link to the project	Temporal link to the project	Distance to main development site or identified associated development site	WFD water body at risk	Additional assessment required?	Justification for screening decision
									likely to be impacted, it is considered that there is no potential for cumulative effects to arise.
PINS	Scottish Power Renewables (UK) Ltd	East Anglia THREE Offshore Wind Farm. Development of an offshore windfarm with an approximate capacity of 1200MW off the coast of East Anglia.	Development consent was granted in August 2017. Construction expected to commence in 2021.	Yes	Yes	11km cable corridor; 84km windfarm site	Export cable in Suffolk coastal water body	No	Only the export cable element of the proposals is within the Suffolk coastal water body boundary (1nm). The array is located offshore, outside of WFD boundaries. Impacts would mostly be

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Licence ref.	Developer	Project title and description	Current status and availability of information	Spatial link to the project	Temporal link to the project	Distance to main development site or identified associated development site	WFD water body at risk	Additional assessment required?	Justification for screening decision
									temporary, small scale and localised for the proposed East Anglia THREE project. Given the distances to other activities and the localised nature of the impacts predicted. there is no pathway for interaction between impacts cumulatively. Given the very low significance of the effects predicted and

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									the parameters likely to be impacted, it is considered that there is no potential for cumulative effects to arise.
PINS_Reference EN020023	National Grid Ventures	Nautilus Interconnector Proposed second interconnector between Great Britain and Belgium. It would create 1.4 gigawatts high voltage direct current. Elia and NGIHL are conducting a bilateral feasibility study and more	Pre-application Application is expected to be submitted to the Planning Inspectorate Q2 2022	No	Yes	Landfall options between 1km and 2.7km from the main development site.	Proposed onshore cable route possibly within: Leiston Beck, Hundred River and Minsmere Old River. Proposed export cable in Suffolk	No	The Nautilus and Eurolink Interconnectors are in early planning stage and therefore limited information is available on construction works, including schedules. The preferred option for the landfalls of the

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Licence ref.	Developer	Project title and description	Current status and availability of information	Spatial link to the project	Temporal link to the project	Distance to main development site or identified associated development site	WFD water body at risk	Additional assessment required?	Justification for screening decision
		information will be available in the future development plans. Connecting in the Leiston area is the preferred option for connection. Further detailed consideration of siting options are being considered. The project is currently at the scoping stage. Installation may commence in 2026 with connection in 2028.					coastal water body.		Nautilus and Eurolink Interconnectors is at Leiston. There could be a temporary effect associated with the construction of the cable corridor and associated landfall infrastructure. It is assumed that the project will implement measures to minimise the risk to geomorphology and water quality. Therefore,

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Licence ref.	Developer	Project title and description	Current status and availability of information	Spatial link to the project	Temporal link to the project	Distance to main development site or identified associated development site	WFD water body at risk	Additional assessment required?	Justification for screening decision
									since the activity will be short-lived and the effects of low significance, it is considered that there is no potential for cumulative effects to arise.
-	National Grid Ventures	Eurolink Interconnector Proposed interconnector between UK and the Netherlands. Connecting in the Leiston area is the preferred option for connection. Further detailed consideration of siting options Are	No further information currently available.	No	Yes	Landfall options between 1km and 2.7km	Proposed onshore cable route possibly within Leiston Beck, Hundred River, Minsmere Old River and Waveney	No	The Nautilus and Eurolink Interconnectors are in early planning stage and therefore limited information is available on construction works, including schedules.

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Licence ref.	Developer	Project title and description	Current status and availability of information	Spatial link to the project	Temporal link to the project	Distance to main development site or identified associated development site	WFD water body at risk	Additional assessment required?	Justification for screening decision
		being considered. The Project is currently at the scoping stage. Likely to connect in 2025					and East Suffolk Chalk & Crag. Proposed export cable in Suffolk coastal water body.		The preferred option for the landfalls of the Nautilus and Eurolink Interconnectors is at Leiston. There could be a temporary effect associated with the construction of the cable corridor and associated landfall infrastructure. It is assumed that the project will implement measures to minimise the risk to geomorpholog

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Licence ref.	Developer	Project title and description	Current status and availability of information	Spatial link to the project	Temporal link to the project	Distance to main development site or identified associated development site	WFD water body at risk	Additional assessment required?	Justification for screening decision
									<p>y and water quality. Therefore, since the activity will be short-lived and the effects of low significance, it is considered that there is no potential for cumulative effects to arise.</p>

4.4.7. The assessment presented in **Table 4.24** demonstrates that no cumulative effects between the Sizewell C Project (including the main development site and associated development sites) and the proposed third party projects identified in **Appendix 1A** of **Volume 10** of the ES (Doc Ref. 6.11) are predicted. Effects on WFD quality elements, mitigation measures, and ultimately water body status are therefore not therefore predicted.

4.5 Summary

4.5.1. The assessment presented in **section 4.3** demonstrates that any project wide effects (i.e. those that occur when environmental impacts from different elements of the Sizewell C Project combine, resulting in the potential for a significant effect) would not be greater than those effects predicted for each activity alone. The assessment did not, therefore, indicate that any quality elements in any water body were at risk of deterioration such that the class status for any of the parameters would decrease. As a result, the proposed activities are considered compliant with the requirements of the WFD.

4.5.2. Furthermore, the assessment presented in **section 4.4** demonstrates that cumulative effects between Sizewell C and other planned or potential third party projects would not be greater than those effects predicted for the Sizewell C project alone. The assessment did not therefore indicate that any quality elements in any water body were at increased risk of deterioration such that the class status for any of the parameters would decrease. As a result, the proposed activities are considered compliant with the requirements of the WFD.