



# The Sizewell C Project

## 8.14 Water Framework Directive Compliance Assessment Report Part 1 of 4

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# SIZEWELL C PROJECT: WFD COMPLIANCE ASSESSMENT

## PART 1: INTRODUCTION AND METHOD

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## 1 Part 1: Introduction and Method

### 1.1 Background

#### a) Introduction

1.1.1. SZC Co.<sup>1</sup> 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.

1.1.2. The report is provided in support of SZC Co.'s Development Consent Order (DCO) application to the Planning Inspectorate and a separate application for a water discharge activity environmental permit to the Environment Agency for the Sizewell C Project.

#### b) Policy background: Nuclear power

1.1.3. In its White Paper on Nuclear Power (Ref. 1.1) the Government sets out its policy on the role of new nuclear power stations in the UK's future energy mix, alongside other low-carbon sources. The National Policy Statement (NPS) for Nuclear Power Generation (EN-6) (Ref. 1.2) sets out a list of sites that, following the strategic siting assessment (Ref. 1.3), have been found to be potentially suitable for the siting of new nuclear power stations by 2025, and the framework through which development consent decisions on sites should be made.

1.1.4. The Sizewell C development site was nominated for new nuclear build by EDF Energy in 2009 and is identified in EN-6 (Ref. 1.2), which was ratified by the Government on the 19 July 2011. Sizewell C is one of eight sites in England and Wales that was deemed potentially suitable for the deployment of nuclear reactors by 2025 (Ref. 1.2). The NPS makes it clear that all eight sites need to be listed, and that it is in the public interest to give priority to sites where new nuclear power stations can be developed early.

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

- 1.1.5. A new NPS for nuclear power stations expected to begin contributing electricity to the National Grid after 2025 (and before the end of 2035) is currently being developed. The consultation documents published to date recognise that the need for new nuclear power remains significant and recommend that Sizewell is one of the sites from the existing NPS that is carried forward into the new NPS.
- 1.1.6. In relation to the WFD, EN-6 (Ref. 1.2) specifically refers to the requirement to consider any discharge against regulatory standards for the protection of the quality of estuarine or coastal waters, in line with future requirements of the WFD. The more general overarching NPS on Energy (EN-1) (Ref. 1.4) also recognises that infrastructure development can have adverse effects on the water environment, including groundwater and surface waters, and that (during all phases) development can lead to increased demand for water, involve discharges to water (including spills and leaks of pollutants) and can cause adverse ecological effects resulting from physical modifications to the water environment. These effects could all lead to adverse impacts on ecosystem health, or on protected species and habitats, and could result in surface waters, groundwaters or protected areas failing to meet environmental objectives established under the WFD.
- 1.1.7. Additionally, the NPS documents state that where a project is likely to have effects on the water environment, the applicant should undertake an assessment of the existing status, and impacts, of the proposed development on water quality, water resources and the physical characteristics of the water environment as part of its **Environmental Statement (ES)** (Doc Ref. Book 6), or equivalent, and that the Planning Inspectorate should satisfy itself that a proposal has regard to the relevant river basin management plans (RBMP).
- 1.1.8. It is also important to note that any mitigation measures that may be required to manage coastal erosion or flood risk at a nuclear development site could have potentially adverse effects on coastal processes and hydrodynamics. These measures could then have secondary impacts on biodiversity and water quality, thus potentially hindering the objectives and requirements of the WFD.
- 1.1.9. To ensure all elements of the proposals are in line with the requirements of the WFD, this Sizewell C Project **WFD Compliance Assessment** (Doc Ref. 8.14) is, therefore, provided by SZC Co. to the Planning Inspectorate and Environment Agency as part of the application submissions.

c) [The Water Framework Directive](#)

- 1.1.10. The WFD was transposed into national law in the UK by means of the Water Environment (Water Framework Directive) (England and Wales) Regulations

2003. These regulations were updated by the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017. The regulations provide for the implementation of the WFD, from designation of all surface waters (rivers, lakes, estuarine waters, coastal waters and ground waters) as water bodies, and set objectives for the achievement of good ecological status (GES) or good ecological potential (GEP).

- 1.1.11. Unlike the European Union’s Birds and Habitats Directives (EC Directive on the Conservation of Wild Birds (2009/147/EC) and EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC), respectively), which apply only to designated sites, the WFD applies to all bodies of water, including those that are man-made. Hence, in this case, the consideration of proposals under the WFD apply to all surface and groundwater bodies that have the potential to be impacted by the Sizewell C Project.
- 1.1.12. Several classification schemes for surface waters and groundwaters have been developed in response to the WFD.
- 1.1.13. For surface waters, there are two separate classifications for water bodies: ecological and chemical. For a water body to be in overall 'good' status, both ecological and chemical status must be at least 'good'. The ecological status of surface waters is classified using information on the biological, physico-chemical and hydromorphological quality of the body of water.
- 1.1.14. The ecological status of a surface water body is assessed according to:
- The condition of biological elements, for example fish, benthic invertebrates and other aquatic flora.
  - The condition of supporting physico-chemical elements, for example thermal conditions, salinity, and concentrations of oxygen, ammonia and nutrients.
  - Concentrations of specific pollutants, for example copper and other priority substances.
  - The condition of the hydromorphological quality elements, including morphological condition, hydrological regime and (for coastal waters only) tidal regime.
- 1.1.15. Ecological status is recorded on the scale of high, good, moderate, poor or bad. 'High' denotes largely undisturbed conditions and the other classes represent increasing deviation from this natural condition, otherwise described as a 'reference condition'. The ecological status classification for

the water body, and the confidence in this, is determined from the worst scoring quality element. This means that the condition of a single quality element can cause a water body to fail to reach its WFD classification objectives.

- 1.1.16. Chemical status is assessed by compliance with environmental standards for chemicals that are listed in the EC Environmental Quality Standards Directive (2008/105/EC). These chemicals include priority substances, priority hazardous substances, and eight other pollutants carried over from the dangerous substance daughter directives. Chemical status is recorded as 'good' or 'fail'. The chemical status classification for the water body is determined by the worst scoring chemical.
- 1.1.17. Where the hydromorphology of a surface water body has been significantly altered for anthropogenic purposes, it can be designated as an artificial or heavily modified water body (A/HMWB). An alternative environmental objective, GEP, applies in these cases.
- 1.1.18. The UK Technical Advisory Group (UKTAG) has adopted the 'mitigation measures approach' for classifying HMWBs (Ref. 1.5). This approach first assesses whether actions to mitigate the impact of physical modification are in place to the extent that could reasonably be expected. If this mitigation is in place, then the water body may be classified as achieving GEP. If this level of mitigation is not in place, then the water body will be classed as 'moderate' or worse ecological potential. Before an overall ecological potential classification is applied, the second step is for the results of the mitigation measures assessment to be cross-checked with data from biological and physico-chemical assessments. Checklists of mitigation measures have been developed based on the steps identified in the alternative approach to enable large numbers of heavily modified and artificial water bodies to be assessed consistently and across sectors (Ref. 1.6).
- 1.1.19. The process of classifying ecological potential is based on an assessment of:
- Whether all appropriate measures have been taken to mitigate the modified or artificial hydromorphological characteristics of the water body.
  - Whether these measures are functioning.
  - Whether all non-sensitive quality elements are at good status or better.

- 1.1.20. Where the Environment Agency has data for biological quality elements that show signs of damage from pressures other than hydromorphological alterations (for example, if the benthic invertebrate status is poor because of nutrient pressures) the ecological potential will be changed. To reflect this other pressure, the water body will be labelled as having 'poor ecological potential'. This is also true where data are available for physico-chemical quality elements.
- 1.1.21. In addition, some surface waters require special protection under other European legislation. The WFD, therefore, brings together the planning processes of a range of other European Directives, such as the Bathing Waters Directive (2006/7/EC) and the Habitats Directive (92/43/EEC). These Directives establish protected areas to manage water, nutrients, chemicals, economically significant species and wildlife, and have been brought in line with the planning timescales of the WFD.
- 1.1.22. Groundwaters are assessed in a different way to surface waters. Instead of GES and GEP, groundwaters are classified as either poor or good in terms of quantity (groundwater levels, flow directions) and quality (pollutant concentrations and conductivity). Again, UKTAG have provided guidance on how groundwater quantity and quality is assessed (Ref. 1.7).

d) **Roles and responsibilities**

- 1.1.23. The Environment Agency is the competent authority for WFD implementation and, therefore, must assess schemes to ensure WFD compliance in relation to the consenting mechanisms for which it is responsible. The Environment Agency also acts as a consultee to other regulators and bodies in relation to WFD compliance and, therefore, for the Sizewell C Project will advise the organisations involved (including the Planning Inspectorate) on the requirements of the WFD.
- 1.1.24. Additionally, whilst it is acknowledged that assessing schemes for WFD compliance is best aligned with the steps of an Environmental Impact Assessment (EIA), the Environment Agency recommends that a separate WFD compliance assessment is undertaken to ensure all aspects of the WFD are appropriately considered.

e) **The Sizewell C Project Water Framework Directive Compliance Assessment process**

- 1.1.25. The **Appendix 1A, Sizewell C Project Water Framework Directive Compliance Assessment Strategy**, sets out the proposed approach to developing and providing the information required for the compliance assessment. However, necessary updates have been made to the method

contained within this document. This includes updates in response to comments from the Environment Agency on earlier versions. .

#### f) [Structure of the Water Framework Directive Compliance Assessment](#)

1.1.26. This **WFD Compliance Assessment** (Doc Ref. 8.14) 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 Effects Assessment.

1.1.27. This document presents the assessment methodology in **section 1.2** and the consultation process undertaken with the Environment Agency in **section 1.3**.

## 1.2 [Assessment method](#)

### a) [Introduction](#)

1.2.1. This section sets out the approach to each of the key stages in the WFD compliance assessment process for this Sizewell C Project **WFD Compliance Assessment**. For each of the stages, a description of the process adopted is provided, together with initial, relevant information that may facilitate early decision-making.

### b) [The approach to assessing Water Framework Directive compliance](#)

1.2.2. Detailed published methodology for the assessment of plans or projects in relation to undertaking WFD compliance assessments across all types of water bodies is not yet available. There are, however, several sets of guidance that have developed in relation to undertaking such assessments for the different water body types, predominantly written by the Environment Agency. Those considered to be the most relevant to the Sizewell C Project are:

- Planning Inspectorate Advice Note 18: The WFD (Ref. 1.8) which provides an overview of the WFD and provides an outline methodology for considering the WFD as part of the DCO process.

- Clearing the Waters for All (Ref. 1.9), which has been produced to assist in the assessment of marine activities against the requirements of the WFD.
- Water Framework Directive Risk Assessment: How to assess the risk of your activity (Ref. 1.10), which provides guidance for bodies planning to undertake activities that would require a flood risk activity permit.
- Protecting and improving the water environment: Water Framework Directive compliance of physical works in rivers (Ref. 1.11) and associated supplementary guidance. These internal Environment Agency documents have been produced to guide WFD assessment of new physical modifications to surface waters.
- Case EUCEJ C-461-13. Bund für Umwelt und Naturschutz Deutschland eV v Bundesrepublik Deutschland (Ref. 1.12). This case confirms the detail around determining a deterioration in the status of a water body.

1.2.3. The assessment process consists of three distinct stages:

- Stage 1: Screening and collation of baseline information;
- Stage 2: Scoping; and
- Stage 3: Detailed compliance assessment.

c) [Stage 1: Screening and collation of baseline information](#)

i. [Aim of this stage](#)

1.2.4. This stage collates all available baseline data that will be necessary to complete the Sizewell C **WFD Compliance Assessment**, i.e. collates all information on the scheme, the baseline environment and the water bodies which could potentially be impacted. The specific screening stage referred to in the various guidance documents identified above has not been formally carried out as the nature of the Sizewell C Project and requirement for capital works negate the possibility of screening the Sizewell C Project out of requiring a WFD compliance assessment.

ii. [Method for the baseline collation stage](#)

1.2.5. Stage 1 requires the following main tasks to be undertaken:

- Initial screening to identify relevant water bodies in the study area. Water bodies will be selected for inclusion in the early stages of the compliance assessment using the following criteria:
  - all surface water bodies that could potentially be directly impacted by the scheme;
  - any surface water bodies that have direct connectivity (e.g. upstream and downstream) that could potentially be affected by the proposed works; and
  - any groundwater bodies that underlie the proposed scheme.
- Review of the 2015 Anglian RBMP (Ref. 1.13) as presented in the online Catchment Data Explorer (Ref. 1.14), and in consultation with the Environment Agency to agree water bodies to be included.
- Collection of water body baseline data, including details of each quality element and status and, if appropriate, reasons for failure and mitigation measures identified. These data are collated from the 'Cycle 2 Extended Water Body Summary Report' presented in **Appendix 2A of the WFD Compliance Assessment Part 2** and **Appendix 3A of Part 3** for each respective water body, obtained from the Environment Agency.
- Collection of proposed scheme baseline data, broken down in sufficient detail so that the compliance of each main scheme component can be considered in the assessment.

### iii. Method for identifying activities

- 1.2.6. In line with the requirements of Clearing the Waters for All (Ref. 1.9), the Sizewell C Project will be separated into activities. This assists in the assessment process and identifying which WFD compliance parameters in which water bodies potentially could be at risk.
- 1.2.7. Where possible, the activities will be grouped for scoping if their potential effects on the water environment are similar and would occur within the same water body.

## d) Stage 2: Scoping

## i. Aim of this stage

1.2.8. This stage identifies whether there is a potential risk to any of the water bodies identified in Stage 1 and is undertaken separately for each water body and each activity (or group of activities).

1.2.9. Water bodies and activities can be scoped out of detailed assessment if it can be satisfactorily demonstrated that there is no risk to the water body. If a risk is identified, then it will be necessary to undertake detailed assessment.

## ii. Scoping method

1.2.10. The scoping stage considers:

- The potential risk to surface water body status (within and between status classes) by adversely affecting biological, hydromorphological and/or physico-chemical quality elements.
- The potential risk to groundwater body status (within and between status classes) by adversely affecting quantitative and chemical quality elements.
- The potential for activities to prevent delivery of WFD status objectives by impacting upon proposed improvement measures or, in the case of A/HMWBs, mitigation measures already identified by the Environment Agency.
- The potential to incorporate the measures required to deliver status objectives included in the RBMPs.
- The potential risk to sensitive habitats, including designated sites and habitats with particular ecological importance. Reference will be made to the **Shadow Habitats Regulations Assessment Report (HRA)** (Doc Ref. 5.10) produced in support of the consent and permit applications where appropriate.
- The potential risk to protected areas such as bathing waters, and areas protected under the Nitrates Directive (91/676/EEC) located within the water bodies.
- The potential for the ‘prevent or limit’ objective of the Groundwater Daughter Directive (2006/118/EC) not being achieved.

### iii. Scoping questions

- 1.2.11. The Stage 2 assessment considers the potential for each activity (or group of activities) to affect each quality element in turn, based on a series of trigger questions for the quality elements that are applicable in each type of water body. These are presented separately for rivers, transitional and coastal water bodies and groundwater in **Tables 1.1, 1.2 and 1.3** respectively.
- 1.2.12. The Stage 2 scoping questions are designed such that the size of risk associated with the activity (e.g. the likelihood and severity of any potential impact) is not central to the decision. If any risk is identified, the quality element will be taken through to Stage 3 for detailed assessment.
- 1.2.13. In all cases, the water body and activity under assessment will be progressed to the detailed assessment (Stage 3) if the answer to one or more of the scoping questions is ‘Yes,’ but only for those quality elements that could potentially be impacted. Conversely, if the answer to a scoping question is ‘No,’ the quality element is scoped out of detailed assessment. Note that activities will only be scoped out if there is clear, definitive evidence that there is no risk to a particular quality element or that a pathway does not exist.
- 1.2.14. The decisions recorded in the scoping tables are based on expert judgement, informed by available data and, in the case of hydromorphological impacts, using the guidance included in the Flood and Coastal Erosion Risk Management R&D Programme expert assessment framework (Ref. 1.15).
- 1.2.15. The end result of Stage 2 is a list of water bodies, activities and quality elements to be carried forward for further consideration in the detailed assessment stage (Stage 3).

**Table 1.1 Scoping questions for river water bodies**

Parameter	Scoping Questions	Answer	Notes
<b>Biology</b>			
Aquatic flora.	Could the activity change the hydromorphology and/or physico-chemistry of the water body, or lead to the direct loss or modification of habitats for aquatic plants?	Yes	Detailed assessment required.
		No	No further action needed.
Benthic invertebrates.	Could the activity change the hydromorphology and/or physico-chemistry of the water body, or lead to the direct loss or modification of habitats for aquatic invertebrates?	Yes	Detailed assessment required.
		No	No further action needed.
Fish	Could the activity change the hydromorphology and/or physico-chemistry of the water body, or lead to the direct loss or modification of shelter, feeding and spawning habitats for fish?	Yes	Detailed assessment required.
		No	No further action needed.
<b>Hydromorphology</b>			
Hydrological regime.	Could the activity change the volume, energy or distribution of flows in the water body?	Yes	Detailed assessment required.
		No	No further action needed.
Morphological conditions.	Could the activity change the width, depth, bank conditions, bed substrates and structure of the riparian zone?	Yes	Detailed assessment required.
		No	No further action needed.

Parameter	Scoping Questions	Answer	Notes
River continuity.	Could the activity create a permanent barrier to the downstream movement of water and/or sediment, or the upstream movement of fish?	Yes	Detailed assessment required.
		No	No further action needed.
<b>Physico-chemistry</b>			
General	Could the activity change the temperature, pH, oxygenation, salinity or nutrient concentrations in the water body?	Yes	Detailed assessment required.
		No	No further action needed.
Specific pollutants.	Could the activity release dangerous chemicals into the water body?	Yes	Detailed assessment required.
		No	No further action needed.
<b>Protected Areas</b>			
Protected areas.	Is the activity within 2km of a protected area?	Yes	Detailed assessment required.
		No	No further action needed.
<b>Invasive Non-Native Species (INNS)</b>			
INNS	Could the activity could introduce or spread INNS to a water body?	Yes	Detailed assessment required.
		No	No further action needed.
<b>Improvement Measures and Mitigation Measures</b>			
Improvement measures (non-A/HMWBs).	Is the activity likely to impact on one of the improvement measures in place?	Yes	Detailed assessment required.
		No	No further action needed.

**NOT PROTECTIVELY MARKED**

Parameter	Scoping Questions	Answer	Notes
	Is the activity likely to prevent the delivery or effectiveness of one of the improvement measures that is not yet in place?	Yes	Detailed assessment required.
		No	No further action needed.
Mitigation measures (A/HMWBs).	Is the activity likely to impact on one of the mitigation measures in place?	Yes	Detailed assessment required.
		No	No further action needed.
	Is the activity likely to prevent the delivery or effectiveness of one of the mitigation measures that is not yet in place?	Yes	Detailed assessment required.
		No	No further action needed.

**Table 1.2: Scoping questions for transitional and coastal water bodies**

Parameter	Scoping Questions	Answer	Notes	
<b>Biology</b>				
Habitats <sup>2</sup>	Will the footprint of the activity cover an area of 0.5km <sup>2</sup> or larger <sup>3</sup> ?	Yes	Detailed assessment required.	
		No	No further action needed.	
	Will the footprint of the activity cover 1% or more of the total water body area?	Yes	Detailed assessment required.	
		No	No further action needed.	
	Will the footprint of the activity be within 500m of any higher sensitivity habitat?	Yes	Detailed assessment required.	
		No	No further action needed.	
	Will the footprint of the activity cover 1% of lower sensitivity habitats in the water body?	Yes	Detailed assessment required.	
		No	No further action needed.	
	Fish (transitional water bodies only).		Yes	Detailed assessment required.

<sup>2</sup> Lower sensitivity habitats include all other habitats potentially present, such as cobbles, gravel and shingle, intertidal soft sediments like sand and mud, rocky shore, subtidal boulder fields, subtidal rocky reef and subtidal soft sediments. Higher sensitivity habitats are defined in the Clearing the Waters for All guidance to include: chalk reef, clam, cockle and oyster beds, intertidal seagrass, maerl, mussel beds, including blue and horse mussel, polychaete reef, saltmarsh, subtidal kelp beds and subtidal seagrass.

<sup>3</sup> Note that a footprint may also be a temperature or sediment plume. For dredging activity, a footprint is 1.5 times the dredge area.

**NOT PROTECTIVELY MARKED**

Parameter	Scoping Questions	Answer	Notes
	Is the activity in an estuary and could it affect fish in the estuary, outside the estuary but could delay or prevent fish entering it or could affect fish migrating through the estuary?	No	No further action needed.
	Could the activity impact on normal fish behaviour like movement, migration or spawning (for example creating a physical barrier, noise, chemical change or a change in depth or flow)?	Yes	Detailed assessment required.
		No	No further action needed.
	Could the activity cause entrainment or impingement of fish?	Yes	Detailed assessment required.
		No	No further action needed.
	<b>Hydromorphology</b>		
Hydromorphology	Could the activity impact on the hydromorphology (for example morphology or tidal patterns) of a water body at high status?	No	No further action needed.
		Yes	Detailed assessment required.
	Could the activity significantly impact the hydromorphology of any water body?	No	No further action needed.
		Yes	Detailed assessment required.
	Is the activity in a water body that is heavily modified for the same use as the activity?	No	No further action needed.
		Yes	Detailed assessment required.

**NOT PROTECTIVELY MARKED**

Parameter	Scoping Questions	Answer	Notes
<b>Water Quality</b>			
Physico chemical (and phytoplankton).	Could the activity affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)?	No	No further action needed.
		Yes	Detailed assessment required.
	Is the activity in a water body with a phytoplankton status of moderate, poor or bad?	No	No further action needed.
		Yes	Detailed assessment required.
	Is the activity in a water body with a history of harmful algae?	No	No further action needed.
		Yes	Detailed assessment required.
Chemistry	Could the activity release chemicals that are on the Environmental Quality Standards Directive (EQSD) list?	No	No further action needed.
		Yes	Detailed assessment required.
	Will the activity disturb sediment with contaminants above Centre for Environment, Fisheries and Aquaculture Science (Cefas) Action Level 1?	No	No further action needed.
		Yes	Detailed assessment required.
	If the activity has a mixing zone, are the chemicals released on the EQSD List?	No	No further action needed.
		Yes	Detailed assessment required.
<b>Protected Areas</b>			
Protected areas.	Is the activity within 2km of a protected area?	No	No further action needed.
		Yes	Detailed assessment required.

**NOT PROTECTIVELY MARKED**

Parameter	Scoping Questions	Answer	Notes
<b>INNS</b>			
INNS	Could the activity could introduce or spread INNS to a water body?	No	No further action needed.
		Yes	Detailed assessment required.
<b>Mitigation Measures</b>			
Improvement measures (non-A/HMWBs).	Is the activity likely to impact on one of the improvement measures in place?	No	No further action needed.
		Yes	Detailed assessment required.
	Is the activity likely to prevent the delivery or effectiveness of one of the improvement measures that is not yet in place?	No	No further action needed.
		Yes	Detailed assessment required.
Mitigation measures (A/HMWBs).	Is the activity likely to impact on one of the mitigation measures in place?	No	No further action needed.
		Yes	Detailed assessment required.
	Is the activity likely to prevent the delivery or effectiveness of one of the mitigation measures that is not yet in place?	No	No further action needed.
		Yes	Detailed assessment required.

**Table 1.3: Scoping questions for groundwater bodies**

Parameter	Scoping Questions	Answer	Notes
Groundwater quantity.	Could the activity change groundwater levels, affecting Groundwater Dependent Terrestrial Ecosystems or dependent surface water features?	Yes	Detailed assessment required.
		No	No further action needed.
	Could the activity lead to saline intrusion?	Yes	Detailed assessment required.
		No	No further action needed.
	Could the activity result in groundwater abstraction in excess of recharge at a water body scale?	Yes	Detailed assessment required.
		No	No further action needed.
	Could the activity lead to an additional surface water body becoming non-compliant and lead to failure of the Dependent Surface Water test?	Yes	Detailed assessment required.
		No	No further action needed.
	Could the activity result in additional abstraction that will exceed any groundwater body scale headroom between the fully licensed quantity and the limit imposed by the total recharge?	Yes	Detailed assessment required.
		No	No further action needed.
	Could the activity result in additional groundwater depletion of surface water flows that will exceed any	Yes	Detailed assessment required.

**NOT PROTECTIVELY MARKED**

Parameter	Scoping Questions	Answer	Notes	
	groundwater body scale headroom between Fully Licensed depletion and the limit imposed by the total low flows resource?	No	No further action needed.	
Groundwater quality.	Could the activity result in or exacerbate diffuse pollution at a water body scale?	Yes	Detailed assessment required	
		No	No further action needed.	
	Could the activity result in pollution of Groundwater Dependent Terrestrial Ecosystems or other dependent surface water features?	Yes	Detailed assessment required.	
		No	No further action needed.	
	Could the activity lead to saline intrusion?	Yes	Detailed assessment required.	
		No	No further action needed.	
	Could the activity cause deterioration in the quality of a drinking water abstraction?	Yes	Detailed assessment required.	
		No	No further action needed.	
	Could the activity result in increasing trends in pollutant concentrations or reduce the ability to reverse significant trends in groundwater pollutants?	Yes	Detailed assessment required.	
		No	No further action needed.	
			Yes	Detailed assessment required.

Parameter	Scoping Questions	Answer	Notes
	Could the activity result in the failure of the 'prevent or limit' objective of the Groundwater Daughter Directive?	No	No further action needed.

e) **Stage 3: Detailed compliance assessment**

i. **Aim of the stage**

1.2.16. The Stage 3 assessment determines whether the activities that have been put forward from the Stage 2 scoping assessment will cause deterioration and whether this deterioration will have a significant non-temporary effect on the status of one or more WFD quality elements at water body level. For priority substances, the process requires the assessment to consider whether the activity is likely to cause failure of good chemical status.

1.2.17. If it is established that an activity is likely to affect water status at water body level (that is, by causing deterioration in status or by preventing achievement of WFD objectives (including those for protected areas) and the implementation of mitigation measures for HMWBs), or that an opportunity may exist to contribute to improving status at a water body level, potential measures to avoid the effect or achieve improvement are investigated. This stage considers such measures and, where necessary, evaluates them in terms of cost and proportionality.

ii. **Method for the detailed compliance assessment**

1.2.18. The end result of Stage 2 is a final list of water bodies, scheme activities and quality elements to be carried forward for detailed assessment. Stage 3 then considers the potential for status deterioration associated with each activity (i.e. not the scheme as a whole) on the biological, hydromorphological and physico-chemical and chemical quality elements of each relevant surface water body, and the quantitative and chemical quality elements of each relevant groundwater body.

1.2.19. The assessment establishes whether the scheme activities will:

- cause deterioration within a water body;
- prevent WFD status objectives (i.e. GES or GEP) being achieved, including prevention of the delivery of mitigation measures identified in the RBMP; and/or
- prevent status objectives being achieved in any other water bodies, including prevention of the delivery of mitigation measures identified in the RBMP.

1.2.20. Following the broad principles of the WFD, the scheme is considered to be non-compliant if any of the activities are likely to cause a non-temporary

deterioration in any of the quality elements individually or cumulatively at a water body level.

1.2.21. Impacts of the scheme on other European legislation, for example the Habitats Directive, Birds Directive, and Bathing Waters Directive (2006/7/EC), will also be considered in line with Articles 4.8 and 4.9 of the WFD. Where necessary, reference will be made to supporting information contained in the relevant **ES** chapters (Doc Ref. Book 6), and in the case of Natura 2000 protected areas, the **Shadow HRA** (Doc Ref. 5.10) (both of which will accompany the applications).

iii. **Determination of deterioration**

1.2.22. Any deterioration will be considered within the context of the water body, in terms of the scale and magnitude of the impact as well as the timescales over which the impact would occur. The detailed assessment will therefore differ depending on the nature of the water body (i.e. marine, freshwater or groundwater).

1.2.23. There is currently no guidance from the Environment Agency on how deterioration in the status of water bodies should be assessed. An outline methodology for use in rivers (**Table 1.4**), coastal (**Table 1.5**) and transitional (**Table 1.6**) water bodies and groundwater (**Table 1.7**), therefore, has been developed in consultation with the Environment Agency.

1.2.24. Since the Environment Agency's policy of no deterioration applies to WFD compliance assessments, all levels of deterioration from short-term *de minimis* impacts to potentially long-term changes to water body status classifications are considered. The methods outlined in **Table 1.4** to **Table 1.7**, therefore, consider the potential for between class, within class and temporary deterioration in water body status. Where deterioration is not predicted, the activity will also be considered against the water body objectives to ensure status objectives (i.e. GES or GEP) will not be prevented from being met.

1.2.25. The methods presented in **Table 1.4** to **Table 1.7** draw upon several existing guidance documents that have some application in the assessment of WFD compliance. That is:

- The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. This document provides the most up to date standards used to determine the ecological and chemical status of surface water bodies and quantitative and chemical status of groundwater.

- Defining & Reporting on Groundwater Bodies (Ref. 1.16). This document provides information on the approaches used to classify groundwater bodies.
- WFD Expert Assessment of Flood Management Impacts (Ref. 1.15). This document provides a framework for the assessment of changes to hydromorphology.
- Guidance on Morphological Alterations and the Pressures and Impacts Analyses (Ref. 1.17). This document provides additional information on hydromorphological pressures.
- Internal Environment Agency guidance on WFD deterioration and risk to the status objectives of river water bodies (Ref. 1.18). This document provides an assessment of the level of risk of deterioration in water body status associated with different activities, based upon activity type and risk screening thresholds.

1.2.26. Should a deterioration be identified, it will be considered in line with the findings of the 2015 EU Court of Justice ruling which precludes the authorisation of a project which may cause the deterioration of the status of a body of water and/or jeopardise the attainment of good overall status (Ref. 1.12). The court also advised the deterioration of status is established as soon as the status of at least one of the quality elements falls by one class, even if the change does not result in a fall in classification of the water body as a whole (note that this applies unless the water body is already in the lowest status class in which case any deterioration is considered to be deterioration in status under WFD).

Table 1.4: Assessment of status deterioration in river water bodies

Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
<b>Ecological Status</b>					
Biology	Between class deterioration: Long-term impact on fish, macrophytes or benthic invertebrates that is sufficient to decrease the overall status classification of the water body.	Qualitative assessment based on predicted changes to ecological quality ratio for phytobenthos, macrophytes, benthic invertebrates or fish. OR Qualitative assessment based on expert judgement of impacts on hydromorphology and physico-chemistry.	Activity causes between-class deterioration in the ecological quality ratios for phytobenthos (River DARLEQ2), macrophytes (River LEAFPACS2), invertebrates (WHPT metric in RICT; number of taxa or average score per taxon) or fish (FCS2), as provided in the provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. OR Length of water body affected by the activity is greater than or equal to the between class deterioration thresholds for hydromorphology. OR Activity causes between-class deterioration in the thresholds for physico-chemistry provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.	Potentially non-compliant: appropriate mitigation options to be considered to reduce the impact to a lower deterioration category.	If mitigation cannot be put in place to reduce the impact to a lower deterioration category, the activity will be considered to be non-compliant and an Article 4.7 assessment will be required.
	Within class deterioration:	Qualitative assessment based on predicted changes to ecological quality ratio for	Activity causes within-class deterioration in the ecological quality ratios for phytobenthos (River DARLEQ2), macrophytes	Deterioration within class should be reduced as far as possible with	An Article 4.7 assessment may be required where good status is prevented from being achieved or water

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Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
	Long-term impact on fish, macrophytes or benthic invertebrates that is not sufficient to decrease the overall status classification of the water body.	phytobenthos, macrophytes, benthic invertebrates or fish. OR Qualitative assessment based on expert judgement of impacts on hydromorphology and physico-chemistry.	(River LEAFPACS2), invertebrates (WHPT metric in RICT; number of taxa or average score per taxon) or fish (FCS2), provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. OR Length of water body affected by the activity is greater than the within class deterioration thresholds for hydromorphology, but less than the thresholds for between class deterioration. OR Activity causes within-class deterioration in the thresholds for physico-chemistry provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.	mitigation. If deterioration is still likely after all mitigation has been included, monitoring is likely to be required to demonstrate compliance.	body objectives are undermined.
	Temporary or no deterioration: Short-term impact or no impact on fish, macrophytes or benthic invertebrates, which will fully recover once	Qualitative assessment based on predicted changes to ecological quality ratio for phytobenthos, macrophytes, benthic invertebrates or fish. OR Qualitative assessment based on expert judgement of	Activity does not cause deterioration in the ecological quality ratios for phytobenthos (River DARLEQ2), macrophytes (River LEAFPACS2), invertebrates (WHPT metric in RICT; number of taxa or average score per taxon) or fish (FCS2), provided in the Water Framework Directive (Standards and	Compliant: no action required.	

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Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
	the pressure is removed. OR any impacts on fish, macrophytes or benthic invertebrates are very spatially constrained.	impacts on hydromorphology and physico-chemistry.	Classification) Directions (England and Wales) 2015. OR Length of water body affected is less than or equal to the no deterioration / short-term impact thresholds for hydromorphology. OR Activity does not cause deterioration in the thresholds for physico-chemistry provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. OR Any deterioration is temporally constrained and insufficient to impact upon biological quality elements.		
Hydromorphology	Between class deterioration: Long-term impact on hydrological regime or morphological conditions that is sufficient to decrease the overall status classification of the water body.	Qualitative assessment of changes to hydromorphological quality elements based on (Ref. 1.15).	Physical modifications (bank reinforcement, bank reprofiling, embankment, bypass channel) > 100 m of river channel length. OR Management activities (management of in-channel or riparian vegetation, woody debris) > 200 m of river length. OR Long-term barrier to river continuity (e.g. weir, culvert) or long-term change to channel geomorphology (widening, deepening, straightening or realigning).	Potentially non-compliant: appropriate mitigation options to be considered to reduce the impact to a lower deterioration category.	If mitigation cannot be put in place to reduce the impact to a lower deterioration category, the activity will be considered to be non-compliant and an Article 4.7 assessment will be required.

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Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
	<p>Within class deterioration:</p> <p>Long-term impact on hydrological regime or morphological conditions that is not sufficient to decrease the overall status classification of the water body.</p>		<p>Physical modifications (bank reinforcement, bank reprofiling, embankment, bypass channel) ≤ 10 m of river channel length.</p> <p>OR Management activities (management of in-channel or riparian vegetation, woody debris) ≤ 20 m of river length.</p> <p>OR Bridges and crossings with abutments that are set back from the channel and that do not include in-channel supports.</p> <p>OR Any impact is temporally constrained and insufficient to impact upon biological quality elements.</p>	Compliant: no further action required.	
Physico-chemistry	<p>Between class deterioration:</p> <p>Long-term impact on temperature, pH, oxygenation, salinity, nutrient concentrations or concentrations of specific pollutants that is sufficient to decrease the overall status classification of the water body.</p>	Qualitative assessment based on predicted changes to physico-chemical quality elements, using an expert judgement approach.	Activity causes between-class deterioration in the thresholds provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.	<p>Potentially non-compliant: appropriate mitigation options to be considered to reduce the impact to a lower deterioration category.</p> <p>If impact on ecology not identified for parameters without thresholds,</p>	If mitigation cannot be put in place to reduce the impact to a lower deterioration category, the activity will be considered to be non-compliant and an Article 4.7 assessment will be required.

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Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
				compliant and no action required.	
	<p>Within class deterioration: Long-term impact on temperature, pH, oxygenation, salinity, nutrient concentrations or concentrations of specific pollutants that is not sufficient to decrease the overall status classification of the water body.</p>		Activity causes within-class deterioration in the thresholds provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.	<p>Deterioration within class should be reduced as far as possible with mitigation. If deterioration is still likely after all mitigation has been included, monitoring is likely to be required to demonstrate compliance.</p> <p>If impact on ecology not identified for parameters without thresholds, compliant and no action required.</p>	An Article 4.7 assessment may be required where good status is prevented from being achieved or water body objectives are undermined.
	<p>Temporary or no deterioration: Short-term impact or no impact on temperature, pH, oxygenation, salinity, nutrient concentrations or concentrations of specific pollutants, which will fully recover once the pressure is removed.</p>		<p>Activity does not cause deterioration in the thresholds for physico-chemistry provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. OR Any impact is temporally constrained and insufficient to impact upon biological quality elements.</p> <p>OR Any impact is spatially constrained and insufficient to impact upon biological quality elements.</p>		Compliant: no further action required.

Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
	OR any impacts on temperature, pH, oxygenation, salinity, nutrient concentrations or concentrations of specific pollutants are very spatially constrained.				
<b>Protected Areas</b>					
Habitats Directive and Birds Directive.	Will be considered within the <b>Shadow HRA Report</b> (Doc Ref 5.10) and therefore no additional requirements for <b>WFD Compliance Assessment</b> .				
Nutrient sensitive sites.	Potential effects on nutrient concentrations within the WFD water bodies will be identified by scoping questions above. These will then be considered in the context of the Protected Area.				

**Table 1.5: Assessment of status deterioration in coastal water bodies**

Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
<b>Ecological status</b>					
Biology	Between class deterioration: Long-term impact on phytoplankton and other aquatic flora, benthic invertebrates that is sufficient to	Qualitative assessment based on predicted changes to the ecological quality ratio for phytoplankton or benthic invertebrates.	Activity causes between-class deterioration in the ecological quality ratios for phytoplankton (Coastal Water Phytoplankton Tool) or benthic invertebrates (Infaunal Quality Index) provided in the Water Framework Directive	Potentially non-compliant: appropriate mitigation options to be considered to reduce the impact to a lower	If mitigation cannot be put in place to reduce the impact to a lower deterioration category, activity will be considered to be non-compliant and an Article 4.7 assessment will be required.

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Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
	decrease the overall status classification of the water body.	OR Qualitative assessment based on expert judgement of impacts on hydromorphology and physico-chemistry.	(Standards and Classification) Directions (England and Wales) 2015. Note that this option is only suitable for use in WFD habitats. For all other habitats (i.e. those for which metrics have not been developed), the alternative options below must be used. OR Area of water body affected by the activity is greater than or equal to the between class deterioration thresholds for hydromorphology. OR Activity causes between-class deterioration in the thresholds for physico-chemistry provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.	deterioration category.	
	Within class deterioration: Long-term impact on phytoplankton and other aquatic flora, benthic invertebrates that is not sufficient to decrease the overall status classification of the water body.	Qualitative assessment based on predicted changes to the ecological quality ratio for phytoplankton or benthic invertebrates. OR Qualitative assessment based on expert judgement of impacts on	Activity causes within-class deterioration in the ecological quality ratios for phytoplankton (Coastal Water Phytoplankton Tool) or benthic invertebrates (Infaunal Quality Index) provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. Note that this option is only	Deterioration within class should be reduced as far as possible with mitigation. If deterioration is still likely after all mitigation has been included, monitoring is likely	An Article 4.7 assessment may be required where good status is prevented from being achieved or water body objectives are undermined.

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Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
		hydromorphology and physico-chemistry.	<p>suitable for use in WFD habitats. For all other habitats (i.e. those for which metrics have not been developed), the alternative options below must be used.</p> <p>OR Area of water body affected by the activity is greater than the within class deterioration thresholds for hydromorphology, but less than the thresholds for between class deterioration.</p> <p>OR Activity causes within-class deterioration in the thresholds for physico-chemistry provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.</p>	to be required to demonstrate compliance.	
	<p>Temporary or no deterioration:</p> <p>Short-term impact or no impact on phytoplankton and other aquatic flora, benthic invertebrates, which will fully recover once the pressure is removed.</p> <p>OR any impacts on phytoplankton and</p>	<p>Qualitative assessment based on predicted changes to the ecological quality ratio for phytoplankton or benthic invertebrates.</p> <p>OR Qualitative assessment based on expert judgement of impacts on hydromorphology and physico-chemistry.</p>	<p>Activity does not cause deterioration in the ecological quality ratios for phytoplankton (Coastal Water Phytoplankton Tool) or benthic invertebrates (Infaunal Quality Index) provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. Note that this option is only suitable for use in WFD habitats. For all other habitats (i.e. those for</p>	Compliant: no action required.	

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Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
	other aquatic flora, benthic invertebrates or fish are very spatially constrained.		<p>which metrics have not been developed), the alternative options below must be used.</p> <p>OR Area of water body affected is less than or equal to the no deterioration / short-term impact thresholds for hydromorphology.</p> <p>OR Activity does not cause deterioration in the thresholds for physico-chemistry provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.</p> <p>OR Any deterioration is temporally constrained and insufficient to impact upon biological quality elements.</p>		
Hydromorphology	Between class deterioration: Long-term impact on morphological conditions or tidal regime that is sufficient to decrease the overall status classification of the water body.	Qualitative assessment based on predicted changes to coastal processes obtained from modelling.	Activity results in permanent changes to wave conditions or sediment transport processes in more than 5% of the water body area.	Potentially non-compliant: appropriate mitigation options to be considered to reduce the impact to a lower deterioration category.	If mitigation cannot be put in place to reduce the impact to a lower deterioration category, activity will be considered to be non-compliant and an Article 4.7 assessment will be required.

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Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
	Within class deterioration: Long-term impact on morphological conditions or tidal regime that is not sufficient to decrease the overall status classification of the water body.	Qualitative assessment based on predicted changes to coastal processes obtained from modelling.	Activity results in permanent changes to wave conditions or sediment transport processes in more than 1% of the water body area.	Deterioration within class should be reduced as far as possible with mitigation. If deterioration is still likely after all mitigation has been included, monitoring is likely to be required to demonstrate compliance.	An Article 4.7 assessment may be required where good status is prevented from being achieved or water body objectives are undermined.
	Temporary or no deterioration: Short-term impact or no impact on morphological conditions or tidal regime, which will fully recover once the pressure is removed. OR any impacts on morphological conditions or tidal regime are very spatially constrained.	Qualitative assessment based on expert judgement and interpretation of coastal process data.	Any deterioration is temporally constrained and insufficient to impact upon biological quality elements. OR Any impact is spatially constrained and insufficient to impact upon biological quality elements.	Compliant: no action required.	
Physico-chemistry	Between class deterioration:	Qualitative assessment based on predicted	Activity causes between-class deterioration in the thresholds	Potentially non-compliant:	If mitigation cannot be put in place to reduce the impact to

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Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
	Long-term impact on transparency, temperature, oxygenation, salinity, nutrient concentrations or concentrations of specific pollutants that is sufficient to decrease the overall status classification of the water body.	changes to physico-chemical quality elements obtained from water quality modelling.	provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.	appropriate mitigation options to be considered to reduce the impact to a lower deterioration category.  For parameters without thresholds (such as temperature) and impact on ecology not identified, compliant and no action required.	a lower deterioration category, activity will be considered to be non-compliant and an Article 4.7 assessment will be required.
	Within class deterioration: Long-term impact on transparency, temperature, oxygenation, salinity, nutrient concentrations or concentrations of specific pollutants that is not sufficient to decrease the overall status classification of the water body.	Qualitative assessment based on predicted changes to physico-chemical quality elements, obtained from water quality modelling.	Activity causes within-class deterioration in the thresholds provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.	Deterioration within class should be reduced as far as possible with mitigation. If deterioration is still likely after all mitigation has been included, monitoring is likely to be required to demonstrate compliance.  If impact on ecology not	An Article 4.7 assessment may be required where good status is prevented from being achieved or water body objectives are undermined.

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Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
				identified for parameters without thresholds, compliant and no action required.	
	<p>Temporary or no deterioration:</p> <p>Short-term impact or no impact on transparency, temperature, oxygenation, salinity, nutrient concentrations or concentrations of specific pollutants, which will fully recover once the pressure is removed.</p> <p>OR any impacts on transparency, temperature, oxygenation, salinity, nutrient concentrations or concentrations of specific pollutants are very spatially constrained.</p>	<p>Qualitative assessment based on predicted changes to physico-chemical quality elements obtained from water quality modelling.</p>	<p>Activity does not cause deterioration in the thresholds for physico-chemistry provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.</p> <p>OR Any impact is temporally constrained and insufficient to impact upon biological quality elements.</p> <p>OR Any impact is spatially constrained and insufficient to impact upon biological quality elements.</p>	Compliant: no further action required.	

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Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
<b>Chemical Status</b>					
Priority substances.	Between class deterioration: Long-term impact on concentrations of priority substances that is sufficient to decrease the overall status classification of the water body.	Qualitative assessment based on predicted changes to chemical quality elements. Water quality modelling of discharges will consider baseline environment and risk of exceeding EQS over long periods.	Activity causes concentrations to exceed the EQS provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.	Potentially non-compliant: appropriate mitigation options to be considered to reduce the impact to a lower deterioration category.	If mitigation cannot be put in place to reduce the impact to a lower deterioration category, the activity will be considered to be non-compliant and an Article 4.7 assessment will be required.
	Within class deterioration: Long-term impact on concentrations of priority substances that is not sufficient to decrease the overall status classification of the water body.	Qualitative assessment based on predicted changes to chemical quality elements. Water quality modelling of discharges will consider baseline environment.	Baseline concentrations below EQS: Activity causes concentrations to increase without exceeding the EQS provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.  Baseline concentrations above EQS: Activity causes concentrations that already exceed the EQS provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015 to increase further.	Deterioration within class should be reduced as far as possible with mitigation. If deterioration is still likely after all mitigation has been included, monitoring is likely to be required to demonstrate compliance.	An Article 4.7 assessment may be required where good status is prevented from being achieved or water body objectives are undermined.
	Temporary or no deterioration:	Qualitative assessment based on predicted changes to chemical	Activity does not cause deterioration in the thresholds for priority substances provided in the	Compliant: no further action required	

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Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
	Short-term impact or no impact on concentrations of priority substances, which will fully recover once the pressure is removed. OR any impacts on concentrations of priority substances are very spatially constrained.	quality elements using an expert judgement approach.	Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. OR Any impact is temporally constrained and insufficient to impact upon biological quality elements. OR Any impact is spatially constrained and insufficient to impact upon biological quality elements.		
<b>Protected Areas</b>					
Shellfish/bathing water standards.	Will be considered using the relevant standards as part of the <b>WFD Compliance Assessment</b> .				
Habitats Directive and Birds Directive.	Will be considered within the <b>Shadow HRA Report</b> (Doc Ref. 5.10) and therefore no additional requirements for <b>WFD Compliance Assessment</b> .				
Nutrient sensitive sites.	Potential effects on nutrient concentrations within the WFD water bodies will be identified by scoping questions above. These will then be considered in the context of the Protected Area.				

Table 1.6: Assessment of status deterioration in transitional water bodies

Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
<b>Ecological Status</b>					
Biology	Between class deterioration: Long-term impact on phytoplankton and other aquatic flora, benthic invertebrates and fish that is sufficient to decrease the overall status classification of the water body.	Qualitative assessment based on predicted changes to the ecological quality ratio for fish, phytoplankton or benthic invertebrates. OR Qualitative assessment based on expert judgement of impacts on hydromorphology and physico-chemistry.	Activity causes between-class deterioration in the ecological quality ratios for fish (Transitional Fish Classification Index), phytoplankton (Coastal Water Phytoplankton Tool) or benthic invertebrates (Infaunal Quality Index) provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. Note that this option is only suitable for use in WFD habitats. For all other habitats (i.e. those for which metrics have not been developed), the alternative options below must be used.  OR Area of water body affected by the activity is greater than or equal to the between class deterioration thresholds for hydromorphology.  OR Activity causes between-class deterioration in the thresholds for physico-chemistry provided in the Water Framework Directive (Standards and Classification)	Potentially non-compliant: appropriate mitigation options to be considered to reduce the impact to a lower deterioration category.	If mitigation cannot be put in place to reduce the impact to a lower deterioration category, activity will be considered to be non-compliant and an Article 4.7 assessment will be required.

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Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
			Directions (England and Wales) 2015.		
	<p>Within class deterioration:</p> <p>Long-term impact on fish, phytoplankton and other aquatic flora, benthic invertebrates that is not sufficient to decrease the overall status classification of the water body.</p>	<p>Qualitative assessment based on predicted changes to the ecological quality ratio phytoplankton, benthic invertebrates or fish.</p> <p>OR Qualitative assessment based on expert judgement of impacts on hydromorphology and physico-chemistry.</p>	<p>Activity causes within-class deterioration in the ecological quality ratios for phytoplankton (Transitional Water Phytoplankton Tool), benthic invertebrates (Infaunal Quality Index) or fish (Transitional Fish Classification Index) provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. Note that this option is only suitable for use in WFD habitats. For all other habitats (i.e. those for which metrics have not been developed), the alternative options below must be used.</p> <p>OR Area of water body affected by the activity is greater than the within class deterioration thresholds for hydromorphology, but less than the thresholds for between class deterioration.</p>	<p>Deterioration within class should be reduced as far as possible with mitigation. If deterioration is still likely after all mitigation has been included, monitoring is likely to be required to demonstrate compliance.</p>	<p>An Article 4.7 assessment may be required where good status is prevented from being achieved or water body objectives are undermined.</p>
	<p>Temporary or no deterioration:</p> <p>Short-term impact or no impact on phytoplankton and</p>	<p>Qualitative assessment based on predicted changes to the ecological quality ratio</p>	<p>Activity does not cause deterioration in the ecological quality ratios for phytoplankton (Transitional Water Phytoplankton Tool), benthic invertebrates</p>	<p>Compliant: no action required.</p>	

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Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
	<p>other aquatic flora, benthic invertebrates and fish which will fully recover once the pressure is removed.</p> <p>OR any impacts on phytoplankton and other aquatic flora, benthic invertebrates or fish are very spatially constrained.</p>	<p>for phytoplankton or benthic invertebrates.</p> <p>OR Qualitative assessment based on expert judgement of impacts on hydromorphology and physico-chemistry.</p>	<p>(Infaunal Quality Index) or fish (Transitional Fish Classification Index) provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. Note that this option is only suitable for use in WFD habitats. For all other habitats (i.e. those for which metrics have not been developed), the alternative options below must be used.</p> <p>OR Area of water body affected is less than or equal to the no deterioration / short-term impact thresholds for hydromorphology.</p> <p>OR Activity does not cause deterioration in the thresholds for physico-chemistry provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.</p> <p>OR Any deterioration is temporally constrained and insufficient to impact upon biological quality elements.</p>		
Hydromorphology	Between class deterioration:	Qualitative assessment based on predicted changes to coastal	Activity results in permanent changes to wave conditions or sediment transport processes in	Potentially non-compliant: appropriate	If mitigation cannot be put in place to reduce the impact to a lower deterioration

**NOT PROTECTIVELY MARKED**

Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
	Long-term impact on morphological conditions or tidal regime that is sufficient to decrease the overall status classification of the water body.	processes obtained from modelling.	more than 5% of the water body area.	mitigation options to be considered to reduce the impact to a lower deterioration category.	category, activity will be considered to be non-compliant and an Article 4.7 assessment will be required.
	Within class deterioration: Long-term impact on morphological conditions or tidal regime that is not sufficient to decrease the overall status classification of the water body.	Qualitative assessment based on predicted changes to coastal processes obtained from modelling.	Activity results in permanent changes to wave conditions or sediment transport processes in more than 1% of the water body area.	Deterioration within class should be reduced as far as possible with mitigation. If deterioration is still likely after all mitigation has been included, monitoring is likely to be required to demonstrate compliance.	An Article 4.7 assessment may be required where good status is prevented from being achieved or water body objectives are undermined.
	Temporary or no deterioration: Short-term impact or no impact on morphological conditions or tidal regime, which will fully recover once the pressure is removed.	Qualitative assessment based on expert judgement and interpretation of coastal process data.	Any deterioration is temporally constrained and insufficient to impact upon biological quality elements.  OR Any impact is spatially constrained and insufficient to impact upon biological quality elements.	Compliant: no action required.	

**NOT PROTECTIVELY MARKED**

Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
	OR any impacts on morphological conditions or tidal regime are very spatially constrained.				
Physico-chemistry	Between class deterioration: Long-term impact on transparency, temperature, oxygenation, salinity, nutrient concentrations or concentrations of specific pollutants that is sufficient to decrease the overall status classification of the water body.	Qualitative assessment based on predicted changes to physico-chemical quality elements obtained from water quality modelling.	Activity causes between-class deterioration in the thresholds provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.	Potentially non-compliant: appropriate mitigation options to be considered to reduce the impact to a lower deterioration category. For parameters without thresholds (such as temperature) and impact on ecology not identified, compliant and no action required.	If mitigation cannot be put in place to reduce the impact to a lower deterioration category, activity will be considered to be non-compliant and an Article 4.7 assessment will be required.
	Within class deterioration: Long-term impact on transparency, temperature, oxygenation, salinity, nutrient concentrations or	Qualitative assessment based on predicted changes to physico-chemical quality elements, obtained from water quality modelling.	Activity causes within-class deterioration in the thresholds provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.	Deterioration within class should be reduced as far as possible with mitigation. If deterioration is still likely after all mitigation has been	An Article 4.7 assessment may be required where good status is prevented from being achieved or water body objectives are undermined.

**NOT PROTECTIVELY MARKED**

Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
	concentrations of specific pollutants that is not sufficient to decrease the overall status classification of the water body.			included, monitoring is likely to be required to demonstrate compliance. If impact on ecology not identified for parameters without thresholds, compliant and no action required.	
	Temporary or no deterioration: Short-term impact or no impact on transparency, temperature, oxygenation, salinity, nutrient concentrations or concentrations of specific pollutants, which will fully recover once the pressure is removed. OR any impacts on transparency, temperature, oxygenation, salinity,	Qualitative assessment based on predicted changes to physico-chemical quality elements obtained from water quality modelling.	Activity does not cause deterioration in the thresholds for physico-chemistry provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. OR Any impact is temporally constrained and insufficient to impact upon biological quality elements. OR Any impact is spatially constrained and insufficient to impact upon biological quality elements.	Compliant: no further action required.	

**NOT PROTECTIVELY MARKED**

Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
	nutrient concentrations or concentrations of specific pollutants are very spatially constrained.				
<b>Chemical Status</b>					
Priority substances.	Between class deterioration: Long-term impact on concentrations of priority substances that is sufficient to decrease the overall status classification of the water body.	Qualitative assessment based on predicted changes to chemical quality elements. Water quality modelling of discharges will consider baseline environment and risk of exceeding EQS over long periods.	Activity causes concentrations to exceed the EQS provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.	Potentially non-compliant: appropriate mitigation options to be considered to reduce the impact to a lower deterioration category.	If mitigation cannot be put in place to reduce the impact to a lower deterioration category, the activity will be considered to be non-compliant and an Article 4.7 assessment will be required.
	Within class deterioration: Long-term impact on concentrations of priority substances that is not sufficient to decrease the overall status classification of the water body.	Qualitative assessment based on predicted changes to chemical quality elements. Water quality modelling of discharges will consider baseline environment.	Baseline concentrations below EQS: Activity causes concentrations to increase without exceeding the EQS provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.  Baseline concentrations above EQS: Activity causes concentrations that already exceed the EQS provided in the Water Framework Directive	Deterioration within class should be reduced as far as possible with mitigation. If deterioration is still likely after all mitigation has been included, monitoring is likely to be required to demonstrate compliance.	An Article 4.7 assessment may be required where good status is prevented from being achieved or water body objectives are undermined.

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Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
			(Standards and Classification) Directions (England and Wales) 2015 to increase further.		
	Temporary or no deterioration: Short-term impact or no impact on concentrations of priority substances, which will fully recover once the pressure is removed. OR any impacts on concentrations of priority substances are very spatially constrained.	Qualitative assessment based on predicted changes to chemical quality elements using an expert judgement approach.	Activity does not cause deterioration in the thresholds for priority substances provided in the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. OR Any impact is temporally constrained and insufficient to impact upon biological quality elements. OR Any impact is spatially constrained and insufficient to impact upon biological quality elements.	Compliant: no further action required	
Protected Areas					
Shellfish/bathing water standards.	Will be considered using the relevant standards as part of the <b>WFD Compliance Assessment</b> .				
Habitats Directive and Birds Directive.	Will be considered within the HRA and therefore no additional requirements for <b>WFD Compliance Assessment</b> .				
Nutrient sensitive sites.	Potential risks to nutrient concentrations will be identified in the scoping questions above. The risks will then be considered within the context of the Protected Area.				

Table 1.7: Assessment of status deterioration in groundwater bodies

Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
Groundwater quantity.	Between class deterioration: Long-term impact on groundwater levels, groundwater dependent surface water bodies or groundwater dependent terrestrial ecosystems that is sufficient to decrease the overall status classification of the water body.	Assessment of changes to groundwater quantity receptors based on interpretation of the results of the FEFLOW-MIKE11 model of groundwater and groundwater surface water interactions within the model domain, and qualitative extrapolation of these results beyond if necessary. Additional qualitative assessment of changes to key species for impacts on terrestrial ecosystems.	Activity results in a significant upward trend in salinity or indicators of other intrusions of pollutants that is sufficient to require any abstracted water to be treated. OR Activity prevents surface water bodies with $\geq 50\%$ groundwater-derived flows from reaching target status over 20% of the groundwater body. OR Activity results in significant change to groundwater dependent terrestrial ecosystems as a result of reduced water availability. OR Activity results in abstraction that exceeds the available water resources in the groundwater body and supported surface flows.	Potentially non-compliant: appropriate mitigation options to be considered to reduce the impact to a lower deterioration category.	If mitigation cannot be put in place to reduce the impact to a lower deterioration category, activity will be considered to be non-compliant and an Article 4.7 assessment will be required.
	Within class deterioration: Long-term impact on groundwater levels, groundwater dependent surface water bodies or groundwater dependent terrestrial ecosystems that is not sufficient to		Activity causes concentrations of substances that are indicative of saline intrusion or other intrusions of pollutants to exceed the thresholds provided in Schedule 5 of the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. OR Activity results in	Deterioration within class should be reduced as far as possible with mitigation. If deterioration is still likely after all mitigation has been included,	An Article 4.7 assessment may be required where good status is prevented from being achieved or water body objectives are undermined.

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Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
	decrease the overall status classification of the water body.		changes to groundwater levels that are identified as a potential contributor factor to unsatisfactory flow conditions in an associated surface water body. OR Activity results in changes to groundwater levels that are identified as a potential contributor to unsatisfactory conditions in a groundwater dependent terrestrial ecosystem. OR The quantity of groundwater abstracted from the water body as a result of the activity exceeds the long-term annual average rate of overall recharge.	monitoring is likely to be required to demonstrate compliance.	
	Temporary or no deterioration: Short-term impact or no impact on groundwater levels, groundwater dependent surface water bodies or groundwater dependent terrestrial ecosystems, which will fully recover once the pressure is removed. OR any impacts on groundwater levels, groundwater dependent		Activity does not cause concentrations of substances indicative of saline intrusion or other intrusions of pollutants to exceed the thresholds provided in Schedule 5 of the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. OR Any impact is temporally constrained and insufficient to impact upon surface water bodies or groundwater dependent terrestrial ecosystems. OR Any impact is spatially constrained	Compliant: no action required.	

**NOT PROTECTIVELY MARKED**

Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
	surface water bodies or groundwater dependent terrestrial ecosystems are very spatially constrained.		and insufficient to impact upon surface water bodies or groundwater dependent terrestrial ecosystems.		
Groundwater quality.	Between class deterioration: Long-term impact on conductivity, oxygenation, pH, concentrations of nitrates, ammonia and priority substances, drinking water quality and groundwater dependent terrestrial ecosystems that is sufficient to decrease the overall status classification of the water body.	Changes to water quality resulting from changes to the quantity will be assessed based on interpretation of the results of the FEFLOW-MIKE11 model within the model domain, and qualitative extrapolation of these results beyond. Where changes to water quality could result from additional input of contaminant, the assessment will take a tiered approach. The first tier will consider the dilution of the contaminant within the aquifer. The second tier (if necessary) will also consider attenuation within the unsaturated zone (if applicable). The third tier (if necessary) will also consider attenuation within	Activity results in a significant upward trend in salinity or indicators of other intrusions of pollutants that is sufficient to require any abstracted water to be treated. OR Activity causes pollutant concentrations that result in failure of a surface water body to meet good status, with inputs from the groundwater accounting for $\geq 50\%$ of the relevant surface water standard. OR Activity releases pollutants that result in significant change to groundwater dependent terrestrial ecosystems as a result of groundwater pollution. OR Activity results in deterioration in the quality of water within a drinking water protected area that is sufficient to require additional treatment. OR Activity results in pollutant concentrations that exceed the thresholds provided in Schedule 5 of the Water Framework Directive	Potentially non-compliant: appropriate mitigation options to be considered to reduce the impact to a lower deterioration category.	If mitigation cannot be put in place to reduce the impact to a lower deterioration category, activity will be considered to be non-compliant and an Article 4.7 assessment will be required.

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Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
		the groundwater body (including the hyporheic zone if relevant).	(Standards and Classification) Directions (England and Wales) 2015 at all representative monitoring points, and the concentration of the pollutant exceeds the maximum allowable concentration for drinking water in at least one sample from a representative monitoring point.		
	Within class deterioration: Long-term impact on conductivity, oxygenation, pH, concentrations of nitrates, ammonia and priority substances, drinking water quality and groundwater dependent terrestrial ecosystems that is not sufficient to decrease the overall status classification of the water body.		Activity causes concentrations of substances that are indicative of saline intrusion or other intrusions of pollutants to exceed the thresholds provided in Schedule 5 of the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. OR Activity causes the groundwater body to exceed a threshold value in Schedule 5 of the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015 which is indicative of a risk to the ecological or chemical quality of an associated surface water body. OR Activity results in groundwater pollution that is identified as a potential contributor to unsatisfactory conditions in a groundwater	Deterioration within class should be reduced as far as possible with mitigation. If deterioration is still likely after all mitigation has been included, monitoring is likely to be required to demonstrate compliance.	An Article 4.7 assessment may be required where good status is prevented from being achieved or water body objectives are undermined.

**NOT PROTECTIVELY MARKED**

Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
			dependent terrestrial ecosystem and causes a threshold value in Schedule 5 of the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015 that is indicative of the risks to the ecological quality of the ecosystem to be exceeded. OR Activity results in the quality of abstracted water to exceed a threshold value in Schedule 5 of the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015, causing a risk of deterioration in water intended for human consumption or significant impairment of water abstracted for other uses.		
	Temporary or no deterioration: Short-term impact or no impact on conductivity, oxygenation, pH, concentrations of nitrates, ammonia and priority substances, drinking water quality and groundwater dependent terrestrial		Activity does not cause concentrations of substances indicative of saline intrusion or other intrusions of pollutants to exceed the thresholds provided in Schedule 5 of the Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015. OR Any impact is temporally constrained and insufficient to	Compliant: no action required.	

**NOT PROTECTIVELY MARKED**

Parameter	Type of Deterioration	Assessment Methodology	Assessment Criteria	Compliance	Assessment Summary
	<p>ecosystems, which will fully recover once the pressure is removed. OR any impacts on conductivity, oxygenation, pH, concentrations of nitrates, ammonia and priority substances, and groundwater dependent terrestrial ecosystems are very spatially constrained.</p>		<p>impact upon surface water bodies or groundwater dependent terrestrial ecosystems. OR Any impact is spatially constrained and insufficient to impact upon surface water bodies or groundwater dependent terrestrial ecosystems.</p>		

#### iv. Protected areas

- 1.2.27. Impacts of the scheme on other European legislation will be considered in line with Articles 4.8 and 4.9 of the WFD.

#### v. Mitigation measures

- 1.2.28. If, at the end of the assessment process, adverse impacts are identified, Stage 3 will then consider measures to mitigate the impacts of relevant activities and, if possible, improve the state of the water environment. Where possible, multiple benefits will be sought from each measure (e.g. across different water bodies or improving more than one quality element) in line with the online Healthy Catchments guidance (Ref. 1.19) and Estuary Edges: Ecological Design Guidance (Ref. 1.20).

- 1.2.29. If no suitable measures are identified, an Article 4.7 assessment will be required which will be developed in consultation with the Environment Agency (including the National Article 4.7 Support Team). The assessment will need to include:

- An assessment of whether the scheme can be classified as being of imperative overriding public interest and if the benefits to society resulting from the scheme outweigh the local benefits of WFD implementation.
- An assessment of whether all practicable steps to avoid adverse impacts have been taken. These steps are defined as those that are technically feasible, not disproportionately costly, and compatible with the overall requirements of the scheme.
- An assessment of whether the scheme can be delivered by an alternative, environmentally better option. This option would need to be technically feasible and not disproportionately costly to be feasible.

#### f) Cumulative effects

- 1.2.30. Project-wide effects (i.e. between components of the Sizewell C Project, including the main development site and associated development sites) and cumulative effects with other projects (i.e. between all components of the Sizewell C Project and other unrelated projects) will be considered in Part 4 of the assessment. It is proposed that the broad approach used for the EIA process set out in **Chapter 1 of Volume 10** of the **ES** (Doc Ref. 6.11) will

also be applied to the **WFD Compliance Assessment**. This can be summarised as follows:

i. **Stage 1 Establishing a Zone of Influence and long list of non-Sizewell C projects, plans and programmes**

1.2.31. To inform the assessment of cumulative effects with non-Sizewell C projects, plans and programmes, the reasonable maximum geographical area around the main development site and the associated development sites, where there is potential for impacts to occur, has been established through the identification of a Zone of Influence (ZOI).

1.2.32. Although the ZOI differs between the environmental topics in the **ES**, for the purposes of the data gathering exercise, the maximum reasonable ZOI for the Sizewell C Project is considered to be 20km around the main development site, and 5km around the associated development sites, with the exception of the rail upgrades where the reasonable ZOI is considered to be 1km. The ZOI is then mapped using geographical information systems (GIS). This forms the search area for non-Sizewell C plans and projects to be included within the long list for initial consideration.

1.2.33. Non-Sizewell C projects, plans and programmes have been identified through the EIA scoping process, stakeholder engagement and a review of publicly available information (such as applications on local planning authorities' planning portals, local plan web pages and the Marine Management Organisation's marine licence application portal). Non-Sizewell C projects, plans and programmes have been included on the basis that they are:

- under construction;
- permitted application(s) that have not yet been implemented (those from the past 5 years have been considered, taking into account those that received planning consent over 3 years ago and are still valid, but have not been completed);
- submitted application(s) not yet determined (as above);
- refused, subject to appeal procedures not yet determined;
- on the National Infrastructure Planning programme of projects;

- identified in plans, with appropriate weight being given as they move closer to adoption recognising that information on any relevant proposals will be limited; and
- identified in other plans and programmes which set the framework for future development consents/approvals, where such development is reasonably likely to come forward.

1.2.34. There are a number of development types, which due to their nature and scale, have not been considered to have the potential to result in cumulative effects and therefore have been screened out of the assessment. The most common of these development types are as follows:

- construction of agricultural buildings (e.g. storage of livestock, machinery or feed);
- house extensions or cosmetic changes to buildings;
- work to trees;
- micro-generation wind turbines;
- roof mounted solar photovoltaic panels (or ground mounted less than 50 kilowatts (KW) output);
- renewal of planning permission for retention of existing operational use;
- variation to planning permissions, including reserved matters applications (where original application would be excluded); and
- small scale residential uses (less than 2 dwellings), or changes of buildings' use (unless it could itself in a cumulative effect, such as a conversion of several barns into a holiday village).

1.2.35. Once these criteria have been applied, the remaining developments comprise the long list.

ii. **Stage 2: Establishing a short list of projects, plans and programmes**

1.2.36. Taking account of the stakeholder comments and using GIS maps to consider the spatial relationship with the proposed development, each of the developments and allocations have been considered in terms of whether they

would be likely to generate impacts which could combine to result in cumulative effects in combination with the proposed development. The result of this process is a defined short list for which more detailed information gathering was undertaken.

- 1.2.37. Projects from the short list which were operational at the time of the cumulative effects assessment are considered within the baseline where applicable. Projects which are due to be completed by the start of construction of the proposed development have been considered future baseline. Where the construction timescales of the applications are unknown, the projects have been considered cumulatively and as a potential receptor under the future baseline scenario.

iii. **Stage 3: Information gathering**

- 1.2.38. A copy of the short list was circulated to the local planning authorities and statutory environmental bodies for their further comments in August 2019 and subsequently finalised for the purpose of commencing with assessments. This finalised list has then been considered against the potential risks to WFD water bodies and associated compliance parameters under a further screening exercise specific to this assessment. Where projects are identified as having effects on the same WFD water bodies these are screened in for further consideration.

iv. **Stage 4: Further consideration**

- 1.2.39. Where a risk was identified on the same water body, further information has been gathered and an assessment for cumulative effects undertaken. There may be limitations to the assessments, such as a lack of detail regarding a project, plan or programme. Likewise, in some cases it might not be possible to undertake a quantitative assessment, meaning that a qualitative assessment and expert judgement was applied.

## 1.3 Consultation

- 1.3.1. The important role of consultation in developing the Sizewell C Project **WFD Compliance Assessment** is recognised by SZC Co. Staged project consultation has been undertaken at several key points in the development of the Sizewell C Project documentation. These consultation stages have provided much of the key feedback on the progression of SZC Co.'s project proposals.
- 1.3.2. For the **WFD Compliance Assessment**, the first stage of informal consultation occurred in September 2012, when the draft version of the assessment strategy was provided to the Environment Agency for comment.

The strategy was then updated and submitted to the Environment Agency in 2016. A further discussion with the Environment Agency was held in February 2019 on the proposed method to recommence the WFD compliance assessment process following completion of the Stage 3 pre-application consultation on the DCO submission.

1.3.3. A summary of the responses provided and an indication of where they have been addressed within this report is provided in **Appendix 1B**.

## 1.4 Next steps

1.4.1. This part (Part 1) will be followed by:

- Part 2: Main Development Site;
- Part 3: Associated Development Sites; and
- Part 4: Cumulative Effects Assessment.

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