

## HPC COMPANY DOCUMENT

# HINKLEY POINT C MATERIAL CHANGE APPLICATION - PRELIMINARY ENVIRONMENTAL INFORMATION REPORT – VOLUME 1: INTRODUCTION

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## 1. INTRODUCTION

### 1.1 Purpose of this Report

1.1.1 This report has been prepared by Jacobs U.K Limited and WSP on behalf of NNB Generation Company (HPC) Limited (hereafter referred to as 'NNB') in relation to a proposed application for a material change to the Development Consent Order ('DCO') for the new nuclear power station known as Hinkley Point C.

1.1.2 Hinkley Point C and the associated development required to facilitate its construction and operation is hereafter referred to as 'the Hinkley Point C Project'.

1.1.3 Under the Infrastructure Planning (Changes to, and Revocation of, Development Consent Orders) Regulations 2011<sup>1</sup>, NNB is required to consult relevant parties on the changes proposed as part of a material change application unless written consent from the Secretary of State has been obtained that consultation is not required.

1.1.4 This Preliminary Environmental Information Report ('PEIR') has been prepared as part of the consultation

process, to enable consultees to develop an informed view of the likely significant environmental effects in relation to the proposed changes to the Hinkley Point C Project. This PEIR presents information about the nature of the proposed changes to inform consultees on the significance of those changes.

1.1.5 An Environmental Impact Assessment ('EIA') Scoping Report<sup>2</sup> was submitted by NNB to the Planning Inspectorate on 23 March 2022 to inform a request for a Scoping Opinion on the scope, and level of detail, of the updated Environmental Statement ('ES') that will be submitted with the proposed material change application. A Scoping Opinion was adopted by the Planning Inspectorate (on behalf of the Secretary of State) on 3 May 2022. The updated ES will identify and assess any new or materially different likely significant effects on the environment, when compared to the original ES, as a result of the proposed changes to the Hinkley Point C Project. For further detail on the EIA process, see **Chapter 4**.

1.1.6 Reference is made throughout this PEIR to reports that can be found via NNB's consultation website at: [www.edfenergy.com/hpccommunity](http://www.edfenergy.com/hpccommunity).

<sup>1</sup> Infrastructure Planning (Changes to, and Revocation of, Development Consent Orders) Regulations 2011. [Online]. Accessed 23 November 2023.

<sup>2</sup> NNB Generation Company Ltd (2022). Hinkley Point C Material Change Application EIA Scoping Report.

## 1.2 Consultation

- 1.2.1 NNB is seeking the views of the public and relevant stakeholders on the changes proposed.
- 1.2.2 In relation to the proposed changes on-site (see **paragraph 1.3.5**), NNB has agreed with relevant stakeholders (Environment Agency, Somerset Drainage Board and Somerset Council) that Groundwater can be scoped out of further assessment and has provided the evidence to demonstrate the absence of a likely significant effect. NNB has also consulted the Transport Review Group ('TRG') on Transport and is seeking agreement with the TRG that Transport can also be scoped out of further assessment in relation to the proposed changes on-site.
- 1.2.3 There will be a period from Tuesday 9 January 2024 to 23:59 on Thursday 29 February 2024 within which consultees can provide their responses to the consultation.
- 1.2.4 The responses received will be taken into consideration when refining the final design of the proposed changes and mitigation measures, if likely significant effects on the

environment are identified. A Consultation Report, which will be submitted with the proposed material change application, will outline how due regard has been had to responses received.

- 1.2.5 For further information about the consultation, please visit NNB's website at: [www.edfenergy.com/hpccommunity](http://www.edfenergy.com/hpccommunity).

## 1.3 The Proposed Changes

### Summary

- 1.3.1 The application for the original DCO was submitted by NNB in 2011 and consent was granted in 2013. Since the DCO was consented in 2013, NNB has submitted four non-material change applications to make minor changes to the Hinkley Point C Project, resulting in the following amendment orders being made:
- The Hinkley Point C (Nuclear Generating Station) (Amendment) Order 2015<sup>3</sup> ('the 2015 Amendment Order') - changes to buildings and structures within the Hinkley Point C site layout and changes to facilitate design resilience, compliance with UK

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<sup>3</sup> The Hinkley Point C (Nuclear Generating Station) (Amendment) Order 2015 (Statutory Instrument 2015 No. 1666). [\[Online\]](#). Accessed 23 November 2023.

regulations, feedback from reference plants and design and optimisation studies;

- The Hinkley Point C (Nuclear Generating Station) (Amendment) Order 2017<sup>4</sup> ('the 2017 Amendment Order') - consolidation of the two temporary offsite accommodation campuses into a single campus (named Bridgwater A and known as the Sedgemoor Campus) including minor changes to the campus itself;
- The Hinkley Point C (Nuclear Generating Station) (Amendment) Order 2018<sup>5</sup> ('the 2018 Amendment Order') - changes to buildings and structures within the Hinkley Point C site layout, an alteration to the alignment of the sea wall and erection of additional pipework along the underside of the temporary jetty; and
- The Hinkley Point C (Nuclear Generating Station) (Amendment) Order 2021<sup>6</sup> ('the 2021 Amendment Order') - changes to buildings and structures within the Hinkley Point C site layout.

1.3.2 Due to the nature and scale of the changes granted by the Secretary of State, no new or materially different likely

significant effects on the environment were identified as a result of the above proposals. The current baseline at Hinkley Point C remains largely unchanged by these amendment orders.

1.3.3 Planning consents have also been obtained by NNB under the Town and Country Planning Act 1990 since the DCO application was submitted, which are listed in Table 3-1 of the Scoping Report submitted to the Planning Inspectorate on 23 March 2022. In addition, since the Scoping Report was submitted the applications in **Table 1–1** have been approved.

<sup>4</sup> The Hinkley Point C (Nuclear Generating Station) (Amendment) Order 2017 (Statutory Instrument 2017 No. 843). [[Online](#)]. Accessed 23 November 2023.

<sup>5</sup> The Hinkley Point C (Nuclear Generating Station) (Amendment) Order 2018 (Statutory Instrument 2018 No. 413). [[Online](#)]. Accessed 23 November 2023.

<sup>6</sup> The Hinkley Point C (Nuclear Generating Station) (Amendment) Order 2021 (Statutory Instrument 2021 No. 1474). [[Online](#)]. Accessed 23 November 2023.

**Table 1–1: Planning consents obtained by NNB under the Town and Country Planning Act 1990 since the Scoping Report**

Reference	Description	Date Approved	Council
3/32/22/001	Change of use of land for bus parking associated with the Hinkley Point C Construction Project	8 August 2022	Somerset West
39/23/00004	Construction of a temporary Abnormal Indivisible Loads bypass track within Combwich construction compound, including the modification of existing, and erection of new gates in connection with the construction of Hinkley Point C Power Station	15 November 2023	Somerset

Reference	Description	Date Approved	Council
09/22/00029	Continued use of land as car park for a temporary period of 5 years, provision of lighting columns, security and height restriction barriers (part-retrospective)	14 December 2022	Sedgemoor
37/23/00056	Temporary change of use of external yard area of former distribution depot yard area to park and ride facility and associated works. To be known as Hinkley Logistics Hub ('HLH')	24 August 2023	Somerset

1.3.4 NNB is now seeking to amend elements of the Hinkley Point C Project via an application for a material change to the DCO that will be submitted to the Planning Inspectorate (on behalf of the Secretary of State).

1.3.5 As outlined in the EIA Scoping Report submitted by NNB to the Planning Inspectorate on 23 March 2022, the proposed changes on-site to the Hinkley Point C Project

are summarised below and described further in **Chapter 2:**

- Removal of the requirement to install an Acoustic Fish Deterrent ('AFD') system (using sound to deter certain types of fish from the cooling water system ('CWS') intake heads);
- Amendment to the Interim Spent Fuel Store ('ISFS') from wet to dry storage of spent fuel and a change in building dimensions;
- Replacement of the Access Control Building associated with the ISFS with a new larger Equipment Storage Building;
- Relocation and re-design of the meteorological mast resulting in the meteorological station building no longer being required;
- Amendment to retain the existing temporary Hinkley Point Substation as a permanent feature to supply electricity to neighbouring Hinkley Point A and Hinkley Point B; and
- Four new structures (two per Unit<sup>7</sup> of Hinkley Point C) to house sluice gates and lifting beams to be used during outages (i.e. maintenance periods) only.

1.3.6 Refer to the Site Layout Plan (Tracked Changes) (drawing reference HINK-A1-SL-00-GA-011) in **PEIR Plans - Proposed Changes On-Site** for a visual representation of the proposed changes.

1.3.7 The proposed changes outlined in **paragraph 1.3.5** are hereafter referred to as 'the proposed changes on-site'.

1.3.8 Since the submission of the EIA Scoping Report, NNB, following extensive stakeholder engagement, has identified a package of compensatory measures that will ensure that the overall coherence of the National Sites Network ('NSN') is protected. These measures are summarised below and discussed in more detail in **Chapter 3:**

- Compensation for migratory fish species to improve successful migration (easement of passage) comprising works on three weir barriers. NNB has identified five potential locations where appropriate works to weirs would deliver improvements to provide appropriate compensation. NNB is proposing to carry out works to three of the five weirs identified:
  - Maisemore Weir on the River Severn;
  - Trostrey Weir on the River Usk; and

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<sup>7</sup> Each Unit of Hinkley Point C comprises one of the reactors and the buildings associated with that reactor.

- one further weir on the River Lugg (one of Mousenatch Weir, Eyton Weir or Coxall Weir), the River Towy (Manorafon Weir) or the River Severn (Upper Lode Weir).
    - Works at Maisemore on the River Severn and at Trostrey on the River Usk are presented as preferred proposals with one further location from the other three sites presented to be taken forward.
  - Compensation for the marine species identified as the Severn Estuary Fish Assemblage, through improvements to, or creation of, habitats that will support the fish populations:
    - Creation or enhancement of approximately 340 hectares ('ha') of saltmarsh and associated habitat;
    - Creation / enhancement of 5 ha of seagrass bed;
    - Creation / enhancement of 15 ha of kelp forest; and
    - Creation / enhancement of 1-2 ha of oyster bed, size dependent on location.
  - An Adaptive Monitoring and Management Plan ('AMMP') - to provide reliable information on the effectiveness and success of the implemented measures and provide the means to adapt the measures where necessary.
- 1.3.9 NNB originally intended to provide an easement of passage on the River Wye, however during engagement with the Environment Agency and Natural Resources Wales it became apparent that there was no suitable option.
- 1.3.10 The proposed changes outlined in **paragraph 1.3.8** are hereafter referred to as 'the proposed changes off-site'.

### Materiality

- 1.3.11 The relevant legislation does not define what constitutes a material change. However, the relevant guidance from the Department for Communities and Local Government ('DCLG') (now the Department for Levelling Up, Housing and Communities ('DLUHC')) has been considered to determine if the changes proposed constitute a material change.
- 1.3.12 As outlined in the DCLG guidance document *Planning Act 2008: Guidance on Changes to Development*

*Consent Orders*<sup>8</sup>, there are certain ‘characteristics’ that would indicate the proposed change is more likely to be treated as material. These ‘characteristics’ include (amongst other things) where a change would require an updated ES (paragraph 12) or Habitats Regulations Assessment ('HRA') (paragraph 14).

1.3.13 In granting the DCO for Hinkley Point C, the (then) Secretary of State for Energy and Climate Change took into account the installation of an AFD system as a mitigation measure in reaching his decision that there would not be an unacceptable effect on the environment or protected habitats. NNB therefore considers it appropriate to treat the proposed change to remove the requirement to install an AFD as a 'material' change within the meaning of the Planning Act 2008 regime. The effect of this is to ensure that the application is subject to a higher degree of scrutiny than for a 'non-material' change. It is noted that NNB remains fully committed to installing the other fish protection measures outlined within the DCO, i.e. the low velocity side-entry ('LVSE') water intake heads, and fish recovery and return ('FRR') system. This is the case as assessed within this PEIR and the Shadow Habitats Regulations Assessment

Evidence Report – Pre-Application Consultation Version (hereafter referred to as 'HRA Report').

1.3.14 NNB is also mindful that Natural England, Natural Resources Wales, the Marine Management Organisation, the Environment Agency and other key stakeholders have a particular interest in any proposal not to install an AFD system. As explained in **Section 1.4** below, the duty to install an AFD system was also set out in Hinkley Point C's permit for a Water Discharge Activity ('WDA'). An application to vary the permit to remove the requirement to install an AFD was submitted in December 2022 and a varied permit was issued by the Environment Agency in July 2023. The removal of the AFD from this permit was done to ensure the permit was consistent with Schedule 21 of the Environmental Permitting (England and Wales) Regulations 2016, which covers water discharges, but not abstraction. Abstraction controls are fully assessed and controlled through the DCO.

1.3.15 In relation to the proposed change to the ISFS, an identical proposal was submitted in 2017 as part of a non-material change application to the Secretary of State. Within the decision letter for that application, the

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<sup>8</sup> Department for Communities and Local Government. Planning Act 2008: Guidance on Changes to Development Consent Orders. Published December 2015. [[Online](#)]. Accessed 23 November 2023.

Secretary of State noted that, given the information and assessment provided, it was not possible to determine the materiality of the proposal. NNB has therefore carried out additional assessments, the preliminary results of which are provided as part of this PEIR. Those assessments show that the change to the ISFS will not have new or materially different likely significant environmental effects. Nevertheless, NNB considers it expedient to include the request for the ISFS change as part of the proposed material change application which it intends to make in relation to the AFD system.

1.3.16 Similarly, NNB's assessments indicate that the other changes described within this PEIR would not in themselves constitute material changes but are included to avoid the need to submit a separate and parallel non-material change application.

## 1.4 Wider Consenting Context

### Water Discharge Activity Permit and compensation measures

#### Inquiry and decision in relation to the WDA Permit

1.4.1 As set out above, the fish protection measures currently required by the Hinkley Point C DCO were previously

1.4.2 duplicated in the requirements of an environmental permit for a WDA EPR/HP3228XT ('WDA Permit').

1.4.2 NNB made an initial application to the Environment Agency on 14 February 2019 to vary this permit to remove conditions relating to the requirement for installation of an AFD system. In accordance with the Environmental Permitting (England and Wales) Regulations 2016 (Schedule 5, Part 1), NNB served notice of deemed refusal on 4 August 2020, stating that the Environment Agency had not determined the application within the relevant period, leading to an appeal. The appeal was submitted on 23 September 2020.

1.4.3 On 24 March 2021, the Secretary of State for Environment, Food and Rural Affairs confirmed that the appeal would be recovered on the grounds that the case:

- *'Involves processes or sites of major importance. This is clearly an important site environmentally. The cooling water system for HPC is to be built in the Severn Estuary European marine sites which are designated under the Habitats Directive and Ramsar Convention.*
- *Could give rise to significant public controversy. There has been (and it is expected there will be further) significant interest from a range of respondents.'* [Ref: para 1.2 of Inspectors Report]

1.4.4 In its Appropriate Assessment dated 2020 for the WDA Permit variation, the Environment Agency was unable to conclude that the proposed variation would not adversely affect the integrity of the Severn Estuary Special Area of Conservation ('SAC'), Severn Estuary Ramsar site, the River Usk SAC and the River Wye SAC.

1.4.5 The Inspector recommended, following an inquiry ('WDA Permit inquiry'), that the appeal be dismissed, and the WDA Permit not be varied. In making the decision, and having reviewed the Inspector's advice, including regarding levels of uncertainty and areas of scientific disagreement, the Secretary of State agreed with the Inspector's conclusion that, in the absence of an AFD, it could not be concluded that there would not be adverse effects on the integrity of the Severn Estuary SAC, Severn Estuary Ramsar site, the River Usk SAC and the River Wye SAC. The Secretary of State dismissed the appeal and refused the application to vary the WDA Permit on 2 September 2022.

1.4.6 In December 2022, a further variation application was submitted to the Environment Agency to request removal of the AFD from the WDA permit. The submission of this further application followed discussions with the Environment Agency where they confirmed to NNB that potential effects arising from abstraction of cooling water in the context of the proposed removal of the AFD would be assessed in the context of a material change

application, whilst impacts from discharges would be considered within a further WDA Permit variation application. Accordingly, in July 2023, the Environment Agency issued a variation to the WDA Permit to remove all references and conditions (or parts of conditions) relating to the proposed AFD as well as adding a new waste stream to additionally regulate the discharge of seawater through the FRR system. The Environment Agency's assessment of the impact of the FRR system discharge concluded that there would be no adverse effect on the integrity of the relevant European sites (in relation to pollution from regulated discharges to water from the FRR) where there is no AFD in place, including to sites functionally linked to the Severn Estuary, and that the discharges will not result in the condition of relevant Sites of Special Scientific Interest ('SSSIs') deteriorating, or prevent them from improving or recovering.

1.4.7 The proposed material change application will be made following the pre-application consultation process and this will include assessments pursuant to the Conservation of Habitats and Species Regulations 2017 ('Habitats Regulations'), The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 ('2017 EIA Regulations'), The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 and The Eels (England and Wales) Regulations 2009.

### NNB's derogation case

- 1.4.8 Under the Habitats Regulations, it would be open to the Environment Agency and Secretary of State for Energy Security and Net Zero to vary the WDA Permit and DCO, respectively, to remove the requirement to fit an AFD system even if they cannot exclude the possibility that there could be an adverse effect on the integrity of the relevant protected marine habitats. In order to come to such a decision, NNB would need to demonstrate to the satisfaction of the Secretary of State that there were 'imperative reasons of over-riding public interest' ('IROPI') for carrying out the project, no alternative solutions, and that commitments to appropriate 'compensation measures' have been secured. Under the Habitats Regulations, such a case is known as a 'derogation case'.
- 1.4.9 NNB has therefore prepared this derogation case to be put before the Secretary of State for Energy Security and Net Zero in the proposed material change application. An outline of the case is set out in the HRA Report.
- 1.4.10 NNB has already commenced engagement with statutory consultees including the Environment Agency, Natural England, Natural Resources Wales and the Marine Management Organisation, as well the wider stakeholder community, as appropriate, regarding the proposed

compensation measures being put forward as part of the derogation case).

- 1.4.11 The statement of common ground agreed by all parties to the WDA Permit inquiry set out the agreed species of Annex 1 migratory fish that are the qualifying features of the SACs that are of interest in the context of assessing the impacts of not fitting an AFD system: twaite shad; allis shad; and Atlantic salmon. In addition, the 'typical fish assemblage' of the Estuaries qualifying habitat of the Severn Estuary SAC would also be affected.

### How this PEIR addresses the different approaches adopted by NNB and the Environment Agency

- 1.4.12 A preliminary analysis of the likely significant effects of the proposed changes on marine ecology and water quality has been undertaken for the purposes of this PEIR, as outlined in **Volume 2 Chapter 5**.

### Marine Licence Variation Application

- 1.4.13 The fish protection measures currently required by the Hinkley Point C DCO are duplicated in NNB's Marine Licence (L/2013/00178). An application will be required for the removal of the requirement to fit an AFD system under the Marine Licence. NNB intends to submit its application for a variation to the Marine Licence at a similar time to the proposed material change application.

The Marine Management Organisation will carry out a separate consultation on the Marine Licence variation and has indicated that it will issue any decision after the decision of the Secretary of State for Energy Security and Net Zero on the proposed material change application.

## 1.5 Content of this Report

- 1.5.1 This PEIR is split into volumes and chapters that outline the approach to the assessment of the likely significant environmental effects of the proposed changes to the DCO both on-site and off-site on the environment and the preliminary findings of the initial assessments for the purposes of consultation.
- 1.5.2 **Volume 1** outlines the changes proposed on-site and off-site, and provides a detailed explanation of the EIA process and how it will be undertaken in the context of the proposed material change application.
- 1.5.3 **Volume 2** outlines the scope of the updated EIA for the proposed changes on-site, including how the Scoping Opinion has been considered. It then provides further information on the effects of the proposed changes on-site on Groundwater and Transport, in line with comments raised in the Scoping Opinion (**Chapters 3 and 4**). NNB has agreed with relevant stakeholders (Environment Agency, Somerset Drainage Board and

- Somerset Council) that Groundwater can be scoped out of further assessment for the proposed changes on-site. NNB has consulted the TRG on Transport and is seeking agreement with the TRG that Transport can also be scoped out of further assessment in relation to the proposed changes on-site. The environmental Aspects scoped into the updated EIA for the proposed changes on-site (i.e. Marine Ecology and Water Quality and Landscape and Visual) have been allocated separate chapters (**Chapters 5 and 6**). Each chapter describes the preliminary assessment of the likely significant environmental effects of the project as changed by the proposed changes on-site to determine whether there are any new or materially different likely significant effects compared to those assessed in the original ES, and any mitigation being considered to avoid, prevent or reduce and, if possible, offset those effects.
- 1.5.4 **Volume 3** provides a preliminary assessment of the likely significant environmental effects of the proposed changes off-site and any mitigation being considered to avoid, prevent or reduce and, if possible, offset those effects. It then outlines the proposed scope of the updated EIA for the proposed changes off-site based on this assessment.
- 1.5.5 **Volume 4** presents the Cumulative and In-combination effects assessments taking into consideration both the proposed changes on-site and off-site.

## 1.6 Original Submission

- 1.6.1 Throughout this PEIR, reference will be made to documents forming part of the original application for the DCO submitted in 2011. Most notably, reference will be made throughout to the original ES and ES addendum submitted for the DCO application (hereafter referred to as ‘the original ES’). The documents can be found via the links provided in **Table 1–2**. These documents can also be accessed on the consultation website at: [www.edfenergy.com/hpccommunity](http://www.edfenergy.com/hpccommunity).

Table 1–2: Original DCO submission - relevant documents and links

Doc Ref	Document
3.16	<a href="#">Hinkley Point C Project Report to Inform Habitats Regulations Assessment 2011</a>
4.2	<a href="#">Hinkley Point C Environmental Statement (ES) 2011 - Volume 1 - Introduction</a>
4.3	<a href="#">Hinkley Point C ES 2011 - Volume 2 - Hinkley Point C Development Site</a>
	<a href="#">Hinkley Point C ES 2011 - Volume 2 - Hinkley Point C Development Site - Appendices</a>
	<a href="#">Hinkley Point C ES 2011 - Volume 2 - Hinkley Point C Development Site - Figures (Excluding Chapter 22 Figures)</a>
	<a href="#">Hinkley Point C ES 2011 - Volume 2 - Hinkley Point C Development Site - Chapter 22 - Figures 22.1 to 22.18b of 22.62</a>
	<a href="#">Hinkley Point C ES 2011 - Volume 2 - Hinkley Point C Development Site - Chapter 22 - Figures 22.18c to 22.28d of 22.62</a>
	<a href="#">Hinkley Point C ES 2011 - Volume 2 - Hinkley Point C Development Site - Chapter 22 - Figures 22.29 to 22.42 of 22.62</a>
4.3	<a href="#">Hinkley Point C ES 2011 - Volume 2 - Hinkley Point C Development Site - Chapter 22 - Figures 22.42a to 22.62 of 22.62</a>
	<a href="#">Hinkley Point C ES 2011 - Volume 2 - Hinkley Point C Development Site - Chapter 22 - Figures 22.42a to 22.62 of 22.62</a>
4.12	<a href="#">Hinkley Point C ES 2011 - Volume 11 - Cumulative Effects</a>
4.15	<a href="#">Hinkley Point C ES 2011 - Annex 3 - Hinkley Point C Development Site Environmental Management and Monitoring Plans</a>
8.2	<a href="#">Hinkley Point C Development Site Design and Access Statement 2011</a>
8.14	<a href="#">Hinkley Point C Sustainability Statement 2011</a>
8.15	<a href="#">Hinkley Point C Health Impact Assessment 2011</a>
4.2-4.19	<a href="#">Addendum to the Environmental Statement</a>
4.2-4.19	<a href="#">Addendum to the Environmental Statement - Appendices</a>

## 2. THE PROPOSED CHANGES ON-SITE

### 2.1 Overview

2.1.1 As outlined in **Section 1.3**, NNB is seeking to amend elements of the Hinkley Point C Project via an application for a material change to the DCO that will be submitted to the Planning Inspectorate (on behalf of the Secretary of State). This chapter describes the proposed changes on-site, including:

- Removal of the requirement to install an AFD system (using sound to deter certain types of fish from the CWS intake heads) (see **Section 2.2**);
- Amendment to the ISFS from wet to dry storage of spent fuel and a change in building dimensions (see **Section 2.3**);
- Replacement of the Access Control Building associated with the ISFS with a new larger Equipment Storage Building (see **Section 2.3**);
- Relocation and re-design of the meteorological mast resulting in the meteorological station building no longer being required (see **Section 2.4**);

- Amendment to retain the existing temporary Hinkley Point Substation as a permanent feature to supply electricity to neighbouring Hinkley Point A and Hinkley Point B (see **Section 2.5**); and
- Four new structures (two per Unit<sup>9</sup> of Hinkley Point C) to house sluice gates and lifting beams to be used during outages (i.e. maintenance periods) only (see **Section 2.6**).

### 2.2 Acoustic Fish Deterrent

#### Current Approved Design

2.2.1 Three measures to protect fish were incorporated into the design of the CWS for Hinkley Point C, as consented by the DCO:

- LVSE water intake heads (including capped heads – see **paragraph 2.2.5**, feature i);
- A FRR system; and
- An AFD system.

<sup>9</sup> Each Unit of Hinkley Point C comprises one of the reactors and the buildings associated with that reactor.

**NOT PROTECTIVELY MARKED**

- 2.2.2 An AFD system was intended to be the first fish protection measure that fish would encounter in the CWS design.
- 2.2.3 The intention of an AFD was to use sound to repel hearing-sensitive fish, such as herring, sprat and shad, as well as moderately hearing-sensitive fish, including cod and whiting, from the CWS intake head<sup>10</sup>. Consent for an AFD was included in Work No.s 2B and 2D in Schedule 1, Part 1 of the DCO.
- 2.2.4 Requirements relating to the design, installation and monitoring of an AFD were imposed at Requirements CW1 (Cooling water infrastructure design) and CW2 (Monitoring and adaptive measures) in Schedule 2, paragraph 6 of the DCO.
- 2.2.5 Four LVSE intake heads have been installed at Hinkley Point C, with two heads fitted on each of two intake tunnels. The intake heads are located approximately 3.3 km offshore. The intake surfaces (apertures) are 2 m high with centres approximately 2.5 m above the seabed, with the base of the aperture being approximately 1.5 m above the seabed to reduce the abstraction of benthic organisms. The intakes are submerged throughout the

tidal cycle even at extreme low water level ('ELWL'). The Hinkley Point C LVSE intakes are the first deployment of this technology on an operational power station and the design features are intended to reduce impingement of fish. The LVSE design features include:

- i. Reducing vertical velocities which fish are ill equipped to resist, by means of velocity caps on the intakes (hereafter 'capped heads').
- ii. Limiting the exposure of the intake surfaces to the tidal stream, to reduce impingement for fish swimming with the tidal stream. That is, they reduce the cross-sectional intercept area of the intake presented to the prevailing tidal directions by mounting the apertures at right angles to the tidal flow.
- iii. Reducing intake velocities into the head to a target velocity of 0.3 m s<sup>-1</sup> (metres per second) over as much of the length of the intake surface as practicable, which is intended to reduce intake velocities to rates allowing fish the potential to avoid abstraction.

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<sup>10</sup> EDF Energy (2011) Hinkley Point C Development Consent Order Application: Environmental Statement – Volume 2 – Hinkley Point C Development Site. Document ref: Environmental Statement 4.3, October 2011. [[Online](#)]. Accessed 23 November 2023.

- iv. Raising the base of the aperture approximately 1.5 m above the seabed to reduce entrapment of benthic species.
- 2.2.6 The LVSE heads are designed to be an improvement over the existing caisson intake design which extracted cooling water for Hinkley Point B and extracted water for the former Hinkley Point A station. The cross-sectional aperture of the LVSE heads exposed to the tide is less than the exposed aperture of the Hinkley Point B caisson and the efficacy of the LVSE head design was modelled using a scaled version in a flume tank. However, the extent to which the LVSE design features reduce impingement in practice remains uncertain and is not agreed despite being Best Practice<sup>11</sup>. The Environment Agency position is that the use of an LVSE in the absence of an AFD provides no deterrent cue, and there is no behavioural stimulus to elicit avoidance behaviours. Therefore, the Environment Agency considers that reduced intake velocities in the absence of an AFD offer no mitigation. Consequently, during the WDA Permit inquiry, both NNB and the Environment Agency applied a factor of 1.0 when scaling impingement rates at Hinkley Point B to predict impingement at Hinkley Point C. This assumes no benefit from features ii. and iii., above.
- 2.2.7 The capped heads (feature i. above) are predicted to provide mitigation for species in the water column, notably pelagic species, and the Environment Agency during the WDA Permit inquiry proposed a mitigation factor with an associated uncertainty range for pelagic species only. The benefits afforded to benthic species by raising the heads from the seabed (factor iv.) is not accounted for in the assessment providing a degree of precaution for those species.
- 2.2.8 For those fish that do nevertheless enter the intake tunnels, the FRR system is designed to recover and return them to the Bristol Channel quickly and with as little damage as possible.
- 2.2.9 The FRR is a more sophisticated version of return systems such as the system operating at Sizewell B. FRR applies from the point fish are first recovered by the filtration equipment in the cooling water pump house until subsequent return to sea via the dedicated FRR tunnel and outfall. Since granting of the DCO the design of the FRR has been refined and improved. Detailed engineering design of the FRR system was submitted to and approved by the Marine Management Organisation, in consultation with the Environment Agency, through the

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<sup>11</sup> See the Environment Agency's 2018 Evidence Scoping Report entitled 'Protection of biota from cooling water intakes at nuclear power stations: scoping study' and the original 2010

Evidence report 'Cooling Water Options for the New Generation of Nuclear Power Stations in the UK'.

discharge of DCO requirement CW1. The design of the FRR system at Hinkley Point C was approved by the Marine Management Organisation on 16 June 2017. This section briefly summarises the FRR design specifications that are pertinent to the assessment of entrapment effects.

- 2.2.10 Following abstraction, water is drawn through the intake tunnels and arrives at the landward end at the forebay. The forebay is a 29 m deep structure that dissipates the hydraulic energy from the incoming seawater before it enters the pumping station. Within the pumping station, the sea water passes through the fine filtration screens of the drum and band screens. The drum and band screens will be situated in the Filtering Debris Recovery Pit and employ fine mesh filters to remove impinged organisms from the cooling water flow. The default mesh size for the EPR is 5 mm square mesh as opposed to the 10 mm mesh filters employed at Hinkley Point B. Biota large enough to be retained on the filtration screens is impinged and would be returned via the FRR outfall. Biota small enough to pass through the fine mesh filters would be entrained through the main power station cooling water flow and returned to sea via the cooling water outfalls.
- 2.2.11 Located immediately before the drum and band screens will be a series of trash racks that are designed to protect the screens from debris and overloading. The trash rack

has 50 mm vertical bar spacing. Material that cannot pass through the bars will be sent to the debris recovery building. The debris recovery building has another trash rack with 200 mm bar spacing. Any fish that pass through this secondary trash rack will be returned to sea via the FRR tunnel. Any fish or debris that cannot pass through the 200 mm bars will go to waste.

- 2.2.12 Fish and biota that are impinged on the 5 mm mesh of the band or drum screens enter ‘buckets’. Very low-pressure wash water sprays help to remove fish from the screens. The buckets are emptied into gutters. The bucket and gutter system has been optimised for fish protection by removing all vertical drops, the use of shrouded Archimedes screws to manage height differentials, and the inclusion of 3 m swept bends rather than acute bends. The surface of the gutters will be smooth with a low coefficient of friction reducing the risk of abrasion to the fish and prevent fouling within the system.
- 2.2.13 The filtration system has been designed to have capacity to respond adaptively to clogging risks and variable frequency drivers can increase the drum and band screen rotation rate such that biota or debris are returned to sea via the FRR system at a faster rate.
- 2.2.14 A dedicated FRR tunnel will extend approximately 600 m under the foreshore to return impinged fish back to the

sea. This differs from some of the more rudimentary designs, such as at Sizewell B where recovered biota is returned in the main cooling water flow that is subject to thermal uplifts and chlorination. The single FRR tunnel servicing both units will have a High Density Polyethylene pipe lining and will terminate with two outfall heads at the seaward end. The outfall structure is located such that biota impinged will be returned under water at all tidal states and separate from the water returning from the heat removal system. At Hinkley Point A and Hinkley Point B, no FRR system was installed and impinged biota went to landfill.

2.2.15 Following Hinkley Point C's operational phase, Hinkley Point C will enter a decommissioning phase. The first stage of decommissioning is defueling. Defueling of Hinkley Point C is at present expected to take approximately four years during which time the [nuclear island cooling water] ('SEC') pumps are expected to run to pull in sea water for cooling purposes. These pumps are much smaller than the main cooling water ('CRF') pumps which are only used during the operational phase. The SEC pumps (operational and decommissioning phase) have a flow rating in the range of 2-3 m<sup>3</sup>/s whereas the CRF pumps (operational phase only) have a flow rating of around 140 m<sup>3</sup>/s. Use of the SEC pumps during the later phases of decommissioning is not envisaged at present as no cooling water from the sea is

expected to be needed after the approximately 4 years of defueling.

### Reason for the change

2.2.16 NNB is applying to remove the requirement to fit an AFD system from the 2013 DCO because, after lengthy and careful analysis, NNB has concluded that there are significant technical feasibility problems associated with the design, installation, maintenance and repair of an AFD system in the hydrologically dynamic tidal conditions of the Severn Estuary. This presents two key risks with the development as currently authorised.

2.2.17 First, there would be indefinite delays whilst an AFD system was developed and installed. This is because there was (and remains) no engineering precedent anywhere in the world for fitting an AFD system to open water intake heads, such as those at Hinkley Point C, in waters with a comparable tidal range and currents. Despite extensive work by NNB and its specialist advisors, the engineering difficulties proved so challenging that NNB made the decision in November 2017 not to proceed with the AFD system. If the Project is not approved and an AFD system is required, Hinkley Point C would not be able to commence operations in mid-2027, as planned. It would instead be necessary to delay the commencement of operations, potentially indefinitely, until an appropriate system had been

designed, developed and tested. Approval of the Project allows that delay to be avoided and will ensure that Hinkley Point C is able to contribute to meeting the urgent national need for a reliable and secure supply of new nuclear power.

2.2.18 Secondly, an important element of the technical feasibility problems associated with an AFD system is that the works in connection with it would need to rely heavily on Remotely Operated Vehicles ('ROVs'). The independent expert advice that NNB has received is that existing ROVs fall significantly short of being able to undertake the work associated with the installation, maintenance and repair of an AFD system. This means it is highly unlikely that ROVs would ever, on their own, be an effective solution for the complex tasks which the installation, maintenance or repair activities an AFD system would require. The reasons why ROV technology alone cannot be used are discussed in the HRA Report.

2.2.19 In the absence of suitable ROV technology to undertake the necessary tasks at the level of accuracy and reliability required for the installation, maintenance and repair of an AFD system, NNB would need to rely heavily on the use of human divers to undertake these activities. Doing this would expose divers for significant periods on a regular basis to intolerable health and safety risks which could lead to their deaths. NNB is firmly of the view that

compliance with health and safety legislation, principles and guidance could not be achieved if divers were required to undertake work at the level of frequency and exposure to the high risks that such complex work would entail. These intolerable health and safety risks are discussed in the HRA Report.

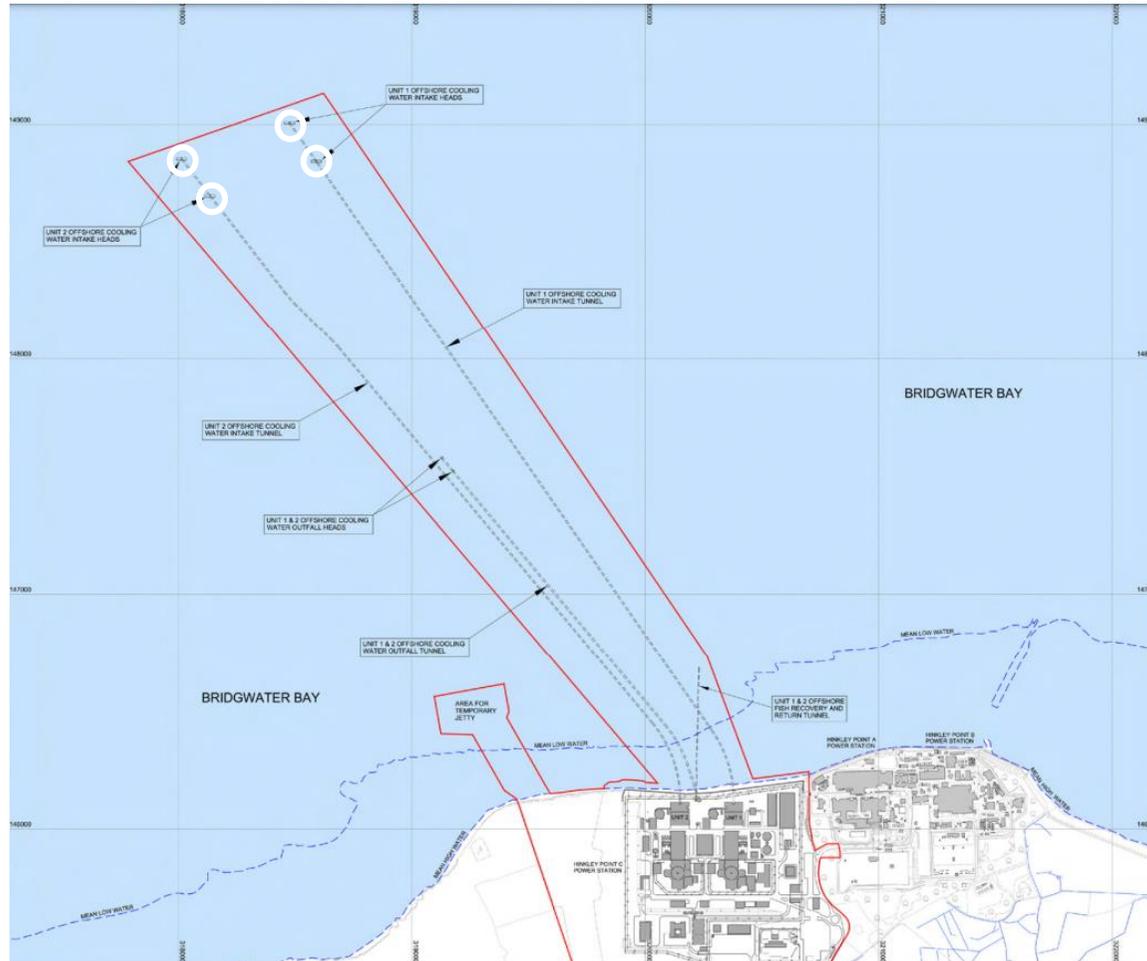
### Description of the change

2.2.20 The proposed change is the removal of the requirement to install an AFD system.

2.2.21 The proposed changes on-site do not include any other changes to the remainder of the CWS infrastructure design.

2.2.22 The location of the cooling water intake heads where an AFD system was proposed to be installed can be seen on **Figure 2–1** and **Figure 2–2**.

2.2.23 Requirement CW1 of the DCO provides that an AFD shall be installed prior to water abstraction commencing, not at the point at which the cooling water intake heads are fitted. The cooling water intake heads were installed during the summer of 2022.



**Figure 2–1: Locations of the four cooling water intake heads at which AFD systems were proposed to be installed (indicated by four white circles)**

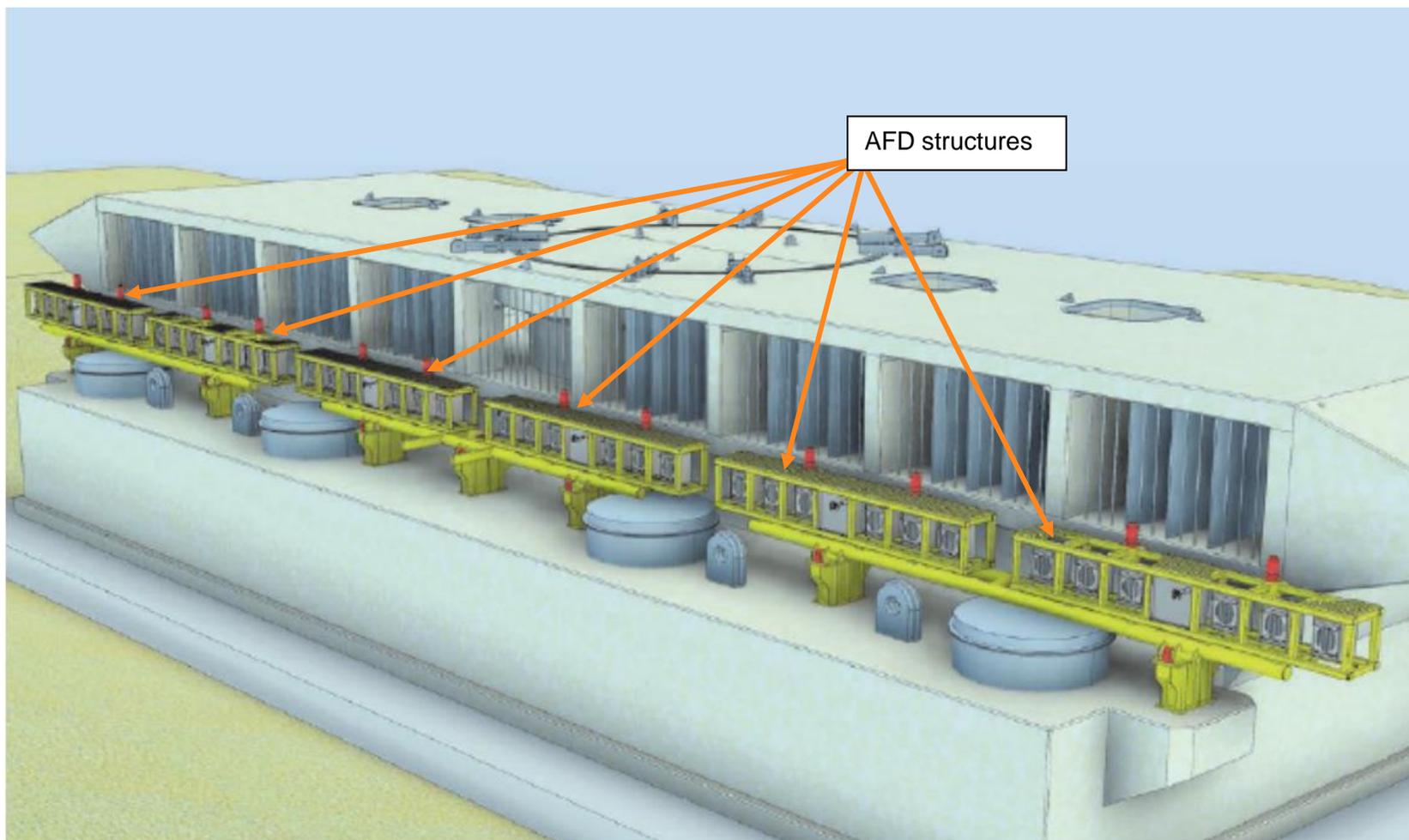


Figure 2–2: Siting of AFD structures originally proposed as part of the LVSE intake head

NOT PROTECTIVELY MARKED

## Consideration of alternative solutions

2.2.24 Stage 3 of the HRA Report presents NNB’s ‘assessment of alternative solutions’ for the Project and concludes that there are no ‘alternative solutions’ in the context of the Habitats Regulations.

2.2.25 A summary of the alternatives considered is set out in **Table 2–1**.

**Table 2–1: Summary of the alternatives to installing an Acoustic Fish Deterrent system**

Potential Alternative	Summary of alternative	Conclusion
Do nothing	Construct a power station at Hinkley Point C with an AFD system	<ul style="list-style-type: none"> <li>There would be indefinite delays while an AFD system was developed and installed.</li> <li>Divers would be needed for the installation, maintenance and repair work for an AFD system because ROV technology cannot now (and is highly unlikely in the future) to be able to carry out the complex processes required for the installation, maintenance and repair of an AFD system and / or other tasks associated with the AFD works.</li> <li>The introduction of high levels of human risk to install untested technology in extreme sea conditions is not a tolerable risk that NNB can accept as part of its risk assessment or impose upon future contractors.</li> <li>Accordingly, this is not an alternative solution.</li> <li>This is discussed in Stage 3 of the HRA Report.</li> </ul>

Potential Alternative	Summary of alternative	Conclusion
Alternative location for the intake water	Abstract cooling water from a difference source outside of the Severn Estuary or the marine environment.	<ul style="list-style-type: none"> <li>There would be indefinite delays while Hinkley Point C was redesigned.</li> <li>Accordingly, this is not an alternative solution.</li> <li>This is discussed in Stage 3 of the HRA Report.</li> </ul>
Alternative scales	Construct a power station with one rather than two water intake heads to reduce the surface area for fish entrapment within the Severn Estuary.	<ul style="list-style-type: none"> <li>There would be indefinite delays while Hinkley Point C was redesigned.</li> <li>The construction of a power station with one, rather than two, water intake heads per reactor Unit to reduce the surface area for fish entrapment within the Severn Estuary would erode the nuclear safety margins for Hinkley Point C.</li> <li>Entrapment may increase if the water velocity increases as a result of reliance on one cooling water intake head.</li> <li>Accordingly, this is not an alternative solution.</li> <li>This is discussed in Stage 3 of the HRA Report.</li> </ul>
	Construct a power station with more than four cooling water intake heads (more than two intake tunnels)	<ul style="list-style-type: none"> <li>There would be indefinite delays while Hinkley Point C was redesigned to include additional intake heads.</li> <li>Additional intake heads would increase the surface area within the Severn Estuary for fish entrapment.</li> <li>Accordingly, this is not an alternative solution.</li> <li>This is discussed in Stage 3 of the HRA Report.</li> </ul>

Potential Alternative	Summary of alternative	Conclusion
Seasonal restrictions	Abstract water only at certain times of the year, on a seasonal basis	<ul style="list-style-type: none"> <li>• This would severely compromise Hinkley Point C’s capacity to produce low carbon energy because Hinkley Point C cannot generate energy when it is in shutdown mode.</li> <li>• Hinkley Point C’s reliance on a CWS that is subject to seasonal restrictions would introduce a major design flaw into the consistent operation of Hinkley Point C. This is because Hinkley Point C needs a consistent water supply of 131.8 m<sup>3</sup>/s required to cool the turbine condenser systems to allow for the generation of low carbon energy.</li> <li>• Regular seasonal shutdowns, in addition to the planned refuelling shutdowns, would erode nuclear safety margins. Even if Hinkley Point C was placed into shutdown mode during the seasonal restriction period, water would still be abstracted (albeit at a lower velocity) from the Severn Estuary. This is because water must always be abstracted in order to cool Hinkley Point C’s nuclear reactors. Fish entrapment would therefore continue even in this scenario.</li> <li>• Accordingly, this is not an alternative solution.</li> <li>• This is discussed in Stage 3 of the HRA Report.</li> </ul>
Phasing the construction works differently	Retrofitting an AFD system to the intake heads when the AFD and ROV technology is available	<ul style="list-style-type: none"> <li>• It would still not be possible to rule out the risk that ROV tethers could become snagged or entangled at the intake heads. If an ROV became entangled it would likely not be able to untangle itself. This means that human divers would be needed in order to untangle the ROV. Reliance on divers would not comply with the requirements of health and safety legislation, guidance and principles.</li> <li>• Accordingly, this is not an alternative solution.</li> <li>• This is discussed in Stage 3 of the HRA Report.</li> </ul>

Potential Alternative	Summary of alternative	Conclusion
Bubble curtains	<p>Construct a power station with bubble curtains to deter fish.</p> <p>Air bubble curtains are formed when a porous or perforated pipe with nozzles is affixed to the seabed and fed with compressed air. The conceptual basis for this as a mitigation measure is that the rising curtain of bubbles formed may plausibly deflect organisms, as organisms drawn towards the bubble curtain may move with the vertical current generated by the bubble plume and be brought to the surface.</p> <p>Bubble curtains can therefore operate as deterrents in three ways:</p> <ul style="list-style-type: none"> <li>• Acting as a physical, visible barrier to fish;</li> <li>• Creating an upward current, carrying smaller fish and non-mobile organisms away from the intake; and</li> <li>• Where combined with the presence of an AFD, it can further project the sound to cover a wider area.</li> </ul>	<ul style="list-style-type: none"> <li>• Bubble curtains can suffer from poor reliability due to blockage risk, exposure of structures on the seabed, and disruption from vessel activity in the area. The high levels of sediment at the intake locations would affect the bubble formation and render the system ineffective.</li> <li>• Bubble curtains are entirely inappropriate in the harsh environment of the Severn Estuary. This is because the high tidal flows in the Severn Estuary would mean that the bubbles would be distorted and dispersed soon upon release, reducing their efficiency at deterring fish entering the CWS. For these reasons, bubble curtains are not considered a feasible design alternative for the Hinkley Point C CWS.</li> <li>• There would be indefinite delays while a bubble curtain system was developed and installed.</li> <li>• Divers would be needed for the installation, maintenance and repair work for a bubble curtain because ROV technology cannot now (and is highly unlikely in the future) to be able to carry out the complex processes required for the installation, maintenance and repair of a bubble curtain system and / or other tasks associated with the bubble curtain works.</li> <li>• The introduction of high levels of human risk to install untested technology in extreme sea conditions is not a tolerable risk that NNB can accept as part of its risk assessment or impose upon future contractors.</li> <li>• Accordingly, this is not an alternative solution.</li> <li>• This is discussed in Stage 3 of the HRA Report.</li> </ul>

Potential Alternative	Summary of alternative	Conclusion
Strobe lighting	<p>Construct a power station with strobe lighting to deter fish.</p> <p>The publication “Cooling Water Options for the New Generation of Nuclear Power Stations in the UK SC70015/SR3” (2010) notes that strobe lights have been used for many years to deter fish but have been limited by the high voltage requirements of the strobes and their bulb life.</p> <p>Strobe lighting can work well in clear water, or areas of low-medium turbidity within which sediment particles may act to reflect the light, transmitting the effects over a wider area.</p>	<ul style="list-style-type: none"> <li>• Whilst strobe lighting can work well in clear water, or areas with low-medium turbidity, they do not operate well in high turbidity areas such as the Severn Estuary. In clear water or low-medium turbidity areas, the sediment particles may act to reflect the light, transmitting the effects of the strobe lighting system over a wider area. In areas such as the Severn Estuary, however, with high levels of suspended sediment, light is unlikely to propagate over wide areas. This greatly reduces the strobes’ efficiency.</li> <li>• Due to the risk of biofouling on light lenses, strobe lights should only be deployed in locations where there is good access for regular cleaning. The harsh environment of the Severn Estuary would therefore be an inherently unsuitable location for the use of a strobe lighting system. In this environment, regular maintenance operations would need to be carried out by ROVs or divers.</li> <li>• There would be indefinite delays while a strobe lighting system was developed and installed.</li> <li>• Divers would be needed for the installation, maintenance and repair work for a strobe lighting system because ROV technology cannot now (and is highly unlikely in the future) to be able to carry out the complex processes required for the installation, maintenance and repair of a strobe lighting system and / or other tasks associated with the strobe lighting works.</li> <li>• The introduction of high levels of human risk to install untested technology in extreme sea conditions is not a tolerable risk that NNB can accept as part of its risk assessment or impose upon future contractors.</li> <li>• Accordingly, this is not an alternative solution.</li> <li>• This is discussed in Stage 3 of the HRA Report.</li> </ul>

Potential Alternative	Summary of alternative	Conclusion
Electrical barriers	<p>Construct a power station with electrical barriers to act as a deterrent to fish species.</p> <p>Electrical barriers have been successfully deployed in freshwater environments, pulsing electrical currents to deflect fish and mammals away from infrastructure.</p>	<ul style="list-style-type: none"> <li>• This method relies on different conductivities of the fish’s body compared to the surrounding environment. However, this does not work well within seawater. Therefore, this fundamental design limitation means that the use of electrical barriers is not considered a feasible alternative in this environment.</li> <li>• There is a risk that fish stunned by the electrical current at the water intake heads may temporarily lose the ability to swim against currents, causing them to be drawn into the intake heads.</li> <li>• This method relies on different conductivities of the fish’s body compared to the surrounding environment. It is therefore a method which does not work well within seawater.</li> <li>• There would be indefinite delays while an electrical barrier system was developed and installed.</li> <li>• Divers would be needed for the installation, maintenance and repair work for an electrical barrier system because ROV technology cannot now (and is highly unlikely in the future) to be able to carry out the complex processes required for the installation, maintenance and repair of an electrical barrier system and / or other tasks associated with the electrical barrier works.</li> <li>• The introduction of high levels of human risk to install untested technology in extreme sea conditions is not a tolerable risk that NNB can accept as part of its risk assessment or impose upon future contractors.</li> <li>• Accordingly, this is not an alternative solution.</li> <li>• This is discussed in Stage 3 of the HRA Report.</li> </ul>

Potential Alternative	Summary of alternative	Conclusion
Alternative methodology	<p>Commission a new engineering system to provide an alternative fish deterrent system.</p> <p>If no engineering system currently exists which can deliver an alternative fish deterrent, could NNB commission a new and different engineering system which would do this?</p>	<ul style="list-style-type: none"> <li>• There would be indefinite delays while any alternative system was developed and installed.</li> <li>• Divers would be needed for the installation, maintenance and repair work for any alternative system because ROV technology cannot now (and is highly unlikely in the future) to be able to carry out the complex processes required for the installation, maintenance and repair of any alternative methodology system and / or other tasks associated with the electrical barrier works.</li> <li>• The introduction of high levels of human risk to install untested technology in extreme sea conditions is not a tolerable risk that NNB can accept as part of its risk assessment or impose upon future contractors.</li> <li>• To the extent that this potential alternative solution would require divers for the installation, maintenance and repair of the alternative fish deterrent technology, it would not comply with the requirements of the health and safety law, guidance and principles.</li> <li>• Accordingly, this is not an alternative solution.</li> <li>• This is discussed in Stage 3 of the HRA Report.</li> </ul>

Potential Alternative	Summary of alternative	Conclusion
<p>Installation of wedge-wire screens</p>	<p>Construct a power station with wedge-wire screens.                      Installing wedge wire screens with a fine mesh would screen the water of all objects (other than silt) before entering into the water intake head. It would also reduce the zone of influence around the intake heads.</p>	<ul style="list-style-type: none"> <li>• A wedge wire mesh could not be fitted to the water intake heads which have been installed and are in the process of being connected to the tunnels which will service them. Because the water intake heads could not be removed, alternative water intake heads would need to be designed, constructed and installed which are capable of being covered by the wedge wire mesh. The existing tunnels would then need to be retrofitted to connect to these new water intake heads or new tunnels would need to be constructed. A fundamental redesign of Hinkley Point C to allow for this would likely jeopardise the viability of Hinkley Point C as a nuclear power station because of the additional construction costs involved.</li> <li>• Wedge wire screens would require regular maintenance (for example using an automated brushing system) so that water can pass through, particularly in the high turbidity conditions of the Severn Estuary. If one or both water intake heads suffered a clogging event and lead to an emergency shutdown of the reactors.</li> <li>• The maintenance schedule for the wedge wire screens would be continuous and would require ROV intervention. This is because components such as an automated brushing system would be vulnerable to breakdown in the challenging environment of the Severn Estuary. To the extent that divers would be needed for these works or if, for example, an ROV became entangled or malfunctioned, this would create an intolerable health and safety risk.</li> <li>• The entire wedge wire system would need to be replaced at least once during the lifecycle of Hinkley Point C. This is due to the corrosion of the steel used to create the wedge wire mesh.</li> <li>• Accordingly, this is not an alternative solution.</li> <li>• This is discussed in Stage 3 of the HRA Report.</li> </ul>

## 2.3 Interim Spent Fuel Store and Equipment Storage Building

### Current Approved Design

- 2.3.1 The ISFS will be one of two buildings on site designed to store spent fuel and waste generated by the operation of the two nuclear reactors. The ISFS will be located towards the north-eastern part of the Hinkley Point C site, and adjacent to Hinkley Point A which is currently being decommissioned. In order to provide necessary flexibility, parameters were approved that allowed the sizing of the building to be increased or decreased within certain limits. In addition, Requirement MS16 of the DCO was imposed so the design appearance and the final layout would be approved at a later date by (now) Somerset Council.
- 2.3.2 Within the Design and Access Statement which formed part of the DCO application (see **Table 1–2** above), it is stated that the ISFS will be constructed towards the end of the construction phase and the facility will only be required to be available approximately ten years after the start of operation of Unit 1. In addition, it explains that the spent fuel will be stored under water in a pool.
- 2.3.3 The original proposal to proceed with wet storage over dry storage was based on operational experience at the time and ease of inspection of spent fuel. This was an operational preference as there was no clear difference in performance between the two options. However, the factors which have now led NNB to prefer dry over wet storage are outlined below.
- 2.3.4 As part of the consented DCO, an Access Control Building was also proposed, located to the south of the ISFS.
- 2.3.5 The Access Control Building had two security functions; control and access of pedestrians in and out of the ISFS, and the control and monitoring of vehicles accessing through the vehicle inspection area.
- 2.3.6 The location and layout of the Access Control Building were based on operational requirements, particularly in relation to entrance and exit arrangements.
- Reason for the changes**
- 2.3.7 The proposed changes are:
- an amendment to the ISFS from wet to dry storage of spent fuel and a change in building dimensions; and

- the replacement of the Access Control Building associated with the ISFS with a new, larger Equipment Storage Building.

2.3.8 The proposed change from wet to dry storage is being driven by the advantages of the dry storage of spent fuel in comparison to wet storage, as approved within the DCO. These factors are outlined below:

- **Engineering issues:** A wet store requires building an aircraft protection shell over a large pool to protect the wet store of spent fuel from accident or attack. The casks used for a dry storage method provide this same protection in a more compact and efficient way.
- **Management:** Whilst both methods are equally safe, a wet storage method requires active management via circulating cooling water, to ensure that the pools are providing the correct environment for the storage of fuel. In a dry storage method, the casks are cooled by air convection, which does not require active management. Whilst both methods are capable of being operated safely, passive safety measures are preferable because passive systems do not require operator intervention or complex mechanical and electrical systems. They rely on air

convection. Operators and systems introduce complexity and risk of failure through diverse means (e.g. human error etc.). Since the DCO was approved a dry store has been introduced at Sizewell B and a dry store has been approved for construction as part of Sizewell C.

2.3.9 As outlined in a strategic assessment in 2010<sup>12</sup>, both wet and dry storage options demonstrate Best Available Technique ('BAT') and As Low As Reasonably Practicable ('ALARP'):

- BAT: vehicle by which the Environment Agency meets the requirements of the International Basic Safety Standards to keep radiation doses to the public and environment ALARP. This should include all relevant factors, including health and safety, operability cost etc.
- ALARP: term used by the Office for Nuclear Regulation ('ONR') and the Health Safety Executive ('HSE') to ensure risks to workers and members of the public from all risks and hazards are mitigated.

2.3.10 By demonstrating both BAT and ALARP, both wet and dry storage options can be considered safe from the perspectives of the nuclear site licence and radioactive

<sup>12</sup> VT Group Plc (2010). MADA Study Output: Synthesis Report. P0095-10089-002.

substance regulation as issued by ONR and Environment Agency.

- 2.3.11 As the Hinkley Point C design process progressed, a revised assessment was made in 2017<sup>13</sup> to re-evaluate wet storage. A number of factors led to a review of the original strategic assessment, including changes in the pool storage design considerations, the experience with dry storage gained from Sizewell B, the enhanced safety measures required following the accident at Fukushima Daiichi and an evolving understanding of UK spent fuel management requirements. On the basis of this assessment NNB made the decision to change from a pool storage to dry canister-based interim spent fuel storage technology.
- 2.3.12 A dry store has been operational at Sizewell B in Suffolk, which is owned and operated by EDF. This facility provides valuable operational experience and adopting a dry storage method at Hinkley Point C would deliver clear advantages to having a consistent method across EDF's Pressurised Water Reactor power stations.
- 2.3.13 In summary, there were no safety or environmental performance advantages for wet storage over dry

storage. The proposed change from wet to dry storage is therefore being driven by the advantages of the dry storage of spent fuel in comparison to wet storage as explained above.

### Description of the changes

- 2.3.14 The proposed change to the ISFS involves changing the method of storing spent fuel from wet storage underwater in a pool to dry storage in concrete casks.
- 2.3.15 The concrete casks used to store the spent fuel will be sealed, meaning no emissions, including gaseous emissions, will occur. Therefore, it is proposed that the 55 m gaseous discharge stack required for wet storage of spent fuel is removed from the ISFS.
- 2.3.16 Dry storage requires more space per unit of fuel stored and casks must be installed at ground level. Therefore, the ISFS building dimensions need to be amended. **Table 2–2** outlines the proposed changes to the building dimensions. These dimensions would be approved via the relevant elevations and roof plans submitted as part of the proposed material change application.

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<sup>13</sup> Cavendish Nuclear (2017). Hinkley Point C Revised MADA Study for Storage of Spent Fuel. A0551-10113. Issue 002.

2.3.17 The overall footprint of the building will increase from 9,750 m<sup>2</sup> to 16,717 m<sup>2</sup>, an increase of 70 %; however this extra footprint is only 6,967 m<sup>2</sup> and is a small percentage (5.25 %) of the overall construction / built up area of the power station considered in the original ES (approximately 132,600 m<sup>2</sup>).

**Table 2–2: Proposed change in dimensions of the ISFS**

Building	Dimensions (m) (length x width x height)
ISFS (original ES design)	150 x 65 x 25 (with 55 m high stack)
ISFS (proposed revised design)	229 x 73 x 30 (with no 55 m high stack)

2.3.18 In relation to the proposed replacement of the Access Control Building with the Equipment Storage Building, the building dimensions are proposed to increase due to the equipment it is required to store. **Table 2–3** outlines the proposed changes to the building dimensions. Despite the increased size the building remains considerably smaller than the adjacent ISFS.

2.3.19 The footprint required for the Equipment Storage Building will increase from 29 m x 17 m (493 m<sup>2</sup>) for the original Access Control Building to 31 m x 23 m (713 m<sup>2</sup>), an increase of 45 %. However this extra footprint is only 220 m<sup>2</sup> and is also a small percentage (0.16 %) of the

overall construction / built up area of the power station considered in the original ES (approximately 132,600 m<sup>2</sup>).

**Table 2–3: Proposed change in dimensions of the Access Control Building to the Equipment Storage Building**

Building	Dimensions (m) (length x width x height)
Access Control Building (original ES design)	29 x 17 x 5
Equipment Storage Building (proposed revised design)	31 x 23 x 18

2.3.20 In accordance with Requirement PW3 of the DCO, the design of the proposed changes set out in the proposed material change application will need to be in accordance with the approved plans, including the Parameter Plan, which defines the maximum extent a building can be moved within the site layout. An updated Parameter Plan (drawing reference HINK-A1-SL-00-GA-002), which can be found in **PEIR Plans - Proposed Changes On-Site**, will therefore be submitted with the proposed material change application.

2.3.21 In accordance with Requirement MS16 of the DCO (once amended), the construction of the ISFS shall not commence until details of the siting, scale and external appearance of the ISFS and new Equipment Storage

Building have been submitted to and approved by Somerset Council.

2.3.22 The original wet storage ISFS was proposed to be partially below ground. It is not possible to store dry casks below ground as it is not in line with international nuclear standards. Storing the casks below ground would introduce significant additional technical and safety considerations and is therefore not considered a credible design concept. Issues include:

- Casks rely on natural circulation of air around them to allow them to cool passively which may be hindered by placing them in a vault-like setting below ground.
- For ground level storage the slab must be seismically qualified. A sunken store adds a layer of complexity as it would also require the walls sitting below ground level to be seismically qualified to prevent blocking of cask cooling in a seismic event.
- Casks stored below ground would have a significantly increased risk of flooding leading to blocking of cask cooling as, during an event of unanticipated ground water ingress, drainage is harder to achieve. This would prevent the passive air circulation that is necessary to achieve cask cooling.

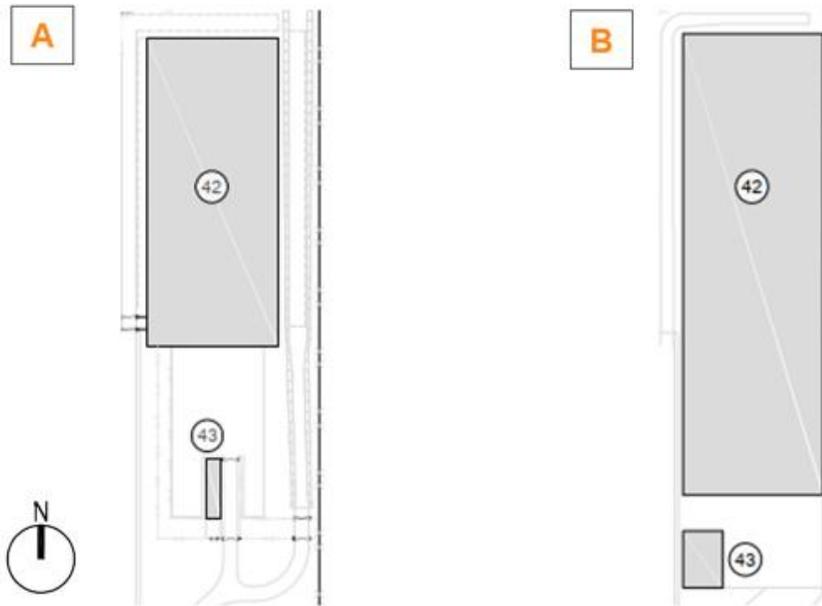
- Placement of the casks into a below ground facility would involve more complex cask movements that would be more challenging to achieve safely.

2.3.23 The Equipment Storage Building will house various pieces of equipment used within the ISFS. Therefore, for operability reasons it must be located as close as possible to the ISFS. Its exact location is based primarily on ease of operability with regards to the shared lifting equipment, such as overhead cranes, used between the two buildings.

2.3.24 The access functions that were previously in the Access Control Building will now be in the ISFS itself which includes an Entrance Lobby. The Equipment Storage Building does not have an access function.

2.3.25 The new Equipment Storage Building is located further south than the original Access Control Building as that location will be within the proposed new footprint of the ISFS.

2.3.26 The proposed change in footprint of the ISFS and associated building can be seen on **Figure 2–3**.



**Figure 2–3: ISFS design comparison. A: Original ISFS (42) including Access Control Building (43) from the Site Layout Plan (drawing reference HINK-A1-SL-00-GA-010) from the 2021 Amendment Order; B: Proposed ISFS (42) including Equipment Storage Building (43) from Site Layout Plan (drawing reference HINK-A1-SL-00-GA-010) in PEIR Plans - Proposed Changes On-Site**

2.3.27 Unit 1 of Hinkley Point C is planned to enter operation in 2027 and the spent fuel will be moved to the ISFS after 10 years. Therefore, the ISFS and Equipment Storage Building will need to be operational in 2037. Information is not yet available on the construction duration of the revised ISFS at this stage. The updated ES will consider if the proposed change results in any impact to the construction programme.

### Decommissioning

2.3.28 Towards the End of Generation ('EoG') and during decommissioning a number of additional buildings will need to be constructed to support the dry storage of spent fuel strategy. The necessary consents and licences for these facilities will be obtained towards the EoG. These facilities include the:

- Spent Fuel Inspection and Repackaging Facility ('SFIRF');
- Spent Fuel Encapsulation Facility (a conversion and extension of the SFIRF); and
- Redundant Storage Canister Processing Facility.

2.3.29 A SFIRF would not be required for a wet store as it would be possible to inspect the condition of the spent fuel *in situ*, within the pool.

2.3.30 These facilities will not be included as part of the proposed material change application and will be applied for in a separate application along with a full EIA towards the EoG, prior to the commencement of decommissioning.

2.3.31 There are benefits to dry storage in relation to decommissioning at Hinkley Point C. The wet store features a large pool of water which would require a higher level of maintenance to ensure safe storage of the spent fuel (e.g. maintaining water clarity and temperature) constituting active management. A dry store removes the maintenance complexities associated with a pool and the casks themselves do not require any form of active management. Therefore, from a decommissioning perspective, it is much less complex to decommission a dry store in comparison to a wet store.

2.3.32 The longer-term impacts of the proposed changes to the ISFS were raised in response to the 2017 application for the non-material change by (then) Somerset County Council and Sedgemoor District Council (refer to **Table 2–4**). As stated in paragraph 5.7.1 of the original ES Volume 2 Hinkley Point C Development Site - Chapter 5: Decommissioning, consent from the ONR under the

Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations ('EIADR') 1999<sup>14</sup> is required to decommission a nuclear reactor. This will include a full EIA and submission of an ES to the ONR via the EIADR.

2.3.33 Spent fuel will remain at the Hinkley Point C site until such time that the Geological Disposal Facility ('GDF') becomes available and is able to receive the spent fuel. Prior to the spent fuel being transferred to the GDF, the fuel is required to be repackaged and encapsulated into containers suitable for disposal.

### Consideration of alternatives

2.3.34 As outlined in **paragraph 2.3.11**, a revised assessment was made in 2017 to re-evaluate wet storage, which revisited the different options originally considered by NNB in 2010. These options were:

- Wet Storage within Pools (Wet Storage);
- Dry Storage in a Cask Storage System;
- Dry Storage within a Vault; and
- Dry Storage in a Canister Storage System.

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<sup>14</sup> Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999. [\[Online\]](#). Accessed 23 November 2023.

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- 2.3.35 Each of the above options was assessed and assigned a score against several attributes including health and safety, technical performance and environment.
- 2.3.36 Cask, vault and cannister storage systems scored higher than pools in regard to safety and risk and conventional safety as they are passive systems requiring minimal operator intervention during operation.
- 2.3.37 Pool systems were considered the best option from a technical performance perspective, but scored the lowest in regard to flexibility to changes in fuel quantity. Cask and cannister storage systems scored similarly in regard to technical performance, with vault systems scoring the lowest for reasons including the requirement for significant modifications to the design of the Hinkley Point C site in comparison to the other storage options.
- 2.3.38 Environmentally, there is little difference between the storage of fuel in casks or cannisters. However, pool and vault storage systems scored low due to a variety of reasons, including the large volumes of operational and decommissioning low level wastes associated with the systems, and the greater height of the building required for vault systems (over 30 m).
- 2.3.39 For the reasons outlined above and in **paragraph 2.3.7** to **paragraph 2.3.13**, the dry storage of spent fuel within concrete casks was found to be superior in practicability and in economic terms over other options, while being equal to the other options in relation to the environment and health and safety.
- 2.3.40 In regard to the replacement of the Access Control Building with the Equipment Storage Building, as outlined in **paragraph 2.3.23**, the new building must be located as close to the ISFS as possible as it will store equipment to be used in the ISFS. The equipment must be stored in a separate building.
- 2.3.41 The Equipment Storage Building is a functional design correctly sized to store the required equipment. Therefore, there are no viable alternatives to the proposed Equipment Storage Building.
- 2.3.42 The proposed changes to the ISFS and change from Access Control Building to Equipment Storage Building were included in the third non-material change application in 2017. Consent for the proposed changes was not granted as the Secretary of State was of the view that further assessment of the proposed changes would need to be carried out in order to determine their materiality. Therefore, the proposed changes to the ISFS and change from Access Control Building to Equipment Storage Building, and an assessment of the landscape and visual impact of the changes, have been scoped into

**Non-material change application**

the updated ES to support the proposed material change application in accordance with the Scoping Opinion.

2.3.43 **Table 2–4** outlines the relevant statements within the Secretary of State’s Decision Letter for the 2017 non-material change application and how these statements have been considered. Relevant statements from other stakeholders, in addition to those from the Secretary of State, are also included in the table.

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**Table 2–4: Relevant statements within the Secretary of State’s Decision Letter for the 2017 non-material change application in relation to the proposed changes to the ISFS**

Stakeholder	Paragraph Number	Relevant Statement	Consideration
Secretary of State	29	<i>‘The Secretary of State has considered the change proposed by the Applicant to the Interim Spent Fuel Store and associated Equipment Store, and is not satisfied that these changes are not material on the basis of the information provided by the Applicant. The Secretary of State has also given consideration to the fact that dry storage rather than wet storage, the preferred option chosen by the Applicant, was not previously considered during the examination of the Application. The Secretary of State began his consideration of the materiality of the proposed variation by considering the four matters lettered (a), (b) (c) and (d)’</i>	Consideration provided below for points a to d.
Secretary of State	29	<i>‘(a) The Applicant supplied a document dated September 2017 entitled ‘Application Statement’ (“the Supporting Statement”) which provides further environmental information which concludes that the changes in respect of the Interim Spent Fuel Store and associated Equipment Store will not have any new significant effects or materially different effects from those already assessed in the original ES for the Hinkley Power Station Order. The Secretary of State does not consider that NNB has provided sufficient information to evidence that these proposed changes fall within the parameters of the impacts assessed in the ES for the Hinkley Power Station Order. The Secretary of State notes that NNB is correct that the storage method for spent fuel is not specified within the Hinkley Power Station Order. However the ES clearly considers the</i>	An updated ES will be submitted with the proposed material change application. Landscape and visual has been scoped into the updated EIA to support the application. Refer to <b>Volume 2 Chapter 6</b> for information relating to the landscape and visual impact assessment ('LVIA') of the proposed changes to the ISFS.

Stakeholder	Paragraph Number	Relevant Statement	Consideration
		<i>alternatives and selects wet storage as the preferred approach. This then feeds into the various assessments contained within the ES. For example, the landscape and visual impact assessments are based on building parameters in line with that preferred approach.'</i>	
Secretary of State	29	<i>'(b) The Secretary of State has concluded that, given the nature and impact of the changes to the Interim Spent Fuel Store and associated Equipment Store and the advice of Natural England, there is not likely to be a significant effect on any European site. Therefore, the Secretary of State is satisfied that a Habitats Regulation Assessment is not required. Furthermore, in respect of European Protected Species, the Secretary of State is satisfied that the changes considered in this letter do not bring about the need for a new or additional licence as the amendments sought are not anticipated to give rise to any new or different effects from an ecological perspective.'</i>	It is acknowledged that the Secretary of State concluded that an HRA was not required for the changes to the ISFS and Equipment Storage Building. It remains the case that no likely significant effects on any European site are anticipated as a result of the proposed changes to the ISFS and Equipment Storage Building.
Secretary of State	29	<i>'(c) The changes in respect of the Interim Spent Fuel Store and associated Equipment Store do not result in any change to the compulsory acquisition provisions of the Hinkley Power Station Order. Consequently, this question does not raise issues of materiality.'</i>	These statements have been noted. The proposed changes in respect of the ISFS and Equipment Storage Building do not necessitate any change to the compulsory acquisition powers.
Secretary of State	29	<i>'(d) On the basis of the information provided by the Applicant, the Secretary of State is not satisfied that the potential impacts on local people and businesses of the changes to the Interim Spent Fuel Store and associated Equipment Store are no greater than those that arise from the development permitted by the Hinkley Power Station Order. The visual impacts of the changes to the Interim Spent Fuel Store and associated</i>	Landscape and visual has been scoped into the updated EIA to support the proposed material change application. Refer to <b>Volume 2 Chapter 6</b> for information relating to the LVIA of the proposed changes to the ISFS and the

Stakeholder	Paragraph Number	Relevant Statement	Consideration
		<i>Equipment Store are not insignificant and in light of the consultation responses the Secretary of State is not satisfied that the changes will not have impacts on local people and businesses.'</i>	<p>replacement of the Access Control Building with the Equipment Storage Building.</p> <p>Through the adoption of the Scoping Opinion (ID 3.3.1), the Planning Inspectorate agreed that additional likely significant effects in relation to spent fuel and radioactive waste management as a result of the change to the ISFS are unlikely and therefore these matters could be scoped out of further assessment.</p> <p>Through the adoption of the Scoping Opinion, the Planning Inspectorate also agreed that the proposed changes are unlikely to increase emissions and would be regulated through the Radioactive Substances Regulation Permit.</p>
Somerset County Council	16	<i>'...the assessment of visual impact and impact on landscape of the proposed change was made in context of the operational power station, and that consideration should be given to the fact that the structure will remain in place long after the power station has been decommissioned as the spent fuel can only be removed when a geological disposal facility is identified.'</i>	<p>Refer to <b>paragraph 2.3.28 to paragraph 2.3.33</b> of this PEIR for information relating to the impact of the ISFS on decommissioning of the Hinkley Point C Project.</p> <p>Landscape and visual have been scoped into the updated EIA to support the proposed material change application. Refer to <b>Volume 2 Chapter 6</b> for information relating to the LVIA of the proposed changes to the ISFS.</p>
Sedgemoor District Council	17	<i>'...the impact it might have on the immediate locality and coastal path, and the impact on long distance views in the context of the long period of time the structure will be in existence.'</i>	<p>Landscape and visual have been scoped into the updated EIA to support the proposed material change application. Refer to <b>Volume 2 Chapter</b></p>

Stakeholder	Paragraph Number	Relevant Statement	Consideration
			6 for information relating to the LVIA of the proposed changes to the ISFS.
Sedgemoor District Council	17	<i>'...requested the Secretary of State to provide assurance to local communities that, from a regulatory perspective, the selection of dry storage ensures a safe and secure location for the interim storage of spent fuel.'</i>	Both wet and dry storage options could both demonstrate BAT and ALARP. Refer to <b>paragraph 2.3.9</b> to <b>paragraph 2.3.10</b> for further information.
Somerset Council (formerly West Somerset Council and then Somerset West and Taunton Council)	19	<i>'...object to the proposed change to the spent fuel storage technology from a wet to a dry method on the basis that this was not previously considered during the examination of the Application, and because members of the public and the local community has not been properly consulted and afforded the opportunity to make detailed representations on this proposed change.'</i>	This PEIR has been prepared as part of the consultation process to enable consultees to develop an informed view of the likely significant environmental effects of the project as changed by the proposed changes to the Hinkley Point C Project. This PEIR presents information about the nature of the proposed changes to inform consultees on the significance of those changes. Landscape and visual have been scoped into the updated EIA to support the proposed material change application. Refer to <b>Volume 2 Chapter 6</b> for information relating to the LVIA of the proposed changes to the ISFS.
Somerset Council (formerly West Somerset Council and then Somerset West and	19	<i>'...objected to the proposed change to the Interim Spent Fuel Store, which would be 79m longer, 8m wider and 5m taller, on landscape and visual impacts.'</i>	Landscape and visual have been scoped into the updated EIA to support the proposed material change application. Refer to <b>Volume 2 Chapter 6</b> for information relating to the LVIA of the proposed changes to the ISFS.

Stakeholder	Paragraph Number	Relevant Statement	Consideration
Taunton Council)			
Somerset Council (formerly West Somerset Council and then Somerset West and Taunton Council)	19	<i>'...requested that the proposed changes to the buildings and structures be considered in combination with the changes in buildings and structures approved through the 2015 Amendment Order and the 2017 Amendment Order'</i>	Since the DCO was made in 2013, NNB has submitted four non-material change applications which have resulted in amendment orders being granted by the Secretary of State. These non-material changes will form part of the current baseline assessed in the updated EIA for the proposed material change application.
West Hinkley Action Group	20	<i>'...considered the proposed change to the Interim Spent Fuel Store to be material, and that the impacts of this change needed to be considered fully and carefully.'</i>	Refer to <b>paragraph 1.3.11</b> to <b>paragraph 1.3.16</b> regarding the materiality of the proposed changes. The proposed changes to the ISFS, and an assessment of the landscape and visual impact of the changes, have been scoped into the updated EIA to support the proposed material change application. Refer to <b>Volume 2 Chapter 6</b> for information relating to the LVIA of the proposed changes to the ISFS.
Stop Hinkley	22	<i>'... questioned the materiality of the proposed change to the Interim Spent Fuel Store and stated that it agreed with the representation made by [West Somerset Council] on this matter.'</i>	
Stop Hinkley	22	<i>'...called for a consultation and public examination on the change to the Interim Spent Fuel Store.'</i>	This PEIR has been prepared as part of the consultation process to enable consultees to develop an informed view of the likely significant environmental effects of the project as changed

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Stakeholder	Paragraph Number	Relevant Statement	Consideration
			by the proposed changes to the Hinkley Point C Project.

## 2.4 Meteorological Mast

### Current Approved Design

- 2.4.1 A meteorological instrumentation mast is proposed at Hinkley Point C to carry instruments to measure environmental conditions such as wind speed, wind direction and air temperature. The data from this instrumentation will monitor and record climatic and atmospheric conditions and will provide important information in the event of an emergency situation.
- 2.4.2 The current approved design features a meteorological mast at 50 m in height. The mast is located on a platform at 14 m Above Ordnance Datum ('AOD') making it a total of 64 m AOD. A separate building (the meteorological station) will house the meteorological equipment.

### Reason for the changes

- 2.4.3 The proposed changes involve lowering in height and relocating the meteorological mast to an area that reduces the potential for interference from surrounding buildings and infrastructure which could lead to inaccurate wind speed and temperature readings.
- 2.4.4 The proposed changes will ensure that the meteorological mast will meet the World Meteorological Organization ('WMO') guidelines<sup>15</sup>, which were published in 2018 after the DCO had been made. A 4-year study of the prevailing weather conditions on site was carried out, which also contributed to the design change.
- 2.4.5 As the proposed mast will be much reduced in height overall by 34 m (when taking into account in height AOD),

<sup>15</sup> World Meteorological Organization (WMO) (2018) Guide to Instruments and Methods of Observation. WMO-No. 8. [\[Online\]](#). Accessed 23 November 2023.

the current authorised location is inadequate for the following reasons:

- Asphalt within the proximity of the nearby internal road could result in inaccuracies in the measurements of temperature;
- Shadows cast by surrounding buildings could lead to inaccuracies in the measurements of temperature;
- Nearby buildings could cause a wind barrier resulting in insufficient wind quality to measure accurately wind velocity and direction; and
- Proximity of buildings meaning Sonic Detection and Ranging ('SODAR') or Light Detection and Ranging ('LIDAR') equipment to measure the wind at >70 m could not be installed. SODAR is used to measure wind speed at various heights. LIDAR is used to preview wind speed before it interacts with other measuring methods.

2.4.6 The proposed new arrangement will not require the previously consented separate building (the meteorological station) to house the meteorological equipment. The equipment will instead be located outside, within a compound situated proximate to the mast. It is therefore proposed that the meteorological station currently authorised by the DCO is not constructed.

## Description of the change

- 2.4.7 The total length of the mast will be reduced from 50 m to 10 m. The newly proposed location is approximately 60 m south-west of its current approved location and is on a platform 20 m AOD, as opposed to only 14 m AOD. This means that the overall change in height of the mast AOD will be a reduction of 34 m (from a height of 64 m AOD (50 m + 14 m) to only 30 m AOD (10 m + 20 m)).
- 2.4.8 The proposed equipment compound (50 m long by 19.6 m wide) will include the meteorological mast, precipitation gauge, meteorological station cabinet, SODAR or LIDAR and guy ropes to secure the equipment.
- 2.4.9 Parameters restricting the extent to which a building or structure can be relocated are approved within the original DCO via the Parameters Table in the Design and Access Statement and Parameter Plan. This has since been revised to account for the non-material changes. The latest version of the Parameters Plan was submitted as part of the application for the 2021 Amendment

Order<sup>16</sup>. The changes to the design and location of the meteorological mast go beyond the current approved parameters, which are:

- +/- 5 m in any direction for the meteorological station; and
- +/- 5 m east, west and south and +/- 20 m north for the meteorological mast.

2.4.10 In accordance with Requirement PW3 of the DCO, the design of the proposed changes set out in the proposed material change application will need to be in accordance with the approved plans, including the Parameter Plan, which defines the maximum movement for a building. An updated Parameter Plan (drawing reference HINK-A1-SL-00-GA-002), which can be found in **PEIR Plans - Proposed Changes On-Site**, will therefore be submitted with the proposed material change application. The updated parameters are:

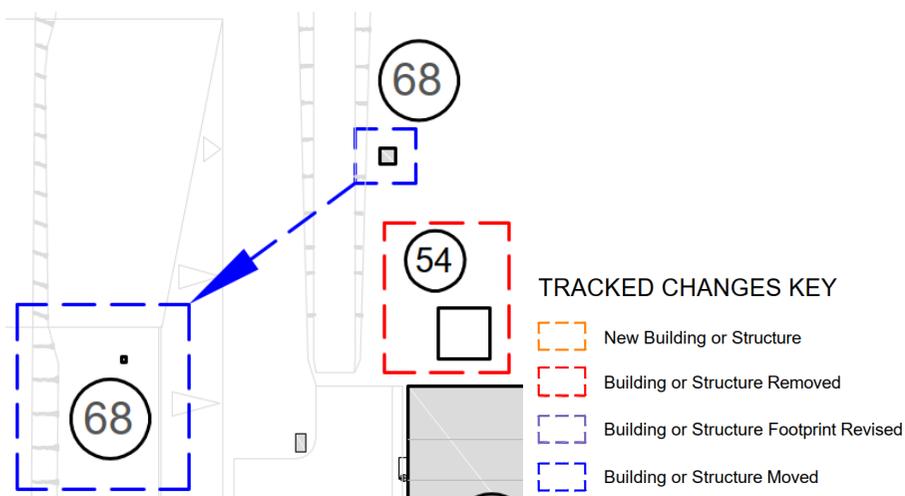
- +/- 6 m in a north direction;
- +/- 6 m in a east direction;
- +/- 13 m in a west direction; and
- +/- 44 m in a south direction.

2.4.11 In accordance with Requirement MS21 of the DCO, the construction of the meteorological mast shall not commence until details of the siting, scale and external appearance of the mast have been submitted to and approved by Somerset Council.

2.4.12 A visual representation of the proposed change can be seen in **Figure 2–4**.

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<sup>16</sup> EDF Energy (2020). HINK-A1-SL-00-GA-002 DCO Change Application Drawing - Parameters (for Approval). [\[Online\]](#). Accessed 23 November 2023.



**Figure 2–4: Relocation of the meteorological mast to a compound of increased area (68) and removal of the meteorological station building (54)**

2.4.13 The mast will need to be in place around a year before first fuel delivery, in time for Unit 1 operation to ensure that the mast is operational and able to perform its Emergency Preparedness functions prior to the delivery of nuclear fuel. Information is not yet available on the construction duration of the revised mast at this stage.

## Consideration of alternatives

2.4.14 When addressing the issues with the current location of the meteorological station, NNB considered the following options:

- Option 1: Slight relocation to the north-east involving a change from asphalt to grass within a 30 m x 30 m area. Reduction of the mast height from 50 m to 10 m; and
- Option 2: Relocation of the whole meteorological station to a platform 20 m (AOD). Reduction of the mast height from 50 m to 10 m.

2.4.15 Following WMO guidelines<sup>15</sup>, Option 1 was anticipated to result in less accurate measurements than Option 2 due to possible interference in readings by adjacent buildings. Option 2 was selected in a study as the best option for weather monitoring within the Hinkley Point C site. In addition, given the similarity between the two options, neither was considered to give rise to materially different environmental effects than the other, and so there was no preference in relation to environmental effects. On this basis, Option 2 was selected as the preferred option.

## 2.5 Hinkley Point Substation

### Current Approved Design

- 2.5.1 The Hinkley Point Substation was constructed in 2014 as a temporary building to be retained only during the construction of Hinkley Point C. It is contained within a small building to the northeast of the site, adjacent to the access road to Hinkley Point A.
- 2.5.2 The Hinkley Point Substation was originally only required during the construction phase of the Hinkley Point C Project, to feed-in power from the National Grid via Hinkley Point B's existing 400 kilovolt (kV) connection (significantly reducing the need for mobile generators during construction). Despite the relatively short period during which the substation would be required, the building and systems were built with at least a 60-year design life, due to the critical nature of its function.

### Reason for the change

- 2.5.3 The proposed change involves an amendment to retain the existing temporary Hinkley Point Substation as a permanent feature to supply electricity to Hinkley Point A and Hinkley Point B.
- 2.5.4 NNB has an obligation under agreements between the three Hinkley Point sites to either provide power to

Hinkley Point A and Hinkley Point B (for decommissioning activities) or provide them with an alternative like for like supply at least until 2040. To fulfil that obligation EDF Energy and National Grid originally planned to build a new substation and 11 kV overhead line to Hinkley Point B.

- 2.5.5 However, after further consideration and discussions with Magnox Ltd (Hinkley Point A) and EDF Energy Ltd (Hinkley Point B), NNB has concluded that instead of building a new substation, the optimal solution is to reconfigure the supply arrangements and retain the existing 11 kV temporary Hinkley Point Substation during the operational phase of the Hinkley Point C Project as a permanent feature. This will avoid the need to design and construct a new substation and overhead line in the future to supply electricity to Hinkley Point A and Hinkley Point B, which would have required extensive construction works.

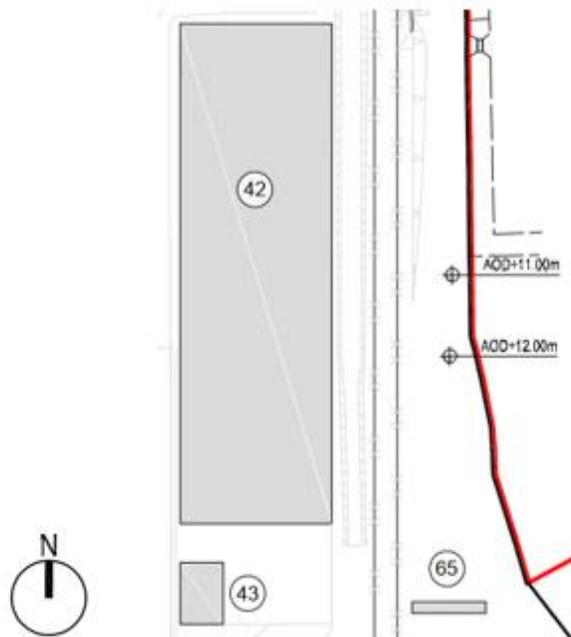
### Description of the change

- 2.5.6 The current temporary Hinkley Point Substation imports electricity to Hinkley Point C via an electrical supply for the construction of Hinkley Point C. The proposed change involves switching the Hinkley Point Substation from importing electricity, to exporting an 11 kV supply to Hinkley Point A and Hinkley Point B (to support decommissioning activities) at the end of the construction

of Hinkley Point C. The temporary substation will therefore be retained as a permanent feature during the operation of Hinkley Point C. The location of the Hinkley Point Substation can be seen on the Site Layout Plan (Tracked Changes) (drawing reference HINK-A1-SL-00-GA-011) in **PEIR Plans - Proposed Changes On-Site**. The dimensions of the building are 34.16 m x 4.04 m x 5 m (length x height x width).

- 2.5.7 It is anticipated that the plant layout within the Hinkley Point Substation will require very minor internal modification to accommodate the change from temporary to permanent.
- 2.5.8 The surrounding landscape design to accommodate the retention of the Hinkley Point Substation is proposed to be amended as set out on the updated version of the Landscape Masterplan authorised by the DCO which can be found in **PEIR Plans - Proposed Changes On-Site** (drawing reference HINK-A1-MP-00-GA-001). However, the building and extensive underground cabling are pre-existing infrastructure meaning that no construction activities or substantive modifications will be required as a result of the proposed change.
- 2.5.9 The Hinkley Point Substation is already constructed and the proposed change to not remove it and no longer construct a new substation to supply Hinkley Point A and Hinkley Point B will reduce the level of workforce and

- construction traffic later in the construction programme. This proposed change will also mean that the 11 kV overhead line to Hinkley Point B will not be required, which will reduce the level of workforce and construction traffic off-site.
- 2.5.10 The location of the Hinkley Point Substation in relation to the revised ISFS and new Equipment Storage Building can be seen on **Figure 2–5**.



**Figure 2–5: Location of the Hinkley Point Substation (65) in relation to the ISFS (42) and new Equipment Storage Building (43) from Site Layout Plan (drawing reference HINK-A1-SL-00-GA-010) in PEIR Plans - Proposed Changes On-Site**

## Consideration of alternatives

- 2.5.11 NNB considered establishing a new permanent substation in an alternative location. However, an alternative building or structure would involve rerouting the existing cables and establishing a new building with a similar footprint and position. Moreover, it would also require relocating or removing the duct bank used to feed the electricity to the Southern Construction Phase Area (see the original ES Volume 2 Hinkley Point C Development Site Figure 1.2) and diverting the main cables between the Hinkley Point A, Hinkley Point B and Hinkley Point C. Re-routing the main cables across the C182 road would be difficult as there are critical services constraining activities in that area.
- 2.5.12 The construction associated with a new permanent substation at an alternative location has the potential to result in environmental effects during construction. The proposed option to retain the temporary substation would not require any additional construction and would avoid the need for new materials, resulting in less waste generation.
- 2.5.13 On this basis, the best and most feasible option is to retain the temporary Hinkley Point Substation as a permanent feature.

## 2.6 Sluice Gate Storage Structures

### Current Approved Design

2.6.1 At present, the design of the power station does not include an area for the storage of sluice gates and lifting beams for the Forebay and Outfall Pond (surge chamber), and the lifting beams of the Pumphouse sluice gates. The Forebay, Outfall Pond (surge chamber) and Pumphouse (one per Unit of Hinkley Point) are located on the north/coastal side of the Hinkley Point C site.

### Reason for the change

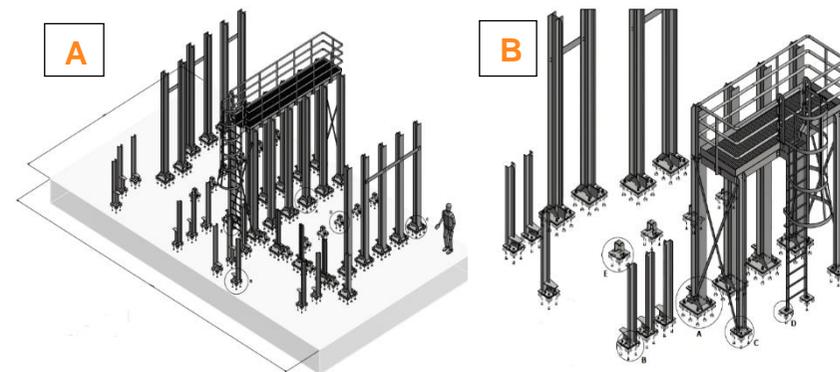
2.6.2 Located within Hinkley Point C's CWS, the sluice gates are used only during “outages” – periods of time where the reactors are shut down to carry out maintenance. The sluice gates allow maintenance to be performed on equipment that is usually submerged, by holding back sea water from the rest of the system.

2.6.3 Sluice gate storage structures were not included within the original DCO submission because detailed design of the Forebay and Outfall Pond had not yet been undertaken. During the post-consent detailed design process it has become apparent that a storage solution is required.

2.6.4 The proposed change therefore involves the construction of four new structures (two per Unit of Hinkley Point) to house the sluice gates and lifting beams.

### Description of the change

2.6.5 As mentioned above, the proposed change involves four new structures to house sluice gates and lifting beams. Two storage structures are required for each Unit of Hinkley Point (Unit 1 and Unit 2). The structures will provide toaster-style storage racks which will be local to each Unit and fixed to a concrete base (see **Figure 2–6** and **Figure 2–7**).



**Figure 2–6: Toaster-style storage rack (A: Large rack; B: Small rack) for illustrative purposes only**



**Figure 2–7: Example of a toaster-style storage rack from Flamenville 3**

- 2.6.6 There will be two storage locations per Unit that will allow mobile cranes to lift the sluice gates from their storage position in the toaster-style storage racks to their guides within the Forebay and Outfall Pond (surge chamber) buildings. Two storage locations are required because the cranes have to reach both Forebay and Outfall Pond buildings. It would not be possible for one crane to serve both the Forebay and Outfall Pond buildings from one location.
- 2.6.7 The footprint of the two storage structures will be 10.6 m x 7.3 m (Type 1) and 6.3 m x 4.9 m (Type 2). The two storage structures vary in size because one is designed to hold the sluice gates for the Forebay and the other for the Outfall Pond (surge chamber); each building requires a different number of sluice gates.
- 2.6.8 The proposal comprises 14 sluice gates rather than 24 as not all the sluice gates will be in use at the same time. However, the storage structures will be designed to hold 24 sluice gates to future proof for expansion if required (if 24 sluice gates were needed at the same time).
- 2.6.9 The sluice gates will be used infrequently, spending the majority of the time in storage and will only be used during outages (maintenance periods).
- 2.6.10 During outages the sluice gates will be moved by crane from the storage structure to either the Outfall Pond or Forebay buildings which are adjacent to the proposed storage structures. The sluice gates will be used to isolate parts of the Secondary CWS such as the Intake Tunnel or forebay to allow water storage areas to be drained and maintenance to be performed. When the maintenance is complete for the outage, the water storage areas will be reflooded and the sluice gates returned to the storage structure.
- 2.6.11 The storage racks are required prior to Hot Functional Testing which will be carried out around a year before the power station is commissioned. Construction duration is anticipated to last two weeks.

2.6.12 The location of the sluice gate storage structures can be seen on the Site Layout Plan (Tracked Changes) (drawing reference HINK-A1-SL-00-GA-011) in **PEIR Plans - Proposed Changes On-Site**.

### Consideration of alternatives

2.6.13 The storage units need to be installed in locations within reach of the cranes used to lift the sluice gates into the adjacent buildings. Therefore, there are no feasible alternative locations for the storage units.

2.6.14 For operability reasons the design of the storage structures needs to be 'exposed' rather than in a building so that the crane could easily move the gates from one location to another, therefore a walled building was discounted.

## 3. THE PROPOSED CHANGES OFF-SITE

### 3.1 Overview

#### The compensation package

3.1.1 As outlined in **Section 1.3**, NNB, following extensive stakeholder engagement, has identified a package of compensatory measures that will ensure that the overall coherence of the NSN is protected after the removal of the requirement to install an AFD. NNB is committed to the delivery of this package, referred to as “the proposed changes off-site”, which comprise:

- Compensation for migratory fish species to improve successful migration, or easement of passage comprising works on three weir barriers. NNB has identified five potential locations where appropriate works to weirs would deliver improvements to provide appropriate compensation. NNB is proposing to carry out works to three of the five weirs identified.
  - Maisemore Weir on the River Severn;
  - Trostrey Weir on the River Usk; and
  - one further weir on the River Lugg (one of Mousenatch Weir, Eyton Weir or Coxall Weir), the River Towy (Manorafon Weir) or the River Severn (Upper Lode Weir).

- Works at Maisemore on the River Severn and at Trostrey on the River Usk are presented as preferred proposals with one further location from the other three sites presented to be taken forward.

- Compensation for the marine species identified as the Severn Estuary Fish Assemblage, through improvements to, or creation of, habitats that will support the fish populations:
  - Creation or enhancement of approximately 340 ha of saltmarsh and associated habitat;
  - Creation / enhancement of 5 ha of seagrass bed;
  - Creation / enhancement of 15 ha of kelp forest; and
  - Creation / enhancement of 1-2 ha of oyster bed, area dependent on location.
- An AMMP – to provide reliable information on the effectiveness and success of the implemented measures and provide the means to adapt the measures where necessary.

3.1.2 The proposed compensation measures will be actively managed in accordance with the AMMP throughout the period when Hinkley Point C will abstract water via the CWS. On the basis this is expected to be for at least 60 years, the different features making up the compensation measures will be fully established and will, in effect, be

permanent, self-sustaining features. NNB will in conjunction with partners consider what, if any, further management is needed at the end of the operational life of the power station.

### Compensation sites

3.1.3 NNB has identified preferred sites for the delivery of elements of the compensation package as outlined in the following paragraphs.

3.1.4 The sites identified for the delivery of the saltmarsh and associated habitats are Pawlett Hams and The Island (both on the River Parrett).

3.1.5 For the purpose of this consultation, NNB has identified five weirs where easement works could be possible to provide compensation for the migratory species. It is not proposed that all of the options outlined are delivered. NNB is committed to delivering a package of works on three weirs as outlined in **paragraph 3.1.1** and will seek agreement from relevant stakeholders on which of the options to take forward for delivery.

3.1.6 The five potential options for the weirs are:

- Maisemore Weir on the River Severn;
- Trostrey Weir on the River Usk;

- Weirs on the River Lugg (one of Mousenatch Weir, Eyton Weir or Coxall Weir);
- Manorafon Weir on the River Towy; and
- Upper Lode Weir on the River Severn.

3.1.7 The sites for the delivery of the seagrass bed, kelp forest and oyster beds are yet to be identified. However, these would be delivered within the Severn Estuary/wider Bristol Channel, subject to detailed feasibility studies and site selection.

3.1.8 Some of the sites outlined in this chapter, if taken forward as part of the compensation package, would be within the amended DCO Order Limits (the limits within which the project will be carried out). These sites include Pawlett Hams, The Island, Maisemore Weir, Upper Lode Weir and the weirs on the River Lugg, which are all located in England. The remaining sites, for reasons including their location and available consenting regimes, would be outside the amended DCO Order Limits and would be consented separately. These sites include Trostrey Weir and Manorafon Weir, which are located in Wales and the delivery of the seagrass bed, kelp forest and oyster bed habitats.

3.1.9 The sites that have been identified are shown on **Volume 3 Figure 1 in PEIR Figures – Volume 3** and the

proposed compensation measures are described in more detail in **Section 3.2** and **Section 3.3**.

### Adaptive Monitoring and Management Plan

3.1.10 The iterative development of an AMMP is an important element of any compensation package to:

- quantify the impacts relative to predictions;
- provide evidence for the successful implementation of compensation measures; and
- set out a framework for additional monitoring and potential adaptive management should measures fail to achieve objectives.

3.1.11 As such, an AMMP supporting these aims is in development.

3.1.12 A key principle that will drive the development of the AMMP is that fish population numbers are influenced by many factors, the provision of suitable habitat being only one such factor. Therefore, the AMMP will need to be carefully designed in order to monitor and respond to the performance of the specific compensation measures, rather than reflecting trends or influences of other environmental factors.

3.1.13 As the final compensation measures have not yet been formally agreed or designed, it is not possible to provide more specific details of the content of the AMMP at this stage.

3.1.14 NNB will engage with the relevant Statutory Nature Conservation Bodies and regulators to establish an AMMP Advisory Group ('AMMPAG'). The purpose of this group will be to provide oversight and advice on the development and implementation of the AMMP. Whilst the details have yet to be agreed with the Statutory Nature Conservation Bodies, the following paragraphs provide information about what is proposed.

3.1.15 The AMMPAG will be independently chaired (much like the existing Hinkley Point C Marine Technical Forum.

3.1.16 The membership of the group is proposed to include (but is not limited to):

- NNB;
- Natural England;
- Natural Resources Wales;
- Marine Management Organisation;
- Environment Agency;
- Devon and Severn Inshore Fisheries Conservation Authority;

- Somerset Council; and
- Representatives from appropriate and relevant conservation groups.

- 3.1.17 The activities, function and decision making authority of the AMMPAG will be similar in structure to that of the existing Hinkley Point C Socio-Economic Advisory Group and TRG which were created as a result of Planning Obligations set out in the Section 106 agreement which formed part of the DCO application and have been operating successfully since 2016.
- 3.1.18 The AMMPAG will be supported and advised by an independent group of scientists to be known as the Compensation Expert Panel ('CEP').
- 3.1.19 The CEP will be formed of experts in the various sciences relevant to the effective implementation, monitoring, and management of the proposed compensation measures.
- 3.1.20 The members of the CEP will be nominated and appointed by consensus by the AMMPAG.
- 3.1.21 It is intended that the CEP will provide expert, impartial advice which will be central to the decision-making processes of the AMMPAG.
- 3.1.22 The AMMPAG will be established within three months of the material change to the DCO being made and will

meet every six months (or less or more frequently, where agreed by the AMMPAG) and shall exist until the end of the Operational Period for the Hinkley Point C Project.

- 3.1.23 NNB shall be responsible for the costs of convening and holding meetings of the AMMPAG.

- 3.1.24 NNB and the other member organisations of the AMMPAG shall take account of the reasonable representations and any relevant advice given by the CEP and the AMMPAG when deciding how to implement the AMMP.

### Relationship with the HRA

- 3.1.25 A HRA Report has been prepared to consider the potential effects of the project on European designated sites and their associated qualifying features. This includes consideration of the marine and terrestrial design elements, and the compensation measures within and beyond the amended DCO Order Limits. Where details are sufficiently advanced, the assessment is quantitative in nature; however, where necessary, a qualitative assessment has been undertaken.

## 3.2 Migratory Fish Compensation Measures

### Maisemore Weir on the River Severn

#### *Proposed site*

3.2.1 Maisemore Weir is located on the River Severn in Gloucestershire, approximately two miles northwest of Gloucester City Centre. Grid Reference: SO8180521667 (refer to **Volume 3 Figure 10** in **PEIR Figures – Volume 3**).

3.2.2 Refer to **Volume 3 Figure 11** in **PEIR Figures – Volume 3** for a representation of the constraints at this site.

#### *Reason for the measure*

3.2.3 Following consultation with the Environment Agency it is understood that approximately 70 % of shad migrating upstream in the River Severn do so via Maisemore Weir, however it is only passable at certain tide states or when river flows are high. As a consequence, it can significantly delay shad and thus limit the extent of their migration upriver with the consequent impact on spawning success and increase in predation pressure.

#### *Description of the measure*

3.2.4 Full removal, partial removal, or bypass of this weir would significantly ease passage for Shad and Salmon as well as improving chances of passage for Eel, Lamprey, and Trout.

3.2.5 For the purposes of the assessments presented in **Volume 3** of this PEIR, it has been assumed that the weir would be fully removed, with associated bank protection, to significantly ease fish passage (refer to **Volume 3 Figure 12** in **PEIR Figures – Volume 3**). Works associated with a bypass channel would be of a similar physical extent to the bank works associated with full removal. The works may be in different locations, but would likely be of a similar footprint. Works to install a technical pass would likely be of a smaller nature and scale to full removal or the construction of a bypass channel. Work to refine the design and extent of work (refer to **paragraph 3.2.4**) will be confirmed through further feasibility assessment and stakeholder engagement and the environmental impact of the proposed works will be assessed in the ES for the proposed material change application.

#### *Consideration of alternatives*

3.2.6 Llanthony Weir (Grid Reference: SO821991820) was considered as an alternative to works on Maisemore

Weir. Llanthony Weir was discounted primarily due to difficulties in accessing the site and the limited benefit to migratory species compared to those that could be realised by selecting Maisemore Weir. Upper Lode has also been considered as an alternative and this is discussed below.

### Upper Lode Weir on the River Severn

#### *Proposed site*

3.2.7 Upper Lode Weir is located on the River Severn approximately half a mile east of Tewksbury in Gloucestershire. Grid Reference: SO88149327 (refer to **Volume 3 Figure 13** in **PEIR Figures – Volume 3**).

3.2.8 Refer to **Volume 3 Figure 14** in **PEIR Figures – Volume 3** for a representation of the constraints at this site.

#### *Reason for the measure*

3.2.9 Engagement with Environment Agency suggests that only 50 % of the shad reaching this weir are able to pass beyond it, thus significantly limiting the extent of migration. Full or partial removal will significantly ease fish passage for shad to the upper reaches of the Severn where key improvements of other barriers have already been made. Works to Upper Lode Weir would also

potentially improve chances of passage for salmon, lamprey and eel.

#### *Description of the measure*

3.2.10 Full removal, partial removal, or bypass of this weir would ease passage for shad as well as potentially improving chances of passage for salmon, lamprey and eel.

3.2.11 For the purposes of the assessments presented in **Volume 3** of this PEIR, it has been assumed that the weir would be fully removed, with associated bank protection, to significantly ease fish passage (refer to **Volume 3 Figure 15** in **PEIR Figures – Volume 3**). Works associated with a bypass channel would be of a similar physical extent to the bank works associated with full removal. The works may be in different locations, but would likely be of a similar footprint. Works to install a technical pass would likely be of a smaller nature and scale to full removal or the construction of a bypass channel. Work to refine the design and extent of work (refer to **paragraph 3.2.10**) will be confirmed through further feasibility assessment and stakeholder engagement and the environmental impact of the proposed works will be assessed in the ES for the proposed material change application.

*Consideration of alternatives*

- 3.2.12 Maisemore Weir and Llanthony Weir (discussed above) have been considered as alternatives to Upper Lode Weir.

**Weirs on the River Lugg**

*Proposed site*

- 3.2.13 These weirs are a series of rock weirs on the River Lugg to the northwest of Leominster in Herefordshire (refer to **Volume 3 Figure 16** in **PEIR Figures – Volume 3**).
- 3.2.14 Their respective locations are:
- Mousenatch Weir - Grid Reference: SO4680260971;
  - Eyton Weir - Grid Reference: SO4719660672; and
  - Coxall Weir - Grid Reference: SO4773260636.
- 3.2.15 Refer to **Volume 3 Figure 17a** and **Volume 3 Figure 17b** in **PEIR Figures – Volume 3** for a representation of the constraints at these locations.

*Reason for the measure*

- 3.2.16 As explained in **paragraph 1.3.9**, as no suitable sites could be identified on the River Wye, it was decided (in discussion with Natural Resources Wales and the

Environment Agency) that the best approach would be to explore options on the River Lugg (a tributary of the River Wye). Improvement to the River Lugg at these points would potentially improve successful migration of salmon to the upper reaches of the river, also lamprey and eel.

*Description of the measure*

- 3.2.17 Whilst there are three separate weirs in this location, they are largely grouped together for this assessment since they are in close geographical proximity to each other and largely of the same construction. Their construction is of large masonry block stone and the prospective plans are to remove the large blocks from the crest of the weir and use to reconstruct a trapezoidal channel with associated bed and bank works, thus achieving a functional removal of the weir.
- 3.2.18 For the purposes of the assessments presented in **Volume 3** of this PEIR, it has been assumed that the weirs would be fully removed, to significantly ease fish passage (refer to **Volume 3 Figure 18** in **PEIR Figures – Volume 3**). Works associated with a bypass channel would be of a similar physical extent to the works associated with full removal. The works may be in different locations, but would likely be of a similar footprint. Works to install a technical pass would likely be of a smaller nature and scale to full removal or the construction of a bypass channel. Work to refine the

design and extent of work (refer to **paragraph 3.2.17**) will be confirmed through further feasibility assessment and stakeholder engagement and the environmental impact of the proposed works will be assessed in the ES for the proposed material change application.

#### *Consideration of alternatives*

3.2.19 Consideration of barriers to migration in the River Lugg was identified as an alternative to improvements on the River Wye as a tributary to the Wye and used by the relevant migratory assemblage fish species.

3.2.20 NNB is aware that the Environment Agency is considering works to Crowards Weir on the River Lugg. NNB is therefore maintaining dialogue with the Environment Agency regarding proposed works to this weir to ensure alignment to works to the other three weirs in this location being considered as part of the proposed compensation works described within this PEIR.

3.2.21 There are no further alternatives to consider.

#### **Trostrey Weir on the River Usk**

##### *Proposed site*

3.2.22 Trostrey Weir was built in the late 1960s as part of a gauging station on the River Usk in Monmouthshire, Wales. It is located approximately two miles northwest of

the town of Usk. Grid Reference: SO3583904191 (refer to **Volume 3 Figure 19** in **PEIR Figures – Volume 3**).

3.2.23 Refer to **Volume 3 Figure 20** in **PEIR Figures – Volume 3** for a representation of the constraints at this site.

##### *Reason for the measure*

3.2.24 This is one of the remaining barriers on the Usk and improving passage here would enable both shad and salmon to benefit from upstream improvements that have been already made.

##### *Description of the measure*

3.2.25 There are several options available for the improvement of passage at Trostrey Weir, including technical passes, partial removal, or full removal of the weir. All of these options depend on the acceptability of the relocation of the existing Natural Resources Wales hydrological gauging station from Trostrey to another Natural Resources Wales site on the Usk at Chainbridge. Discussions with Natural Resources Wales are ongoing and a detailed comparison of the hydrological characteristics at each site is underway.

3.2.26 For the purposes of the information presented in **Volume 3** of this PEIR, it has been assumed that the weir

would be fully removed, to significantly ease fish passage (refer to **Volume 3 Figure 21** in **PEIR Figures – Volume 3**). Works associated with a bypass channel would be of a similar physical extent to the works associated with full removal. The works may be in different locations, but would likely be of a similar footprint. Works to install a technical pass would likely be of a smaller nature and scale to full removal or the construction of a bypass channel. Work to refine the design and extent of work (refer to **paragraph 3.2.25**) will be confirmed through further feasibility assessment and stakeholder engagement and the environmental impact of the proposed works will be assessed in the ES for the proposed material change application.

#### *Consideration of alternatives*

3.2.27 There is another barrier (one of the few remaining on the River Usk) at Crickhowell Bridge. This site has been considered as an option but has been deselected in favour of Trostrey primarily due to difficulties associated with carrying out structural works on and around Crickhowell Bridge, as the A4077 uses this bridge to cross the Usk as well as the bridge being a Grade 1 Listed Building and a Scheduled Monument.

### **Manorafon Weir on the River Towy**

#### *Proposed site*

3.2.28 Manorafon Weir is located in the Towy SAC in Carmarthenshire Wales. Although not in one of the three SACs identified within the HRA Report, it has still been identified as a potential site for compensation. It is part of what appears to be a series of rock weirs, on the River Towy approximately two miles northeast of Llandeilo town (refer to **Volume 3 Figure 22** in **PEIR Figures – Volume 3**).

3.2.29 Refer to **Volume 3 Figure 23** in **PEIR Figures – Volume 3** for a representation of the constraints at this site.

#### *Reason for the measure*

3.2.30 Emerging monitoring data has shown that shad that migrate up the River Towy are sometimes present in the Bristol Channel in the vicinity of the Hinkley Point C cooling water intake heads. As such, a barrier removal on the Towy is being considered.

#### *Description of the measure*

3.2.31 Full removal, partial removal, or bypass of this weir would ease passage for shad as well as improving chances of passage for salmon.

3.2.32 For the purposes of the information presented in **Volume 3** of this PEIR, it has been assumed that the weir would be fully removed, with associated bank protection, to significantly ease fish passage (refer to **Volume 3 Figure 24** in **PEIR Figures – Volume 3**). Works associated with a bypass channel would be of a similar physical extent to the bank works associated with full removal. The works may be in different locations, but would likely be of a similar footprint. Works to install a technical pass would likely be of a smaller nature and scale to full removal or the construction of a bypass channel. Work to refine the design and extent of work (refer to **paragraph 3.2.31**) will be confirmed through further feasibility assessment and stakeholder engagement and the environmental impact of the proposed works will be assessed in the ES for the proposed material change application.

#### *Consideration of alternatives*

3.2.33 There are currently no viable alternatives to improvements at Manorafon Weir that have been identified.

## 3.3 Fish Assemblage Compensation Measures

### Pawlett Hams saltmarsh

#### *Proposed site*

3.3.1 About 313 ha of land at Pawlett Hams on the Pawlett Peninsula, on the River Parrett, three miles northwest of Bridgwater. Grid reference: ST273425 (refer to **Volume 3 Figure 2** in **PEIR Figures – Volume 3**).

3.3.2 Refer to **Volume 3 Figure 3** in **PEIR Figures – Volume 3** for a representation of the constraints at this site.

#### *Reason for the measure*

3.3.3 Saltmarsh provides a supportive habitat for the Severn Estuary fish assemblage by providing feeding and nursery grounds as well as shelter from predation. Saltmarsh also provides valuable habitats for birds, plant species and invertebrates as well as providing amenity value to the local community and visitors. Saltmarsh can also help improve water quality and provide natural flood defenses. There are also well documented “blue carbon” benefits associated with saltmarsh as they can act as a very efficient natural carbon sink.

3.3.4 The proposed managed realignment of about 313 ha of land at Pawlett Hams is in close proximity to the existing Steart marshes wetland site and the Somerset Wetlands National Nature Reserve ('NNR'). Developing this location will provide good ecological connectivity between Steart Wetlands and the Somerset Wetlands NNR further contributing to the overall coherence of the national network of protected sites. It is also in close proximity to another of the proposed compensation measures at The Island (discussed in **paragraph 3.3.10** to **paragraph 3.3.17**).

*Description of the measure*

3.3.5 The creation of saltmarsh and associated habitats through breaching of the soft landscape flood defenses and the excavation of new creeks that will allow tidal waters to flood the low-lying areas of the Pawlett peninsula (refer to **Volume 3 Figure 4** in **PEIR Figures – Volume 3**). The works will be very similar to the scheme developed at Steart on the opposite bank of the River Parrett.

3.3.6 The proposed Order Limits for the proposed compensation measures at Pawlett Hams are shown on **Volume 3 Figure 5** in **PEIR Figures – Volume 3**.

3.3.7 The Pawlett Hams Wetland Site ('White House Hams') is an area of habitat restoration within the south and central

portion of the proposed Order Limits that was secured via a Section 106 agreement between Wyvern Waste Services Ltd and Somerset County Council in 2003 as habitat mitigation for Walpole landfill, located to the east of the site. This site has been taken into consideration in the assessments provided in **Volume 3**.

*Consideration of alternatives*

3.3.8 There are a number of sites that have been considered as alternatives to Pawlett Hams. These include:

- 65 ha of land at Kinston Seymour, two miles southwest of Clevedon on the Severn Estuary.
- 150 ha of land on the Awre Peninsula, three miles southeast of Newnham opposite Slimbridge on the River Severn.
- 215 ha of land at Slimbridge, just north of the existing Wildfowl and Wetlands Trust site.
- 390 ha of land Chilton Trinity, two miles northwest of Bridgwater.

3.3.9 All of these sites are considered viable compensation options, with Pawlett Hams being preferred over them primarily due to its proximity to Hinkley Point C and the additional ecological connectivity that could be realised by it being sited just across the River Parrett from the existing Steart Marshes wetland.

## The Island saltmarsh

### *Proposed site*

3.3.10 About 27 ha of land close to the mouth of the River Parrett, three miles northwest of Bridgwater. Grid Reference: ST290455. (Refer to **Volume 3 Figure 6** in **PEIR Figures – Volume 3**).

3.3.11 Refer to **Volume 3 Figure 7** in **PEIR Figures – Volume 3** for a representation of the constraints at this site.

### *Reason for the measure*

3.3.12 Saltmarsh provides a supportive habitat for the Severn Estuary fish assemblage by providing feeding and nursery grounds as well as shelter from predation. Saltmarsh also provides valuable habitats for birds, plant species and invertebrates as well as providing amenity value to the local community and visitors. Saltmarsh can also help improve water quality and provide natural flood defenses. There are also well documented “blue carbon” benefits associated with saltmarsh as they can act as a very efficient natural carbon sink.

3.3.13 The proposed saltmarsh enhancement of about 27 ha of land at The Island is in close proximity to the existing Steart marshes wetland site, the Somerset Wetlands NNR, and the proposed compensation measures at

Pawlett Hams. Developing this location will provide good ecological connectivity between Steart Marshes wetland site, the proposed managed re-alignment at Pawlett Hams, and the Somerset Wetlands NNR further contributing to the overall coherence of the national network of protected sites.

### *Description of the measure*

3.3.14 Enhancement of existing saltmarsh and associated habitats through the lowering of the existing high-level marsh to create a range of habitats more amenable to fish usage including tidal creek, mudflat and lower-level saltmarsh (refer to **Volume 3 Figure 8** in **PEIR Figures – Volume 3**). The indicative proposals at The Island include the excavation of a new creek system leading into the marsh with proposed extensions to the existing creek and three shallow pools at the heads of the creeks to create additional shallow mudflat areas.

3.3.15 The proposed Order Limits for the proposed compensation measures at The Island are shown on **Volume 3 Figure 9** in **PEIR Figures – Volume 3**.

### *Consideration of alternatives*

3.3.16 There are a number of sites that have been considered as alternatives to The Island. These include:

**NOT PROTECTIVELY MARKED**

- 65 ha of land at Kinston Seymour, two miles southwest of Clevedon on the Severn Estuary.
- 150 ha of land on the Awre Peninsula, three miles southeast of Newnham opposite Slimbridge on the River Severn.
- 215 ha of land at Slimbridge, just north of the existing Wildfowl and Wetlands Trust site.
- 390 ha of land Chilton Trinity, two miles northwest of Bridgwater.

3.3.17 All of these sites are considered viable compensation options, with The Island being preferred over them primarily due to its proximity to Hinkley Point C and the additional ecological connectivity that could be realised by it being sited just across the River Parrett from the existing Steart Marshes wetland.

**Seagrass bed**

*Proposed site*

3.3.18 Establishing seagrass beds will require site feasibility studies and trials before optimal locations can be identified. However, the seagrass bed developments will be within the Severn Estuary or the wider Bristol Channel area.

*Reason for the measure*

3.3.19 Seagrass beds provide a supportive habitat for the fish assemblage by providing feeding and nursery grounds as well as shelter from predation. Seagrass also provides a habitat that is utilised by a number of different species to those that favour the saltmarsh environment, notably Cod, Whiting and Pollock. It is also widely recognised that seagrass beds provide habitats for other marine life as well as helping to improve water quality and stabilise sediments. In addition to these benefits, seagrass will sequester carbon from the environment in much the same way as saltmarsh, kelp, and native oyster beds providing similar “blue carbon” benefits.

*Description of the measure*

3.3.20 Creation of 5 ha of new seagrass habitat and/or enhancement of degraded seagrass area in the Severn Estuary or the wider Bristol Channel.

*Consideration of alternatives*

3.3.21 The approach being taken with regard to seagrass, kelp and native oyster bed compensation measures is that of a matrix approach where a combination of all three types of measure will be applied. The type of measure and the proportions of each measure outlined in this section have been identified by Cefas as being appropriate to provide

a proportionate level of compensation (refer to the HRA Report). Therefore, alternatives to these measures are not considered further.

### **Kelp forest**

#### *Proposed site*

- 3.3.22 Establishing kelp forests will require site feasibility studies and trials before optimal locations can be identified. However, the kelp forest developments will be within the Severn Estuary or the wider Bristol Channel area.

#### *Reason for the measure*

- 3.3.23 Kelp forests provide a supportive habitat for the assemblage by providing feeding and nursery grounds as well as shelter from predation. Kelp also provides a habitat that is utilised by a number of different species (e.g., European Plaice, Atlantic Cod, Whiting and Wrasse) to those that favour the saltmarsh environment. It is also widely recognised that kelp forests provide habitats for other marine life as well as helping to improve water quality and stabilise sediments. In addition to these benefits kelp will sequester carbon from the environment in much the same way as saltmarsh, seagrass, and native oyster beds providing similar “blue carbon” benefits.

#### *Description of the measure*

- 3.3.24 Creation of 15 ha of new kelp habitat and/or enhancement of degraded kelp areas in the Severn Estuary or the wider Bristol Channel.

#### *Consideration of alternatives*

- 3.3.25 The approach being taken with regard to seagrass, kelp and native oyster bed compensation measures is that of a matrix approach where a combination of all three types of measure will be applied. The type of measure and the proportions of each measure outlined in this section have been identified by Cefas as being appropriate to provide a proportionate level of compensation (refer to the HRA Report). Therefore, alternatives to these measures are not considered further.

### **Oyster bed**

#### *Proposed site*

- 3.3.26 Establishing native oyster beds will require site feasibility studies and trials before optimal locations can be identified. However, the native oyster bed developments will be within the Severn Estuary or the wider Bristol Channel area.

*Reason for the measure*

- 3.3.27 Native oyster beds provide a supportive habitat for the assemblage by providing feeding and nursery grounds and can significantly improve water quality and clarity. It is also widely recognised that native oyster beds provide habitats for other marine life as well as helping to stabilise sediments. In addition to these benefits native oyster beds will sequester carbon from the environment in much the same way as saltmarsh, seagrass, and kelp providing similar “blue carbon” benefits.

*Description of the measure*

- 3.3.28 Creation of 1-2 ha of new oyster beds and/or enhancement of degraded native oyster beds areas in the Severn Estuary or the wider Bristol Channel.

*Consideration of alternatives*

- 3.3.29 The approach being taken with regard to seagrass, kelp and native oyster bed compensation measures is that of a matrix approach where a combination of all three types of measure will be applied. The type of measure and the proportions of each measure outlined in this section have been identified by Cefas as being appropriate to provide a proportionate level of compensation (refer to the HRA Report). Therefore, alternatives to these measures are not considered further.

## 4. APPROACH TO ENVIRONMENTAL IMPACT ASSESSMENT

### 4.1 Overview

4.1.1 This PEIR has been prepared as part of the consultation process to enable consultees to develop an informed view of the likely significant environmental effects in relation to the proposed changes to the Hinkley Point C Project.

4.1.2 The proposed changes constitute EIA development under Schedule 2 of the 2017 EIA Regulations<sup>17</sup> as they represent a change to a Schedule 1 development (nuclear power station), *‘where that development is already authorised, executed or in the process of being executed, and the change or extension may have significant adverse effects on the environment’*.

4.1.3 EIA is used to inform the decision-making process for development consent, including applications for material changes to a DCO such as that for the Hinkley Point C Project.

4.1.4 EIA is the process of identifying the direct and indirect effects on the environment as a result of a proposed development in comparison to the environmental baseline. Effects can be either temporary or permanent, adverse or beneficial. The purpose of the ES is to report those effects which are considered to be significant.

4.1.5 The baseline is established to understand the existing environment and how a proposed development will change that. The baseline is typically the environment in the area without the presence of the proposed development. For the purposes of this PEIR, the proposed development comprises the Hinkley Point C Project as changed by the proposed changes.

4.1.6 Unless otherwise stated in the relevant Aspect chapters, the assessment for the proposed changes on-site in **Volume 2** of this PEIR has been undertaken with consideration of three baseline scenarios:

- the original baseline, being that outlined and assessed against within the original ES;
- the current baseline, comprising the original baseline updated to incorporate the changes approved through the four DCO non-material changes and the

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<sup>17</sup> Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 [[Online](#)]. Accessed 23 November 2023.

relevant planning consents obtained under the Town and Country Planning Act 1990 since the original baseline was prepared, as well as other relevant changes to the baseline including elements of the Hinkley Point C Project that have already been constructed; and

- the future baseline, which is the current baseline updated to take into account changes to the baseline that are expected to have been made by the time Hinkley Point C is operational, including as a result of the currently consented Hinkley Point C Project in the absence of the proposed changes that will be the subject of the proposed material change application.

4.1.7 The relevant consents obtained under the Town and Country Planning Act 1990 since the DCO application was submitted can be found in Table 3-1 of the Scoping Report submitted to the Planning Inspectorate on 23 March 2022. The consents outlined in **Table 1–1** above have been obtained since the Scoping Report was submitted.

4.1.8 The assessment of the proposed changes off-site in **Volume 3** of this PEIR has been undertaken with consideration of the current baseline at each site and a future baseline. There is no original baseline for the proposed changes off-site because they were not assessed in the original ES. The future baseline takes

into account changes that are expected to have been made by the time Hinkley Point C is operational, including as a result of the currently consented Hinkley Point C Project in the absence of the proposed changes that will be the subject of the proposed material change application. However, in the case of the proposed changes off-site, the future baseline will remain largely unchanged from the current baseline. On this basis, the PEIR only reports on the current baseline unless stated otherwise.

4.1.9 The significance of the effect of the changes on the environment is determined by considering the sensitivity (or value) of a receptor and the magnitude of the impact (degree of change from the baseline). A receptor is the receiving environment, for example, a resident with views of the proposed development, protected species or wider landscape character.

4.1.10 A significance matrix is often used to guide the determination of whether an effect is considered to be significant or not (see **Table 4–1**). Effects that fall within the moderate or major ratings are usually considered to be significant (see **Table 4–2**). Where professional judgement is used in the assessments presented in this PEIR, and subsequently in the updated ES, the criteria and/or reasoning which supports that professional judgement will be clearly explained, in line with the Scoping Opinion (ID 3.1.3).

**Table 4–1: Significance matrix**

		Sensitivity (Value) of receptor			
		Very Low	Low	Medium	High
Magnitude (Degree of Change)	Very Low	Negligible	Negligible	Minor	Minor
	Low	Negligible	Minor	Minor	Moderate
	Medium	Minor	Minor	Moderate	Major
	High	Minor	Moderate	Major	Major

**Table 4–2: Generic description of significance ratings**

Significance	Description
Major	Very large or large change in environmental conditions. Effects which are likely to be important considerations at a national to regional level because they contribute to achieving national/regional objectives, or which are likely to result in exceedance of statutory objectives and/or breaches of legislation.
Moderate	Intermediate change in environmental conditions. Effects that are likely to be important considerations at a regional and local level.
Minor	Small change in environmental conditions. These effects may be raised as local issues but are unlikely to be of importance in the decision-making process.
Negligible	No discernible change in environmental conditions. An effect that is likely to have a negligible or neutral influence, irrespective of other effects.

- 4.1.11 In some cases, there may be multiple effects on a single receptor, resulting from several different aspects of a project. For example, a nearby resident might experience a change in views from their house and also experience an increase in noise. These effects are called in-combination effects. For further information on the assessment of in-combination effects of the proposed changes to the DCO, refer to **Volume 4 Chapter 2**.
- 4.1.12 Effects could also arise from the combined action of a number of different projects, together with the proposed development, on a receptor. These are called cumulative effects. For further information on the assessment of cumulative effects of the proposed changes to the DCO in combination with other projects, refer to **Volume 4 Chapter 3**.
- 4.1.13 Through EIA, measures to avoid, prevent or reduce and, if possible, offset the significant effects are identified. These are called mitigation measures. Where possible, these mitigation measures can be factored into the design of the development. For example, the retention of vegetation where possible and the construction of bunds to reduce visual and noise intrusion to the surrounding area.

## 4.2 Legislation

- 4.2.1 The updated EIA for the proposed changes will be undertaken in accordance with the 2017 EIA Regulations. The 2017 EIA Regulations introduced a number of new Aspects of the environment for consideration within EIAs that were not assessed previously in the original ES. These new Aspects are:
- Climate change;
  - Vulnerability to risks of major accidents and/or disasters; and
  - Risks to population and human health.
- 4.2.2 Although these Aspects were not explicitly assessed in the original ES because it was carried out under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (note a Health Impact Assessment was produced as part of the DCO application), these Aspects have been scoped out of the updated EIA for the proposed changes on-site. This is in line with the Scoping Opinion. In particular, for Population and Human Health, this is in line with the Scoping Opinion provided the landscape and visual assessment presented in the updated ES does not identify any new or materially different significant effects. It is not currently anticipated that the LVIA for the proposed changes on-site will identify any new or materially different significant

effects (refer to **Volume 2 Chapter 6**). Information on these Aspects has been provided for the proposed changes off-site in **Volume 3**.

### 3.1 Planning Policy

4.2.3 The updated EIA will be undertaken in accordance with the most up-to-date planning policy, including relevant policy outlined in the *National Planning Policy Framework*<sup>18</sup> ('NPPF') and National Policy Statements ('NPSs') including *The Overarching NPS for Energy (EN-1)*<sup>19</sup> published on 22 November 2023 and *The NPS for Nuclear Power Generation (EN-6)*<sup>20</sup> designated in July 2011. It is assumed that *The Overarching NPS for Energy (EN-1)* published on 22 November 2023 will have been designated by Parliament by the time the ES is submitted but, if not, then the assessment will also have regard to *The Overarching NPS for Energy (EN-1)* designated in July 2011.

### 3.2 Proposed Material Change Application

4.2.4 In the context of the proposed material change application, and in accordance with the 2017 EIA Regulations, an updated EIA will be undertaken to assess the environmental effects of the proposed changes to the Hinkley Point C Project.

4.2.5 The outcomes of the updated EIA will be reported in an updated ES and other relevant documents prepared to support the proposed material change application. NNB will have regard to feedback received in response to this consultation when preparing the application including the updated ES.

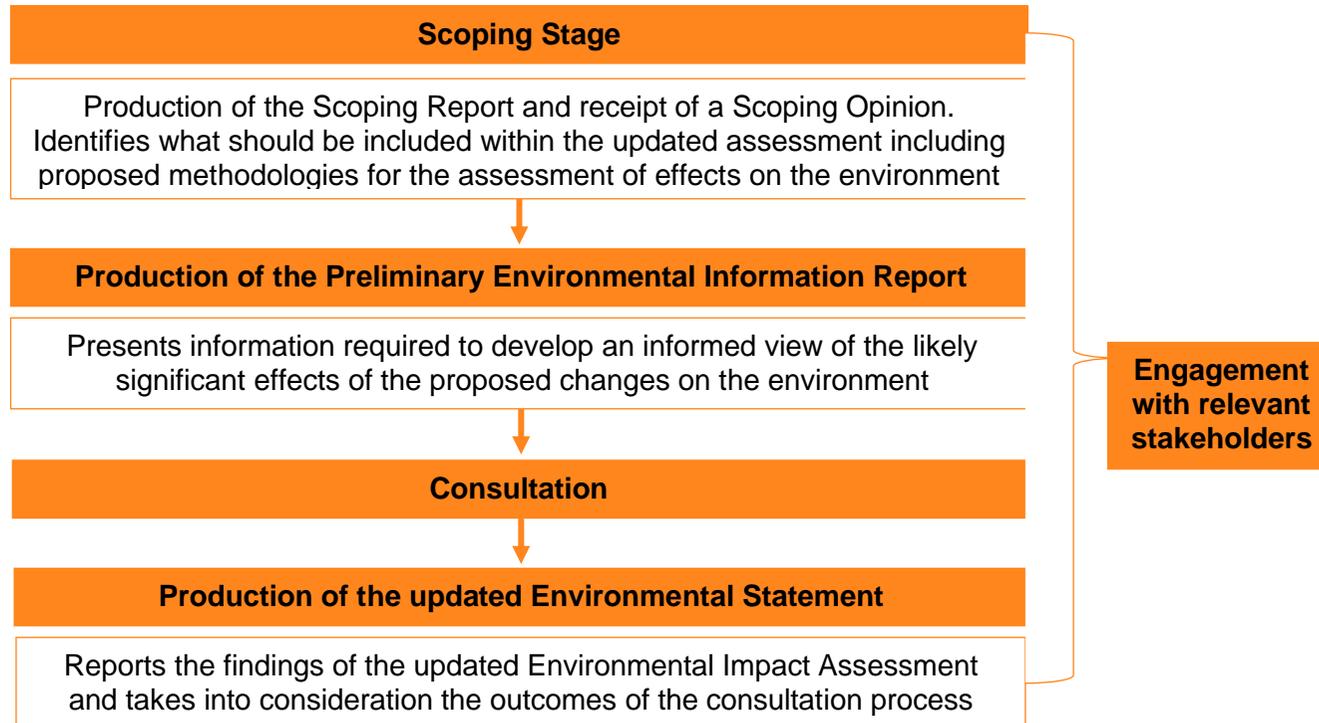
4.2.6 A summary of the EIA process in the context of the proposed application can be found in **Diagram 4–1** and is described in more detail in the following sections.

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<sup>18</sup> Department for Levelling Up, Housing & Communities (2023). National Planning Policy Framework. [\[Online\]](#) Accessed 23 November 2023.

<sup>19</sup> Department for Energy Security and Net Zero (2023). Overarching National Policy Statement for energy (EN-1). [\[Online\]](#) Accessed 23 November 2023.

<sup>20</sup> Department of Energy & Climate Change (2011). National Policy Statement for Nuclear Power Generation (EN-6). [\[Online\]](#) Accessed 23 November 2023.



**Diagram 4–1: The Environmental Impact Assessment process in the context of the application for a material change to a DCO**

## Scoping

- 4.2.7 An applicant may ask the Secretary of State to state in writing their opinion as to the scope, and level of detail, of the information to be provided in an ES. A request for a scoping opinion must be supported by specified information, which is compiled into a scoping report.
- 4.2.8 A scoping report for the proposed changes on-site was submitted to the Planning Inspectorate on 23 March 2022 (the ‘Scoping Report’) in support of a request for a scoping opinion from the Secretary of State (the ‘Scoping Opinion’).
- 4.2.9 The Scoping Opinion was adopted by the Planning Inspectorate (on behalf of the Secretary of State) on 3 May 2022.
- 4.2.10 Before adopting the Scoping Opinion, the Planning Inspectorate consulted the ‘consultation bodies’ listed in Appendix 1 of the Scoping Opinion in accordance with Regulation 10(6) of the 2017 EIA Regulations<sup>17</sup>. A list of the consultation bodies who replied within the statutory timeframe (along with copies of their comments) is provided in Appendix 2 of the Scoping Opinion. Paragraph 1.0.5 of the Scoping Opinion confirms that those comments were taken into account in the preparation of the Scoping Opinion.
- 4.2.11 Regulation 14(3) of the 2017 EIA Regulations states that an ES must, where a scoping opinion has been adopted, be based on the most recent scoping opinion adopted so far as the proposed development remains materially the same as the proposed development which was subject to that opinion.
- 4.2.12 For further information on the scope of the EIA for the proposed material change application and how the Scoping Opinion has been considered for the proposed changes on-site, refer to **Volume 2 Chapter 2**.
- 4.2.13 The Scoping Report considered the proposed changes on-site. As outlined in **Section 1.3**, since the submission of the Scoping Report in 2022, NNB has decided to seek further changes to the Hinkley Point C Project via the proposed material change application; the proposed changes off-site. To provide a robust assessment of the likely significant effects of the proposed changes off-site, each environmental Aspect has been assessed in **Volume 3** to understand the likely significant effects. These preliminary assessments alongside any consultation responses will be used to inform the proposed scope of the updated EIA in relation to the proposed changes off-site.
- 4.2.14 The assessments outlined in **Volume 3** do not alter the assessments undertaken for the proposed changes on-site. The scope of the updated EIA in relation to the

proposed changes on-site remains that outlined in **Volume 2**, in line with the Scoping Opinion.

### Consultation and the Preliminary Environmental Information Report

- 4.2.15 This PEIR has been prepared to enable consultees to develop an informed view of the likely significant environmental effects in relation to the proposed changes to the Hinkley Point C Project both on-site and off-site and should be used to inform the responses of consultees on the changes proposed.
- 4.2.16 Under Regulation 12(2) of the 2017 EIA Regulations, 'preliminary environmental information' means information referred to in Regulation 14(2) which *'has been compiled by the applicant'* and *'is reasonably required for the consultation bodies to develop an informed view of the likely significant environmental effects of the development (and of any associated development)'*<sup>17</sup>. Regulation 14(2) describes the information that an ES must contain.
- 4.2.17 There will be a period from Tuesday 9 January 2024 to 23:59 on Thursday 29 February 2024 within which consultees can provide their responses to the consultation.

- 4.2.18 For further information about the consultation, please visit NNB's website at: [www.edfenergy.com/hpccommunity](http://www.edfenergy.com/hpccommunity).

### Updated Environmental Statement

- 4.2.19 The findings of the updated EIA will be reported within an updated ES that will be submitted as part of the proposed material change application. This will outline any new or materially different likely significant environmental effects identified as a result of the proposed changes and the mitigation measures proposed where relevant.