

**From:** [REDACTED]  
**To:** [SizewellC](#)  
**Cc:** [REDACTED]  
**Subject:** Re Issue Specific Hearing 15 - Eastern IFCA comments on "The Sizewell C Project - Consultation Document - Consultation on Temporary Desalination Plant", dated August 2021  
**Date:** 06 October 2021 11:40:30  
**Attachments:** [2021\\_08\\_Desalination\\_plant\\_sizewell\\_c\\_project\\_consultation\\_document\\_updated\\_v2-compressed.pdf](#)  
[2021\\_08\\_23\\_Sizewell\\_C\\_Temporary\\_Desalination\\_Plant\\_Consultation EIFCA Comments.pdf](#)

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Hello

I wish to offer to the Planning Inspectorate a document that Eastern IFCA (EIFCA) have produced that is relevant to the proposed Sizewell C Temporary Desalination Plant, as dealt with at Issue Specific Hearing 15 of 5 October 2021.

Eastern IFCA received notification of the proposed Construction Water Supply consultation by email from Tom McGarry, Head of Stakeholder Engagement, Sizewell C, on 3<sup>rd</sup> August 2021. That notification included a link to the online document "The Sizewell C Project - Consultation Document - Consultation on Temporary Desalination Plant", dated August 2021. (at URL [https://www.edfenergy.com/sites/default/files/sizewell\\_c\\_project\\_consultation\\_document\\_updated\\_v2-compressed.pdf](https://www.edfenergy.com/sites/default/files/sizewell_c_project_consultation_document_updated_v2-compressed.pdf), and attached)

EIFCA produced a reply to the consultation, which was returned to the Sizewell C team on 23<sup>rd</sup> August 2021, prior to the deadline of 27<sup>th</sup> August.

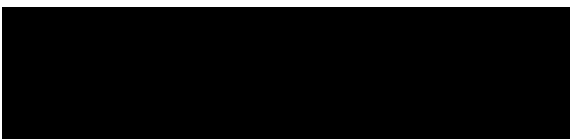
I attach the text of that EIFCA reply. I will be grateful if you can please regard this as a contribution to the Planning Inspectorate list of documentation connected with this issue.

Thank you.

Stephen Thompson

Eastern Inshore Fisheries & Conservation Authority

**Marine Science Officer**



Eastern Inshore Fisheries and Conservation Authority, 6 North Lynn Business Village,  
Bergen Way, King's Lynn, Norfolk PE30 2JG



**DUE TO THE COVID-19 OUTBREAK, FOR THE FORSEEABLE FUTURE ALL EASTERN IFCA STAFF WILL BE WORKING FROM HOME. DURING THIS PERIOD THE EASTERN IFCA OFFICE WILL BE CLOSED TO VISITORS AND ALL MEETINGS WILL BE CARRIED OUT REMOTELY. IF YOU WISH TO SPEAK WITH ME DURING THIS PERIOD, PLEASE USE THE MOBILE NUMBER ABOVE. THANK YOU FOR YOUR UNDERSTANDING.**

**23 August 2021**

**To: The Sizewell C Project Team**

**Via email only, to : [info@sizewellc.co.uk](mailto:info@sizewellc.co.uk)**

Dear Sir or Madam

**Sizewell C Project: Consultation on Temporary Desalination Plant**

██████████ sending me the information relating to the Consultation on a Temporary Desalination Plant associated with the Sizewell C project, and for offering Eastern IFCA the opportunity to comment.

The role of Eastern IFCA is to lead, champion and manage a sustainable marine environment and inshore fisheries within our district, which extends from the Humber to Harwich, and six nautical miles out to sea. As the proposed Sizewell C Temporary Desalination Plant is within those boundaries, and the project may generate effects which interact with our core role, we consider it appropriate that Eastern IFCA comment on the proposed project.

In all consultation responses, the Authority assesses projects according to the Eastern IFCA vision and adherence of those same projects with policies detailed in the relevant marine plan, as directed under section 58(1) of the Marine and Coastal Access Act 2009.

The plans relevant to the Authority's district are the East Inshore and East Offshore Marine Plans. We consider whether proposed developments will have a positive, negative or negligible effect on plan policies related to the IFCA vision to "manage a sustainable marine environment and inshore fisheries". These considerations also enable the IFCA to provide advice in relation to the need to protect the environment, the need to protect human health and the need to prevent interference with other legitimate users of the sea

Within the project there are aspects of potential impacts on features of Marine Protected Areas. We defer to the advice and comments of the relevant Statutory Nature Conservation Body in connection with these potential impacts, except where there may be an interaction with Eastern IFCA core remit.

Within the project there are aspects which may have an impact on the ability of diadromous fish to undertake their normal life history and migratory movements. We defer to the advice and comments of the relevant authority, who we understand to be the Environment Agency in connection with these potential impacts, except where there may be an interaction with Eastern IFCA core remit.

We consider it important that should the desalination project go ahead as described, that the intake pipe for that project and the discharge from the fish recovery and return system for Sizewell C (which will be in very close proximity to each other) are not in operation at the same time. This is acknowledged in Section 2.3.24 of the Consultation

As the proposed works involve some construction and installation works at sea, there is a possibility for some interaction with fishing activity – be it commercial or recreational – in the area. We consider it very important that developers open and maintain effective dialogue with all fishing interests who may be affected by a project (commercial fishers, recreational fishers and charter boat operators). We note the commitment made by Sizewell C in this regard as in for example Section 2.4.14 of the Consultation Document.

We think that, in so far as is possible, infrastructure associated with temporary / short term works such as described here are removed or made “non-impactful” at the end of their required period. This is acknowledged in Section 2.3.25 of the Consultation Document.

We wish to seek clarification on some points of the overall process please –

- Section 2.3.6 identifies that “*The modular desalination plant would initially be capable of producing up to approximately 2,500m<sup>3</sup> of potable water per day. In the event that the water transfer main is not complete by the 4th year of construction, an additional module would be added to the plant to create the ability to produce up to approximately 4,000m<sup>3</sup> of potable water per day.*” However, Figure 2.2 (page 11), “*Likely water demand profile during the construction period*” shows “*Total Potable Water Demand 3 Month Rolling Average*” (expressed as m<sup>3</sup> / day) of slightly over 2500 in month 23, and 4000 in month 53. I would anticipate that the peak daily demand could well exceed the 3 month rolling average, when there are particularly high but short term demands on the system. This peak demand would then exceed the desalination plant capacity at that time. I’ll be grateful if you can please supply clarification on this point.

- Section identifies that 2.3.13. “*Seawater contains dissolved solids other than salt and other minerals, which are also removed as part of the desalination process. This non-hazardous slurry material would be dried to produce a cake (25% dry solids) which would require off-site disposal. At peak desalination, up to one HGV-load of this material would be generated and exported per day.*”, but Section 2.3.15. “*A desalination plant typically converts 40% of the seawater it abstracts into fresh water.*” The latter is more in line with my general understanding of the process, but this implies that dissolved materials are “exported” as a component of a more concentrated salts solution, rather than a slurry / dried slurry. I’ll be grateful if you can please clarify what will be [REDACTED] / “waste” products from the process.

We wish to offer a comment on the overall approach of the Temporary Desalination Project. As described in the Consultation Document, the project requires a bespoke water intake, treatment plant and brine return system. I’d like to ask please what if any consideration has been given to integrating this process with the overall site sea water management, specifically to incorporating the seawater intake and brine return systems with the existing Sizewell B cooling water flow? Would it be possible to take the seawater to feed the desalination plant from this water flow – ideally after it has passed through the reactor cooling system (in which case no additional seater extraction will be needed) or if that is not possible, from the seawater system before it is used by Sizewell B. Brine produced by the process could be returned to the cooling seawater flow prior to its discharge to the sea. My understanding is that the consented abstraction for Sizewell B is of the order of 5 000 000 m<sup>3</sup> / day, and that the proposed sea water to abstracted for desalination (10 000 m<sup>3</sup> / day) or returned as brine (6 000 m<sup>3</sup> / day) represent only some 0.2 / 0.12 % respectively of this.

The benefits of such an approach would be –

- The proportion of change in the amount of seawater that would be extracted is minimal, and I would imagine could well be within existing consents.
- There will be no need for new “at sea” works (intake pipe, discharge pipe) with associated potential environmental impacts, and costs.
- The brine returned to the sea would be diluted by a large factor of up to 800 (depending on the actual flow of cooling water to the Sizewell B facility at any time), and thus render any effects to all intents and purposes undetectable.



We continually seek to improve how we respond to consultations, both in terms of efficiency and content. Therefore, if any of the points raised in this response are reflected in the project outcome we would appreciate being informed

Please do not hesitate to contact me should you have any queries on the above response.

Yours sincerely,

A solid black rectangular box used to redact the signature of Stephen Thompson.

**Stephen Thompson**

**Marine Science Officer**

**Eastern Inshore Fisheries and Conservation Authority**



# The Sizewell C Project

## Consultation Document Consultation on Temporary Desalination Plant

August 2021





# CONTENTS

<b>1.</b>	<b>INTRODUCTION</b>	<b>4</b>	3.1.	Finding out more	23
1.1.	Overview	4	3.2.	Responding to this consultation	23
1.2.	Policy context	6		REFERENCES	24
1.3.	Decarbonisation and the need for new nuclear capacity	7		<b>TABLES</b>	
1.4.	The Planning Process	7		Table 1.1: Summary of further proposed change	6
1.5.	The DCO Application	7		<b>FIGURES</b>	
1.6.	Process for seeking changes to the DCO Application	8		Figure 1.1: Sizewell C Project, Suffolk	5
1.7.	Structure of this Consultation Document	8		Figure 1.2: Planning process for the Project	7
<b>2.</b>	<b>TEMPORARY DESALINATION PLANT (PROPOSED CHANGE 19)</b>	<b>9</b>		Figure 2.1: Main development site sub-areas	9
2.1.	Introduction	9		Figure 2.2: Likely water demand profile during the construction period	11
2.2.	Water Supply Strategy	10		Figure 2.3: Initial location of the plant	13
2.3.	Description of Proposed Change 19	12		Figure 2.4: Subsequent location of the plant, if required	14
2.4.	Environmental impact of Proposed Change 19	17		Figure 2.5: Typical intake pipe headworks	15
<b>3.</b>	<b>RESPONDING TO CONSULTATION</b>	<b>23</b>		Figure 2.6: Typical outfall pipe with diffusers	17



# 1. INTRODUCTION

## 1.1. Overview

### The Application

**1.1.1.** An application for an order granting development consent under the Planning Act 2008 was made on 27 May 2020 by NNB Generation Company (SZC) Limited (“SZC Co.”) to the Planning Inspectorate (on behalf of the Secretary of State for Business, Energy and Industrial Strategy) (the “Application”). The Application was accepted for Examination by the Planning Inspectorate on 24 June 2020 (Application Reference: EN010012). An Examining Authority (“ExA”) was appointed on 30 June 2020 to examine the Application and the Examination is due to close by 14 October 2021. After the Examination has closed, the ExA will submit a report to the Secretary of State who will then make the decision on whether to grant the development consent order.

**1.1.2.** On 21 April 2021, 15 changes to the Application were accepted for Examination by the ExA [Examination Library Ref. **PD-013**] following a request made by SZC Co. in a letter dated 11 January 2021 [Examination Library Ref. **AS-105**] (“Accepted Changes”).

**1.1.3.** The Application is available on the Planning Inspectorate’s website at <https://infrastructure.planninginspectorate.gov.uk/projects/eastern/the-sizewell-c-project/?ipcsection=docs>

**1.1.4.** On 25 July 2021, a request for three further changes was submitted to the Examining Authority by SZC in a letter dated 23 July 2021 [Examination Library Ref. **REP5-002**] (“Requested Changes”).

**1.1.5.** SZC Co. now wishes to make one further change to the application in response to recent engagement with Northumbrian Water Limited in relation to the supply of potable water (see Section 2.2).

### The Project

**1.1.6.** The Application is for development consent to construct, operate and maintain the proposed Sizewell C nuclear power station, which would comprise two UK EPR™ reactor units with an expected net electrical output of approximately 1,670 megawatts per unit, giving a total site capacity of approximately 3,340 megawatts, along with associated development required for the construction, operation or maintenance of the Sizewell C nuclear power station or to mitigate its impacts (“Project”). The Sizewell C nuclear power station would be located in Sizewell in East Suffolk, approximately halfway between Felixstowe and Lowestoft; to the north-east of the town of Leiston.

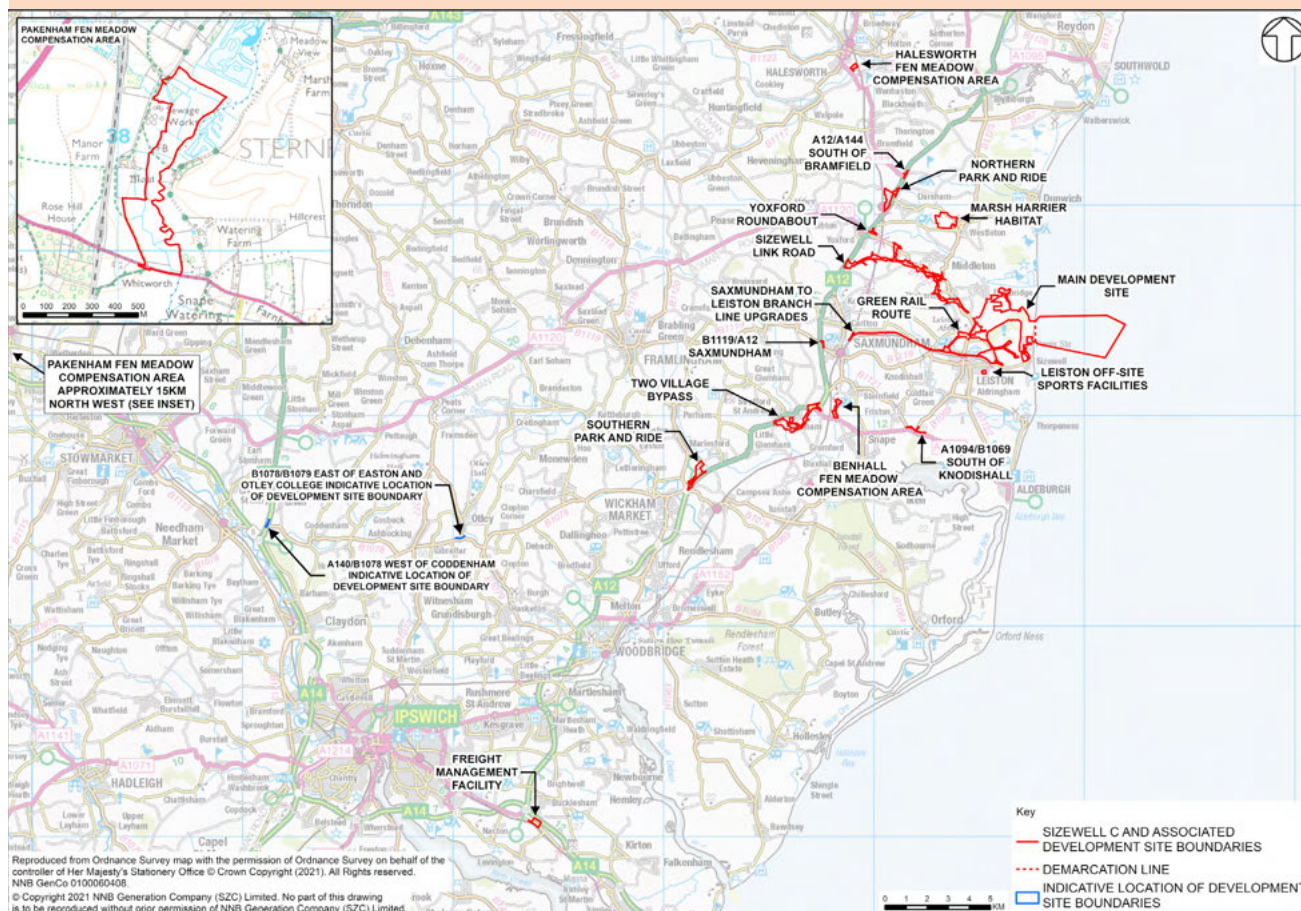
**1.1.7.** The main permanent works within the site include the nuclear power station; associated buildings, plant and infrastructure; an access road; a new National Grid 400kV substation; cooling water infrastructure; sea defences; a permanent beach landing facility and landscaping. Temporary development within the site includes construction compounds and spoil management areas; borrow pits; a temporary beach landing facility; concrete batching; relocation of certain Sizewell B infrastructure; rail infrastructure and accommodation campus. Proposed off-site associated development includes temporary park and ride sites; a two village bypass; a Sizewell link road; highway improvements; a temporary freight management facility; temporary rail infrastructure and permanent rail upgrade works.

**1.1.8.** Further details of the Project, including the other consents, licences and regulatory approvals required for the Project, are provided in the Application.

**1.1.9.** The locations of the elements of development that comprise the Project are shown in **Figure 1.1**.

<sup>1</sup> Registered office: 90 Whitfield Street, London W1T 4EZ.

Figure 1.1: Sizewell C Project, Suffolk



### Environmental Impact Assessment

**1.1.10.** The Project is an EIA development, as defined by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. An **Environmental Statement** was submitted with the Application (Examination Library refs. **APP-159 to APP-582**) pursuant to the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 and Marine Works (Environmental Impact Assessment) Regulations 2007. Details of environmental information submitted since acceptance of the Application, and how that information supplements or changes the Environmental Statement, are provided in the **Environmental Statement Signposting Document** (Examination Library ref. **REP2-025**).

### Proposed Changes

**1.1.11.** Prior to the Application being submitted to the Planning Inspectorate, SZC Co. undertook multiple stages of pre-application consultation. SZC Co. is grateful for the

extensive feedback that has already been received from the statutory consultees, the local community and the general public. The feedback from these stages of consultation was considered throughout the development of the proposals and strategies for the Project and in the finalisation of the Application. Details of the consultation carried out, and how SZC Co. had regard to the feedback, are provided in:

- **Consultation Report** [Examination Library Ref. **APP-068**],
- **Consultation Report Addendum** [Examination Library Ref. **AS-153**].
- **Consultation Report Second Addendum** [Examination Library Ref. **REP3-009**].
- **Consultation Report Third Addendum** [Examination Library Ref. **REP5-044**].

**1.1.12.** Throughout the ongoing Examination of the Application, SZC Co. has continued to engage with the local authorities, landowners and other stakeholder

groups, and has had regard to the representations submitted by interested parties to the examination about the Application. SZC Co. has also been working with its contractors to develop the proposals to the next level of detail in preparation for implementation, in the event that development consent for the Project is granted.

**1.1.13.** As a result, SZC Co. has identified the need to make a change to the Application. Before submitting a formal request to the ExA for this change to the Application to be accepted for examination, SZC Co. is consulting the local community, landowners and other stakeholders so that their views can be taken into account before the request is finalised. It will be for the ExA to decide if the change can be made to the Application.

**1.1.14.** The proposed change is described and explained throughout this Consultation Document and is summarised in **Table 1.1**. As explained in Section 2.3 of this document, SZC Co. considers that the proposed change would not result in any new or materially different likely significant effects on the environment from those presented in the

**Environmental Statement** [Examination Library Refs. **APP-444** to **APP-477**], as updated by the **Environmental Statement Addendum** for the Accepted Changes [Examination Library Refs. **AS-179** to **AS-260**], and other environmental information outlined in the **Environmental Statement Signposting Document** (Examination Library Ref. **REP2-025**).

**1.1.15.** A **Second ES Addendum** for the Requested Changes [Examination Library Ref. **REP5-062** to **REP5-069**] was submitted to the Examination at Deadline 5. Whilst the ExA has not yet reached a decision on whether to accept those changes into the Examination, it is noted that the proposed change set out below would neither affect, nor be affected by, the conclusions in the Second ES Addendum.

**1.1.16.** The numbering of the proposed change is Change 19 to follow consecutively from the previous 15 Accepted Changes [Examination Library Ref. **PD-013**] and the previous three Requested Changes [Examination Library Ref. **REP5-002**].

**Table 1.1: Summary of further proposed change**

ID	Description	Impact on Order limits
<b>Proposed Change 19: Temporary desalination plant</b>		
i	<b>A change to the Water Supply Strategy to propose new temporary infrastructure for the desalination and treatment of seawater to produce potable water suitable for construction-related activities until the Sizewell Transfer Main is delivered and operational.</b>	None

## 1.2. Policy context

**1.2.1.** The Overarching National Policy Statement (“NPS”) for Energy (“NPS EN-1”) (Ref 1.1) and the NPS for Nuclear Power Generation (“NPS EN-6”) (Ref 1.2) were considered by Parliament and formally designated in July 2011. Together, NPS EN-1 and NPS EN-6 provide the framework for development consent decisions on applications for new nuclear power stations which are capable of deployment by the end of 2025.

**1.2.2.** The need for the Project is established in NPS EN-1 and NPS EN-6 which lists Sizewell as one of eight potentially suitable sites for the deployment of new nuclear power stations in England and Wales before the end of 2025. NPS EN-1 confirms that all applications for development consent within the scope of the NPS should be assessed on the basis that the Government has demonstrated that there is a need for those types of infrastructure. NPS EN-1 confirms that it is Government policy that new nuclear power forms an important element of the strategy for moving towards a de-

carbonised, diverse electricity sector by 2050, and that nuclear power should be able to contribute to the UK’s need for new capacity. The need for new nuclear power generation is described as “urgent”.

**1.2.3.** Whilst SZC Co. remains confident that Sizewell is suitable for the deployment of a new nuclear power station, it is no longer possible for deployment to take place by the end of 2025. In December 2017, the Government published a Written Statement on Energy Infrastructure (ref. HLWS316) (the “2017 Ministerial Statement”) which reiterated the continuing need for new nuclear and explained that the Government had begun the process of consulting on the preparation of a new NPS for nuclear power stations expected to be deployed after 2025. For projects yet to apply for development consent and due to deploy beyond 2025, which includes Sizewell C, the 2017 Ministerial Statement confirmed that ‘Government continues to give its strong in principle support to project proposals at those sites currently listed in EN-6’ (Ref 1.3).



**1.2.4.** In July 2018, the Government published its response to the consultation. The Government’s Response (Ref 1.4) reiterated the statements made in the 2017 Ministerial Statement and confirmed again the important role of nuclear in the UK’s energy future. These matters have now been confirmed most recently in the Energy White Paper – Powering our Net Zero Future, December 2020 (Ref 1.5).

**1.2.5.** A more detailed explanation of the legislative and policy context of the Project can be found in **Chapter 3** of the **Planning Statement** [Examination Library Ref. **APP-590**] and the Planning Statement Update (Examination Library Ref. **REP2-043**).

### 1.3. Decarbonisation and the need for new nuclear capacity

**1.3.1.** Climate change is one of the greatest global challenges we face. To meet agreed global climate change targets, CO<sub>2</sub> emissions from all sectors must be reduced to near zero levels (Ref 1.6).

**1.3.2.** Nuclear power is the largest source of low-carbon electricity in the developed world (Ref 1.6) and the UK Government recognises that new nuclear power stations will form an important part of the country’s transition to a low-carbon energy system that is resilient, diverse and

value for money for end users (Ref 1.7). Nuclear generation has a lower carbon footprint than low-carbon alternatives, such as large-scale solar and carbon capture and storage, and a similar footprint to wind generation. It also has a significantly lower physical footprint, requiring around 1,000 times less land than solar and 1,500 times less land than onshore wind.

**1.3.3.** The Government recognises that new nuclear power stations are critical to the country’s transition to a more resilient, affordable and diverse low-carbon energy system. NPS EN-1 states:

*"Nuclear power generation is a low-carbon, proven technology, which is anticipated to play an increasingly important role as we move to diversify and decarbonise our sources of electricity ... [i]t is Government policy that new nuclear power should be able to contribute as much as possible to the UK’s need for new capacity."*

**1.3.4.** Sizewell C would provide 3,340 megawatts (3.34 gigawatts).

### 1.4. The Planning Process

**1.4.1.** The planning process for the Project is illustrated in **Figure 1.2**.

Figure 1.2: Planning process for the Project



**1.4.2.** General information about the planning process for nationally significant infrastructure projects is available on the Planning Inspectorate’s website: <http://infrastructure.planninginspectorate.gov.uk/>

### 1.5. The DCO Application

**1.5.1.** The full Application is available on the Planning Inspectorate’s website: <https://infrastructure.planninginspectorate.gov.uk/projects/eastern/the-sizewell-c-project/>. Details of how to request a copy of the Application are provided in **Chapter 3** of this Consultation Document.

**1.5.2.** The Application includes full descriptions of the

development proposed as part of the Project and a full environmental impact assessment. It also includes explanations of the key strategies SZC Co. proposes to adopt to ensure that Sizewell C is constructed, operated and maintained in a way that minimises the adverse impacts on the environment.

**1.5.3.** Throughout this Consultation Document references are made to documents within the Application. The Application is made up of nine “Books” of documents. A Document Reference number (in round brackets) refers to the Book of the Application in which that document can be found. For example, the Planning Statement is Doc Ref. 8.4 meaning it is the fourth document within Book 8. All of the documents which form the Application can be found at the



website listed above.

**1.5.4.** A **Navigation Document** [Examination Library Ref. **REP4-002**] has been prepared, which explains the structure of the Application and lists all documents that comprise the Application.

**1.5.5.** An Examination Library Reference (shown in square brackets) refers to the numbering assigned to each document in the ExA's Examination Library, which can be found at: <https://infrastructure.planninginspectorate.gov.uk/projects/eastern/the-sizewell-c-project/?ipcsection=docs>

## 1.6. Process for seeking changes to the DCO Application

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**1.6.1.** As explained above, 15 changes to the Application (referred to in this document as the Accepted Changes) were accepted for Examination by the ExA on 21 April 2021 and a request for three further changes was submitted to the Examining Authority on 23 July 2021 (referred to in this document as the Requested Changes).

**1.6.2.** SZC Co. is carrying out consultation on Proposed Change 19 in advance of submitting a third change request to the ExA. This consultation is being carried out in accordance with the Planning Inspectorate's Advice Note 16, which provides information about how to request a change to an application after it has been accepted and before the close of the examination. That Advice Note can be found at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/>

**1.6.3.** On 30 July 2021, SZC Co. wrote to the ExA to provide notification of its intention to consult on, and request a change to, the Application. A report entitled **Third Notification of Proposed Project Changes** which accompanied the letter identified the nature of the proposed change, the proposed approach to consultation and the intended timing of the submission of the request for the

change.

**1.6.4.** This consultation will run from **3 August 2021 to 27 August 2021**. Full details of the ways to respond are set out in Chapter 3 of this Consultation Document.

**1.6.5.** SZC Co. will consider feedback from the consultation, the outcome of further engagement with statutory consultees, ongoing technical studies and environmental assessment to decide whether to request the change to the Application. SZC Co. will then prepare a formal change request to submit to the ExA for its consideration.

## 1.7. Structure of this Consultation Document

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- **Chapter 2** describes the proposed change to the main development site proposals (Proposed Change 19) and the reasoning behind the change.
- **Chapter 3** sets out the different ways you can view this Consultation Document and the Application and lists the ways you can respond to this consultation.

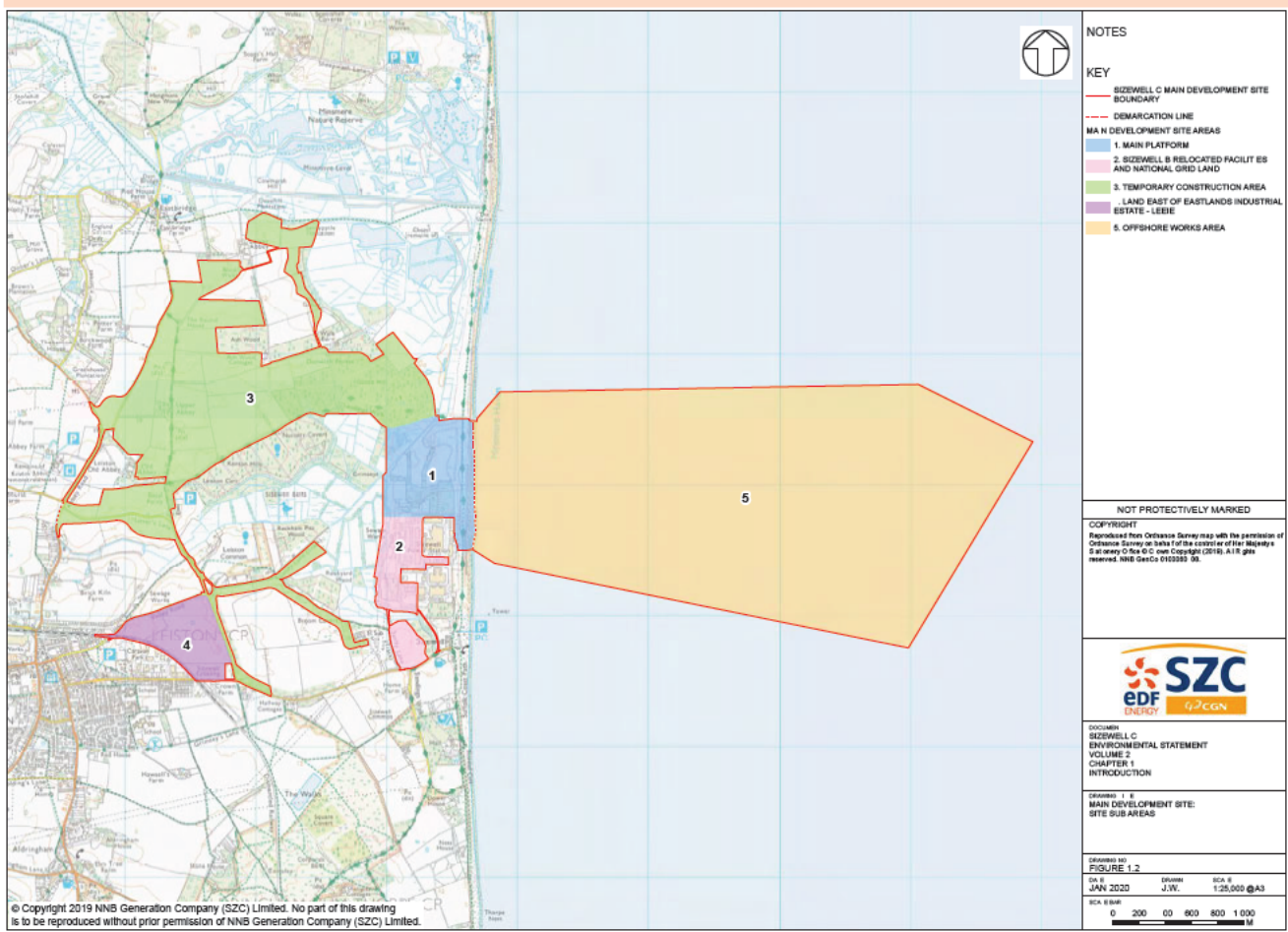
# 2. TEMPORARY DESALINATION PLANT (PROPOSED CHANGE 19)

## 2.1. Introduction

**2.1.1.** The main development site is located on the Suffolk coast, approximately halfway between Felixstowe and Lowestoft; to the north-east of the town of Leiston and within the administrative boundary of East Suffolk Council

(“ESC”) (refer to **Figure 2.1**). Once constructed, the Sizewell C nuclear power station would be located directly to the north of the existing Sizewell A and B power station complex.

Figure 2.1: Main development site sub-areas



**2.1.2.** This chapter describes the proposed change to the Water Supply Strategy which SZC Co. would like your views on. This chapter also provides an explanation of why the change is proposed.

## 2.2. Water Supply Strategy

### i. Background information

**2.2.1.** The construction process for the power station will include many activities that require a regular supply of water, both potable and non-potable. SZC Co. has developed a water supply strategy by engaging with stakeholders including the Environment Agency and Northumbrian Water Limited (trading locally as Essex and Suffolk Water (“ESW”)) to consider potential water sources. This is set out in the **Water Supply Strategy** [Examination Library Ref. **APP-601**] and the **Water Supply Strategy Update** [Examination Library Ref. **AS-202**, ES Addendum Appendix 2.2D].

**2.2.2.** The **Water Supply Strategy** recognised that there is likely to be insufficient potable water available locally to meet the full demands of the Project and identifies options. The **Water Supply Strategy Update** considers this further and explains why all potable water sources apart from one – a new Sizewell transfer main from Barsham Water Treatment Works – have been discounted. Barsham Water Treatment Works is located in the neighbouring Northern/Central Water Resource Zone (WRZ). The Sizewell transfer main would be provided by ESW and does not form part of the Application.

**2.2.3.** ESW’s Sizewell transfer main would involve construction of approximately 28km of replacement or new high pressure water mains, with associated infrastructure.

**2.2.4.** ESW were commissioned by SZC Co. to undertake two tasks:

- *Undertake modelling work to confirm ESW’s expectation that it is sustainable to abstract water from this WRZ.* In order to determine whether the Northern/Central WRZ can sustainably provide the water required by Sizewell C, ESW are undertaking an abstraction sustainability study as part of an Environment Agency led ‘Water Industry National Environment Programme’ (WINEP) scheme. ESW provided interim feedback in June 2021 identifying that the Sizewell C demand is likely to be sustainable subject to agreement with the Environment Agency and Natural England.
- *Develop an implementation plan for the transfer main.* In June 2021, ESW provided further information on the planning strategy and implementation schedule for the Sizewell transfer main. This confirmed that the transfer main would not be available until December 2024 at the earliest. They have also indicated that there is significant programme risk around this milestone and it may not be fully available until 2026 or later, which is significantly

later than previously expected.

**2.2.5.** For the early years of construction while the Sizewell transfer main is being constructed, SZC Co.’s expectation was that ESW would be able to balance water between the Northern/Central WRZ and the local Blyth WRZ using existing network connections with no net increase in abstraction within the Blyth WRZ. However, ESW have now confirmed that it is not feasible.

**2.2.6.** Now that SZC Co. has received this information it is clear that a temporary supplementary potable water source is necessary. Plans have been progressed for consultation at the earliest opportunity.

**2.2.7.** Further details on the Project’s expected demand for potable water and the need for a temporary alternative to meet this demand before the Sizewell transfer main is available is set out below.

### ii. Potable water demand profile

**2.2.8.** The amount of water required by the Project varies throughout the construction period depending on the types of construction activity that are taking place.

**2.2.9.** SZC Co. has sought to minimise the demand for potable water through measures such as:

- recycling potable water in certain construction processes (see below for further details);
- Using non-potable water where feasible (e.g. dust suppression, vehicle washing and wheel washing);
- Storing non-potable water to help ensure a continual supply; and
- Using water reduction fixtures and fittings within site buildings.

**2.2.10.** Certain construction activities will recycle water through the construction process as follows:

- Recycling the slurry returned from the Tunnel Boring Machines (TBMs) during certain marine tunnelling works. This is expected to reduce potable water demand associated with this activity by 30%.
- Adopting a similar process for the cut-off wall, to reduce demand associated with this activity by an expected 60%.
- Adopting specific measures to reduce potable water demand associated with the concrete batching process by approximately 20%.

**2.2.11.** A temporary solution to sourcing potable water remains necessary however because:

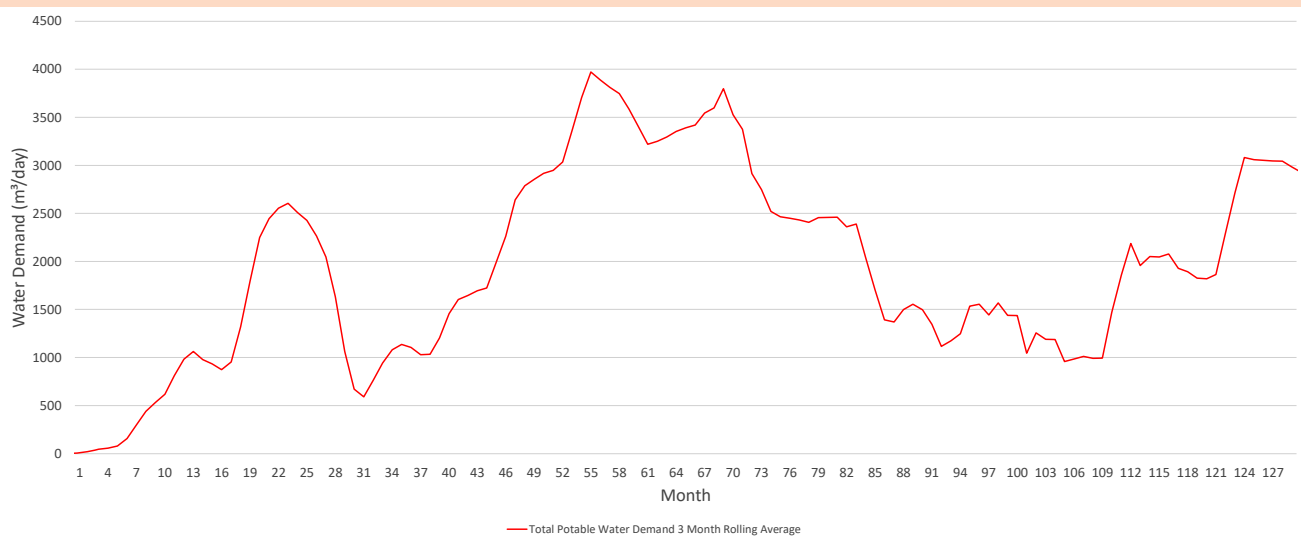
- The specialist nature of some construction activities on the site requires significant quantities of potable water.
- ESW, in consultation with the Environment Agency, have confirmed that no such water can be supplied to Sizewell C from the local Blyth water catchment area in the short term.
- The Sizewell transfer main, which would connect into the neighbouring Northern/Central water catchment area, will not be delivered until two years after construction is scheduled to start at the earliest. It is unlikely to be available within the first 4 years after construction has started (i.e. unlikely to be before 2026).

**2.2.12.** The likely potable water demand profile for the construction period is shown in **Figure 2.2**.

**2.2.13.** During the early years of construction, the demand for potable water is predicted to peak at approximately 2.5 Megalitres (Ml) per day (2,500 cubic metres (m<sup>3</sup>) per day). The potable water demand in this initial period is largely driven by the installation of the below-ground cut-off wall to hydraulically isolate the Main Platform from the wider environment before dewatering and deep excavation works can commence. Installing the cut-off wall is on the critical path for the construction programme.

**2.2.14.** During the main civil works, a peak demand of 4Ml per day (4,000 m<sup>3</sup> per day) is predicted to be required. This demand is largely driven by concrete batching, construction of the cooling water tunnels, placement of structural fill and welfare demands for the construction workforce.

**Figure 2.2: Likely water demand profile during the construction period**





## 2.3. Description of Proposed Change 19

**2.3.1.** As set out above, SZC Co. continues to engage closely with Essex and Suffolk Water on delivery of the Sizewell transfer main. However, the unavailability of this main for at least the first two years of construction requires a temporary additional water supply to be secured in order to meet the Project’s predicted water demand.

**2.3.2.** The potential change to the Application is for a temporary construction-phase desalination plant. Desalination is the process of removing salt and other minerals from seawater. The desalinated water would then be treated as necessary to create potable water.

**2.3.3.** The construction and operation of Sizewell C, including this potential addition to our Water Supply Strategy, will not impact the local supply of potable water. The desalination and seawater treatment process will also not impact or interact with groundwater or surface water.

**2.3.4.** The desalination plant will be required before the Sizewell transfer main is fully available. This is potentially for approximately the first four years of construction, i.e. to 2026 as set out in Paragraph 2.2.4 above. However, it should be assumed for the purposes of consultation that the desalination plant may need to be retained for longer – potentially throughout the majority of the construction period – in the unlikely event of a delay to delivery of the transfer main by Essex and Suffolk Water that is beyond their control. The desalination plant would be decommissioned once the transfer main is fully available.

**2.3.5.** Construction of the desalination plant would take approximately 4-6 months and can only commence once the Main Platform is suitably prepared. It is assumed that for the first 9-12 months of construction, potable water will need to be imported by road via water tanker truck. The number of tanker deliveries is likely to rise gradually during this period to approximately 40 deliveries per day. The capped HGV limits already established for the Project would remain unchanged.

**2.3.6.** The modular desalination plant would initially be capable of producing up to approximately 2,500m<sup>3</sup> of potable water per day. In the event that the water transfer main is not complete by the 4th year of construction, an additional module would be added to the plant to create the ability to produce up to approximately 4,000m<sup>3</sup> of potable water per day.

**2.3.7.** The desalination process comprises the following core components:

- Onshore desalination equipment.
- Seawater intake pipe and associated headworks.
- Brine water outfall pipe and associated diffusers.

### a) Onshore desalination equipment

**2.3.8.** The assumed technology is Sea Water Reverse Osmosis (SWRO) desalination. The plant would include between 6-9 containerised plant modules. Additional plant is required for the treatment and storage of water. The plant is assumed to operate up to 24 hours per day.

**2.3.9.** Plant would be delivered by road and is unlikely to comprise any Abnormal Indivisible Loads (AILs). The additional HGV movements would be within the already proposed HGV daily limit established for the Project during the early years.

**2.3.10.** The plant would initially be located in the Main Platform area. The height of the equipment is assumed to be up to 10m above ground level, which remains significantly below the maximum construction height parameters already established. The equipment would be located away from both Sizewell Marshes SSSI and Sizewell beach.

**2.3.11.** Once construction activity in the Main Platform area reaches a point where the desalination plant becomes a physical constraint (approximately Year 4 of construction), it would be relocated to the Temporary Construction Area (TCA) if the Sizewell transfer main is not already delivered by that time.

**2.3.12.** On-site diesel generators are assumed to be necessary to provide up to approximately 1.5 MVA of electricity for the plant located in the Main Platform. Once the construction site’s permanent electricity connection is installed and operational then the diesel generators would be decommissioned.

**2.3.13.** Seawater contains dissolved solids other than salt and other minerals, which are also removed as part of the desalination process. This non-hazardous slurry material would be dried to produce a cake (25% dry solids) which would require off-site disposal. At peak desalination, up to one HGV-load of this material would be generated and exported per day.

**2.3.14.** The indicative locations of the desalination plant are shown in Figures 2.3 and 2.4 below.

Figure 2.3: Initial location of the plant

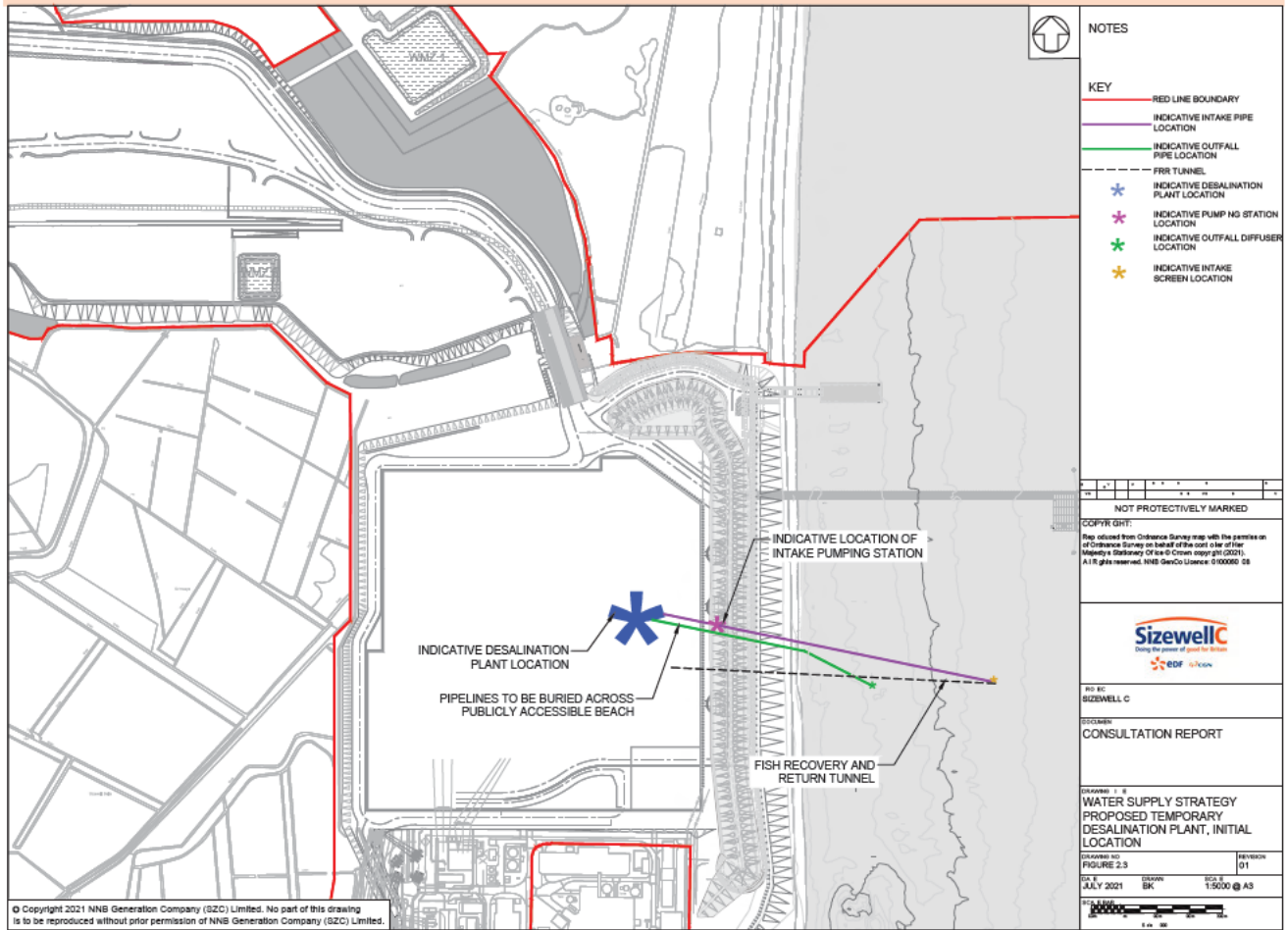
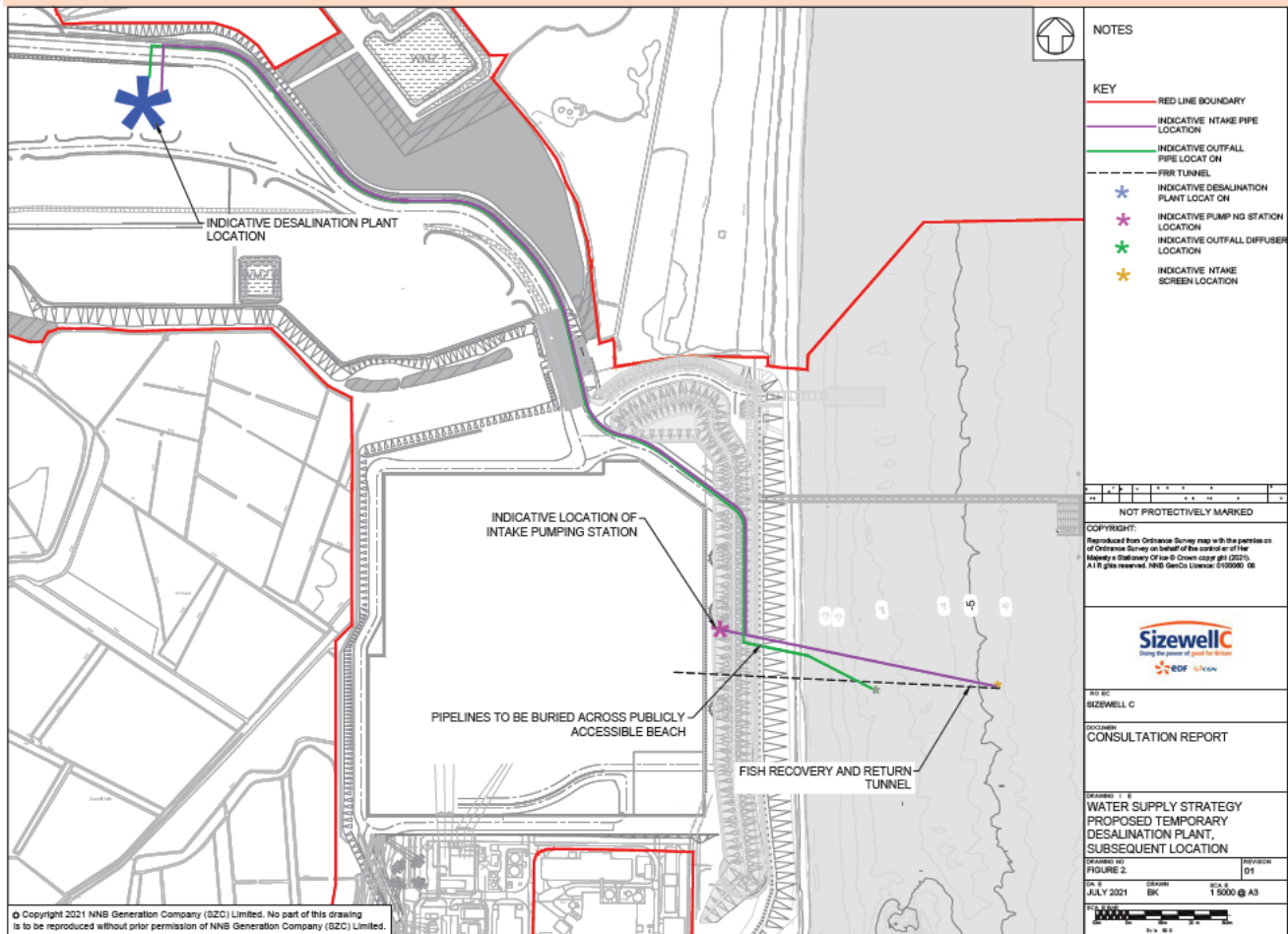


Figure 2.4: Subsequent location of the plant, if required



**b) Seawater intake pipe and associated headworks**

**2.3.15.** A desalination plant typically converts 40% of the seawater it abstracts into fresh water. Therefore, the seawater intake pipe will be sized to abstract up to 10Ml of water per day. This requires a small-bore pipeline (approximately 35cm diameter).

**2.3.16.** The pipe would extend approximately 380m seaward from the temporary Hard Coastal Defence Feature (HCDF). The indicative location of the pipe is shown in **Figures 2.3 and 2.4.**

**2.3.17.** The pipe would be installed under the beach and under the seabed using a trenchless construction method such as Horizontal Directional Drilling (HDD) or similar. It would be launched from the landward side of both the temporary HCDF and the haul road, using a drilling rig or similar. The pipe would therefore not be present on, or interact with, the surface of the beach or seabed except at

the drilling exit site (where a headworks/intake screen would be located as described below and illustrated above).

**2.3.18.** The intake pipe would hydraulically connect directly to a wet well chamber landward of the temporary HCDF and the haul road, which would be sufficiently deep to allow it to naturally fill with seawater under gravity. The exact water level would rise and fall with the tide but the well would be sufficiently deep to ensure it is constantly wet. The seawater would then be pumped out of the well and into the desalination plant.

**2.3.19.** The location of the above plant would be in the same area as the Tunnel Boring Machine launch shafts already assumed in the Application. For the avoidance of doubt, the location and height of the temporary HCDF would not change because of this proposal.

**2.3.20.** To prevent ingress of glass eels and other early life-stages of fish and larger invertebrates the seawater

intake would consist of a Passive Wedge-Wire Cylinder (PWWC) screen with a mesh size of approximately 2mm. The screen would be approximately 60cm in diameter and the headworks would be approximately 1.6m in length, as indicated in **Figure 2.5** below. The headworks would be positioned to reduce the tidal forcing against the screens and minimise approach velocities where possible. The flow velocities within the 35cm diameter pipeline would be between 1.1-1.7m/s.

**2.3.21.** The intake would be located underwater approximately 1m above the seabed. A temporary hazard buoy would be located directly above. The intake would not interact with the Beach Landing Facilities in any way.

**2.3.22.** The intake screen and pipework will be maintained by periodic cleaning using a compressed air cleaning system. Periodic shock chlorination within the headworks would be applied to prevent biofouling. Chlorine dosing would be

flow controlled and angled inwards to minimise chlorine emissions to the environment. Abstracted water would be dechlorinated prior to the Sea Water Reverse Osmosis membranes.

**2.3.23.** The headworks would be located close to the location of the Fish Recovery and Return (FRR) tunnel headworks, because the water depth is suitable (approximately 5m), and the area has already been extensively tested to establish its suitability as a headworks location. This location is seaward of the outer longshore bar. Localised dredging is assumed to be necessary in the immediate area surrounding the headwork.

**2.3.24.** The FRR is not required until the operation of the power station and use of the desalination intake pipe would cease before the FRR begins any commissioning tests towards the end of the construction period.

Figure 2.5: Typical intake pipe headworks





**2.3.25.** The seawater intake headworks would be decommissioned and removed once the transfer main is fully available. The buried intake pipeline would be grouted, capped and would remain in situ.

c) Brine water outfall pipe and associated diffusers

**2.3.26.** A desalination plant typically converts 40% of the seawater it abstracts into fresh water as stated previously. Therefore, the brine water outfall pipe will be sized to discharge up to 6ML of water per day. This again requires a small-bore pipe (approximately 25cm diameter).

**2.3.27.** The pipe would extend approximately 200m seaward from the temporary Hard Coastal Defence Feature (HCDF). The indicative location of the pipe is shown in **Figures 2.3 and 2.4**. This location is between the inner and outer longshore bars and would place the outfall pipe in water approximately 2.5m deep at lowest astronomical tide level. It would be sufficiently distant from the intake to minimise re-entrainment of the brine water.

**2.3.28.** The outfall pipe would also be installed under the beach and under the seabed using a trenchless construction method such as Horizontal Directional Drilling (HDD) or

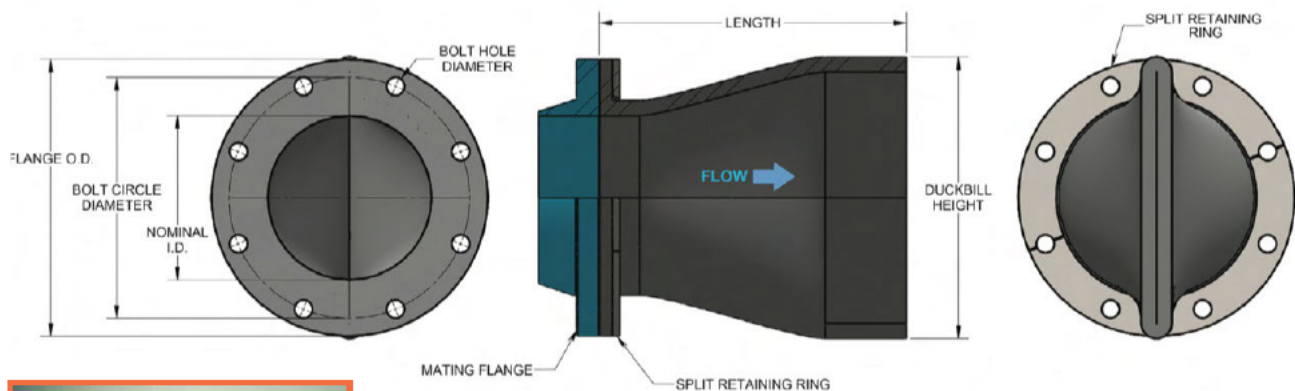
similar. Water to be discharged via the outfall pipe is likely to be pumped from the Main Platform and will be at least two metres below the lowest beach or seabed level, except at the outfall pipe exit site. A bentonite recovery system would be used during drilling to minimise emissions.

**2.3.29.** The outfall pipe would include diffusers, in the form of a series of nozzles at the seaward end to help disperse the brine water, as indicatively shown on **Figure 2.6**. These are likely to be based on a 'duck bill' design to prevent intrusion of sand, sediment, saltwater and marine growth. Periodic inspection and cleaning of the outfall diffusers will be required to ensure correct operation. A temporary hazard buoy would be located directly above. The outfall pipe would not interact with the Beach Landing Facilities in any way.

**2.3.30.** Localised dredging is assumed to be necessary in the immediate area surrounding the diffusers.

**2.3.31.** The brine water will be balanced and mixed on the construction site as part of the desalination process. It will then be stored in a storage tank adjacent to the desalination plant and pumped through the outfall pipe in a controlled manner on a continuous basis (24-hours per day).

Figure 2.6: Typical outfall pipe with diffusers



## 2.4. Environmental impact of Proposed Change 19

**2.4.1.** A preliminary environmental assessment of whether there would be any new or materially different likely significant effects on the environment, arising as a result of Proposed Change 19 has been undertaken based on the assumptions set out in this chapter, with reference to the previous assessments presented within **Volume 2** of the **Environmental Statement** [Examination Library Refs. **APP-178** to **APP-347**], as updated by the **Environmental Statement Addendum for the Accepted Changes** [Examination Library Refs. **AS-179** to **AS-260**], and other environmental information outlined in the **Environmental Statement Signposting Document** (Examination Library Ref. **REP2-025**).

**2.4.2.** Terrestrial ecology and ornithology, amenity and recreation, historic environment, soils and agriculture, and groundwater and surface water and flood risk were screened out of any further assessment. This is due to the typically sealed nature of the desalination process within pipes and containerised equipment and its central location within an area of already substantial construction activity and associated mitigation measures.

**2.4.3.** Similarly, Proposed Change 19 would not alter the impacts of the proposed development with regard to: socio-economics, climate change, major accidents and disasters; and, radiological effects.

**2.4.4.** The remainder of this section, provides a summary of the environmental topic/receptor where there was considered to be the potential for the environmental effects to be altered as a result of Proposed Change 19, including coastal geomorphology and hydrodynamics, marine water quality and sediments, marine ecology and fisheries, marine navigation, marine historic environment, air quality, transport, landscape and visual, geology and land quality, noise and vibration, and conventional waste and material resources. This included consideration of the changes to baseline conditions (such as potential additional receptors affected and any changes to the extent of the study area), the assessment of impacts and mitigation required.

### a) Coastal Geomorphology and Hydrodynamics

(With reference to the Environmental Statement Volume 2, Chapter 20 [Examination Library Ref. **APP-311**] and First Environmental Statement Addendum Volume 1, Chapter 2 [Examination Library Ref. **AS-181**])

**2.4.5.** Construction of the pipelines will be by HDD, meaning that the only disturbance for coastal geomorphology will be at the intake and outfall headworks, which will be above the seabed level. These works can be considered similar to the headworks for the FRR (particularly the intake head, seaward of the outer bar) and within the scope of the original assessment. The outfall head is within the trough between the inner and outer bars, so a new depth-appropriate calculation of associated scour will be required, however, this will not lead to significant effects as it does not directly affect the longshore transport associated with either bar.

**2.4.6.** Cumulative impacts of these works are (strictly) additional to the existing assessment of the ES and First ES Addendum, however, the ES has already recognised uncertainty regarding the resilience of the bar and beach morphology to multiple minor disturbances. The additional effects of the proposed headworks, which are relatively small structures, are therefore likely to be comparable to previous assessments.

**2.4.7.** The Coastal Processes Monitoring and Mitigation Plan (CPMMP) would enable detection of unexpected effects on these features and will apply equally to any potential small-scale impacts associated with the desalination works.

### b) Marine Water Quality and Sediments

(With reference to the Environmental Statement Volume 2, Chapter 21 [Examination Library Ref. **AS-034**] and First Environmental Statement Addendum Volume 1, Chapter 2 [Examination Library Ref. **AS-181**])

**2.4.8.** During construction, the installation of the intake heads and diffuser outfall would require localised dredging. Changes in suspended sediments associated with these activities are anticipated to be comparable to previous assessments in the Environmental Statement which were predicted to be short-lived and not significant for water quality relative to natural variation.

**2.4.9.** Abstraction would occur for up to 24 hours per day whilst controlled brine discharges would be continuous over a 24 hour period. Approximately 90-99% of the loading of most of the substances present in the 40% abstracted seawater would be discharged back to sea as a brine concentrate. The concentrate discharged would be at ambient temperature but would be approximately 1.6 times more concentrated than natural seawater at Sizewell. The only conditioning chemical expected in the discharge concentrate is phosphorus, derived from use of a membrane descaling chemical.

**2.4.10.** The high salinity discharge would be denser than the seawater and would tend to sink to the seabed. This would be mitigated through use of a diffuser head (see **Figure 2.6**) that will would facilitate rapid mixing. The discharge is also well within the surf zone that would favour mixing. Only very localised increases in salinity are expected. Although phosphorus is added to the discharge as noted above, this additional nutrient loading of the Sizewell Bay is expected to be comparable to previous assessments in the Environmental Statement. This will be evaluated as appropriate with additional nutrient modelling included in a H1 type assessment.

**2.4.11.** The brine discharge from the desalination process would contain higher concentrations of naturally occurring metals and trace elements present in natural seawater. A preliminary H1 screening assessment indicates that the small volume discharge may exceed screening thresholds for zinc and chromium. Any such effect is likely to be limited close to the point of discharge due to rapid mixing. The discharge rate and the magnitude of the zinc and chromium concentrations for the desalination concentrate are similar to those for assessments made for other construction discharges which were assessed as not significant. More detailed modelling will be undertaken as part of a H1 type assessment to confirm effects on marine water quality.

#### c) Marine Ecology and Fisheries

(With reference to the Environmental Statement Volume 2, Chapter 22 [Examination Library Ref. **AS-035**] and First Environmental Statement Addendum Volume 1, Chapter 2 [Examination Library Ref. **AS-181**])

**2.4.12.** The intake and outfall infrastructure would be located in the shallow subtidal area where the broad infaunal and epifaunal benthic community is typical of most of the Greater Sizewell Bay. Both the infauna and epifauna assemblages are common in a regional context and are part of a larger community distributed across the southern North Sea 'infralittoral region', corresponding to subtidal areas less than 50m deep. The location of the desalination plant intakes and outfalls are distant from sensitive benthic features such as Sabellaria spinulosa reefs which would therefore be unaffected.

**2.4.13.** Construction of the pipelines will be by HDD, meaning that the only disturbance for marine ecology receptors will be at the intake and outfall headworks. The installation of the intake heads and diffuser outfall would require localised dredging, which would involve removal of substrate, changes in suspended sediments and sedimentation rate, and limited underwater noise.

Potential impacts associated with the physical presence of the infrastructure and associated scour protections include loss or change in habitat type and the potential for the spread of non-indigenous invasive species. Each of these potential impacts will be fully assessed. The magnitude of impacts of the desalination infrastructure is anticipated to be comparable to previous assessments in the Environmental Statement Volume 2, Chapter 22 [Examination Library Ref. **AS-035**] for the FRR outfall installation, which was predicted to have minor localised effects.

**2.4.14.** During the installation of the offshore desalination infrastructure, hierarchical safety buffer zones would be applied surrounding construction vessels with potential implications for local fisheries interests. Any construction activities resulting in reduced access would be communicated in advance by means of the Fisheries Liaison and Co-existence Plan, secured under Condition 20 of the Deemed Marine Licence [Examination Library Ref. **REP5-027**].

**2.4.15.** To prevent ingress of glass eels and other early life-stages of fish and larger invertebrates the seawater intake would consist of a passive wedge-wire cylinder (PWWC) screen with a mesh of approximately 2mm. The headworks would be positioned such as to reduce the tidal forcing against the screens and minimise approach velocities where possible. The relatively low abstraction rates (equivalent to less than 0.09% of the proposed cooling water abstraction once operational) coupled with the intake mitigation would result in negligible losses of fish and invertebrates.

**2.4.16.** Approximately 60% of the abstracted seawater would be discharged back into the sea. The discharge would consist of concentrated saline water, increased concentrations of naturally occurring metals as well as added phosphorus and a preliminary H1 screening assessment of the proposed discharges indicates that the small volume discharge may exceed screening thresholds for zinc and chromium as noted above. A full assessment will consider the magnitude of saline, trace metal and nutrient discharges in relation to the sensitivity of marine ecology receptors. The application of a diffuser and small volume discharges indicate that the effects of the dense saline discharges would be highly localised to the vicinity of the diffuser outfalls. The ES assessed construction nutrient additions, and determined the Greater Sizewell Bay system is rarely phosphate limited. Therefore, small increases in phosphates are unlikely to increase the assessment of effects presented in the ES. Initial indications suggest the magnitude of zinc and chromium discharges are likely to be similar to those assessed in the ES for construction discharges during dewatering and are not anticipated to cause significant effects.

#### d) Marine Navigation

(With reference to the Environmental Statement Volume 2 Chapter 24 [Examination Library Ref. **APP-337**] and First Environmental Statement Addendum Volume 1, Chapter 2 [Examination Library Ref. **AS-181**])

**2.4.17.** The potential change does not affect the marine navigation baseline reported in the ES, as updated by the First ES Addendum, and no additional receptors will be impacted.

**2.4.18.** No significant effects are predicted in the ES or First ES Addendum as a result of the additional offshore infrastructure which is close to shore where very little marine navigation activity currently takes place.

**2.4.19.** No additional impacts are anticipated during the construction phase as the offshore structure is to be located within a construction area which will be charted and marked with buoyage.

**2.4.20.** Further assessment will be undertaken to confirm the impacts and any further mitigation which may be required to minimise the risk to marine users.

#### e) Marine Historic Environment

(With reference to the Environmental Statement Volume 2 Chapter 23 [Examination Library Ref. **APP-334**] and First Environmental Statement Addendum Volume 1, Chapter 2 [Examination Library Ref. **AS-181**])

**2.4.21.** The potential changes do not affect the baseline reported in the ES, as updated by the First ES Addendum, and no additional receptors will be impacted.

**2.4.22.** The HDD associated with the desalination plant and localised dredging activity would not result in materially different significant effects compared to the original scheme.

**2.4.23.** There remains the potential for disturbance to buried archaeological remains, and the overall residual effect following the implementation of an agreed scheme of archaeological investigation would be of the same magnitude or greater as presented in the ES and ES Addendum.

**2.4.24.** Further assessment may be required following a review of any updated or additional coastal and geomorphology assessment.

#### f) Transport

(With reference to the Environmental Statement Volume 2, Chapter 10 [Examination Library Ref. **APP-198**] and First Environmental Statement Addendum Volume 1, Chapter 2 [Examination Library Ref. **AS-181**])

**2.4.25.** The potential change does not affect the baseline reported in the ES, as updated by the First ES Addendum, and no additional receptors will be impacted.

**2.4.26.** The increase in HGV deliveries would remain within the HGV limits set for the Project and the conclusions of the assessment presented in the ES, as updated by the First ES Addendum, would remain unchanged.

#### g) Noise and Vibration

[With reference to Environmental Statement Volume 2 Chapter 11 [Examination Library Ref. **APP-202**] and First Environmental Statement Addendum Volume 1, Chapter 2 [Examination Library Ref. **AS-181**])

**2.4.27.** There is no change to the baseline assessment for noise and vibration reported in the ES, as updated by the First ES Addendum, resulting from the proposed changes which are sited within the site boundary.

**2.4.28.** The desalination plant and associated generators would not be located at the construction site boundary, or near to any noise-sensitive receptors identified in the ES. By implementing good construction practice in accordance with BS5228-1: 2009+A1: 2014, as required by the **Code of Construction Practice** [Examination Library Ref. **REP5-078**], for instance through the use of localised screening or other noise suppression measures, no new or materially different significant effects are likely and the environmental assessment would remain the same.

#### h) Air Quality

(With reference to the Environmental Statement Volume 2 Chapter 12 [Examination Library Ref. **APP-212**] and First Environmental Statement Addendum Volume 1, Chapter 2 [Examination Library Ref. **AS-181**])



**2.4.29.** The potential change does not affect the baseline reported in Volume 2, Chapter 12 of the ES, as updated by the First ES Addendum, and no additional receptors will be impacted.

**2.4.30.** No significant effects are predicted in the ES, as updated by the First ES Addendum, as a result of emissions during the construction, and it is highly unlikely that the additional temporary generators would give rise to any significant effect. These generators would be regulated through an environmental permit which will set controls on emission levels and plant operation, as appropriate.

**2.4.31.** Further assessment will be undertaken to confirm the preliminary view that there would be no new or materially different significant effects as a result of Proposed Change 19, and will include a qualitative assessment of the additional temporary generators.

i) Landscape and Visual

(With reference to the ES Volume 2 Chapter 13 [Examination Library Ref. **APP-216**] and First Environmental Statement Addendum Volume 1, Chapter 2 [Examination Library Ref. **AS-181**])

**2.4.32.** As the potential change is within the site boundary and is within the parameter heights set out and assessed in the Application, there would not be a change to the extent of the 15km study area for the landscape and visual impact assessment.

**2.4.33.** Furthermore, no new landscape or visual receptors would be affected from those identified in the landscape and visual impact assessment presented in the ES, as updated by the First ES Addendum, as a result of the proposed change.

**2.4.34.** The proposed change neither increases parameter heights nor brings additional development onto the beach or coastal path. The proposed change would not alter the assessment of effects on landscape and seascape character, visual receptors or designated or defined landscapes and seascapes during the construction phase from that presented in the ES, as updated by the First ES Addendum.

j) Geology and Land Quality

(With reference to Environmental Statement Volume 2 Chapter 18 [Examination Library Ref. **APP-280**] and First Environmental Statement Addendum Volume 1, Chapter 2 [Examination Library Ref. **AS-181**])

**2.4.35.** There is no change to the baseline assessment for geology and land quality reported in the ES, as updated by the First ES Addendum, resulting from the proposed changes.

**2.4.36.** The addition of the desalination plant will not alter baseline conditions. The baseline assessment has considered the potential presence of contamination in the two areas proposed to be used as a desalination plant with reference to existing desk study and ground investigation reports; this has identified no unacceptable contamination. The assessment has also considered the potential impact to receptors during construction through the introduction of new contamination on-site, such as the use and storage of chemicals that may be associated with the desalination plant. Furthermore, the assessment has previously considered the introduction of new pathways through activities such as any earthworks, and the construction of below ground service corridors and pipelines. Therefore, no potential for new or materially different significant effects have been identified and the environmental assessment would remain the same.

k) Conventional Waste and Material Resources

(With reference to Environmental Statement Volume 2 Chapter 8 [Examination Library Ref. **APP-193**] and First Environmental Statement Addendum Volume 1, Chapter 2 [Examination Library Ref. **AS-181**])

**2.4.37.** There is no change to the baseline assessment for material resources and waste management infrastructure reported in the ES, resulting from the proposed change.

**2.4.38.** During construction, the change to non-hazardous waste generated by the potential option would be minimal, especially within the context of the overall effects of the main development site. Therefore, no potential for new or different significant effects has been identified.

l) Habitats Regulations Assessment (HRA)

[With reference to Shadow Habitats Regulations Assessment Report and Addenda [Examination Library Reference: **APP-145** to **APP-152**, **AS-173** to **AS-178** and **REP2-032**]

**2.4.39.** There is no change to the baseline which is defined in the Shadow HRA Report Addenda [Examination Library Reference: **APP-145** to **APP-152**, **AS-173** to **AS-178** and **REP2-032**].

<sup>2</sup> British Standard BS5228-1 Noise: 2009+A1: 2014 – Code of Practice for noise and vibration control at open construction sites – Noise

**2.4.40.** The marine infrastructure, i.e. the intake and outfall pipes and headworks, would be installed within the Outer Thames Estuary SPA and the Southern North Sea SAC, as is the case for the other proposed marine infrastructure associated with Sizewell C which have been assessed in the Shadow HRA Report.

**2.4.41.** The terrestrial components of the plant would be located in areas already identified as construction areas and the baselines relevant to these areas are already defined in the Shadow HRA Report.

**2.4.42.** Siting of the desalination plant within areas already identified as construction areas, away from the boundaries of the construction site and noise-sensitive receptors, as proposed, means there is no potential for new, or materially different environmental effects to arise of relevance to terrestrial European sites, their designated habitats or species, as already defined and assessed in the Shadow HRA Report.

**2.4.43.** The potential for impacts on the marine water quality associated with the outfall are described above. On the basis of that assessment of marine water quality, it is concluded, on a preliminary basis, that there would be no new or materially different environmental effects compared to those reported in the Shadow HRA Report. There is no potential for any Adverse Effects on Integrity to arise in respect of either the Outer Thames Estuary SPA or the Southern North Sea SAC, via water quality changes, for the designated features of interest, including, but not limited to, red-throated divers, little terns or harbour porpoises.

**2.4.44.** The potential for impacts on marine ecology and fisheries associated with the intake and outfall are described above. On the basis of that assessment of fish populations, it is concluded on a preliminary basis that there would be no new or materially different environmental effects compared

to those reported in the Shadow HRA Report (including the Shadow HRA Addendum). There is therefore no potential for Adverse Effects on Integrity to arise in respect of either the Outer Thames Estuary SPA or the Southern North Sea SAC, via the route of fish as prey, for the designated features of interest, including, but not limited to, red-throated divers, little terns or harbour porpoises.

**2.4.45.** Similarly it is concluded that there would be no potential for Adverse Effects on Integrity to arise in respect of either the Outer Thames Estuary SPA or the Southern North Sea SAC by way of project-wide effects, in this case the addition of any water quality or fish as prey impacts, together with any other construction related impacts in the marine environment such as piling, dredging or vessel movements, all of which have been considered in the Shadow HRA Report (including the Shadow HRA Addendum).

#### m) Other environmental topics and receptors

**2.4.46.** The potential change as set out in **Section 2.3** does not alter the baseline conditions, the assessment of impacts or mitigation identified for any of the other environmental assessment topic areas or receptors as presented in the Application.

**2.4.47.** Proposed Change 19 would also not alter the conclusions of the Flood Risk Assessment [Examination Library Refs. **APP-093** to **APP-144**, **AS-157** to **AS-172**, ] or the Water Framework Directive Assessment [Examination Library Refs. **APP-619** to **APP-633** and **AS-277** to **AS-279**].

# 3. RESPONDING TO CONSULTATION

## 3.1. Finding out more

**3.1.1.** This Consultation Document, together with the online response form (see Section 3.2 below), is available to download between 3 August and midnight 27 August 2021 from the homepage of [www.sizewellc.co.uk](http://www.sizewellc.co.uk).

**3.1.2.** If you require this information in a different format for accessibility reasons or wish to request an electronic copy (on a USB stick) or a hard copy, please call Freephone 0800 197 6102 between 09:00 and 17:00 Monday to Friday or email [info@sizewellc.co.uk](mailto:info@sizewellc.co.uk). These are free of charge, though reasonable postage charges may apply.

**3.1.3.** Alternatively, subject to any applicable government restrictions in response to Covid-19 that may apply, you can book an appointment to view the Application and Consultation Document at:

- The Sizewell C Information Office at 48-50 High Street, Leiston IP16 4EW (please call 0800 197 6102 to make an appointment) – the complete set of Application documents and the Consultation Document are available in both electronic and hard copy; and
- The Council Offices of the Leiston-cum-Sizewell Town Council at Council Offices, Main Street, Leiston IP16 4ER (please call 01728 830388 to make an appointment) – the Application documents are available in electronic copy and the Consultation Document is available in hard copy.

**3.1.4.** This consultation has been publicised through:

- Newsletters – SZC Co. has publicised this consultation in its Sizewell C Newsletter which is available on the homepage of [www.sizewellc.co.uk](http://www.sizewellc.co.uk);
- Local media – SZC Co. has publicised this consultation in local newspapers;
- Social media – SZC Co. has a Twitter account and followers are updated on the latest events and news during the public consultation (@edfesizewellc); and
- Site notices: SZC Co. has publicised this consultation through notices displayed at the Project sites.

**3.1.5.** In addition to the Consultation Document, the other methods available to support engagement with this consultation include:

- Contacting the Project Team: Call Freephone 0800 197 6102 between 09:00 and 17:00 Monday to Friday. Members of the team can discuss the consultation over the phone. Questions or requests for documents can also be emailed to [info@sizewellc.co.uk](mailto:info@sizewellc.co.uk).

- Presentations – town and parish councils, community groups and stakeholders can request online meetings and presentations during the consultation period, which SZC Co. will seek to accommodate where possible.
- Sizewell C website – [www.sizewellc.co.uk](http://www.sizewellc.co.uk) has additional information about the Project and includes links to the Application, this Consultation Document, the Sizewell C Newsletter and the online response form.

## 3.2. Responding to this consultation

**3.2.1.** Any responses to this consultation on Proposed Change 19 must be submitted to SZC Co. by the latest of **midnight 27 August 2021** via one of the methods below:

- Complete a response form online ([www.sizewellc.co.uk](http://www.sizewellc.co.uk)), which contains a series of questions about Proposed Change 19 – this is SZC Co.'s preference for how consultees should respond to this consultation;
- Email comments on Proposed Change 19 to [info@sizewellc.co.uk](mailto:info@sizewellc.co.uk);
- Post comments on Proposed Change 19 to FREEPOST SZC CONSULTATION (no stamp or further address required); or
- If you are shielding and unable to use the above methods, call Freephone 0800 197 6102 (09:00 – 17:00 Monday to Friday) to arrange for your comments on Proposed Change 19 to be collected.

**3.2.2.** If you are registered as an interested party in respect of the examination of the Application, please specify your unique reference number in your response.

**3.2.3.** It is important that responses are submitted to SZC Co., not the Planning Inspectorate's panel appointed to examine the application (ExA), so that we can take your feedback into account before finalising the change request that will be submitted to the ExA. Completed response forms and comments about Proposed Change 19 must be received by SZC Co. by no later than **midnight 27 August 2021**.

**3.2.4.** Any responses received by SZC Co. will subsequently be provided by SZC Co. to the ExA who may publish these responses at: <https://infrastructure.planninginspectorate.gov.uk/projects/eastern/the-sizewell-c-project/>

<sup>3</sup> Any details provided to SZC Co. via email or the telephone will be subject to SZC Co.'s privacy policy, which is available to view at: <https://www.edfenergy.com/privacy/NNB>

# REFERENCES

- 1.1** Department of Energy and Climate Change, Overarching National Policy Statement for Energy (EN-1) (London: The Stationery Office, 2011)
- 1.2** Department of Energy and Climate Change, National Policy Statement for Nuclear Power Generation (EN-6) (London: The Stationery Office, 2011)
- 1.3** Department for Business, Energy and Industrial Strategy (2017). Consultation on the Siting Criteria and Process for a New National Policy Statement for Nuclear Power with Single Reactor Capacity Over 1 Gigawatt Beyond 2025. (Online). Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/666057/061217\\_FINAL\\_NPS\\_Siting\\_Consultation\\_Document-1.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/666057/061217_FINAL_NPS_Siting_Consultation_Document-1.pdf)
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- 1.5** The Energy White Paper – Powering our Net Zero Future (2020) Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/945899/201216\\_BEIS\\_EWP\\_Command\\_Paper\\_Accessible.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/945899/201216_BEIS_EWP_Command_Paper_Accessible.pdf)
- 1.6** Neil Hirst, The role of nuclear electricity in a low-carbon world (Imperial College London, 2018). Available at: <https://www.imperial.ac.uk/media/imperial-college/grantham-institute/public/publications/briefing-papers/BP24-The-role-of-nuclear-electricity-in-a-low-carbon-world.pdf>
- 1.7** Department for Business, Energy & Industrial Strategy, Updated Energy and Emissions Projections 2018 (London, 2019). Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/794590/updated-energy-and-emissions-projections-2018.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/794590/updated-energy-and-emissions-projections-2018.pdf)



[www.sizewellc.co.uk](http://www.sizewellc.co.uk)

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