

Dungeness B Nuclear Decommissioning

EIA Scoping Report

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1. Introduction

1.1 Overview

- 1.1.1 This Environmental Impact Assessment (EIA) Scoping Report has been prepared by AECOM Limited (hereafter referred to as 'AECOM') on behalf of EDF Energy Nuclear Generation Limited (hereafter referred to as the 'Applicant') as part of the application for consent from the Office for Nuclear Regulation (ONR) to decommission and dismantle the Dungeness B Nuclear Power Station (hereafter referred to 'Dungeness B'). The decommissioning and dismantling works at Dungeness B which are subject to ONR consent are referred to as the 'Proposed Works'.
- 1.1.2 This EIA Scoping Report supports a request by the Applicant, under Regulation 6 (1) of the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999 (as amended) (hereafter referred to as 'EIADR')¹, for a written Pre-application Opinion to be provided by ONR with respect to the scope of the EIA to be reported in the Environmental Statement (ES) for the Proposed Works.
- 1.1.3 This chapter provides an overview of the Applicant and the Nuclear Decommissioning Authority (**Section 1.2**), the Proposed Works (**Section 1.3**), the project team (**Section 1.4**), and the purpose (**Section 1.5**) and structure (**Section 1.6**) of this EIA Scoping Report.

1.2 The Applicant and the Nuclear Decommissioning Authority

- 1.2.1 The Applicant is the existing Nuclear Site Licence (NSL) Company for Dungeness B.
- 1.2.2 In 2021, the UK Government's Department for Business, Energy and Industrial Strategy (now the Department of Energy Security and Net Zero), the Nuclear Liabilities Fund (NLF), and the Applicant agreed revised arrangements to deliver the decommissioning and dismantling of the Applicant's fleet of seven Advanced Gas Cooled Reactor (AGR) stations. After the reactors have been confirmed as fuel-free, a process called Fuel Free Verification (FFV), and following a transition period, the AGR sites will individually be transferred to the Nuclear Decommissioning Authority (NDA). Nuclear Restoration Services (NRS) Ltd (formerly 'Magnox'), a subsidiary of NDA, will become the licensee responsible for the implementation of decommissioning.
- 1.2.3 A target of about nine months after FFV is planned for this transfer, subject to all the necessary regulatory approvals and as appropriate for the management of change, to allow for the transfer of the site license from the Applicant to NRS. The NDA will take overall ownership of the long-term strategic decommissioning and dismantling programme.

¹ Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999. Available at: <https://www.legislation.gov.uk/ukSI/1999/2892/contents> [Accessed 28/10/2025].

1.3 The Proposed Works

- 1.3.1 Dungeness B is a 1,120 Megawatt (MW) twin reactor AGR station, which commenced generation on 3rd April 1983. Following a station outage in 2018, a decision was made to end generation on 7th June 2021 as a non-elective closure due to technical constraints.
- 1.3.2 The Proposed Works include the decommissioning of the plant and apparatus, and the deconstruction of buildings and structures within and outside the NSL boundary that were an integral part of normal operation of the Dungeness B to allow it to generate electricity. To assist the identification of the area required for the decommissioning and dismantling of Dungeness B, a 'Works Area' has been identified. The NSL boundary and Works Area are shown in **Figure 1-1**.
- 1.3.3 The objective of the Proposed Works is to complete the decommissioning and dismantling of Dungeness B in a manner that demonstrably manages nuclear liabilities and reduces conventional and radiological risks to levels that are As Low as Reasonably Practicable (ALARP), in accordance with UK regulatory requirements. This includes meeting the ONR 'no danger' criterion for NSL revocation under the Nuclear Installations Act 1965², and satisfying the Environment Agency's requirements for environmental permit surrender under the Environmental Permitting Regulations (EPR) 2016³. The Proposed Works would be delivered with a clear commitment to public safety and environmental stewardship, aligned with the NDA's mission to decommission the UK's earliest nuclear sites safely, securely and sustainably, thereby enabling the release of land from regulatory control and contributing to a positive legacy for future generations.
- 1.3.4 At the time of preparing this EIA Scoping Report, two overarching decommissioning approaches have been assessed by the Applicant. These approaches are described in **Chapter 2: The Decommissioning and Dismantling Process**.

1.4 The Project Team

- 1.4.1 This EIA Scoping Report has been prepared by AECOM on behalf of the Applicant. The list of competent experts involved in the preparation of the EIA Scoping Report is provided **Appendix 1A**.
- 1.4.2 AECOM is registered with the Institute of Sustainability and Environmental Professionals (ISEP) EIA Quality Mark Scheme. The scheme allows organisations that lead the co-ordination of EIAs in the UK to make a commitment to excellence in their EIA activities and have this commitment independently reviewed.

² Nuclear Installations Act (1965). Available at: <https://www.legislation.gov.uk/ukpga/1965/57> [Accessed 09/02/2026].

³ Environmental Permitting Regulations (2016). Available at: <https://www.legislation.gov.uk/uksi/2016/1154/contents> [Accessed 09/02/2026].

1.5 Purpose of the EIA Scoping Report

Scoping Procedure

- 1.5.1 When applying for consent under Regulation 4(1) of the EIADR, the Applicant is required to provide to the ONR an ES that presents the findings of the EIA, in accordance with Regulations 5(1).
- 1.5.2 Regulations 6(1) of the EIADR states that the Applicant may request that ONR provides a written opinion as to the scope and level of detail of information to be provided within the ES. This process is generally referred to as a request for a Pre-application Opinion and is accompanied by a EIA Scoping Report.
- 1.5.3 Once a request for a Pre-Application Opinion has been submitted to the ONR, it is required to consult with consultation bodies and to issue the Applicant with a Pre-application Opinion.
- 1.5.4 The ES must be prepared in accordance with the Pre-application Opinion.

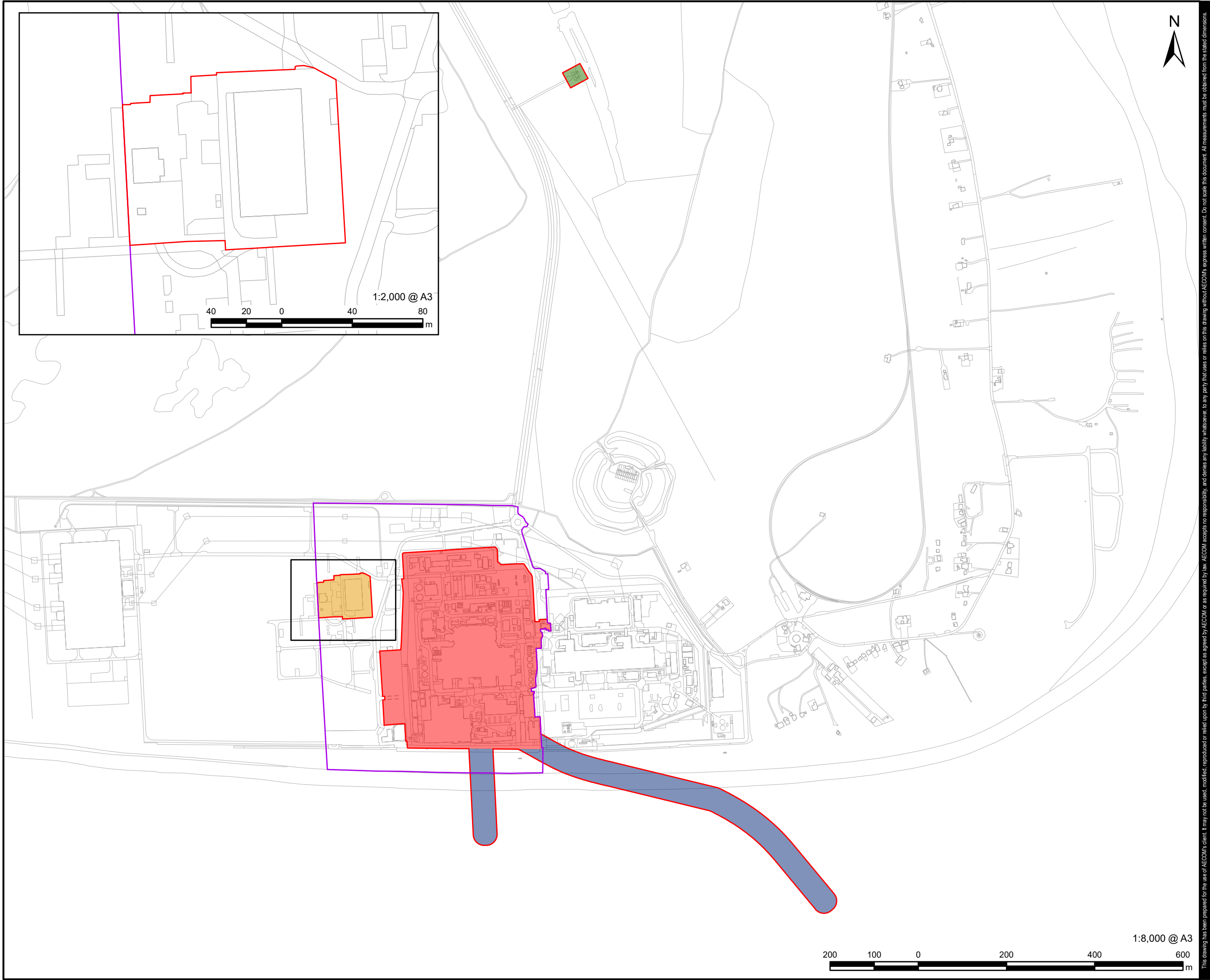
This Request

- 1.5.5 This EIA Scoping Report supports a request for a Pre-application Opinion from the ONR by the Applicant to obtain an opinion on the following matters:
 - The environmental aspects that should be assessed within the EIA process and reported in the ES;
 - The potentially significant effects of the Proposed Works;
 - The effects of the Proposed Works that are not likely to be significant and therefore do not need to be considered further within the EIA process;
 - The approach to spatial definition and justification of the Study Areas for each environmental aspect;
 - The adequacy of the data that has been acquired and reported in the EIA Scoping Report with augmentation by the further data that is planned to be acquired and used to inform the EIA;
 - The assessment methods that will be used to determine likely significant effects for each environmental aspect that will be addressed within the EIA process and reported in the ES;
 - The approach to identifying the environmental management and control measures that could be incorporated into the Proposed Works to avoid, reduce or, as a last resort, compensate for significant effects; and
 - The methodology to identify other developments to be considered within the cumulative effects assessment.

1.6 Structure of this EIA Scoping Report

- 1.6.1 The remainder of this EIA Scoping Report is structured as follows:
 - **Chapter 2: The Decommissioning and Dismantling Process** provides a description of the Works Area and Proposed Works;

- **Chapter 3: Consideration of Alternatives** sets out the context of the alternative options considered for the Proposed Works;
 - **Chapter 4: Legislation, Policy and Technical Guidance** provides an overview of the principal items of legislation and policies that are relevant to the Proposed Works and the relevant consenting regimes, permits and licenses required for the Proposed Works;
 - **Chapter 5: Proposed EIA Methodology** explains the approach that has been undertaken to identify the scope of the EIA and sets out the methodology to be used in the EIA;
 - **Chapter 6 – 19:** set out the proposed scope and methodology for each environmental aspect to be considered as part of the EIA where a potentially significant environmental effect may arise as a result of the Proposed Works. This includes the following environmental aspects:
 - **Chapter 6: Air Quality;**
 - **Chapter 7: Conventional Waste and Materials;**
 - **Chapter 8: Coastal Processes;**
 - **Chapter 9: Climate Change;**
 - **Chapter 10: Historic Environment;**
 - **Chapter 11: Human Health;**
 - **Chapter 12: Landscape and Visual;**
 - **Chapter 13: Marine Ecology;**
 - **Chapter 14: Noise and Vibration;**
 - **Chapter 15: Socio-Economics;**
 - **Chapter 16: Soils and Geology;**
 - **Chapter 17: Traffic and Transport;**
 - **Chapter 18: Terrestrial Ecology; and**
 - **Chapter 19: Water Environment and Flood Risk.**
 - **Chapter 20: Other Environmental Topics:** provides justification for scoping out a number of environmental aspects, including Maritime Heritage, Shipping and Navigation, Radioactive Waste and Discharges and Major Accidents and Disasters;
 - **Chapter 21: Structure of the Environmental Statement:** outlines the proposed structure of the ES; and
 - **Chapter 22: Summary and Conclusions:** provides a summary of the proposed scope of the EIA.
- 1.6.2 The EIA Scoping Report contains a number of appendices and figures which are referenced throughout the document and can be found at the end of the report.
- 1.6.3 A glossary and abbreviation list can be found in **Appendix 1B**.



AECOM

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Dungeness B Nuclear Decommissioning

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LEGEND

- The Works Area
- Nuclear Site Licence Boundary
- Area A
- Area B
- Area C
- Area D

NOT PROTECTIVELY MARKED

NOTES
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ISSUE PURPOSE
EIA Scoping Report

PROJECT NUMBER
60739933

FIGURE TITLE
The Works Area

FIGURE NUMBER	REV
Figure 1-1	0

DOCUMENT NUMBER

2. The Decommissioning and Dismantling Process

2.1 Introduction

- 2.1.1 This chapter provides a description of the Works Area and its surroundings, along with an overview of the principal activities that comprise the Proposed Works, including any assumptions and their associated timescales.
- 2.1.2 As set out in **Chapter 1: Introduction**, the descriptions presented in this chapter focus on the activities relevant to the Initial Decommissioning Works but also provide an overview of the subsequent decommissioning phases.

2.2 The Works Area Location and Context

- 2.2.1 Dungeness B is situated on the south Kent coast, centred approximately at Ordnance Survey National Grid Reference TR081168.
- 2.2.2 Dungeness A nuclear power station (hereafter referred to as Dungeness A), an NRS site currently being decommissioned, is located immediately adjacent to the eastern boundary of Dungeness B (Area A of the Works Area).
- 2.2.3 For the purposes of this EIA Scoping Report, the Works Area is divided into following areas, as shown on **Figure 1-1**:
- **Area A** – the main area of the existing Dungeness B, comprising all land and associated infrastructure within the existing double security fence boundary and the adjacent car park;
 - **Area B** – the area associated with the B1 Hanger, an existing storage hanger, laydown area and conventional waste storage compound;
 - **Area C** – the area associated with the existing back-up cooling water infrastructure at the Long Pits, an existing onshore waterbody; and
 - **Area D** – the area associated with the existing cooling water infrastructure comprising the intake and outfall culverts located within the English Channel and foreshore.
- 2.2.4 The four areas which comprise the Works Area cover approximately 20.97ha. The Works Area lies within the administrative area of Folkestone and Hythe District Council and within the wider jurisdiction of Kent County Council. Sections of the cooling water intake and outfall culverts within Area D lie below Mean High Water Springs (MHWS), within the jurisdiction of The Crown Estate.
- 2.2.5 Area A of the Works Area is bounded to the south by the shingle beach at Dungeness, with the English Channel beyond. Denge Beach lies to the north-east, with Denge Marsh located to the north and west.
- 2.2.6 Area A of the Works Area contains buildings and structures, including the reactor building, services building, turbine hall and a number of smaller ancillary buildings, workshops, and other associated infrastructure. These

are set within land uses associated with the power station site, comprising access roads and service yards, all bounded by security fencing except an area of car park hardstanding located to the western perimeter of the double security fence. It is centred approximately at Ordnance Survey National Grid Reference TR081168

- 2.2.7 Area B of the Works Area comprises the B1 Hanger and surrounding areas of hardstanding, located within the NSL boundary. This area is currently used as a laydown storage area and conventional waste storage compound to support operations at Dungeness B. It is centred on approximately on Ordnance Survey National Grid Reference TR 078169, and is located approximately 85m west of Area A.
- 2.2.8 Area C of the Works Area comprises the back-up cooling water infrastructure at the Long Pits, is centred on approximately on Ordnance Survey National Grid Reference TR 08377 18148 and is located approximately 1.05km north-east of Area A. The back-up cooling water infrastructure includes a pump house with submerged extraction pumping infrastructure, all located outside the NSL boundary. Area C of the Works Area is partly within an area of shingle and includes a small part of the Long Pits, a freshwater body created from historic gravel extraction.
- 2.2.9 Area D of the Works Area includes the Dungeness B cooling water abstraction and discharge culverts, with sections located outside the NSL boundary within the foreshore and the English Channel.
- 2.2.10 The Works Area excludes the majority of the non-operational NSL areas, such as the site access facility and most of the staff car park. It also excludes all infrastructure belonging to Dungeness A.

Access

- 2.2.11 As shown on **Figure 2-1**, the Works Area is accessed via the private Power Station Access Road, an existing and established route that connects to Dungeness Road and is currently proposed as the access and Heavy Goods Vehicle (HGV) route for the Proposed Works.

Settlements and Surrounding Land Use

Residential and Commercial Receptors

- 2.2.12 The nearest town is Lydd, located approximately 4.9km north-west of Area A of the Works Area. Other residential areas include Dungeness, Lydd-on-Sea and Greatstone located approximately 1km east, 1.65km north-east and 4.9km north-east of Area A of the Works Area respectively. Area C of the Works Area is in closer proximity to Lydd-on-Sea.
- 2.2.13 There are several residential receptors in relatively proximity to Area A of the Works Area, the closest of which are houses and holiday rental accommodation along Dungeness Road, located approximately 340m east-northeast of Area A of the Works Area, at their closest point.
- 2.2.14 Nearby commercial receptors include tourist attractions along Dungeness Road, including the Dungeness Lighthouse and Dungeness Station for the Romney, Hythe & Dymchurch Railway, located approximately 550m and 560m east of Area A of the Works Area respectively. There are other

amenities along Dungeness Road, the closest of which is the Britannia Inn, located approximately 780m east of Area A of the Works Area.

- 2.2.15 Commercial fishing operations are located at Dungeness, with boats stored on and launched from the shingle beach approximately 1.5km east-north-east of Area A of the Works Area.

Surrounding Land Use

- 2.2.16 The surrounding area to the west and northwest of the Works Area is largely uninhabited, with the closest areas of agricultural land located 2.5km to the northwest of Area A of the Works Area. Dungeness substation, Lydd military firing range, and Herons Park campsite and events venue are located approximately 410m west, 4km west, and 3.8km northwest, respectively, from Area A of the Works Area. The Royal Society for the Protection of Birds (RSPB) Dungeness Reserve is located approximately 1.2km from the Works Area at its closest point.

Ecological Designations

- 2.2.17 There are several statutory ecological designations surrounding the Works Area (see **Figure 2-1** and **Chapter 18: Terrestrial Ecology** for further information), with those within 500m comprising:
- Dungeness National Nature Reserve (NNR) located approximately 100m north of the Zone A of the Works Area at its closest point.
 - Dungeness, Romney Marsh and Rye Bay Site of Specific Scientific Interest (SSSI), located immediately adjacent to the southern border of the Works Area at its closest point.
 - Dungeness, Romney Marsh and Rye Bay Ramsar Site, which falls within Area C of the Works Area. Area A of the Works Area is approximately 450m from this Ramsar Site; and
 - Dungeness Special Area of Conservation (SAC), which falls within Area C of the Works Area. Area A and B of the Works Area is approximately 60m and 5m from this SAC respectively.

Heritage Designations

- 2.2.18 There are no designated heritage assets within the Works Area and no World Heritage Sites, registered battlefields or registered parks and gardens in the vicinity. One scheduled monument, one conservation area, and five listed buildings are located within 3km of the Works Area. These are:
- Lade Fort (**NHLE 1004205**) scheduled monument located approximately 2.6km north-east of Area C of the Works Area and 3.5km northeast of Area A of the Works Area;
 - Dungeness Conservation Area is located approximately 80m east of the Works Area at its closest point (Area D of the Works Area), but is approximately 300m east of Area A of the Works Area;
 - Dungeness Lighthouse (**NHLE 1390640**), grade II* listed, located approximately 630m east of Area A of the Works Area;

- The Old Lighthouse (**NHLE 1252010**), grade II listed, located approximately 390m east of Area A of the Works Area;
 - Dungeness Lighthousemen's Dwellings (**NHLE 1068933**), grade II listed, located approximately 550m east of Area A of the Works Area;
 - Net Boiler (**NHLE 1252214**), grade II listed, located approximately 790m north-east of Area C and 1.6km north-east of Area A of the Works Area; and
 - 1, Toby Road (**NHLE 1344123**), grade II listed, 2.6km north of Area C of the Works Area and 3.7km north-east of Area A of the Works Area.
- 2.2.19 The Kent Historic Environment Records (KHER) identify 108 non-designated heritage assets within the 3km Study Area. Of these, only one is recorded as crossing the Works Area, namely an extensive stretch of Second World War anti-invasion beach scaffolding related to Dungeness West Coastal Battery (**1533475**). This feature was removed prior to aerial photographs taken in 1962.
- 2.2.20 There are no Protected Wrecks or Designated maritime archaeological assets located within 3km of the Works Area and no remains of any aircraft, that are currently designated under the Protection of Wrecks Act (PWA) 1973⁴, the Protection of Military Remains Act (PMRA) 1986⁵ or the Ancient Monuments and Areas Act (AMAA) 1979⁶.
- 2.2.21 There are 196 maritime heritage assets located within 3km of the Works Area, all of which are the locations of shipwrecks dating to between the prehistoric and modern periods. There are no known sunken aviation archaeological assets within the study area.
- 2.2.22 Further information on terrestrial heritage assets is provided in **Chapter 10: Historic Environment**, with information on maritime heritage included in **Chapter 20: Other Environmental Topics**.

Water Environment

- 2.2.23 Area D of the Works Area encompasses cooling-water infrastructure within the foreshore and the English Channel. Area C of the Works Area covers the back-up cooling water infrastructure which is located at the Long Pits, an onshore waterbody approximately 1.1km from the foreshore.
- 2.2.24 To the west of the Works Area there are further onshore waterbodies created by past gravel workings, including those located at the RSPB Dungeness reserve located approximately 1.2km north-west of the Works Area at its closest point.

⁴ HM Government. 1973. Protection of Wrecks Act (PWA). Available at: <https://www.legislation.gov.uk/ukpga/1973/33/enacted>

⁵ HM Government. 1986. The Protection of Military Remains Act. Available at: <https://www.legislation.gov.uk/ukpga/1986/35/contents>

⁶ HM Government. 1979. Ancient Monuments and Areas Act (as amended). Available at: www.legislation.gov.uk/ukpga/1979/46

Further Information on Baseline Conditions

- 2.2.25 Further details on the environmental and socio-economic receptors considered in this report are provided in the individual topic chapters (**Chapters 6 to 20**).

2.3 The Proposed Works

Decommissioning Approach

- 2.3.1 The current baseline decommissioning approach is known as 'Early Safestore', which involves completing Initial Decommissioning Works and building a weather-tight secure Safestore around the reactor complex and high-activity waste vaults. Area A of the Works Area would then enter a Care and Maintenance period, deferring high-activity waste vault emptying, reactor dismantling, and final site clearance until later in the programme of the Proposed Works. The overall duration of this approach would be approximately 90 years, based on current assumptions and understanding of the programme.
- 2.3.2 An alternative approach known as 'Prompt Decommissioning' is also under consideration for suitability by the Applicant in collaboration with NRS. Under this approach once the Initial Decommissioning Works are completed the preparations for continuous reactor dismantling would commence, without a planned Care and Maintenance deferral period prior to Final Site Clearance. The overall duration of this approach would be approximately 40 years, based on current assumptions and understanding of the programme, and subject to the availability of a Geological Disposal Facility or suitable interim storage arrangements for intermediate level waste arisings (a form of higher activity waste).
- 2.3.3 **Chapter 3: Consideration of Alternatives** provides further information in relation to the alternatives decommissioning approaches considered for Dungeness B.
- 2.3.4 In both approaches, work would be delivered in stages, taking account of the natural reduction in radioactivity over time and keeping risks to people and the environment ALARP and in line with regulatory requirements throughout, including during the Care and Maintenance period if relevant.
- 2.3.5 Although most activity involves carefully taking apart existing plant and buildings, some supporting infrastructure may be needed to enable the work.

Key Decommissioning Phases

- 2.3.6 The Proposed Works are broadly divided into three decommissioning phases, each reflecting a distinct set of intended outcomes and activities.
- 2.3.7 The key phases of the Early Safestore approach are:
- Phase 1 – Initial Decommissioning Works;
 - Phase 2 – Care and Maintenance; and
 - Phase 3 – Final Site Clearance.

- 2.3.8 Under the Prompt Decommissioning approach, the same overall scope of work is delivered as for Early Safestore. However, once the Initial Decommissioning Works are complete (Phase 1), instead of entering a planned Care and Maintenance phase (Phase 2), the Proposed Works would move directly into the Final Site Clearance phase (Phase 3).

Phase 1 – Initial Decommissioning Works

Intended Outcomes

- 2.3.9 The Initial Decommissioning Works are intended to reduce Dungeness B to a low-hazard, minimal-intervention state by removing most buildings and plant, while retaining and modifying the reactor buildings and certain adjoining structures to form a Safestore (Early Safestore). This configuration enables Dungeness B to either enter a decades-long Care and Maintenance period with reduced environmental and safety risks (Early Safestore) or progress directly to Final Site Clearance (Prompt Decommissioning).
- 2.3.10 The key intended outcomes of the Initial Decommissioning Works are to:
- Provide essential waste-management capability by commissioning and operating required waste facilities, including the Decommissioning Waste Processing Facility (DWPF), Operational Waste Processing Facility (OWPF), and, if required, an Interim Conditioned Intermediate Level Waste Store (ICILWS).
 - Remove redundant plant, buildings and infrastructure through systematic, planned decommissioning and dismantling to existing ground level, retaining below-ground structures unless removal is necessary for safety, environmental or engineering purposes.
 - Manage all waste safely and responsibly by identifying what it is, treating it appropriately, and packaging both radioactive and non-radioactive materials, including existing higher and lower activity wastes from dismantling, so it can be reused, recycled, recovered, stored, or sent to approved off-site facilities.
 - Configure Dungeness B for the next decommissioning stage, enabling either entry into Care and Maintenance with the construction of a Safestore (Early Safestore) or direct progression to reactor dismantling and high-activity waste vault clearance (Prompt Decommissioning).

New Infrastructure Requirements

- 2.3.11 A range of infrastructure is anticipated to be required to support the decommissioning and dismantling process at Dungeness B. This section outlines the new infrastructure required during the Initial Decommissioning Works.
- 2.3.12 During decommissioning, both radioactive and non-radioactive waste would be produced. All waste would be managed in line with government policy, legislation, the waste management hierarchy, and the relevant regulatory framework.
- 2.3.13 For radioactive waste, extra steps are required to make sure it is handled and stored safely, protecting people and the environment. Radioactive waste may be managed using a combination of on-site and/or off-site facilities.

Decisions on whether to construct new facilities, refurbish existing assets, or use shared facilities within the NDA estate remain open. The Proposed Works include the provision of new buildings within Area A of the Works Area to represent a reasonable worst-case scenario.

Decommissioning Waste Processing Facility

- 2.3.14 This facility would predominantly manage lower activity waste generated during the Phase 1 – Initial Decommissioning Works. It would act as a hub to sort, decontaminate, size-reduce, condition, package and dispatch decommissioning waste arisings from radiologically controlled areas.
- 2.3.15 Examples of wastes which a DWPF would receive include lightly contaminated;
- Scrap metals;
 - Plastics, insulation, and cabling; and
 - Concrete rubble or small building components.
- 2.3.16 Lower activity waste would be managed in accordance with the UK's updated policy framework outline in **Chapter 4: Legislation and Policy Context**, which prioritises waste minimisation, treatment, and near-surface disposal as a last resort to ensure protection of people and the environment throughout the decommissioning process.
- 2.3.17 If a new-build structure is required, the structure, at this stage, is assumed to have a maximum footprint of 2,000 m² and a maximum height of 15 m. It would most likely be a metal-clad, portal-frame building on a concrete floor, although the final design and exact dimensions would be confirmed later in the development process.

Operational Waste Processing Facility

- 2.3.18 This facility would process and package operational radioactive waste from Dungeness B that has been intentionally and safely created on-site during generation and stored in dedicated storage locations. These wastes are also known as intermediate level or higher activity waste.
- 2.3.19 Examples of these operational wastes, which a OWPF would receive, include:
- Used reactor components, such as control rods, filters, or metallic parts that have become radioactive during normal operation;
 - Resins and filters from water-cleaning systems used to keep reactor cooling and processing circuits clean;
 - Contaminated sludge or sediments collected from treatment tanks or sumps;
 - Radioactive equipment and tools that have been used in controlled areas during routine maintenance;
 - Shielding materials (e.g., lead or concrete pieces) that have become radioactive during normal operation ; and
 - Waste from fuel handling, such as contaminated protective clothing, packaging, or small items from fuel routes.

- 2.3.20 Higher activity waste would be packaged, placed into secure interim storage and ultimately routed for geological disposal in accordance with UK Government policy for higher activity waste, which requires long-term safe management through conditioning, monitored storage and eventual emplacement within a Geological Disposal Facility to ensure protection of people and the environment.
- 2.3.21 If the OWPF is delivered as a new structure, it would have a maximum footprint of approximately 1,500 m² and a maximum building height of 15 m. The building would likely comprise a metal-clad portal frame on a concrete floor, with final dimensions and detailed design confirmed during later stages of development

Interim Conditioned Intermediate Level Waste Store

- 2.3.22 The Applicant, in collaboration with NRS, is currently evaluating the provision of either an on-site or off-site facility to provide secure interim storage for conditioned intermediate level waste (also known as higher activity waste) processed through the OWPF.
- 2.3.23 If progressed, the ICILWS would deliver compliant, passively safe storage of processed intermediate level waste in line with UK policy to ensure waste is suitably packaged, monitored and held prior to transfer to national disposal pathways, including a future Geological Disposal Facility, subject to the applicable regulatory approvals.
- 2.3.24 Should an ICILWS be required within the Works Area, this would comprise a new structure. This structure would have a maximum footprint of 2,000 m² and a maximum height of 20 m, with final dimensions and design confirmed at later development stages.

Alternative Active Effluent Discharge Line

- 2.3.25 As the existing cooling water outfall culvert is oversized for decommissioning needs, the construction of an Alternative Active Effluent Discharge Line (AAEDL) is proposed convey treated effluent from the existing on-site Active Effluent Treatment Plant (AETP) following the cessation of cooling water flows. These reduced discharges are permitted under Dungeness B's radioactive substances permit (EPR/SB3035DF).
- 2.3.26 For the purpose of this Scoping Report, the discharge point is expected to remain within the existing outfall structure, however, the final position is to be confirmed. Further information on the alternatives that have been considered will be provided in the ES.

Alternative Treated Sewage Discharge Line

- 2.3.27 As the existing cooling water outfall culvert is oversized for decommissioning needs, the construction of an Alternative Treated Sewage Discharge Line (ATSDL) is proposed to convey treated foul wastewater from the existing Sewage Treatment Plant (STP) once cooling water flows cease.
- 2.3.28 These discharges are authorised under the site's environmental permit (EPR/P1288/K/87) and discharges would continue to operate within existing limits.

- 2.3.29 For the purpose of this Scoping Report, the discharge point is expected to remain within the existing outfall structure, however, the final position confirmed. Further information on the alternatives that have been considered will be provided in the ES.

Safestore (Early Safestore approach only)

- 2.3.30 The construction of a Safestore would place the reactor building into a long-term, passively safe care and maintenance state. In this configuration, the remaining reactor structures would be sealed, stabilised and monitored, allowing the natural decay of radioactivity to reduce hazards over several decades before final dismantling is undertaken.
- 2.3.31 These works would involve:
- Scaffolding of the Safestore to assist removal of existing cladding and glazing;
 - Use of Cranes to assist removal/replacement of structural elements of the building; and
 - Re-cladding of the Safestore to provide a secure weatherproof envelope.
- 2.3.32 It is assumed that the Safestore would be the same height as the existing reactor building and would be re-clad using standing seam aluminium cladding. Whilst the colour of the cladding would be subject to further consideration, for the purpose of this assessment it is assumed the Safestore would a similar colour to the existing reactor building.

Deplanting and Deconstruction

- 2.3.33 During the Initial Decommissioning Works, a 'Managed Retreat' programme of deplanting and dismantling would be undertaken across both radiological ("active") and conventional areas of Dungeness B. This programme involves the progressive removal of plant, equipment, and supporting systems in a controlled sequence, ensuring that risk-reduction is prioritised and that all works proceed within defined radiological and environmental boundaries.
- 2.3.34 Area A of the Works Area contains radiologically controlled (active) areas and conventional non active areas. All de-planting and dismantling activities in the non-active parts of Area A of the Works Area would therefore involve only conventional (non-radiological) plant, equipment, and buildings. The planned works include removing redundant operational systems, safely removing both hazardous and non-hazardous materials in line with regulatory requirements, and demolishing structures down to existing ground level. Below ground features, such as foundations, base slabs, culverts, service ducts, and other hardstanding, would remain in place. The buildings within Area A of the Works Area are assumed to be dismantled at the end of the Initial Decommissioning Works, with only ground-level hardstanding retained.
- 2.3.35 Area B of the Works Area would primarily serve as a laydown, handling, and storage area to support de-planting and dismantling operations. This includes temporary storage of removed plant items, waste container staging, pre-treatment areas, and logistical zones to facilitate safe and efficient movement of materials prior to off-site transfer or subsequent processing.

- 2.3.36 Within Area C, the back-up cooling water infrastructure is identified for full dismantling during the Initial Decommissioning Works. This structure is non-active and therefore suitable for early removal. Works would involve the complete de-planting of residual equipment, safe isolation and removal of utilities, and controlled demolition of the pumphouse superstructure. It is currently assumed that any below-ground structures associated with the pumphouse would be left in place.
- 2.3.37 The dismantling and decommissioning of the existing cooling water intake structure within Zone D of the Works Area is not within the scope of the Initial Decommissioning Works, with the assumption that this would be capped within the terrestrial and marine environment and left in situ. This approach reflects the disproportionate time and cost that would be required to remove a large, reinforced buried marine structure during the Initial Decommissioning Works, as well as the increased safety risks associated with complex in-water demolition. Leaving the structure in place also avoids potential short-term environmental impacts on the foreshore and near-shore marine environment that could arise from intrusive works.

Phase 2 - Care and Maintenance

- 2.3.38 This phase would only be required within the Early Safestore approach and is not relevant to the Prompt Decommissioning approach.

Intended Outcomes

- 2.3.39 The Care and Maintenance phase would commence upon completion of the Initial Decommissioning Works. During the Care and Maintenance period, the reactor complex and the high-activity waste vaults would be enclosed within the Safestore and placed into, and maintained in, a state of long-term passive safety.
- 2.3.40 The primary purpose of the Care and Maintenance phase is to enable radiological decay of activated and contaminated materials prior to undertaking final site clearance. By allowing time for the decay of key radionuclides, the hazard potential associated with remaining plant items and structures is progressively reduced.

Care and Maintenance Activities

- 2.3.41 The design basis of the Safestore structure is that it would require only a minimal programme of work to sustain the safe, stable, passive storage conditions and the continued integrity of the reactor complex and the high-activity waste vaults. Monitoring and surveillance systems, along with the intruder resistant design of the Safestore structure would ensure that security is maintained.
- 2.3.42 There would be periodic visits by the Site Licensee to inspect and monitor the site and its environs. This includes visual inspections, radiological and environmental monitoring, general grounds maintenance and any other activities required. During the Care and Maintenance phase there may be a need for refurbishment or replacement of materials, e.g. building cladding materials or supports.

Waste Management Facilities

- 2.3.43 During the Care and Maintenance phase, if a ICILWS is constructed on-site during the Initial Decommissioning Works phase, it would be maintained, and the condition of the higher activity waste packaged within the store monitored until the ICILWS is to be emptied and the packaged wastes transferred to the Geological Disposal Facility.
- 2.3.44 At the end of the Care and Maintenance phase, the Site Licensee would carry out final decommissioning and dismantling planning, to ensure that all regulatory requirements are in place for the Final Site Clearance phase.

Phase 3 - Final Site Clearance

- 2.3.45 The purpose of the Final Site Clearance phase is to achieve the conditions necessary for the ONR to determine that Dungeness B presents “no danger”, enabling full release from nuclear regulation. To reach this end state, Final Site Clearance would deliver a defined set of outcomes that collectively remove remaining radiological and conventional hazards and restore the Works Area to a safe, stable and environmentally compliant condition.

Intended outcomes

- 2.3.46 The intended outcomes of the Final Site Clearance phase are to:
- Reinstall essential site infrastructure - including establishment and operation of a Waste Management Centre to safely support the dismantling of remaining reactor structures and high-activity waste vaults;
 - Complete full deplanting, once all hazardous materials and high-activity vault contents have been removed, returning the site to a low-hazard state suitable for final remediation;
 - Dismantle the reactors and empty the high-activity waste vaults, ensuring all remaining high-activity components, structures and plant are removed, processed or transferred to permitted off-site routes in accordance with the relevant regulatory frameworks;
 - Dismantle the Safestore to allow for deplanting and dismantling of the reactor complex and high-activity waste vaults;
 - Remove remaining above-ground and, where required, below-ground structures to achieve the physical clearance necessary to meet end-state criteria, while undertaking any further land remediation or decontamination needed for regulatory release;
 - Manage all resulting wastes responsibly, applying the waste hierarchy and ensuring all radioactive and non-radioactive wastes are characterised, conditioned and consigned to authorised facilities, consistent with national policy and environmental permitting requirements;
 - Achieve the end-state conditions necessary for regulatory release, demonstrating to the environmental regulator that:
 - Disposal of radioactive waste has ceased; and

- The land has been left in a condition that ensures long-term protection of people and the environment supporting ONR's statutory "no danger" determination and enabling removal from radioactive substances regulation.

2.3.47 Delivering these outcomes would allow Dungeness B to be fully de-licensed, completing the Proposed Works and enabling the land to transition to its post-regulatory future.

2.4 Waste and Materials Management

2.4.1 Deplanting and deconstruction would generate both radioactive and non-radioactive wastes. Waste management would follow the waste hierarchy prioritising prevention, preparing for re-use, recycling and other recovery ahead of disposal. For conventional wastes this follows Article 4 of the Waste Framework Directive (2008/98/EC), as transposed in England and Wales by the Waste (England and Wales) Regulations 2011. For radioactive wastes, the hierarchy would be applied in line with UK policy and guidance, including the UK Radioactive Waste & Materials Inventory guidance⁷.

Conventional Waste

- 2.4.2 Conventional waste would be managed in accordance with the Environmental Protection Act 1990⁸, the Waste (England and Wales) Regulations 2011⁹, and other applicable legislation. All waste streams would be subject to appropriate characterisation, segregation, and treatment, with disposal routes selected to minimise environmental impact and ensure compliance with regulatory requirements.
- 2.4.3 All hazardous materials, such as asbestos, would be removed by licensed contractors, packaged and taken to appropriate licensed facilities. Existing systems, plant and equipment may be dismantled in-situ, or broken into parts to be taken elsewhere in the Works Area for further processing. It is expected that after deplanting and any other internal clean-up is complete, dismantling would be carried out using conventional methods. The exact method to be used would be determined with the appointed contractor at the time. Bulk/oversized plant may be cut or split into components or sub-component parts prior to removal.
- 2.4.4 All dismantling materials and arisings on-site would be, as far as possible, segregated and sorted at source. The materials and wastes during the Initial Decommissioning Works would be radiologically clean, and the majority would be non-hazardous. The materials and waste would be transferred to a dedicated area on-site, separated into different types, size-reduced if required and placed into large off-site transport skips for use or disposal at offsite permitted facilities.

⁷ Nuclear Decommissioning Authority. Applying the Waste Hierarchy. Available at: <https://ukinventory.nda.gov.uk/information-hub/about-radioactive-waste/what-is-the-waste-hierarchy/> [Accessed 28/10/2025].

⁸ Environmental Protection Act (1990). Available at: <https://www.legislation.gov.uk/ukpga/1990/43/contents> [Accessed 28/10/2025].

⁹ Waste (England and Wales) Regulations (2011). Available at: <https://www.legislation.gov.uk/uksi/2011/988/contents> [Accessed 28/10/2025].

- 2.4.5 Where possible, levels would be restored to existing ground level using clean site-won recycled concrete material generated from demolition arisings as part of the Proposed Works. The approach to filling of voids is being developed in accordance with the waste hierarchy, optimising the use of site won material and avoiding the use of imported material where possible, and having regard to groundwater management considerations, definition of waste criteria and associated legislation.
- 2.4.6 Further information is provided in **Chapter 7: Conventional Wastes and Materials**.

Radioactive Waste

- 2.4.7 For radioactive waste, management practices would comply with the Radioactive Substances activity permit under the Environmental Permitting (England and Wales) Regulations 2016 (as amended)¹⁰, and be guided by the Environment Agency's Radioactive Substances Regulation objectives and principles, which align with the International Atomic Energy Agency (IAEA) General Safety Requirements Part 6. Operators would continue to hold and operate under a radioactive substances environmental permit, ensuring that all activities are regulated to protect human health and the environment.
- 2.4.8 Additionally, ONR enforces compliance with NSL conditions, including Licence Condition 32 (Accumulation of radioactive waste), Licence Condition 33 (Disposal of radioactive waste), and Licence Condition 34 (Leakage and escape of radioactive material), ensuring safe handling, storage, and disposal throughout the decommissioning lifecycle.
- 2.4.9 The approach to the management of radioactive waste would reflect the UK Government's updated Policy Framework for Managing Radioactive Substances and Nuclear Decommissioning (2024)¹¹, which uses a risk-based approach, emphasising sustainable decommissioning, environmental protection and the use of best available techniques (BAT).
- 2.4.10 Further information is provided in **Chapter 20: Other Environmental Topics**.

2.5 Working Hours

- 2.5.1 Decommissioning and dismantling working hours would vary across the Proposed Works. Core working hours across all phases are assumed to be between 07:30 and 18:00 hours Monday to Friday. There may be occasional infrequent exceptions when the working day may be extended in order to complete specific items of work safely. Initially it is anticipated that security personnel would remain on site 24 hours a day, seven days a week, during all phases, using shift arrangements.

¹⁰ The Environmental Permitting (England and Wales) Regulations (2016). Available at: <https://www.legislation.gov.uk/ukxi/2016/1154/contents> [Accessed 28/10/2025].

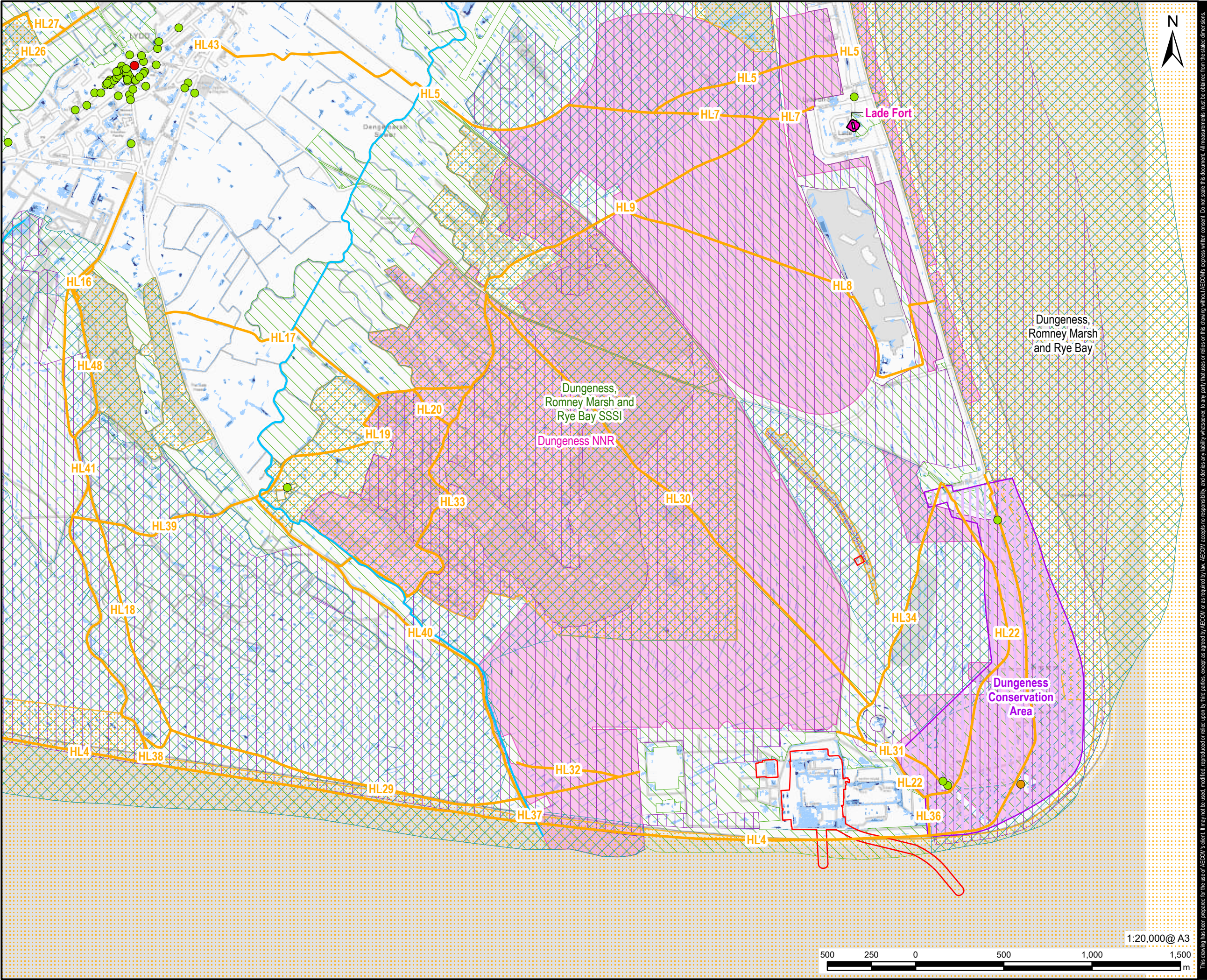
¹¹ Department for Energy Security and Net Zero. 2024. UK policy framework for managing radioactive substances and nuclear decommissioning. Available at: <https://assets.publishing.service.gov.uk/media/6632371769098ded31fca7c1/managing-radioactive-substances-and-nuclear-decommissioning-uk-policy-framework.pdf> [Accessed 28/10/2025].

2.6 Workforce Numbers

- 2.6.1 Workforce requirements would vary across the Proposed Works. Current assumptions indicate a peak workforce of around 550 personnel during the Initial Decommissioning Works.
- 2.6.2 During the Care and Maintenance phase, numbers of workers would reduce substantially when compared to the Initial Decommissioning Works, however no estimates are currently available.
- 2.6.3 Workforce levels during the Final Site Clearance phase are expected to fluctuate over the duration of the programme. Although precise numbers cannot yet be defined, they are likely to remain below those anticipated for the Initial Decommissioning Work.

2.7 HGV Numbers and Routing Assumptions

- 2.7.1 HGV numbers would vary throughout the Proposed Works in line with the specific activities taking place at each stage. For the purposes of this report, the peak daily HGV demand has been benchmarked against the Preparations for Quiescence phase reported in the Hunterston B EIADR Environmental Statement, which represents a comparable worst-case scenario. During that phase, peak daily HGV activity reached 24 two-way movements, and this has therefore been adopted as a representative worst-case assumption for the Proposed Works during the Initial Decommissioning Works.
- 2.7.2 During the Care and Maintenance phase there would be negligible traffic associated with the Proposed Works. The only regular traffic movements would relate to security or inspections personnel, with visits for maintenance purposes as and when required.
- 2.7.3 It is anticipated that the number of HGV movements required during the peak year of the Final Site Clearance activities would be comparable to the number required during the Initial Decommissioning Works.
- 2.7.4 It is currently assumed that the HGVs would follow the following route from site:
 - Power Station Access Road and Dungeness Road to Lydd.
 - Harden Road and Romney Road to the A259 west of New Romney.
 - A259 to Brenzett, joining the A2070.
- 2.7.5 Consideration has been given to alternative means of transportation including rail and marine options to reduce HGV numbers and further details will be provided within the ES.



PROJECT

Dungeness B Nuclear Decommissioning

CLIENT

EDF Energy Nuclear Generation Limited

CONSULTANT

AECOM Limited
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LEGEND

- The Works Area
- Statutory Main River
- Public Rights of Way
- Ramsar
- Special Protection Area
- Special Areas of Conservation
- Sites of Special Scientific Interest
- National Nature Reserve
- Conservation Area
- Scheduled Monument

Listed Buildings - Grade

- I
- II*
- II

Risk of Flooding from Surface Water

- High
- Medium
- Low

NOT PROTECTIVELY MARKED

NOTES

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ISSUE PURPOSE

EIA Scoping Report

PROJECT NUMBER

60739933

FIGURE TITLE

Environmental Constraints

FIGURE NUMBER	REV
Figure 2-1	0

DOCUMENT NUMBER

3. Consideration of Alternatives

3.1 Context

- 3.1.1 This chapter outlines the reasonable alternatives to the Proposed Works considered by the Applicant to date. The ES will further address EIADR requirements for alternatives, setting out the main options considered, the reasons for selecting the preferred feasible option(s), and a comparison of likely environmental effects.
- 3.1.2 The Applicant continues to maintain and develop its overarching decommissioning strategy, in compliance with NSL Condition 35 (LC35) and to prepare a deliverable strategy and plan. The AGR decommissioning strategy is kept under review for each site, to reflect any significant relevant developments in aspects including regulatory position, official guidance, industry experience, technical developments, and business context. NRS is moving from a fleet-wide deferred dismantling approach for the MAGNOX sites (similar to the AGR baseline decommissioning strategy of Early Safestore approach) to site-specific decommissioning strategies.
- 3.1.3 The Applicant is working collaboratively with NRS, incorporating NRS's ongoing input to develop work in relation to the Proposed Works.

3.2 Development of Alternatives

Site-Specific Considerations

- 3.2.1 In developing the credible strategic options for Dungeness B, options have been appraised against key strategic drivers, including safety, environmental considerations, regulatory alignment, socio-economic implications, and technical feasibility. The appraisal also incorporated site-specific attributes that influence the practicality and comparative merits of the alternatives, including:

- How the reactors were designed and used; and
- The coastal location.

How the Reactors were Designed and Used

- 3.2.2 Dungeness B's reactors were the first UK-designed AGR reactors and contain graphite reactor cores. The graphite used in these cores is of a higher purity than that used in other UK AGR stations. Combined with the fact that the reactors operated for significantly fewer operating hours than other AGR stations, this means that lower levels of long-term radioactivity are expected. As a result, the volume of waste requiring management may be reduced, and some dismantling activities may be able to commence earlier than at other AGR sites.

The Coastal Location

- 3.2.3 Harsh coastal conditions from storm event, salt air and changing weather can put pressure on structures over time. Looking ahead, there is uncertainty

about how climate change may affect future flooding, coastal change and corrosion risks at Dungeness B.

- 3.2.4 Beginning decommissioning sooner could help manage these challenges and reduce long term risks to Dungeness B.

Decommissioning Approaches

- 3.2.5 In 2025, the Applicant completed a comprehensive periodic review of the decommissioning approach in full accordance with the requirements of Licence Condition 35 (Decommissioning). This review involved a systematic reassessment of all underpinning technical data, key assumptions and the evolving knowledge base for the site. It ensured that the proposed decommissioning approach remains robust, up to date, and reflective of current regulatory expectations, best practice and site-specific information.
- 3.2.6 As part of this process, a structured multi-attribute optioneering appraisal was undertaken using the latest available information. The appraisal drew on cross-functional subject-matter expertise and was carried out collaboratively with the NDA and NRS to ensure alignment with wider national decommissioning strategy. Options were assessed against clearly defined safety, environmental, technical and sustainability criteria, underpinned by Dungeness B's site-specific datasets, studies and operational history.

Overarching Options Not Considered Feasible for Dismantling Dungeness B

- 3.2.7 The following overarching decommissioning approaches were deemed not feasible for Dungeness B, by reference to UK policy¹², IAEA guidance^{13,14} and their inability to meet the objectives of safe, sustainable decommissioning:

Do Nothing

- 3.2.8 Under this approach, once the fuel had been removed from the reactor, no further dismantling work would take place, and Dungeness B would remain in a long-term programme of care and maintenance to keep it safe and secure.
- 3.2.9 While this would maintain safety in the short term, it would result in little reduction of the remaining hazards, would not allow the land to be released for other uses, and would require ongoing expenditure indefinitely. Over time, the cumulative cost of maintaining Dungeness B without dismantling the facilities would be substantial.

¹² Department for Energy Security and Net Zero. 2024. UK policy framework for managing radioactive substances and nuclear decommissioning. Available at: <https://assets.publishing.service.gov.uk/media/6632371769098ded31fca7c1/managing-radioactive-substances-and-nuclear-decommissioning-uk-policy-framework.pdf> [Accessed (11/02/2026)].

¹³ International Atomic Energy Association. 2014. GSR Part 6 – Decommissioning of Facilities. Available at: <https://nucleus.iaea.org/sites/committees/Policy%20Documents/Complete%20Collections%20of%20Safety%20Standards/Complete%20collection%20English/GSR%20Part%206%20Decommissioning%20of%20Facilities.pdf> [Accessed 11/02/2026].

¹⁴ International Atomic Energy Association. 2018. SSG-47 – Decommissioning of Nuclear Power Plants, Research Reactors and Other Nuclear Fuel Cycle Facilities. Available at: https://www-pub.iaea.org/MTCD/Publications/PDF/P1812_web.pdf [Accessed 11/02/2026].

3.2.10 The do nothing approach would also not consistent with UK Government policy or international guidance.

3.2.11 For these reasons, the do nothing approach has been discounted.

Abandonment

3.2.12 Abandonment, involving leaving the reactor and associated structures in situ without active management, is not consistent with UK Government policy or international guidance.

3.2.13 Such an approach would not achieve progressive hazard reduction, safe management of radioactive materials, or eventual release of the site from nuclear regulation. For an AGR, abandonment would result in unacceptable long-term environmental and safety risks.

3.2.14 For these reasons, abandonment has been discounted.

Entombment

3.2.15 Entombment, which involves encapsulating radioactive structures within long-lived materials (such as concrete) until radioactive waste decays to a level permitting termination of the NSL. The ONR do not considered entombment as an appropriate strategy for the planned decommissioning of civil nuclear power reactors. UK policy and international guidance restrict its use to exceptional circumstances.

3.2.16 For Dungeness B, entombment would effectively create a long-term waste disposal facility on site, would not represent sustainable waste management, and would constrain future site use.

3.2.17 For these reasons, entombment has been discounted.

Immediate Dismantling

3.2.18 Immediate dismantling involves reactor dismantling immediately following shutdown and obtaining FFV. Immediate dismantling has been considered but is not regarded as appropriate for Dungeness B as an AGR. Radiation levels associated with the reactor core and irradiated graphite would result in unacceptable worker dose rate risk and technical risk if these activities are not deferred to allow radioactive decay. For these reasons, immediate dismantling has been discounted.

3.2.19 Immediate dismantling remains a credible option for other technologies including Pressurised Water Reactors (PWRs) e.g., Sizewell B nuclear power station, at the point that station is decommissioned, where plant design and materials differ.

Overarching Decommissioning Options Considered Feasible for Dismantling Dungeness B

3.2.20 Two overarching approaches have been identified for progression within the EIADR application: Early Safestore (baseline) and Prompt Decommissioning (alternative).

Early Safestore Strategy

- 3.2.21 This is the baseline approach for all AGR stations in the UK and would see the Proposed Works at Dungeness B enter the Care and Maintenance phase following the completion of the Initial Decommissioning Works.
- 3.2.22 Major dismantling work of the reactor building and final site clearance would happen many decades later. This timing helps keep workers safe and reduces the amount of waste that needs to be managed as the Care and Maintenance period allows for radiological decay of reactor and high activity debris vault components.
- 3.2.23 The key considerations of this strategy are:
- Lower radiation levels associated with the proposed works;
 - Less radioactive waste requiring long-term storage;
 - Reduced reliance on extended interim storage in the event of constraints on the availability of an intermediate-level waste (ILW) disposal route i.e. Geological Disposal Facilities (GDF);
 - More time to put suitable and efficient waste disposal arrangements in place;
 - Simpler site arrangements, supporting proportionate security management; and;
 - Potential changes in overall decommissioning lifecycle costs, based on the assumption that the decommissioning fund continues to grow during the Care and Maintenance period.

Prompt Decommissioning Strategy

- 3.2.24 This approach comprises prompt decommissioning of Dungeness B following the completion of the Initial Decommissioning Works. It continues with no planned deferral Care and Maintenance phase until the reactor has been dismantled, and the Site is cleared.
- 3.2.25 The key considerations of this strategy are:
- Earlier and more continuous reduction and removal of hazards from the site;
 - Retention of site knowledge, skills, and workforce continuity;
 - Final site clearance undertaken without the need for a later phase of site re-establishment.
- 3.2.26 The following considerations may limit the suitability of this strategy:
- Higher levels of radiation exposure potential for workers during reactor dismantling activities; and
 - The generation of larger volumes of ILW, with associated implications for waste management costs.

3.3 Other Considerations

3.3.1 As well as the overarching decommissioning approach, option appraisal for a range of components associated with the Proposed Works is ongoing. This includes but is not limited to:

- Alternative aqueous discharge arrangements;
- Approach to waste management facilities required in support of decommissioning;
- Void management (former building and infrastructure basements); and
- Transportation of waste and materials.

3.3.2 Further information regarding the above will be provided within the ES including the justification for proceeding with the preferred option.

3.4 Conclusion

3.4.1 Alongside the current baseline decommissioning strategy for AGR power stations (Early Safestore), recent reviews have indicated that a Prompt Decommissioning could potentially also be a technically viable option for Dungeness B.

3.4.2 Further technical work will be carried out to develop areas of current uncertainty and support future decision-making. A final decision between the two retained approaches for Dungeness B is not considered likely to be made before the submission of the application under the EIADR and therefore the assessment will consider both approaches.

3.4.3 The ES will focus on the first phase of decommissioning works (Initial Decommissioning Works) which is substantially a common scope of work for both approaches. The assessments will take a strategic look ahead to consider how future phases might be approached, ensuring that long-term environmental effects are taken into account. Further information on the assessment approach is provided in **Chapter 5: EIA Methodology**.

4. Legislation and Policy Context

4.1 Introduction

- 4.1.1 This chapter outlines the relevant legislation and policy context for the Proposed Works. It identifies legislation and policy relevant to nuclear decommissioning activities and explains how they have been considered within this EIA Scoping Report.
- 4.1.2 This chapter also summarises other regulatory requirements which the Applicant must comply with before undertaking certain activities as identified in **Chapter 2: The Decommissioning and Dismantling Process**.
- 4.1.3 Each topic chapter in the Scoping Report (**Chapters 6 to 19**) includes topic specific legislation and provides a summary of the relevant policy where pertinent to the assessment.

4.2 Consideration of Legislation and Policy in the Context of EIA

- 4.2.1 Legislation and policy help to define the scope of environmental assessments. In the context of this EIA Scoping Report, they are considered relevant to the Proposed Works where they:
- Influence the definition of sensitivity of receptors (and therefore the significance of effects) and any requirements for mitigation; and
 - Influence the methodology of the EIA. For example, a requirement to assesses a specific impact/effect or to use of a specific methodology.
- 4.2.2 It is also important to recognise that certain legislation establishes separate and well defined existing regulatory arrangements that apply to the Proposed Works alongside, but outside of, the EIADR process. Many of the considerations relevant to environmental protection are already adequately addressed through these existing regimes, which provide proportionate and effective safeguards. Where this is the case, further detailed assessment or duplication within this EIA is not considered necessary. Instead, the ES will signpost these interfaces and provide sufficient information to place them in context, whilst focussing detailed assessment on the remaining key issues. This approach is consistent with ONR guidance, which notes that an environmental statement should be comprehensive without repeating work undertaken under other town and country planning, security, health, safety or environmental legislation. It therefore helps to ensure proportionality and avoidance of unnecessary duplication.

4.3 Directly Relevant Legislation

- 4.3.1 **Table 4-1** identifies legislation relevant to the activities associated with the Proposed Works and the overarching EIA. This list is not exhaustive and additional legislation is referenced within **Chapters 6 to 19** where relevant. As identified in **Section 4.2** primary legislation will only be discussed in **Chapter 6 to 19** of this EIA Scoping Report where they are of direct relevance to the assessment.

Table 4-1: Summary of Primary Legislation

Legislation	Relevance to the Proposed Works
The Nuclear Reactors (Environmental Impact Assessment for decommissioning) Regulations 1999 (EIADR) (as amended)	In accordance with this regime works relating to the decommissioning and dismantling of the nuclear power station will require environmental impacts to be considered in detail before consent for the decommissioning and dismantling is granted. As described in Chapter 2: The Decommissioning and Dismantling Process, the Proposed Works exclude defueling activities at Dungeness B. Regulation 3 notes these regulations apply to nuclear power stations (except research installations). Regulation 5 identifies the requirement for an ES to accompany the EIADR application, with Schedule 1 setting out the information to be included with the ES. Regulation 6 identifies a licensee can make a request for a Pre-application Opinion in relation to a project. This does not specify the format of such a request but does identify it should include sufficient information for ONR to give an opinion on the request. Regulation 12 provides guidance in relation to the process to be followed where significant transboundary effects are identified. Regulation 13 applies when a project consent under EIADR is subject to change or extension that may have significant adverse effects on the environment. Under Regulation 13, it is the duty of the licensee to decide whether an application should be made to ONR for a determination as to whether an EIA is required. The decision on whether to seek a determination should be made with no consideration of the effects that might be provided by mitigation measures, even if these are required by other legislation.
Nuclear Installations Act 1965	This legal instrument controls the installation, operation and decommissioning of nuclear sites and imposes duties on holders of nuclear site licences. ONR attach conditions to each nuclear site licence which it considers necessary or desirable in the interests of safety. These licence conditions include but are not limited to: • Organisational Capability and Management Control • Safety Documentation and Operating Limits • Modification Control • Maintenance, Inspection and Testing • Radioactive Materials and Waste Management • Emergency Preparedness and Accident Management • Records, Surveillance and Decommissioning

Legislation**Relevance to the Proposed Works**

	The conditions apply throughout the lifecycle of a licensed nuclear site and are applicable to design, procurement, construction, commissioning, operation, maintenance, modifications and decommissioning.
The Ionising Radiations Regulations 2017	Identifies the requirements for the use and control of ionising radiation in the United Kingdom. The regulations require that radiation exposure to workers and members of the public are restricted so far as is reasonably practicable.
Energy Act 2013	The Energy Act creates and empowers the ONR as the primary regulator of safety and security in the UK with respect to nuclear facilities.
The Radiation (Emergency Preparedness and Public Information) Regulations 2019	Provides a framework for the protection of the public and workers from and in the event of radiation emergencies that originate from sites. REPPIR19 requires the licensee to undertake a hazard evaluation and consequence assessment and present the conclusions in a consequences report that is used to inform off-site emergency planning.
Conservation of Habitats and Species Regulations 2017	Where a proposal directly or indirectly affects an internationally/nationally significant ecological designation, a separate assessment of potential effects must be carried out under the Conservation of Habitats and Species Regulations 2017. As there is the potential for the Proposed Works to adversely affect European Sites of nature conservation, a Habitats Regulation Assessment (HRA) Screening Report has been prepared to consider whether the Proposed Works could negatively impact local plans on a recognised protected European site. The Preliminary HRA Screening Report is included as Appendix 18D .
The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017	The Water Framework Directive Regulations sets out the Environmental Quality Standards (EQSs) used to assess the risk of chemical pollutant impacts on water quality to the health of aquatic plants and animals in freshwater, estuarine and coastal waters out to 1 nautical mile. As there is potential for adverse effects on water quality, a separate WFD Screening and Scoping Exercise has been prepared and is included as Appendix 19-A .

4.4 Other Regulatory Requirements

- 4.4.1 **Table 4-2** summarises regulatory regimes under which the Applicant will be required to obtain the relevant approvals prior to undertaking certain activities as identified in **Chapter 2: The Decommissioning and Dismantling Process**.
- 4.4.2 The assessments in **Chapters 6 to 19** consider the need to comply with these requirements and make specific reference to these as necessary.

Table 4-2: Related Consenting Regimes

Legislation	Relevance to the Proposed Works
Town and Country Planning Act 1990	This Act provides the framework for development control and sets out the procedures for applications and appeals. Any of the following new infrastructure that may be required to support the Proposed Works would require consent under this Act; • DWPF; • OWPF; • ICILWS; and • Safestore. The Town and Country Planning (EIA) Regulations 2017 (as amended) requires applications to provide environmental information as part of an application, including the consideration of whether the development is considered to require an EIA.
The Marine and Coastal Access Act 2009	This Act defines arrangements for a system of marine management, including the introduction of marine planning, across the UK. The MMO delivers UK marine policy objectives for English waters through a series of statutory Marine Plans and other measures. The Proposed Works may require a Marine Licence for activities including the construction of the AAEDL and ATSDL where the works are to be undertaken below the MHWS. Application for a Marine Licence may require supporting information under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017¹⁵, Conservation of Habitats and Species Regulations 2017¹⁶ and the Marine Works (Environmental Impact Assessment) Regulations 2007¹⁷ (as amended).
Environmental Permitting (England and Wales) Regulations 2016	This requires operators of regulated facilities in England & Wales to obtain environmental permits where there are activities undertaken that could harm the environment or human health. These regulations needed to be considered in the context of changes resulting from decommissioning activities. The following permits are currently held at Dungeness B and will be retained for the Proposed Works: • Radioactive Substances Activity permit – The site holds an existing Environmental Permit (EPR/SB3035DF) from the Environment Agency for radioactive substances activities. This permit will be retained and updated as the

¹⁵ The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (online), Available at: <https://www.legislation.gov.uk/ukxi/2017/407/contents> (accessed 28/10/2025)

¹⁶ Conservation of Habitats and Species Regulations 2017 (online), Available at: <https://www.legislation.gov.uk/ukxi/2017/1012/contents> (accessed 28/10/2025)

¹⁷ Marine Works (Environmental Impact Assessment) Regulations 2007 (online), Available at: <https://www.legislation.gov.uk/ukxi/2007/1518/contents/made> (accessed 28/10/2025)

Legislation

Relevance to the Proposed Works

	Proposed Works progress to reflect any changes in authorised activities, as required. • Water Discharge Activity permit – The site holds an existing Environmental Permit (EA/P1288/K/87) issued by the Environment Agency. This permit regulates water discharge activities. The existing permit covering site discharges and will be varied, where necessary, to reflect any changes in flow volumes or discharge characteristics arising from the Proposed Works. • Combustion Activity permit – The site holds an existing combustion plant permit (EPR/BX60061Y). As decommissioning progresses, the requirement for combustion-plant operation will reduce, which may lead to a need to vary the permit. Once plant usage falls below the permitting threshold and Site Condition Report requirements have been met, the permit can be surrendered. The Proposed Works are not expected to require additional permitting in their own right; the temporary generators required for decommissioning fall within the scope of the existing permit and are not anticipated to trigger new regulatory requirements. • Conventional Waste Permits – The site does not currently hold any conventional waste permits. Environmental permits from the Environment Agency may be required where waste is produced, treated, stored, recycled or disposed of, including through the use of mobile plant. Such permits will be obtained as necessary to support waste processing and treatment activities during decommissioning.
Control of Major Accident Hazards (COMAH) Regulations 2015	Under the provisions of the COMAH, an operator of any establishment, to which these Regulations apply, must notify the competent authority (ONR for nuclear establishments) in advance of any significant increase or decrease in the quantity of dangerous substances, notified under COMAH and within the installations COMAH Safety Report. Additionally, there is a requirement to notify the local authority of reduced volumes of hazardous substances or surrender of the existing Hazardous Substances Consent(s). Dungeness B is currently a registered COMAH establishment under the COMAH Regulations. Following the completion of the defueling activities with the removal of COMAH inventory substances the site will no longer qualify as a COMAH establishment.

4.5 National Policy

- 4.5.1 Whilst compliance with national planning policy is not a key consideration in ONR's determination of EIADR applications, the Applicant has given due consideration to the national planning policy outlined in **Table 4-3**. As identified in **Section 4.2** national planning policy will only be discussed in **Chapter 6 to 19** of this EIA Scoping Report where they are of direct relevance to the assessment.

Table 4-3: National Planning Policy

Legislation	Description
National Waste Management Plan for England (WMPE) (2021)	The WMPE analyses the current waste management situation in England to fulfil the mandatory requirements of Article 28 of the revised Waste Framework Directive. The WMPE does not apply to radioactive waste.
National Planning Policy for Waste (NPPfW) (2014) (as amended)	The National Planning Policy for Waste (NPPfW) sets out detailed waste planning policies. It should be read in conjunction with the National Planning Policy Framework (NPPF) and the WMPE (and National Policy Statements, where relevant). Local Planning Authorities should have regard to its policies when discharging their responsibilities where they are appropriate to waste management. There is no specific reference to radioactive or high activity waste in the NPPfW; however, policies are provided to guide planning and decision making in relation to waste management facilities.
National Planning Policy Framework (2024) ¹⁸	Whilst not directly relevant to EIADR, the NPPF sets out the Government's requirements for the planning system and provides a framework within which local people and their accountable councils can produce their own distinctive local and neighbourhood plans, which reflect the needs and priorities of their communities, and is a material consideration for determining planning applications. In providing this sets out guidance for the assessment of environmental effects which has been considered within Chapter 6 to 20 of this EIA Scoping Report.
25 Year Environment Plan (2021) ¹⁹	The 25 Year Environment Plan set out the Government's 25-year plan to improve the environment within a generation. It defined 10 goals and provided a framework and vision for how these were to be achieved. The goals included: achieve clean air; achieve clean and plentiful water; achieve thriving plants and wildlife; reduce risk of harm from environmental hazards like flooding and drought; use resources from nature more sustainably and efficiently; enhance beauty, heritage and engagement with the natural environment; mitigate and adapt to climate change; minimise waste; manage exposure to chemicals; and enhance biosecurity. In accordance with the Environment Act 2021, the 25-year plan is to be reviewed and is the first of these updates. It reinforces the intent of the 25 Year Environment Plan and sets out the progress made against all 10 goals, the specific targets and commitments made in relation to each goal, and the Government's plan to continue to deliver these targets and the overarching goals.

¹⁸ Ministry of Housing, Communities and Local Government, 2024, (online), Available at : <https://www.gov.uk/government/publications/national-planning-policy-framework--2> (accessed 28/10/2025)

¹⁹ Department for Food, Energy and Rural Affairs, 2021, (online), Available at: <https://www.gov.uk/government/publications/25-year-environment-plan> (accessed 28/10/2025)

4.6 National Guidance

- 4.6.1 **Table 4-4** identifies national guidance relevant to the activities associated with the Proposed Works and the overarching EIA. This list is not exhaustive and additional national guidance is referenced within **Chapters 6 to 19** where it only applies to that topic assessment.

Table 4-4: National Guidance

Legislation	Description
Guidance on the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 2023 ²⁰	The ONR published guidance on compliance with the EIADR in 2023. In guidance relating to Regulation 4: Consent for Dismantling or Decommissioning, this document identifies the presence of primary legislation on health and safety, nuclear safety and environmental protection as a controlling mechanism providing mitigation. In guidance relating to Regulation 5, interface with policies and legislation is discussed, ONR recognises that some issues relevant to the environmental statement will be adequately covered elsewhere (i.e. in policy or legislation). Paragraph 34 states: <i>“Rather than repeating this work, an environmental statement can provide links with these issues, and sufficient information to put them into context with the decommissioning project. An environmental statement should describe related town and country planning legislation and provide adequate (but not necessarily detailed) information on developments covered by that legislation. A statement should describe main related security, health, safety and environment legislation and provide adequate (but not necessarily detailed) information on topics covered by that legislation.”</i>
Technical Assessment Guide: The Assessment of the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations Submissions ²¹	This TAG is written as guidance for ONR inspectors to carry out their regulatory duties. It is clearly noted as not being a set of prescriptive legal requirements, however does provide a source of guidance or good practice. The Tag provides guidance on 16 environmental topics with the key information identified summarised in Appendix 4-A. Appendix 4-A provides a signpost to where each of the relevant sections of the guidance has been considered in the EIA Scoping Report.
Managing Radioactive Substances and Nuclear	The Managing Radioactive Substances and Nuclear Decommissioning: UK Policy Framework provides “a coherent UK-wide policy framework for managing radioactive

²⁰ ONR, 2023, Guidance on the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 2023, (online), Available at: <https://www.onr.org.uk/our-work/what-we-regulate/sellafield-decommissioning-fuel-and-waste/decommissioning-fuel-and-waste/decommissioning/eiadr> (accessed 28/10/2025)

²¹ ONR, 2023, Technical Assessment Guide (TAG) The Assessment of the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations Submissions, (online), Available at: <https://www.onr.org.uk/media/documents/guidance/ns-tast-gd-105.docx> (accessed 28/10/2025)

Legislation	Description
Decommissioning: UK Policy Framework	<i>substances and nuclear decommissioning under normal operating conditions". The aim of the policy framework "is to provide a clear direction of travel and to drive earlier, more cost-effective nuclear decommissioning and effective management of radioactive substances, including radioactive waste".</i>
NDA Strategy (Fifth Strategy Update) July 2025	The strategy outlines how the NDA group will continue to deliver its mission to safely decommission the UK's legacy nuclear sites, a programme of work spanning several decades which will protect people and the environment for generations to come. Section 4.2 of the consultation document discusses ONRs approach to decommissioning. The strategy is supported by an Integrated Impact Assessment, combining a Strategic Environmental Assessment (SEA), Health Impact Assessment (HIA) and Socio-Economic Impact Assessment (SeIA) of the credible options.

4.7 Local Policy

- 4.7.1 As with national planning policy, whilst compliance with local planning policy is not a key consideration in ONR's determination of EIADR applications, the Applicant has given due consideration to the local planning policy outlined in **Table 4-5**.
- 4.7.2 As identified in **Section 4.2** local planning policy will only be discussed in **Chapter 6 to 19** of this EIA Scoping Report where they are of direct relevance to the assessment.

Table 4-5: Local Policy

Legislation	Description
Kent Minerals and Waste Local Plan 2024 to 2039 ²²	The Kent Minerals and Waste Local Plan 2024 to 2039 was adopted in March 2025 and sets out the vision and strategy for waste management and mineral provision up to 2039. The Kent Minerals and Waste Local Plan 2024 to 2039 makes reference to radioactive waste management and includes Policy CSW 17 (Waste Management at the Dungeness Nuclear Licensed Sites). Policy CSW 17 recognises the presence of Dungeness A and Dungeness B, the timescales associated with their decommissioning and the waste management facilities required to facilitate waste processing.

²² Kent County Council, 2025, Kent Minerals and Waste Local Plan 2024 to 2039, (online), Available at: https://www.kent.gov.uk/_data/assets/pdf_file/0006/206853/Kent-minerals-and-waste-local-plan-2024-to-2039.pdf (accessed 28/10/2025)

Legislation	Description
Folkstone & Hythe District Core Strategy Review (2022) ²³	The Core Strategy Review was adopted in March 2022 and establishes the spatial vision, objectives, development strategy and a series of over-arching strategic policies guiding development in the district until 2037. The Core Strategy Review identifies the economic importance of Dungeness A and B within New Romney Marsh Area, but none of the policies have direct relevance to the Proposed Works other than the potential future use of the Works Area for employment opportunities. Specific policies of relevance to the EIA are identified in Chapters 6 to 19 of this EIA Scoping Report.
Folkstone & Hythe District Places and Policies Local Plan (2020) ²⁴	The Folkestone & Hythe Places and Policies Local Plan was adopted in September 2020. The Local Plan provides a policy framework for addressing specific requirements relating to: • Places • Housing and the built environment; • Economy; • Retail and leisure; • Community; • Transport • Natural environment; • Climate change; • Health and wellbeing; and • Historic environments. Specific policies of relevance to the EIA are identified in Chapters 6 to 19 of this EIA Scoping Report.
South Inshore Marine Plan ²⁵	The South Marine Plan covers an area of around 20,000 square kilometres of inshore and offshore waters across 1,000 kilometres of coastline from Folkestone to the river Dart. The Plan identifies 12 objectives which provides a framework for development within its defined area aiming to protect the marine environment by ensuring “<i>the right activities happen in the right place and in the right way</i>”.

²³ Folkstone and Hythe District Council, 2022, Core Strategy Review, (online), Available at: <https://www.folkestone-hythe.gov.uk/downloads/file/3593/core-strategy-review-2022> (accessed 28/10/2025)

²⁴ Folkstone and Hythe District Council, 2020, Places and Policies Local Plan, (online), Available at: <https://www.folkestone-hythe.gov.uk/downloads/file/3598/places-and-policies-local-plan> (accessed 28/10/2025)

²⁵ Marine Management Organisation, 2022, South Inshore Marine Plan, (online), Available at: <https://www.gov.uk/government/collections/south-marine-plans> (accessed 28/10/2025)

5. EIA Methodology

5.1 Introduction

- 5.1.1 This Chapter provides an overview of the methodology framework that will apply generally across the EIA, providing definitions of terms that will be used throughout the ES. It identifies how the individual assessments will identify resources or receptors and identify their sensitivities, as well as how impact magnitudes will be determined related to relevant baseline conditions. Considering both resource/receptor sensitivity and impact magnitude, this Chapter identifies how conclusions on effects and their significance will be drawn.
- 5.1.2 The key activities that will be undertaken in preparing the ES are as follows:
- Defining the scope and focus of the ES through the preparation of a request for a Pre-Application Opinion (this EIA Scoping Report) and receipt/review of the Pre-Application Opinion from the ONR;
 - Consultation with statutory and non-statutory consultees throughout the pre-application process;
 - Consideration of relevant local, regional and national planning policies, guidelines and legislation relevant to EIA;
 - Consideration of technical standards for the development of effect significance criteria;
 - Establishing existing baseline conditions through:
 - Review of secondary information, previous environmental studies and publicly available information and databases;
 - Desk-top studies; and
 - Physical surveys and data collection.
 - Computer modelling (where required); and
 - Expert opinion.
- 5.1.3 Each individual technical Chapter (**6 to 20**) of this EIA Scoping Report provides confirmation of the relevant guidance that has been used to develop the topic specific methodology. It is noted that available guidance can deviate from the methodology framework as set out in this Chapter, and where this is the case, it is clearly noted in the relevant Chapter.
- 5.1.4 An overview of the EIA process is provided below in **Plate 5-1**.

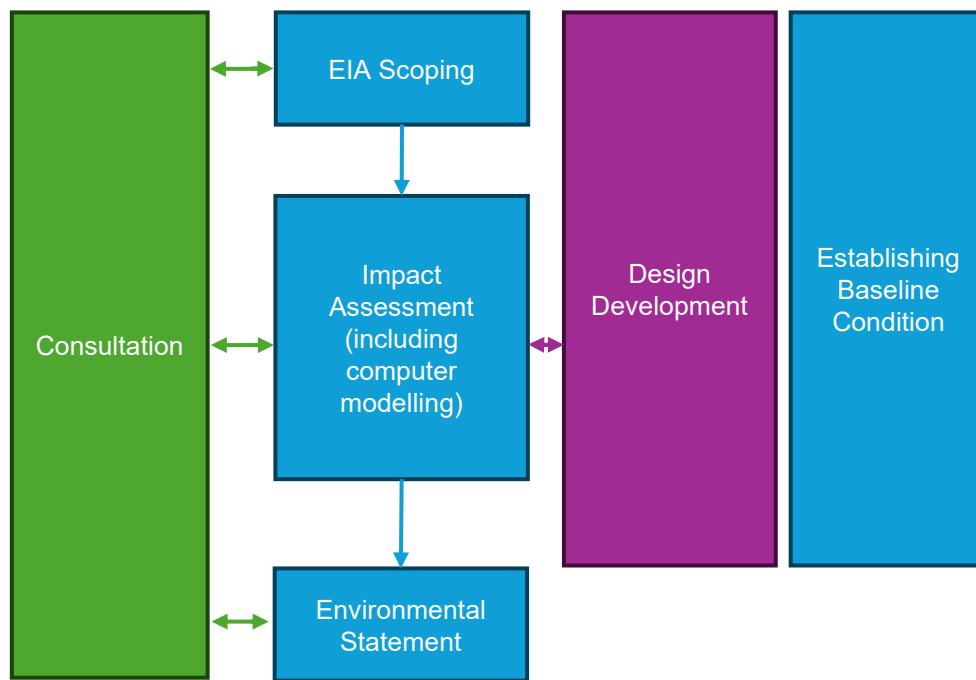


Plate 5-1: Overview of the EIA Process

5.2 Determining the Baseline Conditions

- 5.2.1 In order to predict the potential environmental effects of the Proposed Works, it is necessary to determine the environmental conditions that currently exist within the Works Area and the surrounding area in the absence of the Proposed Works. These are known as 'baseline conditions'.
- 5.2.2 As the focus of the EIA is on the Initial Decommissioning Works, the ES will refer to the existing and future baseline descriptions as described below:
- Existing baseline (2026): current baseline conditions based on desktop studies and surveys. The baseline is the reference level of the environmental conditions without implementation of the Proposed Works, against which the potential impacts of the Proposed Works are to be assessed; and
 - Future baseline: the future conditions, against which the potential impacts of the Proposed Works are to be assessed, if these conditions differ substantially from the existing baseline. When describing the future baseline scenario for each technical topic, the current baseline will be extrapolated to take account of anticipated change factors including, but not limited to, those caused by changing climatic conditions, natural evolution or planned management of habitats, changes to policy or legislation, expected new development (including planned infrastructure projects). The future baseline scenario thus describes the likely changes to the baseline environment over an appropriate timescale that can be supported by datasets and modelling.

5.3 Approach to Mitigation

Application of the Mitigation Hierarchy

- 5.3.1 Mitigation measures are an action or process defined to avoid, reduce and, if possible, offset significant adverse effects identified during the EIA process.

5.3.2 The Applicant has and will continue to apply the standard mitigation hierarchical approach to identifying mitigation measure requirements as follows:

- **Avoid or Prevent:** In the first instance, mitigation will be sought to avoid or prevent potential adverse impacts at source. For example, through the selection of a methodology for the installation of alternative discharge lines which avoids impacts within the marine environment;
- **Reduce:** If the impact is unavoidable, mitigation measures will be implemented to reduce the potential significance of the effect. For example, the provision of dust suppression; and
- **Offset:** If the impact can neither be avoided nor reduced, mitigation to offset the effect through the implementation of compensatory mitigation will be sought. For example, the provision of compensatory habitat.

Consideration of Mitigation within the EIA

5.3.3 Within the EIA, reference will be made to the two following types of mitigation:

- Embedded mitigation: measures that are incorporated into the design of the Proposed Works or where standard measures relating to industry practices or legislative requirements would be implemented; and
- Additional mitigation: measures that are identified to be required to mitigate significant adverse environment effects identified during the EIA.

Securing Environmental Commitments

5.3.4 An Environmental Management Plan (EMP) will be prepared to detail all mitigation measures identified within the ES. This EMP will be updated as decommissioning progresses in accordance with ONR's Guidance on the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations²⁶.

5.3.5 Existing management arrangements at Dungeness B are controlled by the Integrated Management System (IMS). The IMS is a suite of specification documents and procedural arrangements prepared to ensure activities are undertaken in accordance with regulatory and legislative requirements as well as established good practice. The IMS is externally accredited to ISO:14001 providing a robust, externally verified framework for environmental management.

5.4 General EIA Methodology and Assessment Scenarios

5.4.1 Establishing the scope of the assessment in a rigorous and transparent manner is a key step in the EIA process. Consultation is also an essential element of this process. This EIA Scoping Report has been prepared to

²⁶ ONR. 2022. Guidance on the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations. Available at: <https://www.onr.org.uk/our-work/what-we-regulate/sellafield-decommissioning-fuel-and-waste/decommissioning-fuel-and-waste/decommissioning/eiadr> [Accessed 12/12/2025].

provide stakeholders with sufficient information for them to form an opinion over the adequacy of the proposed scope of assessment and to ensure that impacts potentially giving rise to 'likely significant effects' will be addressed during the EIA.

- 5.4.2 Issues that are scoped into the EIA are judged likely, without effective mitigation, to have the potential to cause significant environmental effects. Issues that are scoped out of the EIA are those which it is considered are not likely to lead to significant environmental effects. Where insufficient information is available in relation to a particular issue to make a reasonable judgement at this stage, a precautionary approach is adopted and that issue is scoped in. The decision to scope out issues is based upon factors such as a high degree of development – receptor separation, the lack of impact pathways or the known low value or low sensitivity of impact receptors/resources. The case to scope out topics, or particular aspects of topics, has been clearly made within each individual technical chapter (**Chapters 6 to 20**) of this EIA Scoping Report and is supported by appropriate evidence.
- 5.4.3 The EIA will identify the likely direct (impacts that are caused by the Proposed Works), indirect (impacts which are not a direct result of the Proposed Works), cumulative, short, medium and long-term, permanent, temporary, beneficial and adverse significant effects likely to arise during the Proposed Works. The mitigation measures envisaged in order to avoid, reduce or remedy any likely significant adverse effects identified will be described in the ES (and included in the EMP).

Assessment Parameters

- 5.4.4 It is acknowledged that the decommissioning approach will continue to evolve as the Licensee refines the plan and progresses through subsequent stages of design and implementation. It is therefore important to ensure a necessary degree of flexibility incorporated through use of a parameter led assessment basis for the EIA using the Rochdale envelope approach and assumptions derived from the planning and preparation work activity outputs. This approach involves assessing the maximum (and where relevant, minimum) parameters, including for limits of deviation (e.g., development extents or specific maximum heights) as relevant, for the elements of the Proposed Works where flexibility needs to be retained, recognising that the worst-case parameter for one technical assessment may differ from another.
- 5.4.5 For the purposes of the EIA, a parameter led approach will be utilised to arrive at 'reasonable worst-case' assessment scenarios. Example parameters include the maximum height and footprint of buildings, peak traffic flows and peak staff numbers.
- 5.4.6 Whilst the 'reasonable worst case' is not defined within each of the technical sections of this EIA Scoping Report, through assessment, the ES will provide confirmation of this.

Assessment Scenarios

Spatial Scope

- 5.4.7 Each technical chapter of the ES will define the baseline against which the likely significant environmental effects of the Proposed Works will be assessed. Study areas for defining baseline conditions vary according to the technical assessment and the nature of potential impacts. For each topic the study area will be of sufficient size to encompass the spatial extent over which impacts relevant to that topic and the related receptors may occur. The study area for each topic scoped into the EIA is defined within the technical chapters (**Chapters 6 – 19**) of this EIA Scoping Report.

Temporal Scope

- 5.4.8 The assessment will have regard to the programme of works and will evaluate the environmental effects of the Proposed Works at key stages. These will be, where appropriate, compared to the situation prevailing before the Proposed Works have commenced (i.e. the current baseline), and to the situation that would prevail in the future without the Proposed Works (i.e. the future baseline).
- 5.4.9 Although the assessment will focus on the Initial Decommissioning Works, it will consider the potential environmental effects of the Care and Maintenance and Final Site Clearance phases (see **Chapter 2** for further details). Although, it is anticipated that the assessment for Care and Maintenance and Final Site Clearance phases will be high-level and qualitative in nature given the uncertainties owing to the long timescales.
- 5.4.10 In summary, where appropriate, the potential effects of the Proposed Works will be assessed during each phase as follows:
- **Initial Decommissioning Works:** A detailed assessment of this phase will be undertaken;
 - **Care and Maintenance:** A high-level, qualitative assessment of this phase will be undertaken; and
 - **Final Site Clearance:** A high-level, qualitative assessment of this phase will be undertaken.

Assessment of Effects

- 5.4.11 For consistency, and to allow comparison between aspects, the methodology described in this section will be applied during the EIA. This methodology is designed to consider whether impacts of the Proposed Works would have an effect on identified environmental receptors.
- 5.4.12 The conclusion that is made on whether an effect should be considered significant will be based upon professional judgement, with reference to the description of the Proposed Works and available information regarding:
- The magnitude and other characteristics of the potential changes (impacts) that are expected to be caused by the Proposed Works; and
 - The sensitivity of receptors to these potential changes.
- 5.4.13 Whilst this section outlines the general principles of the assessment methodology to be applied, for each environmental aspect, the categories of

resource or receptor sensitivity and magnitude of impact will be described or defined. The environmental aspect chapters (**Chapter 6 to 19**) provide greater detail on the approach to the assessment and specific guidelines for the definition of impact magnitude and resource or receptor sensitivity. Where applicable standards mandated by professional bodies (e.g. the Chartered Institute of Ecology & Environmental Management (CIEEM) or the Landscape Institute) are available, these will also be considered and referred to as applicable in the environmental aspect chapters (**Chapter 6 to 19**).

Sensitivity

- 5.4.14 The sensitivity or value of a receptor is largely the product of the importance of an asset, as informed by legislation and policy, and as qualified by professional judgement. For example, higher value receptors for landscape, biodiversity or the historic environment may be defined as being of international or national importance; whilst lower value resources may be designated as being sensitive or important at a county or district level.
- 5.4.15 The use of a receptor also plays a part in the classification of its value or sensitivity. For example, when considering visual amenity, a receptor which is residential in nature may be valued more highly than a place of work as the environmental quality of a residential receptor is more likely to be an important part of that receptor's use.

Magnitude of Impact

- 5.4.16 The magnitude of change (impact) affecting a receptor that would result from the Proposed Works will be identified on a scale from minor alterations or change, up to major changes or the total or substantial loss of the receptor. For certain aspects, the magnitude of impact will be related to guidance on levels of acceptability (e.g. for air quality or noise) and is therefore based on numerical parameters. For others it will be a matter of professional judgement to determine the magnitude of impact, using descriptive terminology.

Classification of Effect and Significance

- 5.4.17 The significance of effects is derived with reference to information about the nature of the Proposed Works, the sensitivity or value of receptors that could be affected, together with the magnitudes of impact that are likely to occur.
- 5.4.18 For many environmental aspects, effect significance can be determined by using a matrix (**Table 5-1**). Variations to this matrix approach, which may be applicable to specific environmental aspects, are detailed within the respective environmental aspect chapters (**Chapter 6 to 19**), along with descriptions of receptor sensitivity, magnitude of impact, and levels of effect that are considered significant. Definitions of how the categories that are used in the matrix are derived for each environmental aspect are also set out.
- 5.4.19 Professional judgement will be applied during the assessment, as the boundaries between the sensitivities or magnitudes of impact may not be clearly defined, and the resulting assessment conclusions may need clarifying.
- 5.4.20 The overarching significance matrix that will be used to classify effects is shown in **Table 5-1**. Effects can be either beneficial or adverse.

Table 5-1: Classification of Effect Matrix

Magnitude	Value and sensitivity of receptor			
	High	Medium	Low	Very Low
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Minor
Low	Moderate	Minor	Minor	Negligible
Very Low	Minor	Minor	Negligible	Negligible

5.4.21 Following the classification of an effect, clear statements will be made within the topic chapters as to whether that effect is significant or not significant. As a general rule, major and moderate effects are considered to be significant (as shown by the shaded cells in **Table 5-1**), whilst minor and negligible effects are considered to be not significant. However, professional judgement will be applied, including taking account of whether the effect is permanent or temporary, its duration/frequency, whether it is reversible, and/or its likelihood of occurrence.

5.4.22 Generic definitions for the classification of effects are provided below:

- **Major:** These effects may represent key factors in the decision-making process. Potentially associated with sites and features of national importance are likely to be important considerations at a regional or district scale. Major effects may relate to resources or features which are unique and which, if lost, cannot be replaced or relocated;
- **Moderate:** These effects, if adverse, are likely to be important at a local scale and on their own could have a material influence on decision making;
- **Minor:** These effects may be raised as local issues and may be of relevance to the detailed design of the Proposed Works, but are unlikely to be critical in the decision-making process; and
- **Negligible:** Effects which are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error, these effects are unlikely to influence decision making, irrespective of other effects.

5.5 Approach to Effect Interactions and Cumulative Effects Assessment

5.5.1 In accordance with the EIADR, the EIA will include consideration of cumulative effects. For the cumulative assessment, two types of effect will be considered:

- **Effect interactions:** The combined effect (in-combination effect) of individual effects identified from the Proposed Works, for example noise, airborne dust or traffic impacting on a single receptor (known as 'effect interactions'); and
- **Cumulative effects:** The combined effect of nearby planned developments, planning proposals, programmes or development schemes which may, on an individual basis be not significant but,

cumulatively, have a likely significant effect (known as 'cumulative effects').

Effect Interactions

- 5.5.2 There is no established EIA methodology for assessing and quantifying effect interactions that can lead to combined effects on sensitive receptors. However, the European Commission (EC) has produced guidelines for assessing effect interactions "*which are not intended to be formal or prescriptive, but are designed to assist EIA practitioners in developing an approach which is appropriate to a project...*"²⁷.
- 5.5.3 A number of effect interactions are inherently considered within the assessment methodologies defined in **Chapters 6 to 19**, for example the ecology assessment will consider the effects of both air quality and noise on ecological receptors. However, there are potential effect interactions which require further consideration. The approach to consider these potential effect interactions, developed in accordance with the EC guidelines, will use the defined residual effects of the Proposed Works to consider if a combination of several effects on one receptor or receptor group due to the Proposed Works, could theoretically interact or combine to produce a combined significant effect. The four stage assessment approach is summarised in **Plate 5-1**.
- 5.5.4 Whilst it is anticipated that effect interactions would be limited to residential receptors, the receptors or receptor groups considered within the EIA will be tabulated to determine the potential for effect interactions and therefore any combined effects. Only adverse or beneficial residual effects classified as minor, moderate, or major will be considered in relation to potential effect interactions. Residual effects which are classified as negligible will be excluded from the assessment of the effect interactions as, by virtue of their definition, they are considered to be imperceptible effects to an environmental/socio-economic resource or receptor.

²⁷ European Commission. 1999. Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions. Available at: <http://ec.europa.eu/environment/archives/eia/eia-studies-and-reports/pdf/guidel.pdf> [Accessed 18/10/2025].

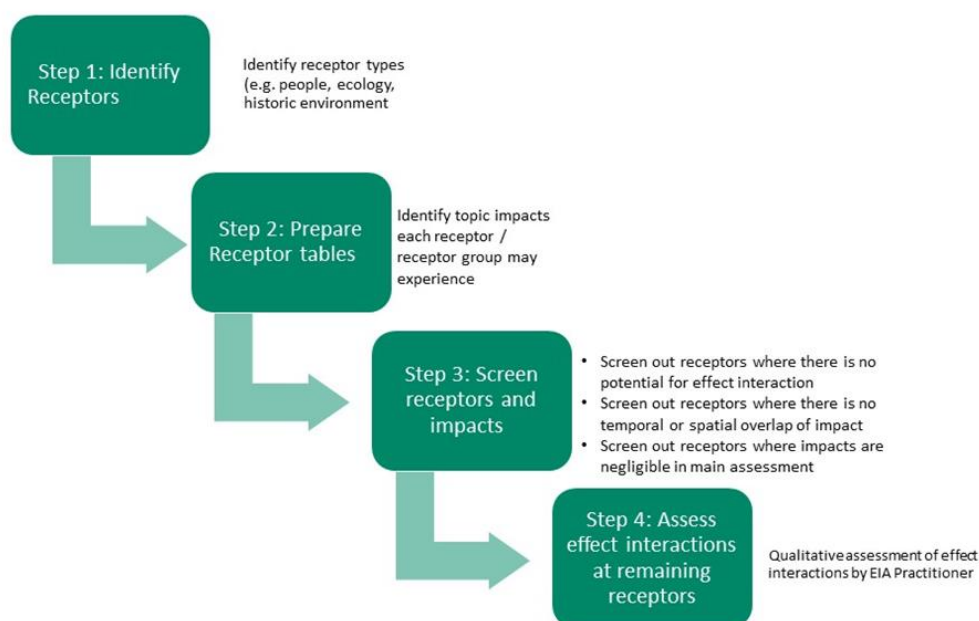


Plate 5-2: Effect Interactions Assessment Process

Cumulative Effects with Other Developments

General Approach

- 5.5.5 In line with Regulations 5(1)(f) and Schedule 1, paragraph 5 (e) of the EIADR, cumulative effects will be assessed within the ES. There is guidance available for cumulative effects assessments, however, there is no single agreed industry standard method of assessment. In accordance with the ONR Technical Assessment Guide for The Assessment of the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations Submissions (2023), in the absence of a definitive approach, and given the scale of the Proposed Works, professional judgement will be applied alongside the approach presented in the Planning Inspectorate Advice on Cumulative Effects Assessment²⁸. Whilst this guidance is designed specifically for Nationally Significant Infrastructure Projects, the advice therein is often referred to as standard approach and is considered appropriate to adopt for an application made under the EIADR. The proposed cumulative effects assessment methodology is described below.

Stage 1 – Establish the Zone of Influence and Identify Long List of ‘Other Developments’

- 5.5.6 The Zone of Influence (Zoi) of the Proposed Works within which any potential effects of the Proposed Works may combine with the effects arising from other developments will be determined on the basis of the maximum study areas of the technical assessments considered within the ES. The Zoi considered for each technical assessment are presented in **Table 5-2**.

²⁸ HM Government. 2025. Planning Inspectorate Guidance Note. Available at: <https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-cumulative-effects-assessment> [Accessed 16/10/25].

Table 5-2: Study Areas Considered in Technical Assessments

Technical Topic	Zone of Influence
Air Quality	Up to 250 m from the Works Area and up to 200 m from affected roads
Conventional Waste and Materials	United Kingdom
Coastal Processes	Wider regional area, including the English Channel
Climate Change	The global climate
Historic Environment	Up to 3 km from the Works Area
Human Health	The ward of Walland and Denge Marsh
Landscape and Visual	Up to 10 km from the Works Area
Marine Ecology	Up to 50 km from the Works Area
Noise and Vibration	Up to 300m from the Works Area and up to 50m from affected roads
Socio-Economics	Up to 45-minute drive time from the Works Area
Soils and Geology	Up to 1 km from the Works Area
Traffic and Transport	Affected road network
Terrestrial Ecology	Up to 10 km from the Works Area
Water Environment and Flood Risk	Up to 1 km from the Works Area

5.5.7 It is considered that a 20km search area encompasses the maximum range of any potential significant effects as associated with the Proposed Works.

5.5.8 The following data sources will be used to identify terrestrial ‘other developments’:

- Folkestone and Hythe District Council planning portal²⁹;
- Kent County Council planning portal³⁰;
- Local Plans (see **Chapter 4**); and
- National Infrastructure Planning website³¹.

5.5.9 The following data sources will be used to identify ‘other marine development’:

- Marine Plans on the Marine Management Organisation (MMO) portal³²;

²⁹ Folkestone and Hythe District Council. Planning and Built Environment Public Register. Available at: [https://folkestonehythedc.my.site.com/PR3/s/be-register-view?c_r=Arcus BE Public Register](https://folkestonehythedc.my.site.com/PR3/s/be-register-view?c_r=Arcus+BE+Public+Register) [Accessed 28/10/2025].

³⁰ Kent County Council. Planning Portal. Available at: <https://www.kentplanningapplications.co.uk/> [Accessed 28/10/2025].

³¹ HM Government. National Infrastructure Planning Project Search. Available at: <https://national-infrastructure-consenting.planninginspectorate.gov.uk/project-search> [Accessed 28/10/2025].

³² Marine Management Organisation. Marine Plans. Available at: <https://www.gov.uk/guidance/explore-marine-plans> [Accessed 28/10/2025].

- MMO Public Register³³;
- Kingfisher Information Service – Offshore Renewable and Cable Awareness (KIS-ORCA) Marine³⁴;
- National Infrastructure Planning website; and
- The Crown Estate website³⁵.

5.5.10 Developments identified in the long list will be based on the following criteria:

- Those under construction;
- Permitted applications which have not yet been implemented (covering the past five years and taking account of those that received planning consent over three years ago and are still valid but have not yet been completed);
- Submitted planning applications not yet determined;
- Refused, subject to appeal procedures not yet determined;
- Projects on the Planning Inspectorate's Programme of Projects where a scoping report has been submitted;
- Projects on the National Infrastructure Planning Programme of Projects;
- Development identified in the relevant Development Plan (and emerging Development Plans); and
- Development identified in other plans and programmes (as appropriate) which set the framework for future development consents/approvals, where such development is reasonable likely to come forward.

Stage 2: Establishing a Shortlist of 'Other Existing Development and/or Approved Development'

5.5.11 To ensure the cumulative effects assessment is proportionate, a shortlist will be established from the long list (Stage 1) of other existing development and/or approved development. To create the shortlist (Stage 2), the following criteria will be used, which will exclude the following developments:

- Small scale residential uses (less than two dwellings);
- Changes of buildings' use (unless it could itself result in a cumulative effect, such as a conversion of several barns into a holiday village);
- Construction of agricultural buildings (e.g. storage of livestock, machinery or feed);
- House extensions or cosmetic changes to buildings;
- Works to trees;
- Micro-generation wind turbines;

³³ Marine Management Organisation. Public Register. Available at: https://marinelicensing.marinemanagement.org.uk/mmofox5/fox/live/MMO_PUBLIC_REGISTER/ [Accessed 28/10/2025].

³⁴ Kingfisher Information Service. Offshore Renewable and Cable Awareness (KIS-ORCA) Marine. Available at: <https://kis-orca.org/map/> [Accessed (28/10/2025)].

³⁵ The Crown Estate. Available at: <https://www.thecrownestate.co.uk/> [Accessed 28/10/2025].

- Roof mounted solar photovoltaic panels (or ground mounted less than 50kW output);
- Renewal of planning permission for retention of existing operational use; and
- Variation to planning permissions, including reserved matters applications (where original application would be excluded).

5.5.12 Developments meeting any of the aforementioned criteria will be excluded as they are unlikely to have the potential to result in cumulative effects.

5.5.13 Following an initial review of the sources listed in Stage 1, it is considered that the shortlist of other development identified for the assessment of cumulative effects is likely to comprise of the following developments:

- Decommissioning activities at Dungeness A, including application reference 25/1502/FH for the proposed demolition of boiler house complexes and external alterations to reactor buildings;
- KCC/FH/0128/2025 - Continuation of seasonal shingle recycling operations beyond October 2026, for the purpose of recovering material used in the maintenance of flood defences at Dungeness;
- South Kent Energy Park;
- Shepway Energy Park; and
- South Brooks Solar Farm.

5.5.14 **Figure 5-1** shows the location of these schemes in relation to Dungeness B.

5.5.15 The shortlist of potential cumulative schemes will be reviewed and confirmed in the ES, being agreed with ONR approximately three months prior to the EIADR application to allow sufficient time for the technical assessments to consider the potential cumulative schemes.

5.5.16 Whilst application reference 25/1388/FH (a proposed Administration Building at Dungeness B and associated car parking) has been submitted, it is considered that this would form part of the future baseline for the EIA based on the current understanding of these works. This will be reviewed during the preparation of the ES and will be considered as a potential cumulative development if necessary.

Stage 3: Information Gathering

5.5.17 Information on the shortlist developments will be compiled to inform the cumulative effects assessment. Key details of the information gathered will be presented in the ES.

Stage 4: Assessment

5.5.18 Consideration will be given within the EIA, as relevant, to those shortlisted developments which have the potential to result in cumulative effects together with the Proposed Works from the perspective of each relevant technical assessment. It should be noted that some of the developments that meet the above criteria may be due to be occupied prior to the start of the Proposed Works. As a result, these developments may be considered as 'built' within the EIA assessment scenarios and thus included as part of the existing or future baseline.

- 5.5.19 For the majority of topics, the assessment of cumulative effects will be a qualitative assessment and will be reported as a collective assessment of the cumulative developments rather than an assessment of each individual cumulative developments identified.
- 5.5.20 The cumulative assessment will be undertaken with a focus on Phase 1. The cumulative assessment of Phases 2 and 3 will be undertaken if any known long-term development comes forward. Given the long timescales of these phases, the level of detail available for other developments is likely to be limited.

5.6 Transboundary Effects

- 5.6.1 The United Nations Economic Commission for Europe's (UNECE) 'Espoo Convention'³⁶ was adopted in 1991 to encourage and improve the cooperation between European Economic Area (EEA) states in assessing the potential transboundary environmental impacts of their developments. The Espoo Convention is implemented through Directive 2014/52/EU³⁷ of the European Parliament of 16 April 2014 amending Directive 2011/92/EU³⁸ on the assessment of the effects of certain public and private projects on the environment (the EIA Directive).
- 5.6.2 Additionally, the EIADR requires EIA for decommissioning and dismantling to consider the "*transboundary nature of the impacts*" of decommissioning and dismantling. The ONR provides guidance in considering transboundary effects, stating that the EIA should "*take into account the environmental protection objectives established in retained EU law*" when considering transboundary effects.
- 5.6.3 At present there is no single agreed industry standard method of assessing transboundary effects. In the absence of a definitive approach, professional judgement has been applied alongside the approach to transboundary effects as identified by the Planning Inspectorate in their Advice on Transboundary Impacts and Process³⁹. Whilst this Advice Note is specific to Nationally Significant Infrastructure Projects, the advice therein is often referred to as a standard approach and is considered appropriate to adopt for an application made under EIADR.
- 5.6.4 The Applicant does not have a formal role in the transboundary effects notification and consultation process, however, the Espoo Convention obligates its signees to engage with other signatory states and their public where relevant to identify potential issues or concerns. Therefore, the Applicant is required to provide sufficient information to allow the ONR to

³⁶ United Nations. 1991. Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention). Available at:

https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-4&chapter=27&clang=en [Accessed 28/10/2025].

³⁷ European Commission. 2014. The EIA Directive (2014/52/EU). Available at: <https://eur-lex.europa.eu/eli/dir/2014/52/oj/eng> [Accessed 28/10/2025].

³⁸ European Commission. 2011. The EIA Directive (2011/92/EU). Available at: <https://eur-lex.europa.eu/eli/dir/2011/92/oj/eng> [Accessed 28/10/2025].

³⁹ HM Government Planning Inspectorate. 2025. Advice on Transboundary Impacts and Process. Available at: <https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-transboundary-impacts-and-process> [Accessed 28/10/2025].

make a decision on whether or not the Proposed Works may lead to significant transboundary environmental effects and subsequently notify the Secretary of State (SoS) if required.

- 5.6.5 The Applicant has undertaken an appraisal of the potential transboundary environmental effects arising from the Proposed Works through the completion of a Transboundary Screening Matrix which is provided in **Appendix 5A** of this EIA Scoping Report.
- 5.6.6 The nearest Espoo Convention signatory state outside the UK is France, as shown in **Figure 5-2**. The Works Area is approximately 22km from French territorial waters. **Figure 5-2** also shows the Works Area in relation to other nearby EEA states.
- 5.6.7 Based on the information provided in this EIA Scoping Report, it is not envisaged that the Proposed Works would result in significant effects on the environment in other EEA states, as demonstrated in the Screening Matrix provided in **Appendix 5A**. It is proposed that an updated Transboundary Screening Matrix be provided as part of the EIADR application and will be appended to the ES to provide further justification for this position, with reference to the detailed consideration to be undertaken through the EIA process. Beyond the provision of an updated Transboundary Screening Matrix, no further assessment or chapter of potentially significant transboundary environmental effects is proposed within the ES.

5.7 Approach Post EIADR Determination

- 5.7.1 This section outlines the approach to the consideration of environmental effects of changes associated with the Proposed Works that occur following the determination of the EIADR application, as well as the approach to environmental compliance.

Regulation 13

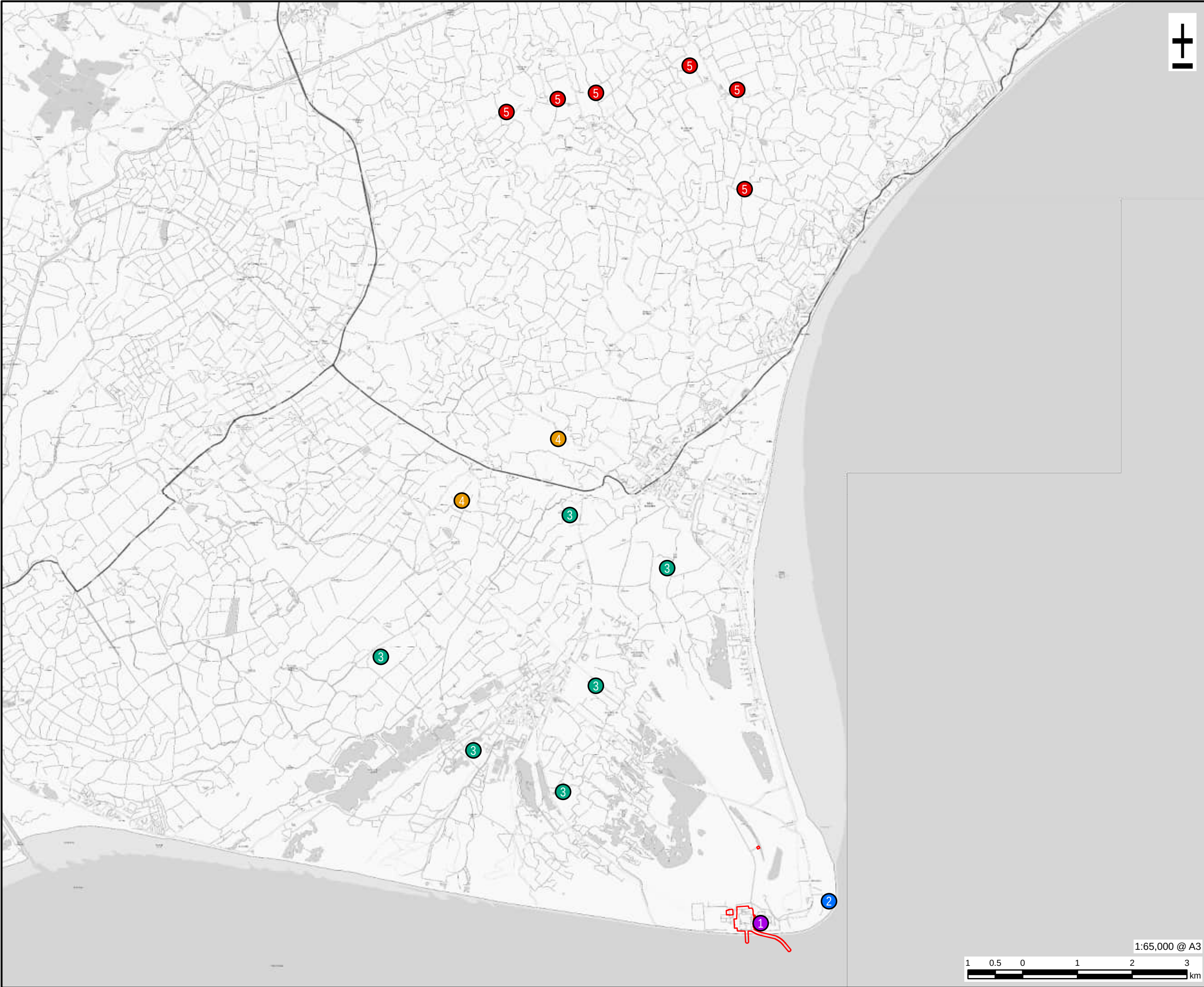
- 5.7.2 Regulation 13 of the EIADR makes provision for the assessment of change(s) or extension(s) to Projects in respect of which a consent has been granted pursuant to Regulation 4(1)(b).
- 5.7.3 As identified in ONR's Guidance on the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations, a change could be:
- *“Quantitative in nature and related directly to the project itself (for example, a change in the amount of radioactive waste generated, or a change in the number of heavy goods vehicles travelling to and from site)”*; or
 - *“Qualitative in nature and might arise from changes in factors outside the control of licensees (for example, changes in government policy, or changes in the technology and expertise available).”*
- 5.7.4 Under Regulation 13, it is the responsibility of the licensee to consider if proposed change(s) or extension(s) could result in significant effects on the environment. The conclusions of the licensee on whether significant effects on the environment are likely, including justification, must be provided to the ONR. The ONR will then consider whether an EIA is required to support the proposed change or extension. If an EIA is required, it would focus on the

potential impacts of the change or extension, but would also consider if the conclusions of EIA for the extant project remain valid.

- 5.7.5 If an EIA is required, the ONR would review the EIA for the proposed change(s) or extension(s) and provide determination within 90 days.

Environmental Management

- 5.7.6 Arrangements for monitoring the evolving baseline as decommissioning and dismantling progresses post EIADR determination will be outlined within the ES and EMP. The management of changes to the future baseline will likely reflect the NRS procedure for managing compliance.



AECOM

PROJECT

Dungeness B Nuclear
Decommissioning

CLIENT

EDF Energy Nuclear
Generation Limited

CONSULTANT

AECOM Limited
Aldgate Tower
2 Leman Street
London, E1 8FA
www.aecom.com

LEGEND

The Works Area

- Other Identified Development**
- 1 - Dungeness A Power Station - 25/1502/FH
 - 2 - Dungeness Shingle Recycling Operation - KCC/FH/0128/2025
 - 3 - South Brooks Solar Farm
 - 4 - South Kent Energy Park
 - 5 - Shepway Energy Park

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FIGURE TITLE

Location of Other Identified
Developments

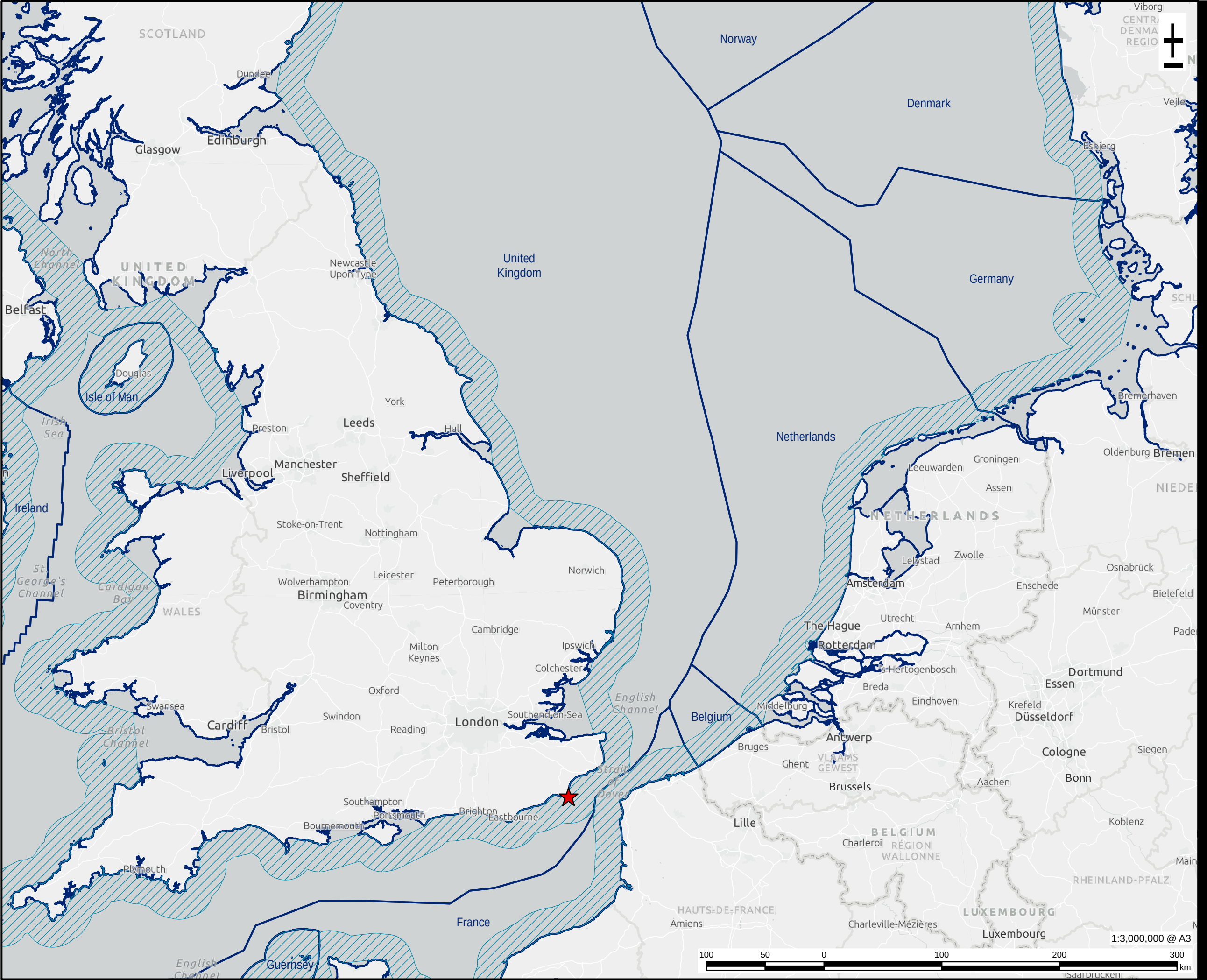
FIGURE NUMBER

Figure 5-1

REV

0

DOCUMENT NUMBER



AECOM

PROJECT

Dungeness B Nuclear
Decommissioning

CLIENT

EDF Energy Nuclear
Generation Limited

CONSULTANT

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LEGEND

- The Works Area
- European Economic Area State
- Territorial Seas - 12 Nautical Miles Zone

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NOTES

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Flanders Marine Institute (2023). Maritime Boundaries Geodatabase: Territorial Seas (12NM), version 4. Available online at <https://www.marineregions.org/>. <https://doi.org/10.14284/633>. Maritime Boundaries and Exclusive Economic Zones (200NM), version 12. Available online at <https://www.marineregions.org/>. <https://doi.org/10.14284/632>

ISSUE PURPOSE

EIA Scoping Report

PROJECT NUMBER

60739933

FIGURE TITLE

European Economic Area States

FIGURE NUMBER

Figure 5-2

REV

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DOCUMENT NUMBER

6. Air Quality

6.1 Introduction

- 6.1.1 This chapter sets out the proposed scope and methodology for the assessment of effects of the Proposed Works on air quality. This has been informed by a review of the environmental baseline conditions, along with the anticipated key issues likely to be associated with the Proposed Works.
- 6.1.2 This chapter should be read in conjunction with the description of the Proposed Works presented in **Chapter 2: The Decommissioning and Dismantling Process**, and the assessment methodologies presented in **Chapter 11: Human Health, Chapter 17: Traffic and Transport** and **Chapter 18: Terrestrial Ecology** and of this Scoping Report.

6.2 Relevant Legislation, Policy and Guidance

Legislation

- 6.2.1 Legislation which is relevant to the assessment of effects on air quality is presented in **Table 6-1**.

Table 6-1: Legislation Relevant to Air Quality

Legislation	Legislation details
Sections 2 and 3 of the EU (Withdrawal) Act 2018 (c. 16) ⁴⁰	Air pollution limits set by the EU by Directive 2008/50/EC ⁴¹ remain in UK law, having been enshrined through the EU (Withdrawal) Act, however, the EU will no longer have a role in enforcement.
The Air Quality (England) Regulations 2000 ⁴²	The Air Quality (England) Regulations 2000 set national objectives for local authorities in England. The local air quality management regime requires every local authority to regularly review and assess air quality in their areas. Air quality is a devolved matter, and for England these reviews identify whether national objectives in the Air Quality (England) Regulations 2000 have been, or will be, achieved by an applicable date. If national objectives are not met, or at risk of not being met, the local authority concerned must declare an air quality management area and prepare an air quality action plan.
The Air Quality (England) Standards Regulations 2010 (as amended) ⁴³	Transpose Directive 2008/50/EC ⁴¹ , including the limit values, into UK legislation. The Air Quality Standards Regulations 2010 impose a duty on the Secretary of State to meet these limit values. Similar to Directive 2008/50/EC, the Air Quality

⁴⁰ European Union (Withdrawal) Act (2018). Available at: <https://www.legislation.gov.uk/ukpga/2018/16/contents> [Accessed 30/09/2025].

⁴¹ European Commission. (2008). Directive 2008/50/EC of the European Parliament and of The Council of 21 May 2008 on ambient air quality and cleaner air in Europe. Available at: <https://eur-lex.europa.eu/eli/dir/2008/50/oj/eng> [Accessed 30/09/2025].

⁴² The Air Quality (England) Regulations (2000). Available at: <https://www.legislation.gov.uk/uksi/2000/928/contents/made> [Accessed 30/09/2025].

⁴³ Environmental Protection – The Air Quality Standards Regulations (2010). Available at: <https://www.legislation.gov.uk/uksi/2010/1001/contents> [Accessed 30/09/2025].

Legislation	Legislation details
	Standards Regulations 2010 define ambient air as outdoor air, and explicitly exclude workplaces and other places to which members of the public do not have regular access. The 2016 amendment regulations include an update to sampling methods and to requirements for the selection of monitoring site locations.
Environment Act 2021 ⁴⁴	Part IV of the Environment Act (2021) requires the Government to update review the Air Quality Strategy (AQS). The AQS contains standards, objectives and measures for improving ambient air quality.
The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 ⁴⁵	Introduces a target level for annual mean concentrations of PM _{2.5} of 10 µg/m ³ to be achieved at relevant monitoring stations by 31 st December 2040 and an exposure reduction target for the Secretary of State to report on by 15 th July 2041. For the purpose of these regulations, relevant monitoring locations refer to fixed stations that are part of the national air quality monitoring network. There are no such monitoring locations within the study area for the Proposed Works.

Policy

- 6.2.2 Policy relating to air quality and relevant to the assessment of effects of the Proposed Works is presented in **Table 6-2**.

Table 6-2: Policy Relevant to Air Quality

Policy	Policy details
	The NPPF, published in December 2024, sets out the Government's planning policies for England and how these are expected to be applied. Air quality in the UK has been managed through the Local Air Quality Management regime using national objectives. Paragraph 199 of the NPPF states that: <i>"Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. ... Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan."</i>
National Planning Policy Framework (NPPF) ⁴⁶	
Air Quality Strategy for England: Framework for	Published in April 2023 the strategy sets out the actions the government expects local authorities to take in support of achieving the new national PM _{2.5} targets, by reducing emissions from sources within their control.

⁴⁴ Environment Act (2021) (c.30). Available at: <https://www.legislation.gov.uk/ukpga/2021/30/contents> [Accessed 30/09/2025].

⁴⁵ The Environmental Targets (Fine Particulate Matter) (England) Regulations (2023). Available at: <https://www.legislation.gov.uk/uksi/2023/96/contents/made> [Accessed 30/09/2025].

⁴⁶ Department for Levelling Up, Housing and Communities (DLUHC) (2024). The National Planning Policy Framework. Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2> [Accessed 30/09/2025].

Policy	Policy details
Local Authority Delivery 2023 ⁴⁷	The UK's national Air Quality Objectives for the pollutants of relevance to this assessment are displayed in Annex A.

- 6.2.3 The relevant national Air Quality Objectives, as outlined in the Air Quality Strategy for England: Framework for Local Authority Delivery are presented in **Table 6-3** below.

Table 6-3: National Air Quality Objectives

Pollutant	Averaging Period	Value	Maximum Permitted Exceedances
Nitrogen Dioxide (NO ₂)	Annual Mean	40 µg/m ³	None
	Hourly Mean	200 µg/m ³	18 times per year
Particulate Matter (PM ₁₀)	Annual Mean	40 µg/m ³	None
	24-Hour Mean	50 µg/m ³	35 times per year
Fine Particulate Matter (PM _{2.5})	Annual Mean	20 µg/m ³	None
	Annual Mean (Interim Target)*	12 µg/m ³	None
	Annual Mean (Final Target)**	10 µg/m ³	None
	Population Exposure Reduction**	35% reduction from 2018	None

* Interim PM_{2.5} target to be achieved by 2028.

** Final PM_{2.5} target and exposure reduction goal to be achieved by 2040.

Guidance

- 6.2.4 Guidance which is relevant to the assessment of effects on air quality is presented in **Table 6-4**.

Table 6-4: Guidance Relevant to Air Quality

Guidance	Guidance details
Environmental Protection UK and Institute of Air Quality Management Guidance on Land-Use Planning & Development Control: Planning for Air Quality ⁴⁸	Statutory best practice guidance relating to air quality and development control has been published by Environmental Protection UK (EPUK) and the Institute of Air Quality Management (IAQM). The guidance states that: <i>"Land-use planning can play a critical role in improving local air quality. At the strategic level, spatial planning can provide for more sustainable transport links between the home, workplace, educational, retail and leisure facilities, and identify appropriate areas for potentially polluting industrial development. For an</i>

⁴⁷ Department for Environment, Food and Rural Affairs. 2023. Air Quality Strategy for England.

⁴⁸ IAQM & EPUK. 2017. Land-Use Planning & Development Control: Planning for Air Quality.

Guidance	Guidance details
	<i>individual development proposal, there may be associated emissions from transport or combustion processes providing heat and power."</i>
Local Air Quality Management (LAQM) Technical Guidance (2022) ⁴⁹	Provides guidance for technical officers and local authorities to discharge their obligations under the LAQM regime. It contains guidance on numerous areas including, for example, screening tools and methodologies, air quality monitoring, estimating emissions and dispersion modelling.
Institute of Air Quality Management Planning Guidance guide to the assessment of air quality impacts on designated nature conservation sites ⁵⁰	The IAQM guidance's purpose is to assist in the assessment of the air quality impacts of development on designated nature conservation sites. It focuses on air quality assessments in support of Habitats Regulations Assessments (HRA) but is also useful when assessing the air quality impact on national or local designated nature conservation sites.
IAQM Guidance on the Assessment of Dust from Demolition and Construction ⁵¹	The IAQM guidance provides the methodology for assessing construction phase dust impacts and recommends appropriate mitigation measures.
PM _{2.5} Targets: Interim Planning Guidance ⁵²	Interim Planning Guidance was published in October 2024 pending publication of new guidance on PM _{2.5} , which has not yet been published. The guidance moves away from an exceedance-based approach and towards a minimisation of pollution approach. It recommends key sources of air pollution are identified, and appropriate action to minimise emissions of PM _{2.5} and its precursors are implemented as far as is reasonably practicable. If quantitative evidence is not available, a qualitative approach can be taken.

6.3 Baseline Conditions

Data Gathering Methodology

6.3.1 The principal data source used to inform the current baseline conditions presented in this section beyond those identified in **Chapter 5: EIA Methodology** comprise the following:

- Local Authority air quality management reports⁵³;

⁴⁹ Department for Environment, Food and Rural Affairs. 2022. Local Air Quality Management Technical Guidance (TG22).

⁵⁰ IAQM. 2020. A guide to the assessment of air quality impacts on designated nature conservation sites.

⁵¹ IAQM. 2024. Guidance on the assessment of dust from demolition and construction.

⁵² Department for Environment, Food and Rural Affairs. 2024. PM_{2.5} Targets: Interim Planning Guidance.

⁵³ Folkestone and Hythe District Council. 2024. Air Quality Annual Status Report. Available at: <https://www.folkestone-hythe.gov.uk/downloads/file/5820/folkestone-and-hythe-asr-2024> [Accessed (30/09/2025)].

- Department for Environment, Food and Rural Affairs (Defra) published data⁵⁴; and
- Air Pollution Information Service (APIS)⁵⁵.

6.3.2 Project specific nitrogen dioxide diffusion tube surveys and dust deposition surveys will be undertaken in advance of the assessment to be presented in the ES.

Study Area

6.3.3 The study areas are defined according to the appropriate guidance for the type of air quality assessment being carried out (i.e. construction dust and Non-Road Mobile Machinery (NRMM), works traffic), and therefore vary for the various assessments. The guidance used has identified distances for study areas based on the risk of effect and has determined that outside of the specified distances, the risk of effects is negligible.

6.3.4 The study area for the construction dust and NRMM emissions is applied in line with IAQM guidance. IAQM guidance does not differentiate between study area distances for demolition dust and construction dust. Therefore, the same study area parameters are utilised for both types of dust emissions to ensure consistency and clarity in the assessment. The specific distances applied are as follows:

- Up to 250m beyond the Works Area boundary and 50m from the construction traffic route (up to 250m from the Site entrances), for human health receptors; and
- Up to 50m from the Works Area and construction traffic route (up to 250m from the Site entrances) for ecological receptors.

6.3.5 The study area for the traffic emissions assessment, in relation to human health receptors, is defined in the screening criterion set out in the IAQM/EPUK guidance⁴⁸. This guidance states that only properties within 200m of affected roads, should be considered. Affected roads are those where changes in traffic flow as a result of a project would exceed the thresholds outlined in the guidance including:

- A change of >100 Light Duty Vehicle (LDV) Average Annual Daily Traffic (AADT) within or adjacent to an AQMA, or >500 LDV AADT elsewhere.
- A change of >25 Heavy Duty Vehicle (HDV) AADT within or adjacent to an AQMA, or >100 HDV AADT elsewhere.

6.3.6 The study area for the traffic emissions assessment in relation to ecological receptors is defined by the screening criterion set out within the Design Manual for Roads and Bridges (DMRB)⁵⁶. This specifies that habitat sites within 200 m of affected roads should be considered and identifies affected roads as those experiencing an increase in traffic of 1000 AADT or 200 HDV

⁵⁴ Department for Environment, Food and Rural Affairs. 2021. Background Mapping Data for Local Authorities. Available at: <https://uk-air.defra.gov.uk/data/iaqm-background-maps?year=2021> [Accessed 30/09/2025].

⁵⁵ APIS. Available at: <https://www.apis.ac.uk/> [Accessed 30/09/2025].

⁵⁶ Highways Agency. 2007. Design Manual for Roads and Bridges, Volume 11 Environmental Assessment, Section 3 Environmental Assessment Techniques, Part 1 HA207/07 Air Quality.

AADT. It should be noted that cumulative changes in traffic will also be taken into consideration.

Potential Receptors

6.3.7 Sensitive air quality receptors may include:

- Residential and other sensitive human health receptors (i.e., schools and hospitals);
- Commercial and other properties sensitive to dust soiling; and
- Ecological sites sensitive to dust or changes in air quality, and deposition.

Residential and Other Sensitive Human Receptors

6.3.8 The nearest identified residential properties to the Proposed Works are located at least 340m to the east north-east of Zone A of the Works Area which are a mixture of holiday lets and private dwellings. The nearest small settlements are Lydd approximately 4.9km north-west of the Proposed Works Other residential areas include Dungeness, Lydd-on-Sea and Greatstone located approximately 1km east, 1.65km north-east and 4.9km north-east of Zone A respectively.

6.3.9 In addition, there are residential and other sensitive human receptors located within proximity to the proposed traffic route identified in **Chapter 2: The Decommissioning and Dismantling Process**. These include properties in Lydd.

Commercial Receptors

6.3.10 A review of the site and its surroundings has been conducted to identify commercial and other properties that may be sensitive to dust soiling. Based on the assessment, no receptors fulfilling this criterion have been identified within the defined study area. As such, this receptor type has been screened out from further consideration in the assessment.

Ecological Receptors

6.3.11 Whilst ecological sites are relevant to this assessment, the assessment methodology for air quality effects on ecological sites is presented in **Chapter 18: Terrestrial Ecology**. This is because, whilst there are critical loads/levels below which impacts on ecological sites will be not significant, any assessment of the potential for impacts above these levels will rely a knowledge of the sensitivity of specific ecosystems and consideration of multiple effects on the ecosystem which falls outside the scope of an air quality assessment. The assessment of dust impacts focuses on identifying a suitable level of mitigation regardless of the specific sensitivity or condition of the ecosystem and is therefore included in this chapter. Specific ecological receptors to be considered within the assessment are also detailed in **Chapter 18: Terrestrial Ecology**, rather than this chapter. Receptors to be considered include:

- Internationally designated sites such as Ramsar sites, SPA (Special Protection Areas) and SAC (Special Area of Conservation);
- Nationally designated sites such as SSSI and NNR; and

- Locally designated sites such as local nature reserves.

Surveys

- 6.3.12 In order to provide data for model verification, a 6-month nitrogen dioxide diffusion tube survey will be undertaken at publicly accessible locations around the Works Area and the proposed traffic routes. In addition, frisbee gauge dust monitors⁵⁷ will be used on-site to monitor the existing dust deposition baseline. This monitoring has not yet commenced but will be carried out in advance of the completion of the ES.
- 6.3.13 Proposed monitoring locations are shown in **Figure 6-1** and summarised in **Table 6-5** and **Table 6-6**. These locations have been identified in consultation with the transport and ecology specialists and have been proposed to the Environmental Health Officer at Folkestone and Hythe District Council. Further detail of consultation undertaken regarding the air quality monitoring is provided in **Section 6.4**.

Table 6-5: Proposed Diffusion Tube Locations

Location Number	Location	Approx. Grid Reference	
DT1	Harden Road	604704	121021
DT2	Harden Road	604846	121300
DT3	Dungeness Road	604721	120900
DT5	Dungeness Road	605769	120161
DT7	Romney Marsh	603406	125106
DT9	Kingsnorth	601693	138596

- 6.3.14 The NO₂ monitoring is based on proximity to the roads that will be used by deconstruction traffic. This will be used to verify the modelling of emissions impacts on both human and ecological receptors based on future conditions. It will also give an indication of current conditions for existing human health receptors which are sensitive to NO₂ impacts.

Table 6-6: Proposed Frisbee Gauge Dust Monitor Locations

Location Number	Location	Approx. Grid Reference	
FG1	Dungeness B Power Station	608200	117137
FG2	Romney Marsh	607693	119075
FG3	Dungeness Road	605763	120164

- 6.3.15 The dust monitoring locations have been identified as locations where changes in dust deposition are expected to be more significant. FG1 is adjacent to the Zone A of the Works Area itself and will therefore measure deposited dust at the boundary of the Zone A of the Works Area which is the worst case location in terms of deconstruction related dust. FG2 and FG3

⁵⁷ A Frisbee gauge dust monitor is a device used to measure airborne dust concentrations in the environment. It features a circular, flat design that resembles a frisbee, which allows it to effectively collect dust particles from the air. The monitor captures these particles on its surface, and the collected dust is then analysed to determine its concentration.

are located alongside the access road and are therefore expected to measure dust impacts related to transport of materials.

Summary of Existing Baseline

Existing Baseline Air Quality

- 6.3.16 A review of existing baseline air quality has been undertaken using information available within Folkestone and Hythe District Council latest Air Quality Annual Status Report⁵³, Defra Background Maps⁵⁴ and APIS⁵⁵.
- 6.3.17 Folkestone and Hythe District Council have not declared any AQMAs. The closest to the Works Area is approximately 35km north-west, declared by Tunbridge Wells Borough Council. No AQMAs are located on the proposed traffic route from the Works Area to the Strategic Road Network (M20 Junction 10).
- 6.3.18 A number of air quality monitoring sites are operated by Folkestone and Hythe District Council, all sites using non-automatic (i.e., diffusion tubes) measurement methods, therefore measuring NO₂ but not dust. Three monitoring sites are located within 10km of the Works Area.
- 6.3.19 A summary of measured data for the most recently published five years (2019 to 2023) is shown in **Table 6-7**.

Table 6-7: Summary of local air quality monitoring

ID	Site Name	OS Grid Ref (X,Y)	Site Type	Distance to Works Area	Pollutant	Annual Mean Concentration (µg/m ³)				
						2019	2020	2021	2022	2023
DT10	Martins Cottages	604116, 124888	Road side	8.9km	NO ₂	16.6	13.1	14.0	14.4	11.8
DT17	St Andrews Road	608206, 124832	Road side	7.9km	NO ₂	-	9.9	9.6	9.8	8.9
DT18	Littlestone Road	607675, 124699	Road side	7.8km	NO ₂	-	14.0	15.3	12.6	14.1

- 6.3.20 The predicted concentrations from Defra background mapping projection at the location closest to the Works Area (608500, 116500) is presented in **Table 6-8** for 2024 and 2025.

Table 6-8: Summary of Defra background mapping projection

Pollutant	Annual Mean Background Concentration (µg/m ³)	
	2024	2025
NO ₂	7.12	6.95
PM ₁₀	7.87	7.78
PM _{2.5}	5.07	4.99
NO _x	9.09	8.87

- 6.3.21 Deposition and background air pollution data at identified ecological sites have been sourced from the APIS⁵⁵ and are presented in **Table 6-9**.

6.3.22

Table 6-9: APIS data for Ecological Receptors for 2020-2022

Site Name	Designation	Distance to Works Area (m)	Av. N Dep Grid Average kgN/ha/yr	Critical Load N Dep kgN/ha/yr*	Av. Acid Dep keq/ha/yr N	Critical Load N Acid Dep keq/ha/yr MinCLMaxN	Background NH ₃ (µg/m ³)*
Dungeness	SAC	0	8.88	5-15	0.65	No critical load available	0.89
Dungeness, Romney Marsh and Rye Bay	SSSI/Ramsar	0	8.06	5-15	0.59	No critical load available	0.97
Dungeness, Romney Marsh and Rye Bay	SPA	0	8.68	5-15	0.64	4.856	0.87

* lowest critical load from range of feature types within site which is therefore a conservative approach.

- 6.3.23 Overall, baseline air quality across the Local Authority can be considered as 'good' in relation to human health-based standards. Background nitrogen and ammonia concentrations at designated ecological sites (see **Chapter 18: Terrestrial Ecology**) indicate however that some habitats may be approaching or exceeding their critical load for nitrogen or acid deposition. The environment surrounding the Works Area is dusty due to natural sources of dust and PM₁₀.

Summary of Future Baseline

- 6.3.24 Background concentrations are predicted to decrease year-on-year, largely due to the influence of improving vehicle exhaust emission standards over time.
- 6.3.25 Traffic modelling will be undertaken as part of the assessment to inform the air quality impact analysis. The scale of the modelling will be proportionate to the scale of the Proposed Works and surrounding transport network. Specific road links to be modelled will be determined based on the traffic data available and the potential for significant changes in traffic flows associated with the Proposed Works.
- 6.3.26 For the Initial Decommissioning Works, the assessment scenarios will be:
- Baseline;
 - Peak Works Year without the Proposed Works; and
 - Peak Works Year with the Proposed Works.
- 6.3.27 The peak Works Year will be identified within the ES and will consider both HGV and all other traffic associated with the Proposed Works.

6.3.28 Traffic data inputs will be provided by the project team. The air quality assessment will follow best practice approaches in line with EPUK and IAQM guidance, including the application of screening criteria to determine whether detailed modelling is required. These criteria include:

- A change in AADT of ≥ 100 vehicles per day within or adjacent to an Air Quality Management Area (AQMA), or ≥ 500 vehicles per day elsewhere;
- A change in HGV flows of ≥ 25 vehicles per day within or adjacent to an AQMA, or ≥ 100 vehicles per day elsewhere;
- Significant changes in traffic speed or road alignment; and
- Introduction of new roads or junctions.

6.3.29 Where screening indicates that detailed assessment is required, Defra's Emissions Factor Toolkit (EFT)⁵⁸, will be used to calculate emissions for each year of assessment, and dispersion modelling will be carried out using ADMS-Roads⁵⁹, with background concentrations from Defra background maps⁶⁰. The most up to date tools and resources will be used for the assessment.

6.3.30 The air quality assessment will adopt a realistic worst-case approach to ensure that the potential impacts are robustly evaluated, consistent with EPUK/IAQM guidance.

6.4 Consultation

6.4.1 Consultation with stakeholders has been undertaken in relation to monitoring. This is presented in **Table 6-10**.

Table 6-10: Stakeholder Consultation Summary

Date	Stakeholder	Discussion	Outcome
06/2025	Natural England	Monitoring location approval	Stakeholder was unable to provide any advice at this time, considering the case as low risk
06/2025	Folkestone and Hythe District Council	Monitoring location approval	Stakeholder did not comment on locations

6.5 Scope for Mitigation

6.5.1 Where necessary, embedded mitigation and monitoring measures will be identified to reduce air impacts at sensitive locations within and around the Works Area.

⁵⁸ Department for Environment, Food & Rural Affairs. 2025. Emission Factors Toolkit (EFT) v13.1 User Guide. Available at: <https://laqm.defra.gov.uk/wp-content/uploads/2021/02/EFTv13.1-user-guide-v1.0.pdf> [Accessed 30/09/2025].

⁵⁹ Cambridge Environmental Research Consultants. 2024. ADMS-Roads Version 5.3.17. Available at: <https://www.cerc.co.uk/environmental-software/ADMS-Roads> [Accessed 30/09/2025].

⁶⁰ Department for Environment, Food & Rural Affairs. 2024. Background Mapping data for local authorities. Available at: <https://uk-air.defra.gov.uk/data/laqm-background-home> [Accessed 30/09/2025].

- 6.5.2 Embedded mitigation requirements will be determined based on an evaluation of the results of the air quality assessment, a review of source apportionment of pollutants (i.e. background contributions and, road sources), the location of existing/future receptors to local pollutant sources and relevant planning policy.
- 6.5.3 Embedded mitigation measures to be included in the Environmental Management Plan could include the following:
- Ensuring appropriate dust mitigation measures are in place and adhered to throughout the Proposed Works;
 - Use of plant and vehicles to defined emission performance standards; and
 - Minimising the amount of demolition material exported during the Proposed Works, to reduce vehicle movements.

6.6 Potential Effects

- 6.6.1 The potential air quality impacts associated with the Initial Decommissioning Works to be considered in the ES are as follows:
- Impacts of soiling associated with dust generated during the dismantling and construction activities on nearby land use amenity and nature conservation sites;
 - Impacts of fugitive emissions of PM₁₀ from dismantling and construction phase activities on nearby human health sensitive receptors and nature conservation sites; and
 - Impacts of site plant and NRMM emissions on nearby human health sensitive receptors and nature conservation sites.
- 6.6.2 The impact of traffic emissions will be screened based on EPUK/IAQM screening guidance and assessed where relevant.

Receptors and Effects Scoped Out of the Assessment

Care and Maintenance Phase

- 6.6.3 Any emissions to air during the Care and Maintenance Phase would be negligible during this period of relative inactivity. As outlined in **Chapter 2: The Decommissioning and Dismantling Process**, the Works Area will be maintained in a planned passive state to allow further radioactive decay of materials within the Safestore. Works in this phase will consist of monitoring and maintenance, therefore no significant effects are expected during that time.

Point Source Emissions of Combustion Products and their Effect on Human and Ecological Receptors

- 6.6.4 The requirement for onsite combustion plant decreases through the defueling stage with the requirements for the Proposed Works largely being served by the Decommissioning Site Electrical Distribution System (DSEDS) and where needed lower capacity temporary package combustion plant units. On this basis point source emissions during the Proposed Works are expected to be less than those which occur currently. Current combustion

plant is managed under an environmental permit which will cease to be required in the future.

Emissions to Air of Radionuclides

- 6.6.5 The regulation for, and impact of, discharges of radioactive substances on the environment and human health is undertaken through a permitting regime under the Environmental Permitting Regulations⁶¹. These discharges and their impacts are assessed in detail during the process for applying for a permit (or a variation) and are regulated by the Environment Agency through routine regulatory interactions (see **Chapter 4: Legislation and Policy Context**). Given this, the impact of atmospheric radioactive discharges on the environment and human health is scoped out of the air quality assessment.

6.7 Assessment Methodology

- 6.7.1 The proposed generic project-wide approach to the assessment methodology is set out in **Chapter 5: EIA Methodology**.
- 6.7.2 This section provides a summary of the air quality assessment methodology for human health receptors. The scope of assessment considers the impacts and resultant effects during the Initial Decommissioning Works.

Approach and Assessment Criteria

- 6.7.3 The potential impacts of emissions to air from the Proposed Works will be determined or estimated, and key local receptors identified, following appropriate guidance documents:
- IAQM and EPUK Guidance on land-use planning and development control: Planning for air quality⁴⁸.
 - IAQM Guidance on the assessment of dust from demolition and construction.
- 6.7.4 A dust assessment and ambient air quality assessment will be undertaken based on the Initial Decommissioning Works as a worst-case scenario. A high-level qualitative assessment will also be provided for the Final Site Clearance Phase.
- 6.7.5 Impacts arising from traffic emissions related to Initial Decommissioning Works will be predicted using atmospheric dispersion modelling techniques where appropriate. The technique enables the assessment of the impacts associated with the Proposed Works on the existing local ambient air quality and in particular on the identified sensitive receptors.

Dust Assessment

- 6.7.6 Dust impacts during the Proposed Works will be assessed by providing a qualitative assessment of the potential sources and dust emissions, along with consideration of the sensitivity of the area which will be exposed to

⁶¹ The Environmental Permitting (England and Wales) Regulations (2016). Available at: [The Environmental Permitting \(England and Wales\) Regulations 2016 \(legislation.gov.uk\)](https://www.legislation.gov.uk/uksi/2016/1154/contents/making) [Accessed 30/09/2025].

these emissions. These factors will be combined to identify a level of risk of impacts.

- 6.7.7 Suitable mitigation measures will then be proposed corresponding with the calculated risk. The risk assessment will be undertaken in line with IAQM guidance.
- 6.7.8 Dismantling-related plant emissions will not be explicitly modelled, as these are anticipated to represent a small source of emissions relative to ambient local conditions in the vicinity of the Works Area. However, suitable mitigation measures for plant and motorised equipment will be presented as part of the mitigation measures defined in the Environmental Management Plan, which will be based on advice presented in the relevant guidance.

Sensitivity

- 6.7.9 The sensitivity of the area takes account of several factors:
- The specific sensitivities of receptors in the area (in this case, predominantly ecological sites);
 - The proximity and number of those receptors;
 - In the case of PM₁₀, the local background concentration; and
 - Site-specific factors, such as whether there are natural shelters, such as trees, to reduce the risk of wind-blown dust.
- 6.7.10 The assessment of the significance of the effects of dust will be made with respect to the receptor and area sensitivity definitions as outlined in the IAQM Guidance.

Significance of Effects

- 6.7.11 The IAQM guidance does not provide a method for the evaluation of impacts on receptors from construction dust prior to mitigation, rather a means to determine the level of mitigation required to avoid significant impacts on receptors. The guidance indicates that application of appropriate mitigation should ensure that residual dust effects will normally be 'not significant'.

Traffic Emissions Assessment

- 6.7.12 Traffic emissions associated with the Proposed Works will be assessed through detailed modelling where appropriate. The assessment will consider changes in pollutant concentrations at sensitive receptor locations resulting from changes in road traffic flows.
- 6.7.13 The assessment will be undertaken in accordance with the IAQM/EPUK guidance, which outlines screening criteria for identifying affected roads and receptors, as described in Paragraph 6.3.5.

Sensitivity

- 6.7.14 The assessment will evaluate pollutant exposure at several locations, with receptors identified at worst case locations where impacts from vehicle emissions can be expected to be greatest. All human health receptors are considered to be of high sensitivity.

Significance of Effects

- 6.7.15 With regard to traffic emissions, the magnitude of pollutant concentrations in the “with” and “without” decommissioning works scenarios will be used in conjunction with the total concentration to identify the significance of impacts at individual receptors following the guidance published by EPUK and IAQM⁴⁸.
- 6.7.16 A change in predicted annual mean concentrations of NO₂, PM₁₀, or PM_{2.5} of less than 0.5% of the relevant objective is considered to be so small as to be imperceptible. This is presented in **Table 6-11**. Moderate and Substantial impacts at individual receptors are deemed to be significant impacts, negligible and Slight are deemed to be not significant. The IAQM/EPUK guidance states that the overall significance of effect should be made using professional judgement and considering the identified significance at each receptor as well as the sensitivity of the area and the number and sensitivity of the receptors affected by any change.

Table 6-11: Effects Descriptors at Individual Receptors

Long Term Average Concentration at Receptor in Assessment Year (µg/m ³)	% Change in Concentration Relative to Air Quality Assessment Level (AQAL)				
	<0.5	1	2-5	6-10	>10
75% or less of the AQAL	Negligible	Negligible	Negligible	Slight	Moderate
76-94% of the AQAL	Negligible	Negligible	Slight	Moderate	Moderate
95-102% of the AQAL	Negligible	Slight	Moderate	Moderate	Substantial
103-109% of the AQAL	Negligible	Moderate	Moderate	Substantial	Substantial
110% or more of the AQAL	Negligible	Moderate	Substantial	Substantial	Substantial

Evaluation of Significance – Proposed Works as a Whole

- 6.7.17 Following the assessment of each individual air quality effect (dust; and traffic), the significance of all the reported effects is then considered for the Proposed Works in overall terms, recognising that dust and traffic will occur in the same time period. The potential for the Proposed Works to contribute to or interfere with the successful implementation of policies and strategies for the management of local air quality are considered if relevant, but the principal focus is any change to the likelihood of future achievement of the air quality standards, (which also relate to compliance with local authority goals for local air quality management and objectives are set for the protection of human health).
- 6.7.18 In terms of the significance of the effects (consequences) of any adverse impacts, an effect is reported as being either ‘not significant’ or as being ‘significant’. As noted above, for ecological receptors, the significance of effects will not be determined within this assessment. However, the magnitude of change in pollutant concentrations and/or deposition rates at

designated ecological sites will be identified and reported to inform further ecological interpretation (see **Chapter 18: Terrestrial Ecology**).

6.7.19 The evaluation of significance is based on the approach outlined in the IAQM guidance, which recommends the use of professional judgement, taking into account:

- The magnitude of change in pollutant concentrations;
- The absolute concentration relative to relevant air quality objectives;
- The sensitivity and number of receptors affected; and
- The context of the impact, including whether the area is within an AQMA or subject to existing air quality pressures.

Assumptions and Limitations

6.7.20 Where information on plant is unavailable, assumptions will be made using professional judgement based on experience of similar projects.

6.7.21 The Proposed Works are separated into three distinct phases, as detailed in **Chapter 2: The Decommissioning and Dismantling Process**. It is currently assumed that the effects identified for the Initial Decommissioning Works will be representative of the Final Site Clearance phase. The Final Site Clearance phase will still be discussed qualitatively, applying professional judgement. This is due to the lack of relevant information such as emissions factors and backgrounds due to the large timeframes involved.

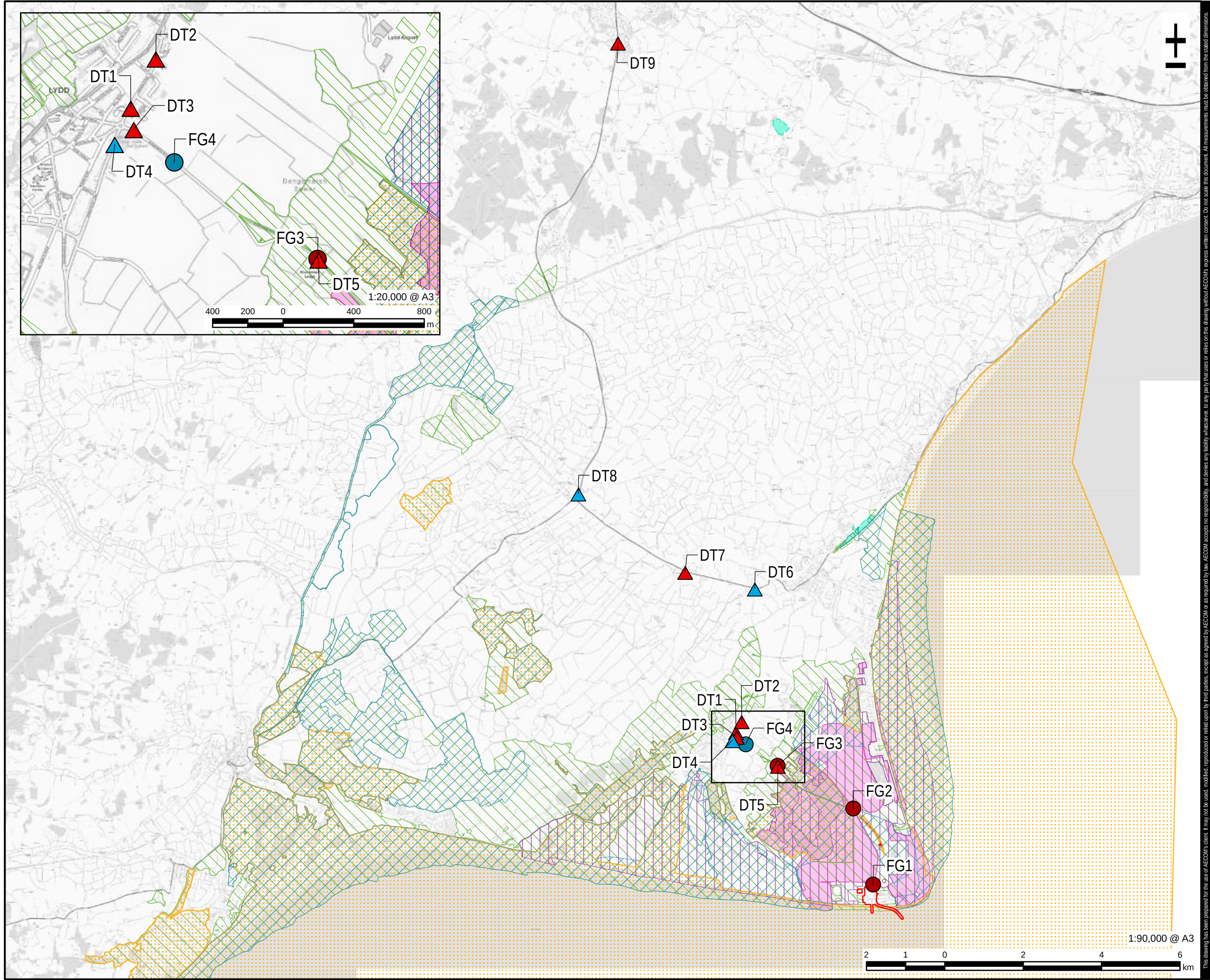
6.8 Summary of Potential Likely Significant Effects

6.8.1 **Table 6-12** provides a summary of the proposed scope of the Air Quality chapter of the ES. Please refer to **Section 6.6** where justification of the scope is provided.

Table 6-12: Summary of Elements to be Considered in the ES

Pathway	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
Construction Dust	Scoped in	Scoped out	Scoped in*
Traffic emissions	Scoped in	Scoped out	Scoped in*
Point source emissions	Scoped out	Scoped out	Scoped out
Radionuclides	Scoped out	Scoped out	Scoped out

* It is currently assumed that the effects identified for the Initial Decommissioning Works will be representative of the Final Site Clearance Phase. The Final Site Clearance Phase will still be discussed qualitatively, applying professional judgement



PROJECT

Dungeness B Nuclear Decommissioning

CLIENT

EDF Energy Nuclear Generation Limited

CONSULTANT

AECOM Limited
Aldgate Tower
2 Leman Street
London, E1 8FA
www.aecom.com

LEGEND

The Works Area

Preferred Dust Monitoring Location

Preferred NO2 Monitoring Location

Backup Dust Monitoring Location

Backup NO2 Monitoring Location

Environmental Designations

Ramsar

Special Protection Area

Special Areas of Conservation

Sites of Special Scientific Interest

Local Nature Reserve

National Nature Reserve

NOT PROTECTIVELY MARKED

NOTES

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ISSUE PURPOSE

EIA Scoping Report

PROJECT NUMBER

60739933

FIGURE TITLE

Proposed Survey Locations and Receptors

FIGURE NUMBER	REV
Figure 6-1	0

DOCUMENT NUMBER

7. Conventional Waste and Materials

7.1 Introduction

- 7.1.1 This chapter sets out the proposed scope and methodology for the assessment of effects of the Proposed Works associated with conventional waste and materials. This has been informed by a review of the environmental baseline conditions, and consideration of the anticipated pathways and receptors where likely significant effects could arise as a result of the Proposed Works.
- 7.1.2 This chapter should be read in conjunction with the description of the Proposed Works presented in **Chapter 2: The Decommissioning and Dismantling Process** of this Scoping Report.
- 7.1.3 This chapter follows the methodology set out in the Institute of Environmental Management and Assessment (IEMA) (now ISEP) Guide to: Materials and Waste in Environment Assessment, Guidance for a Proportionate Approach (referred from herein as the 'IEMA Guidance')⁶². The IEMA Guidance provides methodologies for assessing both conventional waste and materials.
- 7.1.4 For the purpose of this Scoping Report, conventional waste and materials comprise:
- The consumption of materials (key materials only); and
 - The generation and management of conventional waste.
- 7.1.5 Materials are defined in the IEMA Guidance as “*physical resources that are used across the lifecycle of a development. Examples include concrete, aggregate, asphalt, bricks, ballast, mortar, glass and timber.*” Four key construction materials are considered to be relevant to the Proposed Works: aggregate, asphalt, concrete, and steel.
- 7.1.6 Other material assets considered include built assets such as landfill void capacity and allocated/safeguarded mineral and waste sites.
- 7.1.7 Waste is defined as per the Waste Framework Directive (Waste FD)⁶³ as “*any substance or object which the holder discards or intends or is required to discard*” and this definition is transposed into law in England and Wales by The Waste (England and Wales) Regulations 2011⁶⁴.

⁶² IEMA. 2020. Guide to: Materials and Waste in Environment Assessment, Guidance for a Proportionate Approach. Available at: <https://www.iema.net/resources/reading-room/2020/03/30/materials-and-waste-in-environmental-impact-assessment> [Accessed 03/09/2025].

⁶³ The European Commission. 2008. Waste Framework Directive (Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives). Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02008L0098-20180705> [Accessed 03/09/2025].

⁶⁴ The Waste Regulations (2011). Available at: <https://www.legislation.gov.uk/uksi/2011/988/contents/made> [Accessed 3/09/2025].

- 7.1.8 Mineral safeguarding sites are assessed in a materials and waste assessment as per the IEMA Guidance. However, Mineral Safeguarding Areas (MSA) are not considered to be mineral safeguarding sites. According to the National Planning Policy Guidance for Minerals⁶⁵, an MSA is “*an area designated by a Mineral Planning Authority which covers known deposits of minerals which are desired to be kept safeguarded from unnecessary sterilisation by non-mineral development*”. In contrast, a mineral safeguarded site is defined by National Highway’s Design Manual for Roads and Bridges⁶⁶ as “*operational sites or sites identified within strategic planning documents for the extraction of minerals e.g. quarries, wharves and depots*”.
- 7.1.9 Radioactive wastes are considered separately in **Chapter 20: Other Environmental Topics**.
- 7.1.10 Other environmental and human health impacts associated with the management of materials and waste from the Proposed Works e.g. on water resources, health, air quality, noise or traffic resulting from the generation, handling, on-site temporary storage or off-site transport of materials and waste are considered separately as part of the following chapters:
- **Chapter 6: Air Quality;**
 - **Chapter 11: Human Health;**
 - **Chapter 14: Noise and Vibration;**
 - **Chapter 16: Geology and Soils;**
 - **Chapter 17: Traffic and Transport;**
 - **Chapter 18: Terrestrial Ecology;** and
 - **Chapter 19: Water Resource and Flood Risk.**

7.2 Relevant Legislation, Policy and Guidance

Legislation

- 7.2.1 Legislation which is relevant to the assessment of effects on conventional waste and materials is presented in **Table 7-1**.

Table 7-1: Legislation Relevant to Conventional Waste and Materials

Legislation	Legislation Details
Waste FD ⁶³	Establishes the wider regulatory context for waste management across Europe. In addition to defining waste, it also introduces the concept of the waste hierarchy (Plate 7-1 below) and establishes landfill diversion targets for member states.

⁶⁵ Ministry of Housing, Communities and Local Government (MHCLG) and Department for Levelling Up, Housing and Communities (DLUHC). 2014. National Planning Policy Guidance (NPPG) for Minerals. Available at: <https://www.gov.uk/guidance/minerals>. [Accessed 08/10/2025].

⁶⁶ National Highways. 2020. Design Manual for Roads and Bridges (DMRB). Available at: <https://nationalhighways.co.uk/suppliers/design-standards-and-specifications/design-manual-for-roads-and-bridges-dmrbl/>. [Accessed 08/10/2025].

Legislation	Legislation Details
Environmental Protection Act 1990 ⁶⁷	The duty of care for waste management is set out under section 34 of the Environmental Protection Act 1990 ^{67,67} and the Waste (England and Wales) Regulations 2011 (as amended). It requires anyone who produces, imports, keeps, stores, transports, treats or disposes of waste to take all reasonable steps to ensure that the waste is managed properly.
Environment Act 2021 ⁶⁸	An Act to make provisions for the improved control of pollution arising from certain industrial and other processes; re-enacts the provisions of the Control of Pollution Act 1974 relating to waste on land; amends the Radioactive Substances Act 1960; etc.
The Waste (Miscellaneous Amendments) (EU Exit) Regulations 2019	The Waste (Miscellaneous Amendments) (EU Exit) Regulations are a series of UK statutory instruments made to ensure the country's waste management laws continue to function after leaving the European Union.
The Waste (England and Wales) Regulations 2011 ⁶⁴	The Waste (England and Wales) Regulations 2011 ⁶⁴ (as amended) transpose the requirements of the Waste FD ⁶³ in England and Wales and require the Secretary of State to establish waste prevention programmes and waste management plans that apply the waste hierarchy. The waste hierarchy is defined in the Waste FD ⁶³ and prioritises waste prevention, followed by preparing for reuse, recycling, recovery and finally disposal as means of management of waste.
Hazardous Waste (England and Wales) Regulations 2005 ⁶⁹ (as amended)	These Regulations set out the regime for the control and tracking of the movement of hazardous waste for the purpose of transposing the requirements of the Hazardous Waste Directive (Directive 91/689/EC) ⁷⁰ . Waste is generally considered hazardous if it (or the material or substances it contains) are harmful to humans or the environment.
Environmental Permitting (England and Wales) Regulations 2016 ⁷¹ (as amended)	Environmental Permitting (England and Wales) Regulations 2016 ⁷¹ require sites where waste is processed, treated or disposed of to hold a valid Environmental Permit issued by the Regulator (Environment Agency or Local Authority). The Regulations also include a schedule of activities that are exempt from the requirements of permitting.

Policy

- 7.2.2 Policy relating to conventional waste and materials and relevant to the assessment of effects of the Proposed Works is presented in **Table 7-2**.

⁶⁷ Environmental Protection Act (1990). Available at: <https://www.legislation.gov.uk/ukpga/1990/43/contents> [Accessed 03/09/2025].

⁶⁸ Environment Act (2021). Available at: <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>. [Accessed 03/09/2025].

⁶⁹ Hazardous Waste (England and Wales) Regulations (2005). Available at: [The Hazardous Waste \(England and Wales\) Regulations 2005](#) [Accessed 03/09/2025].

⁷⁰ The European Commission. 1991. Hazardous Waste Directive (Council Directive 91/689/EEC of 12 December 1991 on hazardous waste). Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:31991L0689> [Accessed 03/09/2025].

⁷¹ Environmental Permitting (England and Wales) Regulations (2016). Available at: <https://www.legislation.gov.uk/uksi/2016/1154/contents/made> [Accessed 03/09/2025].

Table 7-2: Policy Relevant to Conventional Waste and Materials

Policy	Policy Details
NPPF ⁷²	The NPPF does not contain specific waste policies as these are detailed within the revised Waste Management Plan for England⁷³ and the National Planning Policy for Waste⁷⁴, however the following overarching policies are relevant to materials and waste: • The environmental objective set out at paragraph 8 of the NPPF is <i>“to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.”</i> • The environmental objective set out in paragraph 223 of the NPPF is to <i>“so far as practicable, take account of the contribution that substitute or secondary and recycled materials and minerals waste would make to the supply of materials, before considering extraction of primary materials, whilst aiming to source minerals supplies indigenously.”</i>
National Planning Policy for Waste ⁷⁴	The National Planning Policy for Waste 74 sets out detailed waste planning policies to be applied in conjunction with the NPPF⁷². It states: <i>“when determining planning applications for non-waste development, local planning authorities should, to the extent appropriate to their responsibilities, ensure that:</i> • <i>The likely impact of proposed, non-waste related development on existing waste management facilities, and on sites and areas allocated for waste management, is acceptable and does not prejudice the implementation of the waste hierarchy and/or the efficient operation of such facilities;</i> • <i>new, non-waste development makes sufficient provision for waste management and promotes good design to secure the integration of waste management facilities with the rest of the development, and;</i> • <i>the handling of waste arising from the construction and operation of development maximises reuse/recovery opportunities, and minimises off-site disposal”.</i>
Waste Management Plan for England ⁷⁵	Provides an overview of waste management in England and reiterates the requirement for all waste producers and waste management providers to implement the waste hierarchy. It also highlights the need for waste to be managed using the proximity principle and confirms England's commitment to recovering at least 70% by weight of non-hazardous construction and demolition waste by 2020 (excluding soils and stones). Recovery is assumed in the context of this policy to include reuse, recycling and incineration with energy recovery.

⁷² MHCLG and DLUHC. 2025. National Planning Policy Framework (NPPF). Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2> [Accessed 03/09/2025].

⁷³ Department for Environment, Food & Rural Affairs. 2021. Waste Management Plan for England. Available at: <https://www.gov.uk/government/publications/waste-management-plan-for-england-2021> [Accessed 03/09/2025].

⁷⁴ MHCLG. 2014. National Planning Policy for Waste. Available at: <https://www.gov.uk/government/publications/national-planning-policy-for-waste> [Accessed 03/09/2025].

⁷⁵ Department for Environment, Food & Rural Affairs. 2021. Waste Management Plan for England. Available at: <https://www.gov.uk/government/publications/waste-management-plan-for-england-2021> [Accessed 03/09/2025].

Policy	Policy Details
A Green Future: Our 25 Year Plan to Improve the Environment ⁷⁶	Plan to Improve the Environment' published in 2018, "<i>sets out goals for improving the environment within a generation and leaving it in a better state than we found it</i>". It details how the government will work with communities and businesses to do this. The following policies are relevant: • make sure that resources are used more efficiently and kept in use for longer to minimise waste and reduce its environmental impacts by promoting reuse, remanufacturing and recycling. • work towards eliminating all avoidable waste by 2050 and all avoidable plastic waste by end of 2042. • reducing food supply chain emissions and waste. • reducing litter and littering. • improving management of residual waste.
Resources and Waste Strategy for England ⁷⁷	The strategy published in 2018 will help the government to meet the commitments outlined in the 25 Year Plan and "<i>sets out how we will preserve our stock of material resources by minimising waste, promoting resource efficiency and moving towards a circular economy. At the same time we will minimise the damage caused to our natural environment by reducing and managing waste safely and carefully, and by tackling waste crime.</i>" The strategy combines actions to be taken now and commitments for the coming years. Key targets and milestones and targets, which could be relevant to the Proposed Works, include: • roll out of a deposit return scheme (subject to consultation) – expected 2027; • legislation for mandatory separate food waste collections (subject to consultation) – April 2025; • 75% recycling rate for packaging (subject to consultation) – 2023; • 65% recycling rate for municipal solid waste – 2035; and • municipal waste to landfill 10% or less – 2035.
The Waste Prevention Programme for England: maximising Resources, Minimising Waste 2023 ⁷⁸	The Waste Prevention Programme builds on and embeds strategic principle 2 from the Our Waste, Our Resources Strategy, to prevent waste from occurring in the first place and managing it better when it does. The goal is for a circular economy approach which retains products and materials in circulation for as long as possible and at their highest value.
Kent Minerals and Waste Local Plan 2024 to 2039 (KMWLP) ⁷⁹	The KMWLP and the Kent Minerals Site Plan form part of the development plan for the purposes of determining planning applications. The KMWLP sets out the vision and strategy for waste management and mineral provision up until (and including) the year 2039. The

⁷⁶ DEFRA. 2021. Waste Management Plan for England. Available at: <https://www.gov.uk/government/publications/waste-management-plan-for-england-2021> [Accessed 03/09/2025].

⁷⁷ DEFRA. 2018. Resources and Waste Strategy for England. Available at: <https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england> [Accessed 03/09/2025].

⁷⁸ DEFRA. 2023. The Waste Prevention Programme for England: Maximising Resources, Minimising Waste 2023. Available at: <https://www.gov.uk/government/publications/waste-prevention-programme-for-england-maximising-resources-minimising-waste>. [Accessed 08/10/2025].

⁷⁹ Kent County Council. 2025. Kent Minerals and Waste Local Plan 2024-2039. Available at: https://www.kent.gov.uk/_data/assets/pdf_file/0019/205507/Kent-minerals-and-waste-local-plan-2024-to-2039.pdf [Accessed 03/09/2025].

Policy	Policy Details
	plan contains a number of development management policies and is used for evaluating planning applications, in particular those related to the supply of minerals and management of waste. The Plan details locations in Kent which are suitable for quarrying essential minerals needed to support growth and the economy. Safeguarded waste sites are available in Figures 16A and 16B of the KMWLP.
KMWLP – Minerals Sites Plan 2013-30 ⁸⁰	The Minerals Sites Plan identifies the location of safeguarded mineral sites in Kent.

Guidance

7.2.3 Guidance which is relevant to the assessment of effects on conventional waste and materials is presented in **Table 7-3**.

Table 7-3: Guidance Relevant to Conventional Waste and Materials

Guidance	Guidance Details
IEMA Guide to: Materials and Waste in Environmental Impact Assessment, Guidance for a Proportionate Approach ('IEMA Guidance') ⁶²	The document offers guidance and recommendations for EIA practitioners and stakeholders concerned with the impacts and effects of conventional waste and materials on the environment. The guidance provides considerations for screening, scoping, consultation, assessment, and subsequent reporting and monitoring.
Contaminated Land: Applications in Real Environments (CL:AIRE) Definition of Waste: Development Industry Code of Practice (DoW CoP), v2 ⁸¹	The DoW CoP provides a process which enables the reuse of excavated materials on-site or their movement between sites. Use of the DoW CoP supports the sustainable and cost-effective development of land. It can provide an alternative to Environmental Permits or Waste Exemptions. The DoW CoP enables: • the direct transfer and reuse of clean naturally occurring soil materials between sites; • the conditions to support the establishment/operation of fixed soil treatment facilities; and • the reuse of both contaminated/uncontaminated materials on their site of origin and between sites within defined Cluster projects.
Defra Guidance on Applying the Waste Hierarchy 2011 ⁸²	The Defra (2011) Guidance on Applying the Waste Hierarchy provides a framework for prioritising waste management practices in line with environmental sustainability principles. It emphasises the five-step waste hierarchy, ranking waste prevention as the most preferred option, followed by preparing for reuse, recycling, recovery, and disposal as the least desirable.

⁸⁰ Kent County Council. 2020. Kent Minerals and Waste Local Plan 2024-2039 – Minerals Site Plan. Available at: https://www.kent.gov.uk/_data/assets/pdf_file/0020/205508/Kent-Mineral-Sites-Plan.pdf [Accessed 03/09/2025].

⁸¹ Contaminated Land: Applications in Real Environments (CL:AIRE). 2011. Definition of Waste: Development Industry Code of Practice (DoWCoP), v2. Available at: <https://www.clare.co.uk/projects-and-initiatives/dow-cop/28-framework-and-guidance/111-dow-cop-main-document> [Accessed 03/09/2025].

⁸² DEFRA, 2011; Guidance on applying the Waste Hierarchy. Available at: <https://assets.publishing.service.gov.uk/media/5a795abde5274a2acd18c223/pb13530-waste-hierarchy-guidance.pdf>. [Accessed 08/10/2025]

Guidance	Guidance Details
	The guidance explains the legal obligations under the Waste (England and Wales) Regulations 2011, ensuring that businesses and waste operators take all reasonable measures to manage waste according to the hierarchy. It also includes sector-specific advice, clarifications on exemptions, and practical examples to support compliance while promoting resource efficiency and environmental protection.
Defra (2018) Waste Duty of Care: Code of Practice ⁸³	Defra's "Waste Duty of Care: Code of Practice" outlines the legal responsibilities of individuals and organisations involved in waste management. It provides guidance on ensuring waste is handled safely and legally, preventing harm to human health and the environment, and emphasising the importance of proper documentation and transfer procedures.
Waste and Resources Action Programme (WRAP) (2013) Quality Protocol, Aggregates from Inert Waste, End of Waste Criteria for the Production of Aggregates from Inert Waste ⁸⁴	The quality protocol sets out end of waste criteria for the production and use of aggregates from inert waste. If the criteria are met, the aggregates will normally be regarded as having been fully recovered and to have ceased to be waste. A quality protocol identifies the point at which waste, having been fully recovered, may be regarded as a non-waste product that can be used in specified markets, without the need for waste management controls.
Collection Waste Exemption Guides ⁸⁵	The guidance provides a list of waste exemptions for storing, treating, using and disposing of waste. The guides include exemption conditions. Exemptions you do not need to register are known as non-waste framework directive (NWFD) exemptions.

7.3 Baseline Conditions

Data Gathering Methodology

7.3.1 The principal data sources used to inform the current baseline conditions presented in this section beyond those identified in **Chapter 5: EIA Methodology** comprise the following:

- Non-hazardous, inert and hazardous waste management (South East region), Environment Agency 2024 Waste Summary Tables for England (landfill capacity) – Version 1 and 2024 Waste Data Interrogator -

⁸³ DEFRA and the Environment Agency. 2018. Waste Duty of Care Code of Practice. Available at: https://assets.publishing.service.gov.uk/media/6274d74bd3bf7f5e3ade6090/Waste_duty_of_care_code_of_practice.pdf. [Accessed 08/10/2025].

⁸⁴ WRAP. 2013. Quality Protocol, Aggregates from Inert Waste, End of Waste Criteria for the Production of Aggregates from Inert Waste. Available at: https://assets.publishing.service.gov.uk/media/65fd7426f1d3a0001132add0/CD1.Y_Quality_Protocol_Aggregates_from_inert_waste_End_of_waste_criteria_for_the_production_of_aggregates_from_inert_waste_WRAP_October_2013.pdf [Accessed 08/01/2026].

⁸⁵ EA. 2025. Collection Waste Exemption Guides. Available at: <https://www.gov.uk/government/collections/waste-exemption-guides> [Accessed 08/01/2026].

Wastes Received (Excel) (waste management facility inputs) - Version 1⁸⁶;

- Environment Agency Historic Landfill Sites⁸⁷;
- Environment Agency Permitted Waste Sites - Authorised Landfill Site Boundaries⁸⁸;
- Environmental Permitting Regulations - Waste Sites⁸⁹; and
- Local Plan information on minerals and waste safeguarding.

Study Area

7.3.2 The study area for the assessment of impacts related to conventional waste have been identified in line with the IEMA Guidance. Two study areas are defined:

- The Works Area - within which conventional waste associated with the Proposed Works is generated and within which the required materials associated with the Proposed Works would be used; and
- An expansive study area - within which waste facilities that manage conventional waste generated by the Proposed Works are likely to be located and within which the required materials would be sourced.

7.3.3 The expansive study area for non-hazardous and inert waste management is defined based on professional judgement and informed by consideration of the proximity principle. The expansive study area for non-hazardous and inert waste management has been determined to comprise the wider region within which landfill capacity is located i.e. the South East region which includes the sub-regions Berkshire, Buckinghamshire, East Sussex, Hampshire, Isle of Wight, Kent, Oxfordshire, Surrey and West Sussex as outlined in the Environment Agency's 2024 Waste Summary Tables for England - Version 1⁸⁶.

7.3.4 The expansive study area for hazardous waste management is England. This is defined based on professional judgement, through consideration of the proximity principle and noting that planning for hazardous waste management is undertaken at a national level. The proximity principle for hazardous waste in England is defined in Principle 2 – Infrastructure Provision in the Strategy for Hazardous Waste Management in England⁹⁰.

"We look to the market for the development of hazardous waste infrastructure, which implements the hierarchy for the management of

⁸⁶ Environment Agency. 2025. Waste Summary Tables for England – Version 1 and 2024 Waste Data Interrogator - Wastes Received (Excel) - Version 1. Available at: <https://www.data.gov.uk/dataset/81f9d676-e77c-4d68-ab0c-b67e0b0b353e/2024-waste-data-interrogator> [Accessed 08/10/2025].

⁸⁷ Environment Agency. 2025. Historic Landfill Sites. Available at: <https://www.data.gov.uk/dataset/17edf94f-6de3-4034-b66b-004ebd0dd010/historic-landfill-sites> [Accessed 03/09/2025].

⁸⁸ Environment Agency. 2025. Permitted Waste Sites - Authorised Landfill Site Boundaries. Available at: <https://www.data.gov.uk/dataset/ad695596-d71d-4cbb-8e32-99108371c0ee/permited-waste-sites-authorised-landfill-site-boundaries> [Accessed 03/09/2025].

⁸⁹ Environment Agency. 2023. Environmental Permitting Regulations - Waste Sites. Available at: <https://www.gov.uk/guidance/waste-environmental-permits> [Accessed 03/09/2025].

⁹⁰ Defra. 2010. Strategy for Hazardous Waste Management in England.

hazardous waste and meets the needs of the UK to ensure that the country as a whole is self-sufficient in hazardous waste disposal, facilities are put in place for hazardous waste recovery in England, and the proximity principle is met”.

- 7.3.5 The expansive study area for availability of key construction materials is national (United Kingdom or Great Britain) for steel and regional (South East region) for aggregate, asphalt, and concrete.

Summary of Existing Baseline

Works Area

- 7.3.6 An initial review of baseline conditions within the Works Area itself indicates that:
- No historic or permitted landfill sites (Environment Agency’s Historic Landfill Sites⁹¹ and Permitted Waste Sites - Authorised Landfill Site Boundaries⁹² data sets) are present. Landfills within the Works Area are potentially relevant to the assessment since excavations in landfills can give rise to waste that would require management;
 - No permitted waste sites or waste site applications (Environmental Agency’s Environmental Permitting Regulations – Waste Sites⁹³) are present; and
 - No safeguarded mineral or waste sites are present as shown in the KMWLP 2024 to 2039 and Minerals Sites Plan 2013-30⁹⁴.

Materials

- 7.3.7 Key construction material availability is inferred from UK Steel’s Statistics 2025⁹⁵ (2024 steel requirement) and the Mineral Products Association’s Profile of the UK Mineral Products Industry, estimated production/sales in Great Britain, 2022 data.
- 7.3.8 **Table 7-4** outlines the UK requirement (providing an indication of availability) in 2024 for steel (i.e. the most recent year for which data is available). Steel is expected to be one the key materials used during the Proposed Works for the establishment of the waste management facilities and the Safestore.

⁹¹ Environment Agency. 2025. Historic Landfill Sites. Available at: <https://www.data.gov.uk/dataset/17edf94f-6de3-4034-b66b-004ebd0dd010/historic-landfill-sites> [Accessed 03/09/2025].

⁹² Environment Agency. 2025. Permitted Waste Sites - Authorised Landfill Site Boundaries. Available at: <https://www.data.gov.uk/dataset/ad695596-d71d-4cbb-8e32-99108371c0ee/permited-waste-sites-authorized-landfill-site-boundaries> [Accessed 03/09/2025].

⁹³ Environment Agency. 2023. Environmental Permitting Regulations - Waste Sites. Available at: <https://www.gov.uk/guidance/waste-environmental-permits> [Accessed 03/09/2025].

⁹⁴ Kent County Council. 2020. Kent Minerals and Waste Local Plan 2024-2039 – Minerals Site Plan. Available at: https://www.kent.gov.uk/_data/assets/pdf_file/0020/205508/Kent-Mineral-Sites-Plan.pdf [Accessed 03/09/2025].

⁹⁵ UK Steel. 2025. UK Steel Statistics 2025. Available at: https://www.uksteel.org/versions/2/wizard/modules/fileManager/downloadDigitalFile.php?url=https%3A%2F%2Ffiles.cdn-files-a.com%2Fuploads%2F8346772%2Fnormal_684ada57ddbcb.pdf [Accessed 03/03/2026].

Table 7-4: National Steel Requirement

Material	UK (Million Tonnes, Year)	5% of National availability (Million Tonnes, Year)*	Baseline Data Year	Data Description
Steel	16	0.8	2024	UK requirement

*5% of national availability noted as the point of significance for materials based on a sensitivity of 'medium' (see Table 7-11).

- 7.3.9 Regional materials sales data from the Mineral Products Association for the South East is presented in **Table 7-5**.

Table 7-5: Construction Materials Sales by Region

Construction Material	Regional (South East) availability (million tonnes, year)	5% of Regional (South East) availability* (tonnes)
Crushed rock** (million tonnes)	0.0	n/a
Sand and gravel** (million tonnes)	9.2	460,000
Ready-mixed concrete (converted to million tonnes from m ³ using a density of 2.4 t/m ³)	5.5	275,000
Asphalt (million tonnes)	1.7	85,000

*5% of national availability noted as the point of significance for materials based on a sensitivity of 'medium'.

**Accumulated to form overall aggregate availability

- 7.3.10 Potential recycled content for the main construction materials is outlined in **Table 7-6**. These good practice rates are derived from the WRAP Designing Out Waste Tool for Civil Engineering⁹⁷. This data has informed the selection of sensitivity for materials.

Table 7-6: Potential Recycled Content (Percentage by Weight)

Material Type	Potential Recycled Content (% by Weight)
Concrete	16
Asphalt	25
Aggregates	50
Steel reinforcement	100
Structural steel	60

Conventional Waste

- 7.3.11 Remaining landfill capacity at the end of 2024, as outlined on the Environmental Agency's 2024 Waste Summary Tables for England – Version 1⁸⁶, for the non-hazardous and inert waste expansive study area (South East region) and the hazardous waste study area (England) is shown in **Table 7-7**.

- 7.3.12 Merchant landfills are operated for commercial purposes and accept waste from construction projects and operating businesses and are therefore considered to form the baseline. In contrast, restricted landfills are sites that deal with their own produced waste (i.e. not operating for commercial purposes) and therefore additional capacity is excluded from the baseline. Some non-hazardous landfills have a Stable Non-Reactive Hazardous Waste Cell (SNRHW) e.g. for asbestos. SNRHW cells usually form only a small fraction of the overall capacity therefore for assessment purposes non-hazardous landfills with SNRHW cells are considered in the same way as non-hazardous landfills.

Table 7-7: Landfill Capacity (2024) in South East England, and England

Landfill type	South East England Capacity ('000s m ³)	England Capacity ('000s m ³)
Hazardous merchant	Not applicable (N/A) – assessed at national level	9,167
Non-hazardous with SNRHW cell	9,001	N/A – assessed at regional level
Non-hazardous	15,646	
Inert	16,695	

Summary of Future Baseline

- 7.3.13 There is no publicly available information regarding any potential changes to landfill capacity at the current time and by the time of the Proposed Works.
- 7.3.14 Due to the cyclic nature of inert landfill (e.g. landfill capacity decreasing, and then new sites or landfill cells being opened with landfill capacity increasing), professional judgement indicates that it is not realistic to forecast future landfill capacity. Therefore, for the purposes of the assessment, inert and hazardous landfill capacity is assumed to remain the same as the current baseline.
- 7.3.15 For non-hazardous waste, using the current rate of decline of landfill capacity and forecasting into the future would lead to the inevitable conclusion that there would be no void space remaining. However, this is not a credible scenario, as if landfill is still required, the waste planning authority will need to approve additional capacity. Therefore, non-hazardous and hazardous landfill capacity is assumed to remain the same as the current baseline.

7.4 Consultation

- 7.4.1 No engagement has been undertaken to date with respect to the scope or assessment methodology for this chapter.

7.5 Scope for Mitigation

- 7.5.1 The Proposed Works will aim to prioritise conventional waste prevention, followed by preparing for reuse, recycling and recovery and lastly disposal to landfill as per the waste hierarchy, illustrated in **Plate 7-1**.

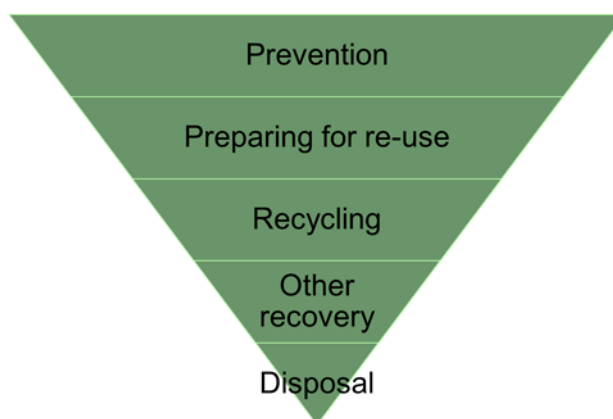


Plate 7-1: The Waste Hierarchy, from Defra's Guidance on Applying the Waste Hierarchy, recreated by AECOM

- 7.5.2 The national target for recovery of construction and demolition waste is 70% by weight, as set out in the Waste FD⁶³ and the Waste Management Plan for England⁷³. The target specifically excludes naturally occurring materials with European Waste Catalogue (EWC) Code 17 05 04 (soil and stones other than those mentioned in 17 05 03* (soils and stones containing hazardous substances)). An asterisk (*) next to a code signifies that the waste is classified as hazardous. Recovery is deemed to include reuse, recycling and other recovery e.g. energy recovery.
- 7.5.3 A good practice landfill diversion target of 90% has been achieved and exceeded by major UK developments as outlined in the IEMA Guidance⁶². In the most recent data (2022), England was recorded to have generated 63 million tonnes of non-hazardous construction and demolition waste, of which 59.4 million tonnes was recovered. This represents a recovery rate of 94.3%⁹⁶.
- 7.5.4 Standard, good and best practice recovery rates by material are provided by WRAP⁹⁷. Recovery rates for key construction materials and other construction wastes relevant to the Proposed Works are provided in **Table 7-8**.

Table 7-8: Standard, Good and Best Practice Recovery Rates by Material

Material	Standard practice recovery (%)	Good practice recovery (%)	Best practice recovery (%)
Metals	95	100	100
Packaging	60	85	95
Concrete	75	95	100
Inert	75	95	100
Plastics	60	80	95
Miscellaneous	12	50	75
Electrical equipment	Limited information	70	95

⁹⁶ DEFRA. 2025. UK Statistics on Waste. Available at: <https://www.gov.uk/government/statistics/uk-waste-data/uk-statistics-on-waste> [Accessed 08/10/2025].

⁹⁷ Waste and Resources Action Programme (WRAP). 2007. Waste Recovery Quick Wins. Improving Recovery Rates without Increasing Costs.

Material	Standard practice recovery (%)	Good practice recovery (%)	Best practice recovery (%)
Cement	Limited information	75	95
Liquids and oils	100	100	100
Hazardous	50	Limited information, cannot be 100% since some hazardous waste e.g. asbestos must be landfilled.	

7.5.5 The following mitigation measures will be considered and implemented where applicable during the Proposed Works:

- Design for reuse and recovery: identifying, securing and using materials that already exist on-site, or can be sourced from other projects;
- Design for materials optimisation: simplifying layout and form to minimise material use, using standard design parameters, balancing cut and fill, maximising the use of renewable materials and materials with recycled content;
- Design for off-site construction (e.g. prefabricated and support structures, modular systems, etc): maximising the use of prefabricated structure and components, encouraging a process of assembly rather than construction;
- Design for the future (deconstruction and flexibility) (e.g. temporary structures): identify how materials can be designed to be more easily adapted over an asset lifetime and how deconstructability and demountability of elements can be maximised at end of first life; and
- Design for waste and materials efficient procurement: identify and specify materials that can be acquired responsibly, in accordance with a recognised industry standard.

7.5.6 The Proposed Works will implement industry standard practice and control measures for environmental impacts arising during the Proposed Works and the approach to non-radiological waste management on-site in accordance with the Dungeness B IMS.

7.5.7 Excavated material would be managed in accordance with the CL:AIRE DoW CoP, exemption, Waste Framework Directive exclusion or an Environmental Permit.

7.5.8 If required, excavated material would be managed through a Materials Management Plan (MMP) developed under the CL:AIRE DoW CoP⁹⁸, at an appropriate time in the future. The MMP would support the reuse of excavated materials, minimise off-site disposal; and to demonstrate the necessary lines of evidence to support the appropriate reuse of materials and ensure compliance with regulatory guidance.

7.5.9 Where possible demolition waste would be recycled and used as a material onsite in accordance with relevant regulatory routes e.g. via the WRAP

⁹⁸ CL:AIRE. 2011. Definition of Waste Code of Practice. Available at: <https://www.claire.co.uk/projects-and-initiatives/dow-cop> [Accessed 03/09/2025].

Quality Protocol Aggregates from Inert Waste, exemption, Waste Framework Directive exclusion or an Environmental Permit⁹⁹.

7.6 Potential Impacts

Potential Receptors

- 7.6.1 The sensitive receptors for the assessment of impacts are the landfill void capacities in the South East region (for non-hazardous and inert landfill void capacity) and England (for hazardous landfill void capacity) respectively.
- 7.6.2 As defined in the IEMA Guidance *“landfill is a finite resource, and hence – through the ongoing disposal of waste – there is a continued need to expand existing and develop new facilities. This requires the depletion of natural and other resources which, in turn, adversely impacts the environment.”* The IEMA guidance *“does not consider waste processing and recovery facilities as sensitive receptors, rather: they are part of a system that has the potential to reduce the magnitude of adverse impacts associated with waste generation and disposal. Waste processing and recovery facilities are, hence, different to landfills, in that the latter are finite resources.”*

Potential Significant Effects

- 7.6.3 The ES will consider the potential effects relating to the reduction of landfill capacity. Each of the phases will be considered as follows:
- **Initial Decommissioning Works** – A detailed assessment considering the deplanting and dismantling of active (radiological) (excluding reactor Safestore) and conventional areas within Zone A and C of the Works Area;
 - **Care and Maintenance Phase** – Due to the nature of this phase and the relative inactivity, this phase is scoped out of the assessment; and
 - **Final Site Clearance** – A qualitative assessment considering the dismantling of the reactors and debris vaults and the potential remaining waste management facility as well as waste from construction and engineering works to prepare for these final dismantling.

Receptors and Effects Scoped Out of the Assessment

- 7.6.4 The following matters are ‘scoped out’ of the EIA and will not be considered in the assessment of conventional materials and waste:
- Waste arising from extraction, processing and manufacture of construction components and products. This assumes that these products and materials are being developed in a manufacturing environment with their own waste management plans, facilities, and supply chain, which are potentially in different regions of the UK or the world and therefore outside of the geographical scope of this

⁹⁹ WRAP. 2013. Quality Protocol, Aggregates from Inert Waste, End of Waste Criteria for the Production of Aggregates from Inert Waste. Available at: https://assets.publishing.service.gov.uk/media/65fd7426f1d3a0001132add0/CD1.Y_Quality_Protocol_Aggregates_from_inert_waste_End_of_waste_criteria_for_the_production_of_aggregates_from_inert_waste_WRAP_October_2013.pdf [Accessed 08/01/2026].

assessment. Such matters cannot be accurately predicted and assessed in the ES as they relate to procurement decisions that cannot be assured.

- Other environmental and human health impacts associated with the management of materials and waste from the Proposed Works e.g. on water resources, health, air quality, noise or traffic resulting from the generation, handling, on-site temporary storage or off-site transport of materials and waste will be addressed separately in the ES in the following chapters:
 - **Chapter 6: Air Quality;**
 - **Chapter 11: Human Health;**
 - **Chapter 14: Noise and Vibration;**
 - **Chapter 16: Soils and Geology;**
 - **Chapter 17: Traffic and Transport;**
 - **Chapter 18: Terrestrial Ecology;** and
 - **Chapter 19: Water Resource and Flood Risk**
- As stated in the IEMA Guidance⁶²: “the indirect impacts of off-site waste management facilities and material production facilities are generally assumed to be assessed (and where necessary mitigated) under the planning and permitting regime for those sites and thus do not normally require assessment as part of an EIA for a development that uses such facilities for material supply or waste management”. Indirect impacts of on-site waste management will be addressed separately in the ES as outlined above.
- Reduction of landfill capacity and the unsustainable use or loss of resources to landfill that results in the temporary or permanent degradation of the natural environment in the Care and Maintenance Phase since this phase will likely generate a relatively small quantity of waste in the regional and national context.
- Effects on the availability of materials during the Proposed Works. Forecast effects (using professional judgement) are considered negligible in relation to the scale and nature of the Proposed Works and the national and regional availability of materials such as concrete, aggregate, asphalt and steel. Consumption and sales information from the Steel UK and Mineral Products Association has been reviewed and it is unlikely that materials required for the Proposed Works would be more than 5% of national or regional material consumption (the point at which a medium sensitivity of significant effect would occur). Steel consumption is not expected to exceed 800,000 tonnes of the national availability. It is also anticipated that aggregate would not exceed 460,000 tonnes, concrete would be less than 275,000 tonnes and less than 85,000 tonnes of asphalt would be required (see **Table 7-5**).
- Direct impacts on allocated mineral and waste sites. There are no allocated mineral or waste sites within the Works Area⁸⁹. There are no authorised or historic landfills⁸⁷, permitted waste sites or waste site applications within the Works Area⁸⁸.

7.7 Assessment Methodology

- 7.7.1 This section provides a summary of the conventional waste assessment methodology. This differs from the proposed generic project-wide approach to the assessment methodology set out in **Chapter 5: EIA Methodology** as a topic specific guidance is available.
- 7.7.2 The scope of the assessment considers the impacts and resultant effects during the Indicative Decommissioning Works, with a qualitative assessment for the Final Site Clearance Phase.

Approach and Assessment Criteria

Sensitivity

- 7.7.3 The sensitivity of conventional waste relates to availability of landfill capacity in the absence of Proposed Works as outlined in the IEMA Guidance⁶² “*landfill capacity is recognised as an unsustainable and increasingly scarce option for managing waste*”. The sensitivity of landfill capacity is assessed based on a review of historic landfill void capacity trends where available and information from relevant policy documents.
- 7.7.4 The inert and non-hazardous landfill capacity sensitivity criteria is described within **Table 7-9**. **Table 7-10** will be used to determine the sensitivity of hazardous landfill capacity.

Table 7-9: Inert and Non-Hazardous Landfill Capacity Sensitivity

Effects	Criteria for inert and non-hazardous landfill capacity sensitivity
Negligible	Across the Proposed Works phases, the baseline/future baseline (i.e. without the Proposed Works) of regional inert and non-hazardous landfill capacity is expected to remain unchanged or is expected to increase through a committed change in capacity.
Low	Across the Proposed Works phases, the baseline/future baseline (i.e. without the Proposed Works) of regional inert and non-hazardous landfill capacity is expected to reduce minimally by <1% as a result of wastes forecast.
Medium	Across the Proposed Works phases, the baseline/future baseline (i.e. without the Proposed Works) of regional inert and non-hazardous landfill capacity is expected to reduce noticeably by 1-5% as a result of wastes forecast.
High	Across the Proposed Works phases, the baseline/future baseline (i.e. without the Proposed Works) of regional inert and non-hazardous landfill capacity is expected to reduce considerably by 6-10% as a result of wastes forecast.
Very High	Across the Proposed Works phases, the baseline/future baseline (i.e. without the Proposed Works) of regional inert and non-hazardous landfill capacity is: • expected to reduce very considerably (by >10%); • end during Proposed Works; • is already known to be unavailable; or, • would require new capacity or infrastructure to be put in place to meet forecast demand.

Table 7-10: Hazardous Landfill Capacity Sensitivity

Effects	Criteria for hazardous landfill capacity sensitivity
Negligible	Across the Proposed Works phases, the baseline/future baseline (i.e. without the Proposed Development) of regional (or where justified, national) hazardous landfill capacity is expected to remain unchanged or is expected to increase through a committed change in capacity.
Low	Across the Proposed Works phases, the baseline/future baseline (i.e. without the Proposed Development) of regional (or where justified, national) hazardous landfill capacity is expected to reduce minimally: by <0.1% as a result of wastes forecast.
Medium	Across the Proposed Works phases, the baseline/future baseline (i.e. without the Proposed Development) of regional (or where justified, national) hazardous landfill capacity is expected to reduce noticeably: by 0.1-0.5% as a result of wastes forecast.
High	Across the Proposed Works phases, the baseline/future baseline (i.e. without the Proposed Development) of regional (or where justified, national) hazardous landfill capacity is expected to reduce considerably: by 0.5-1% as a result of wastes forecast.
Very High	Across the Proposed Works phases, the baseline/future baseline (i.e. without the Proposed Development) of regional (or where justified, national) hazardous landfill capacity is: • expected to reduce very considerably (by >1%); • end during Proposed Works; • is already known to be unavailable; or, • would require new capacity or infrastructure to be put in place to meet forecast demand.

Magnitude of Impact

- 7.7.5 The magnitude of impacts will be assessed by comparing the total conventional waste arising (as a worst case scenario) from the Proposed Work against the landfill void capacity, utilising a percentage-based approach. The criteria used to assess the magnitude of impact for resources and conventional waste are provided within **Table 7-11** and **Table 7-12**.

Table 7-11: Inert and Non-Hazardous Waste Magnitude of Impact

Effects	Criteria for waste magnitude of impacts
No change	Zero waste generation and disposal from the Proposed Works.
Negligible	Waste generated by the Proposed Works will reduce expansive study area landfill capacity baseline* by <1%
Minor	Waste generated by the Proposed Works will reduce expansive study area landfill capacity baseline* by 1-5%
Moderate	Waste generated by the Proposed Works will reduce expansive study area landfill capacity baseline* by 6-10%.
Major	Waste generated by the Proposed Works will reduce expansive study area landfill capacity baseline* by >10%

* forecast as the worst-case scenario, during a defined phase.

Table 7-12: Hazardous Waste Magnitude of Impact

Effects	Criteria for waste magnitude of impacts
No change	Zero waste generation and disposal from the Proposed Works.
Negligible	Waste generated by the Proposed Works will reduce expansive study area landfill capacity baseline* by <0.1%
Minor	Waste generated by the Proposed Works will reduce expansive study area landfill capacity baseline* by <0.1-0.5%
Moderate	Waste generated by the Proposed Works will reduce expansive study area landfill capacity baseline* by <0.5-1%
Major	Waste generated by the Proposed Works will reduce expansive study area landfill capacity baseline* by >1%

* forecast as the worst-case scenario, during a defined phase.

Significance of Effects

7.7.6 **Table 7-13** describes the effect thresholds used in determining the significance of potential effects and **Table 7-14** shows the significance of the effects.

Table 7-13: Effect Thresholds

		Magnitude of Impact				
		No Change	Negligible	Minor	Moderate	Major
Sensitivity of Receptor	Very High	Neutral	Slight	Moderate or Large	Large or Very Large	Very Large
	High	Neutral	Slight	Slight or Moderate	Moderate or Large	Large or Very Large
	Medium	Neutral	Neutral or Slight	Slight	Moderate	Moderate or Large
	Low	Neutral	Neutral or Slight	Neutral or Slight	Slight	Slight or Moderate
	Negligible	Neutral	Neutral	Neutral or Slight	Neutral or Slight	Slight

Table 7-14: Significance of Effect

Effect	Waste
Neutral	Not significant
Slight	
Moderate	Significant
Large	
Very large	

Assumptions and Limitations

7.7.7 There is limited information available at the Scoping stage regarding conventional waste quantities associated with the Proposed Works. These

limitations are not untypical at the Scoping stage, and the information presented in this chapter is considered to represent an appropriate level of detail in line with IEMA Guidance⁶². Further information regarding conventional waste quantities will be provided in the ES.

7.7.8 The scope of the conventional waste assessment has been informed by the most recent baseline information available at the time of writing.

7.7.9 The assessment of conventional waste assumes that:

- Waste producers have a legal duty of care to manage their waste in accordance with regulations and to ensure that any waste leaving the site where it is generated is transferred to a suitably licensed facility for further treatment or disposal;
- Off-site facilities transferring, treating or disposing of waste must be either licensed or apply for an exemption from a licence, and impacts arising from the operation of off-site waste management facilities are considered as part of the planning and permitting process for these facilities themselves;
- As part of their planning function, Waste Planning Authorities (WPAs) are required to ensure that sufficient land is available to accommodate facilities for the treatment of all waste arising in the area, either within the WPA area, or through export to suitable facilities in other areas; and
- Minerals Planning Authorities (MPAs) are similarly required to ensure an adequate supply of minerals, sufficient to meet the needs of national and regional supply policies, and local development needs.

7.8 Summary of Potential Likely Significant Effects

7.8.1 **Table 7-15** provides a summary of the proposed scope of the Conventional Waste and Materials chapter of the ES. Please refer to **Section 7.6** where justification of the scope is provided. These pathways will be further assessed and refined as the Proposed Works design scheme progresses.

Table 7-15: Summary of Elements to be Considered in the ES

Pathway	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
Changes in available landfill void capacity	Scoped In	Scoped Out	Scoped In*
Changes in the availability of materials	Scoped Out	Scoped Out	Scoped Out
Waste arising from extraction, processing and manufacture of construction components and products.	Scoped Out	Scoped Out	Scoped Out
Other environmental impacts associated with the management of waste from the Proposed Works (on and off-site).	Scoped Out	Scoped Out	Scoped Out

Pathway	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
Changes to allocated/safeguarded mineral site(s)	Scoped Out	Scoped Out	Scoped Out
Changes to allocated/safeguarded waste site(s)	Scoped Out	Scoped Out	Scoped Out

* Applying professional judgement, qualitative assessment of the Final Site Clearance phase will be undertaken

8. Coastal Processes

8.1 Introduction

- 8.1.1 This chapter sets out the proposed scope and methodology for the assessment of effects of the Proposed Works on coastal processes. This chapter has been informed by a review of the coastal processes baseline conditions, along with the anticipated key issues likely to be associated with the Proposed Works.
- 8.1.2 This chapter should be read in conjunction with the description of the Proposed Works presented in **Chapter 2: The Decommissioning and Dismantling Process**, as well as the technical assessments described in **Chapter 9: Climate Change**, **Chapter 13: Marine Ecology** and **Chapter 19: Water Environment and Flood Risk** of this Scoping Report.
- 8.1.3 For the purposes of this Scoping Report, coastal processes are defined as encompassing the following elements:
- Coastal environment;
 - Meteorological and oceanographic (metocean) conditions (wind, waves and tides);
 - Geology, sediments and bathymetry;
 - Geomorphology and sediment transport processes;
 - Marine sediment quality; and
 - Climate change effects.
- 8.1.4 Changes in coastal processes within the defined Study Area (refer to **Section 8.3**) as a result of the Proposed Works are considered as 'sources' of a change and 'pathways' for effects which have potential influence on other environmental 'receptors'. In some cases, coastal processes can also be considered as a receptor, such as metocean conditions which refers to the combined meteorological and oceanographic conditions that influence the marine and coastal environment. Changes in the metocean conditions affect other processes, such as sediment transport which may in turn affect intertidal morphology. This demonstrates a complex interaction between these processes resulting in potential primary and secondary or indirect effects on identified receptors.

8.2 Relevant Legislation, Policy And Guidance

Legislation

- 8.2.1 Legislation which is relevant to the assessment of effects on coastal processes as associated with the Proposed Works is presented in **Table 8-1**.

Table 8-1: Legislation Relevant to Coastal Processes

Legislation	Legislation details
Marine and Coastal Access Act (MCAA) 2009 ¹⁰⁰	The MCAA provides the legal mechanism to help ensure clean, healthy, safe and productive and biologically diverse oceans and seas. The Act is designed to create a more integrated approach to effective marine management, enable the sustainable use and production of marine resources and provide a clear framework for consistent decision making.
The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 ¹⁰¹	The Water Framework Directive (WFD) seeks to achieve an integrated approach to the use of the water environment in a sustainable and protective way. Managing waters under the WFD requires a holistic approach, focusing on the wider ecosystem and hydrological cycle.
The Marine Strategy Regulations 2010 ¹⁰²	These regulations establish a framework for community action in the field of marine environmental policy. These regulations ensure that human activities within the marine environment remain compatible with achieving or maintaining Good Environmental Status (GES).

Policy

- 8.2.2 Policy relating to coastal processes and relevant to the assessment of effects associated with the Proposed Works is presented in **Table 8-2**.

Table 8-2: Policy Relevant to Coastal Processes

Policy	Policy details
The UK Marine Policy Statement (MPS) ¹⁰³	The UK MPS provides the policy framework for the preparation of marine plans and establishes how decisions affecting the marine area should be made.
South Inshore and South Offshore Marine Plan ¹⁰⁴	The South Marine Plan area stretches from Folkestone in Kent to the River Dart, Devon, covering approximately 1,000 kilometres (km) of coastline. Adopting the Marine Plan provides a way of implementing government's marine policies at a local level. Marine Plans explain that the marine environment serves a critical role in mitigating climate change. The Plan is used to guide what marine and coastal activities and developments are acceptable, and under what constraints.

¹⁰⁰ Marine and Coastal Access Act (2009). Available at:

<https://www.legislation.gov.uk/ukpga/2009/23/contents> [Accessed 23/10/2025].

¹⁰¹ The Water Environment (Water Framework Directive) (England and Wales) Regulations (2017).

Available at: <https://www.legislation.gov.uk/uksi/2017/407/contents/made> [Accessed 23/10/2025].

¹⁰² The Marine Strategy Regulations (2010). Available at: [The Marine Strategy Regulations 2010 \(legislation.gov.uk\)](https://www.legislation.gov.uk/uksi/2010/101/contents/made) [Accessed 23/10/2025].

¹⁰³ HM Government. 2011. Marine Policy Statement. Available at:

<https://assets.publishing.service.gov.uk/media/5a795700ed915d042206795b/pb3654-marine-policy-statement-110316.pdf> [Accessed 23/10/2025].

¹⁰⁴ HM Government. 2018. South Inshore and South Offshore Marine Plan, London: Department for Environment, Food and Rural Affairs. Available at: <https://www.gov.uk/government/publications/the-south-marine-plans-documents> [Accessed 23/10/2025].

Policy	Policy details
South Foreland to Beachy Head Shoreline Management Plan (SMP)	SMP 11- South Foreland to Beachy Head. Policy Unit 4C13- Dungeness Power Station. The long-term policy option for Policy Unit 4C13 is to hold the line and the Policy Unit has been recognised as an area of high environmental importance.

Guidance

- 8.2.3 Guidance which is relevant to the assessment of effects on coastal processes is presented in **Table 8-3**.

Table 8-3: Guidance Relevant to Coastal Processes

Guidance	Guidance details
Integrated Coastal Zone Management (ICZM) ¹⁰⁵	Marine planning is aligned with principles of ICZM, ensuring that coastal areas and activities taking place within them are managed in an integrated and holistic way. The guidance considers marine planning, flood risk, cross sector impacts and provides guidance on managing coastal areas in a holistic and sustainable way.

8.3 Baseline Conditions

Data Gathering Methodology

- 8.3.1 The principal data sources used to inform the definition of baseline conditions as related to coastal processes comprise the following:
- Admiralty Tide Tables¹⁰⁶;
 - Annual Management Report 2024 – Dungeness Shingle Recycling, EDF Energy¹⁰⁷;
 - British Geological Survey (BGS) Geology Viewer¹⁰⁸;
 - Channel Coastal Observatory (CCO) Southeast Swath Bathymetry 2013¹⁰⁹;
 - Suspended Sediment Climatologies Around the UK (Centre for Environment, Fisheries and Aquaculture Science (cefas)¹¹⁰);

¹⁰⁵ European Parliament and Council. 2002. Recommendation concerning the implementation of Integrated Coastal Zone Management in Europe (2002/413/EC). Official Journal L 148, 06 June 2002, pp. 24–27.

¹⁰⁶ UK Hydrographic Office. 2025. Admiralty Tide Tables.

¹⁰⁷ Moffatt & Nichol. 2024. Annual Management Report – Dungeness Shingle Recycling

¹⁰⁸ BGS Geology Viewer, 2025, Geology Viewer, BGS. Available at: <https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/>. [Accessed 09/10/2025].

¹⁰⁹ Channel Coastal Observatory. 2013. CCO South East Swath Bathymetry 2013. Available at: <https://www.data.gov.uk/dataset/daa1b24c-fdde-4d2e-bb1c-5d83c3ea922b/cco-south-east-swath-bathymetry-2013>. [Accessed 09/10/2025].

¹¹⁰ Cefas. 2016. Suspended Sediment Climatologies around the UK. Available at: [CEFAS 2016 Suspended Sediment Climatologies around the UK.pdf \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/531111/CEFAS_2016_Suspended_Sediment_Climatologies_around_the_UK.pdf). [Accessed 23/10/2025].

- Coastal Geomorphology of Great Britain, Chapter 6: Gravel and 'shingle' beaches – Geological Conservation Review (GCR) site reports, Site: Dungeness (GCR ID: 2771)¹¹¹;
- Coastal Wave Network Annual Report 2023 – CCO¹¹²;
- Dungeness Shingle Recycling Operations for Flood Defence, Environmental Statement: Appendix 9.1 – Assessment of Geomorphology and Sediment Transport Impacts. EDF Energy Nuclear Generation Limited¹¹³;
- Estimation of abrasion on flint shingle beaches in East Sussex, UK¹¹⁴;
- Flood Risk Assessments: climate change allowance¹¹⁵;
- HR Wallingford Coastal Impact Assessment for the Area 530 marine aggregate dredging area¹¹⁶;
- Modelling coastal erosion and sediment transport on the Dungeness Foreland, UK¹¹⁷;
- Sussex Inshore Fisheries and Conservation Authority (IFCA) – Seabed Mapping Dungeness to Selsey¹¹⁸; and
- Two-stage opening of the Dover Strait and the Origin of island Britain¹¹⁹.

8.3.2 Project specific marine surveys may be undertaken to inform the marine ecology assessment (refer to **Chapter 13: Marine Ecology**). These may include a walkover (intertidal), subtidal grab samples and subtidal drop-down video (DDV) and could provide useful contextual information of use during the coastal processes assessment.

¹¹¹ JNCC. 2007. Coastal Geomorphology of Great Britain, Chapter 6: Gravel and 'shingle' beaches – GCR site reports, Site: Dungeness (GCR ID: 2771). Available at: <https://jncc.gov.uk/jncc-assets/GCR/gcr-site-account-2771.pdf> [Accessed 24/10/2025].

¹¹² Channel Coastal Observatory. 2023. Coastal Wave Network Annual Report 2023, TR 128.

¹¹³ WSP. 2025. Dungeness Shingle Recycling Operations for Flood Defence, Environmental Statement: Appendix 9.1 – Assessment of Geomorphology and Sediment Transport Impacts. EDF Energy Nuclear Generation Limited.

¹¹⁴ Dornbusch, U., Robinson, D., Williams, R. & Moses, C. 2003. Estimation of abrasion on flint shingle beaches in East Sussex, UK. Clearwater Beach, Florida, Conference: Coastal Sediment 2003.

¹¹⁵ Environment Agency. 2022. Flood Risk Assessments: climate change allowance. Available at: <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>. [Accessed 09/10/2025].

¹¹⁶ HR Wallingford. 2022. Area 530 Coastal Impact Study. Available at: <https://marinelicensing.marinemangement.org.uk/mmofox5/fox/live/>. [Accessed 06/11/2025].

¹¹⁷ Phelps, J,J,C., Brown, J,M., Plater, A, J., Barkwith, A., Hurst, M, D., Ellis, M, A. 2015. Modelling coastal erosion and sediment transport on the Dungeness Foreland, UK. National Oceanography Centre, 30pp. (National Oceanography Centre Research and Consultancy Report, 48). Available at: <https://nora.nerc.ac.uk/id/eprint/511382/> [Accessed 27/10/2025].

¹¹⁸ Sussex Inshore Fisheries and Conservation Authority. 2014. Seabed Mapping – Dungeness to Selsey. Available at: <https://dnu7gk7p9afoo.cloudfront.net/Files/schip-seabed-mapping-dungeness-to-selsey.pdf> [Accessed 24/10/2025]

¹¹⁹ Gupta, S., Collier, J, S., Garcia-Moreno, D., Oggioni, F., Trentesaux, A., Vanneste, K., De Batist, M., Camelbeeck, T., Potter, G., Vilet-Lanoe, B. and Arthur, J, C, R. 2017. Two-stage opening of the Dover Strait and the Origin of island Britain. Nature Communications 8 (15101).

Study Area

- 8.3.3 The Works Area is located on the south coast of England at the Dungeness headland on the Kent coastline, UK.
- 8.3.4 The Works Area includes the spatial extent of the Proposed Works, which includes the Dungeness B Power Station and associated cooling water outfall and intake locations, hereafter referred to as Area D.
- 8.3.5 The Study Area is focused on Area D of the Works Area within Rye Bay, encompassing the immediate footprint of the Proposed Works and sections of the coastline directly subject to the Proposed Works.
- 8.3.6 To ensure a comprehensive assessment, the baseline has been characterised at an appropriate wider regional scale to consider the coastal physical processes and metocean conditions that extend beyond the defined Study Area. This is defined as the Zol which extends southwards into the English Channel to account for any potential far field or transboundary effects.
- 8.3.7 The environmental baseline has therefore been characterised on a wider regional scale, as appropriate. The regional scale could extend beyond Rye Bay, within which the Area D of the Works Area lies, to wider marine impacts within the English Channel.

Summary of Existing Baseline

- 8.3.8 This section provides a baseline review of coastal process receptors relevant to the coastal environment, including meteorological and oceanographic conditions, waves and wind, tidal currents, geology, sediments and bathymetry and sediment transport processes.
- 8.3.9 The Marine Works are located entirely in subtidal waters offshore from Dungeness Beach in the Greater North Sea and English Channel marine region. The existing outfall and intake infrastructure are located approximately 160m and 340m from the shoreline respectively up to a depth of approximately 12m.

Overview of Coastal Environment

- 8.3.10 The Dungeness headland is characterised by a wide shingle beach. The shingle beach in front of Dungeness B has been regularly replenished by recycling operations since the 1960s by EDF Energy, the Environment Agency and their predecessors. An estimated 30,000m³ of beach material was approved for beach replenishment for the winter seasons of 2024 to 2025 and 2025 to 2026.
- 8.3.11 Dungeness B is situated on the southern side of the headland at the eastern end of Rye Bay. Rye Bay is orientated west to north-east and is exposed to prevailing wind and waves approaching from the south-west.
- 8.3.12 The village of Dungeness is located within Romney Marsh, a populated wetland on the border of East Sussex and Kent. As identified in **Chapter 18: Terrestrial Ecology**, the areas surrounding the Works Area are designated for their ecological importance and include a Special Protection Area (SPA),

Ramsar site and SSSI. These designations recognise the importance of the area in supporting diverse coastal landscapes and habitats.

Meteorological and Oceanographic Conditions

Water Levels

- 8.3.13 **Table 8-4** presents tidal levels from the UK Hydrographic Office (UKHO) Admiralty Tide Tables for the Dungeness (0087) secondary port (refer to **Figure 8-1**). The Dungeness secondary port (coastal location) is referenced to the nearby standard port, Dover (0089), since there is no standard port at Dungeness. Tidal predictions for Dungeness are therefore obtained by applying time and height corrections to those recorded at Dover. Highest Astronomical Tide (HAT) and Lowest Astronomical Tide (LAT) are not provided in the Admiralty Tide Tables¹²⁰.
- 8.3.14 Rye Bay experiences a semi-diurnal, macro tidal regime, influenced by the tidal system of the Atlantic Ocean, which transmits tidal energy into the North Sea from both the north and the south through the English Channel.

Table 8-4: Tidal levels for Dungeness

Tide	Tidal Level (m above Chart Datum (CD*))	Tidal Level (m Ordnance Datum Newlyn (ODN))
MHWS	7.8	3.7
Mean High Water Neap (MHWN)	5.9	1.8
Mean Sea Level (MSL)	4.13	0.03
Mean Low Water Neaps (MLWN)	2.5	-1.6
Mean Low Water Springs (MLWS)	0.9	-3.2

*CD is 4.1m below ODN

- 8.3.15 Tracking the excursion of the tide provides means of visualising the path of a water particle over a tidal cycle. **Plate 8-1** shows output from AECOM's established tidal model of the Southern North Sea that has been used to determine tidal excursion distances within coastal waters within the English Channel covering the Study Area for this assessment¹²¹. The movement of the tide was calculated over a 12.5 hour period representing a single tidal cycle. The start date was chosen to coincide with the HAT for the year simulated (2025). This approach was taken to provide a maximum tidal excursion distance indicating the maximum distance travelled by a water or sediment particle carried in suspension over a tidal cycle.

¹²⁰ UK Hydrographic Office. 2025. Admiralty Tide Tables.

¹²¹ AECOM. 2025. English Channel – North Sea Tidal Model.

- 8.3.16 To the north-east of Dungeness, the orientation of the excursion path is north-east to south-west and has a length of approximately 12km. The tidal ellipse excursion can be seen in **Plate 8-1** and the arrows indicate the orientation of the ellipse from north-east to south-west. To the south-west, the path has a similar orientation and a slightly short length of approximately 10km.

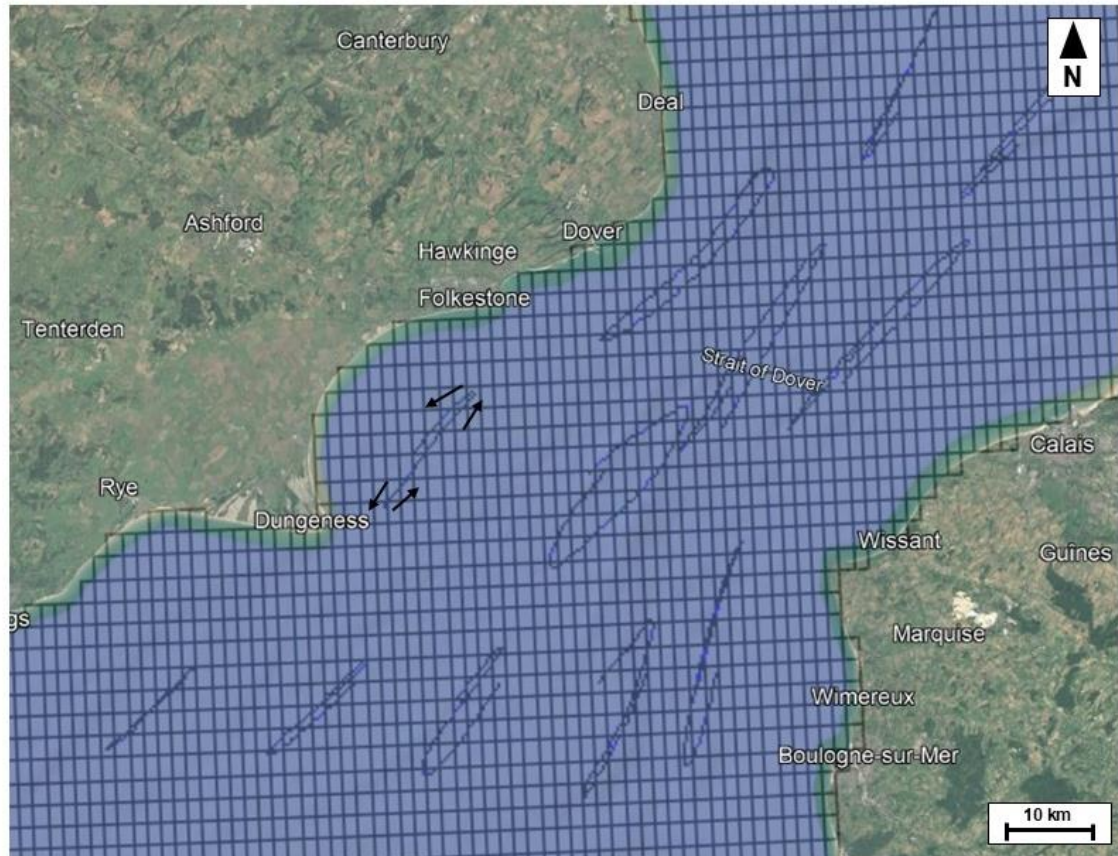


Plate 8-1: Tidal excursion distances off Dungeness (arrows indicate the orientation of the 12km long tidal ellipse)¹²¹

Waves and Wind

- 8.3.17 Waves within the English Channel are either formed in the Atlantic which then travel eastwards along the channel, or they can be generated locally by southerly winds within the channel itself¹²². Wave and wind data have been extracted from the CCO Wave Network Annual Report¹²³. The wave data provides an indication of average conditions at the Rye Bay buoy located approximately 13km west from the Works Area. **Plate 8-2** shows that the dominant wave direction is from the south-west.

¹²² Dornbusch, U., Robinson, D., Williams, R. & Moses, C. 2003. Estimation of abrasion on flint shingle beaches in East Sussex, UK. Clearwater Beach, Florida, Conference: Coastal Sediment 2003.

¹²³ Channel Coastal Observatory. 2023. Coastal Wave Network Annual Report 2023, TR 128.

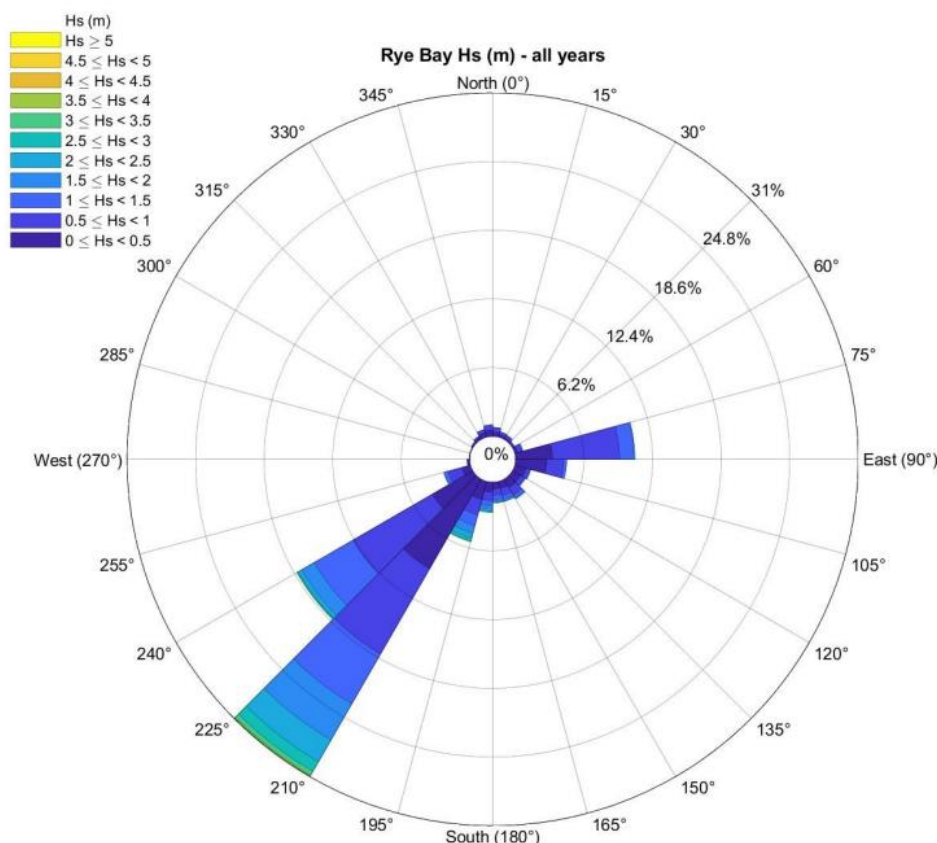


Plate 8-2: Rye Bay wave buoy – wave rose of significant wave heights from 2008 – 2023¹²³

Tidal Currents

- 8.3.18 Tidal currents are an important component of the physical environment, influencing aspects such as sediment transport and dispersion of suspended sediment.
- 8.3.19 Tidal diamonds suggest that the currents off Dungeness, both offshore and inshore, are stronger than the average for this stretch of coastline, although reaching a moderate energy level only during peak flow on spring tides. Coupled with a relatively sheltered wave climate, this results in this area being classified as low energy¹²⁴.
- 8.3.20 In the absence of site specific tidal current information, flow modelling undertaken by HR Wallingford for a project located approximately 15.4km east of Dungeness Point (see Marine Sediment Quality section below) has been used¹²⁵. The modelling of tidal flow patterns was predicted by the TELEMAC 2D model.
- 8.3.21 shows that in the coastal environment at Dungeness on the ebb phase of a spring tide, the current flows north-east to south-west. Tidal peak spring ebb speed varies between 0.1m/s and 0.8m/s. **Plate 8-3** shows that in the

¹²⁴ Sussex Inshore Fisheries and Conservation Authority. 2014. Seabed Mapping – Dungeness to Selsey. Available at: <https://dnu7gk7p9afoocloudfront.net/Files/schip-seabed-mapping-dungeness-to-selsey.pdf> [Accessed 24/10/2025].

¹²⁵ HR Wallingford. 2022. Area 530 Coastal Impact Study. Available at: <https://marinelicensing.marinemangement.org.uk/mmofox5/fox/live/>. [Accessed 06/11/2025].

coastal environment at Dungeness on the flood phase of a spring tide, the current flows south-west to north-east. Tidal peak spring flood speed varies between 0.3m/s and 1.1m/s.

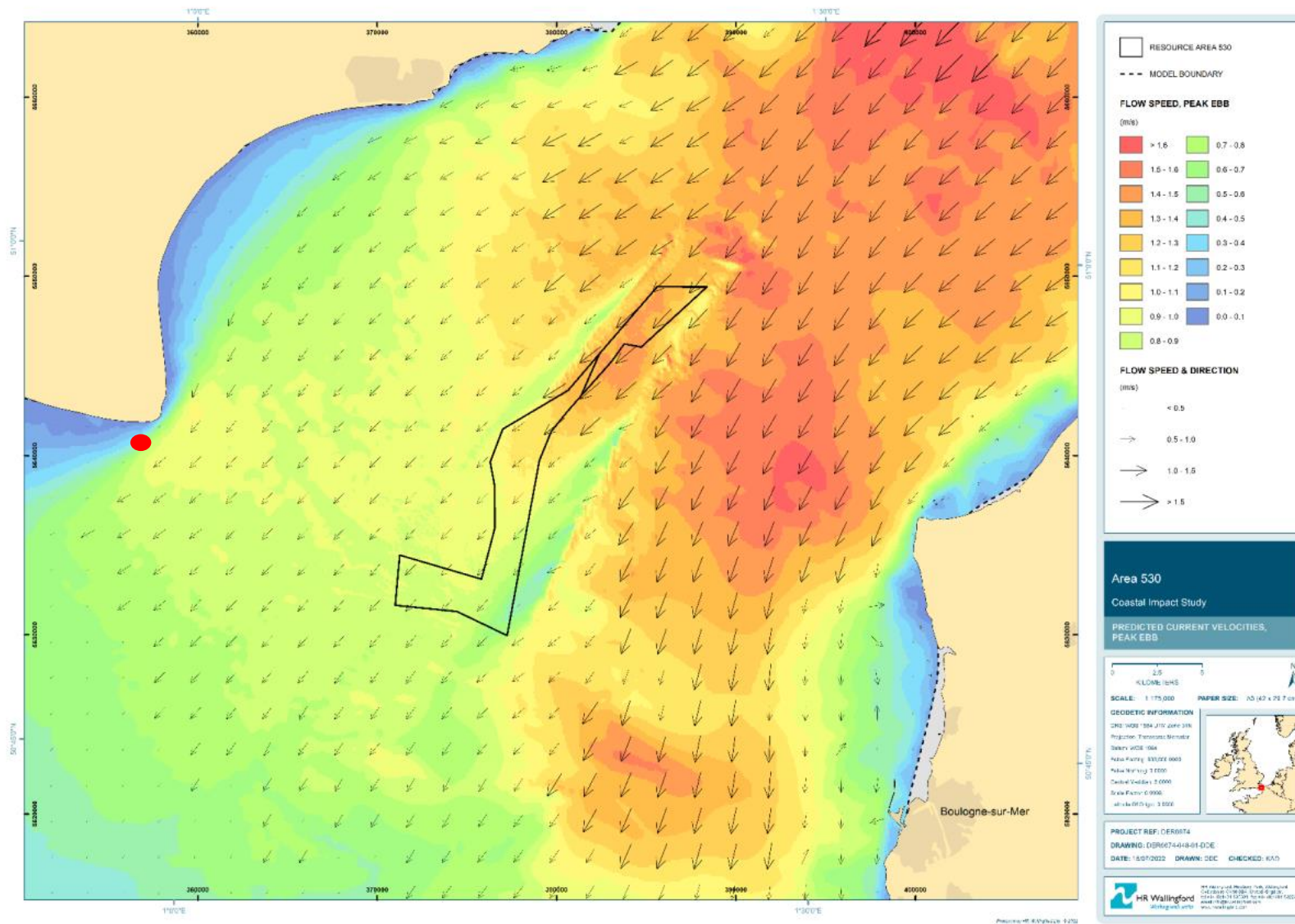


Plate 8-3: Predicted current velocities for the marine dredging area near Dungeness Power Station (red circle) during the ebb phase of a spring tide (HR Wallingford, 2022)¹²⁵

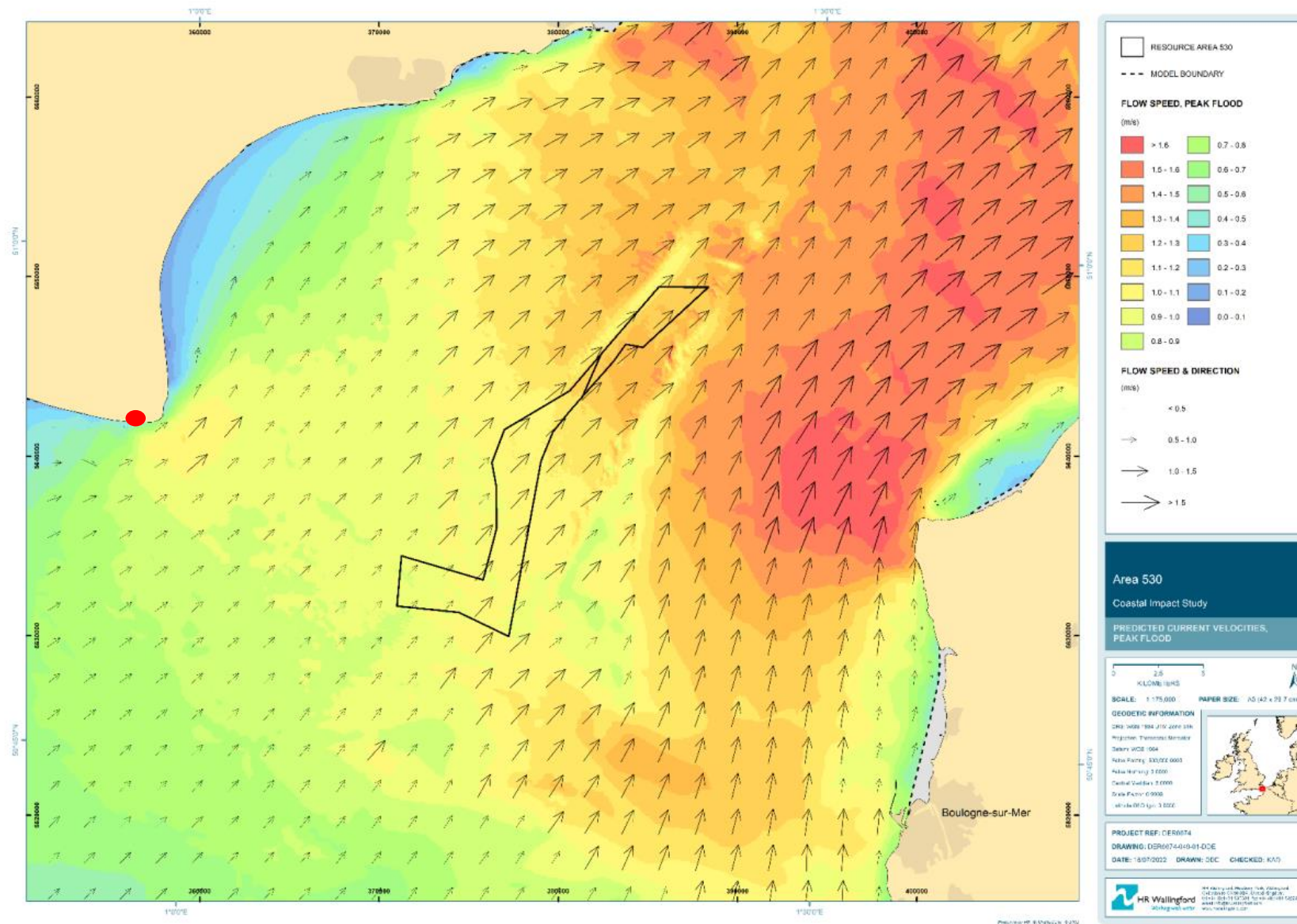


Plate 8-4: Predicted current velocities for the marine dredging area near Dungeness Power Station (red circle) during the flood phase of a spring tide (HR Wallingford, 2022)¹²⁵

Geology, Sediments and Bathymetry

Geology

- 8.3.22 The underlying hard geology of the Dungeness Headland consists of bedrock made up of sandstone, siltstone and mudstone which has a thickness of between 0m and 400m. This sedimentary bedrock formed between 145 and 133.9 million years ago during the cretaceous period. The superficial deposits consist of storm beach deposits made up of gravel, formed between 2.6 million years ago and the present during the Quaternary period. There are superficial deposits outcrops to the west of the Dungeness Power Station that consist of Tidal Flat Deposits of clay and silt formed 11.8 thousand years ago¹²⁶.
- 8.3.23 The bedforms located to the north-east of Dungeness Point are potentially caused by waves breaking in the extensive littoral drift area. As a result of the depth at which these bedforms are present, it is likely that they indicate mobile sediment. Further, a narrow strip of bedforms appear to be present at the base of the subtidal bank of Dungeness Point and at the northern end of the western bank, which could possibly be associated with the instability of the slope or sediment mobility¹²⁷.

Sediments

- 8.3.24 The substrate that predominantly surrounds Dungeness is sand. The remainder of the area is either sublittoral or littoral sand¹²⁸ (see **Figure 13-2**).
- 8.3.25 The Dungeness beach itself is composed of largely rounded flint shingle, with pebbles of Cherty sandstones derived from the Upper Greensand, fine grained sandstones from the Hastings Beds, and red, grey and liver-coloured quartzites¹²⁹.

Suspended Sediments

- 8.3.26 Cefas provides the spatial distribution of average non-algal Suspended Particulate Matter (SPM) between 1998 and 2015 for most of the UK continental shelf (see **Plate 8-5**). The largest plume concentrations are associated with major water bodies, such as the Outer Thames Estuary and the Severn Estuary, where mean values of SPM are above 10mg/l. The plume concentrations within the English Channel and at Dungeness are approximately 10mg/l.

¹²⁶ BGS Geology Viewer. 2025. Geology Viewer, BGS. Available at: <https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/>. [Accessed 09/10/2025].

¹²⁷ WSP. 2025. Dungeness Shingle Recycling Operations for Flood Defence, Environmental Statement: Appendix 9.1 – Assessment of Geomorphology and Sediment Transport Impacts. EDF Energy Nuclear Generation Limited.

¹²⁸ Sussex Inshore Fisheries and Conservation Authority. 2014. Seabed Mapping – Dungeness to Selsey. Available at: <https://dnu7gk7p9afoo.cloudfront.net/Files/schip-seabed-mapping-dungeness-to-selsey.pdf> [Accessed 24/10/2025].

¹²⁹ JNCC. 2007. Coastal Geomorphology of Great Britain, Chapter 6: Gravel and 'shingle' beaches – GCR site reports, Site: Dungeness (GCR ID: 2771). Available at: <https://jncc.gov.uk/jncc-assets/GCR/gcr-site-account-2771.pdf> [Accessed 24/10/2025].

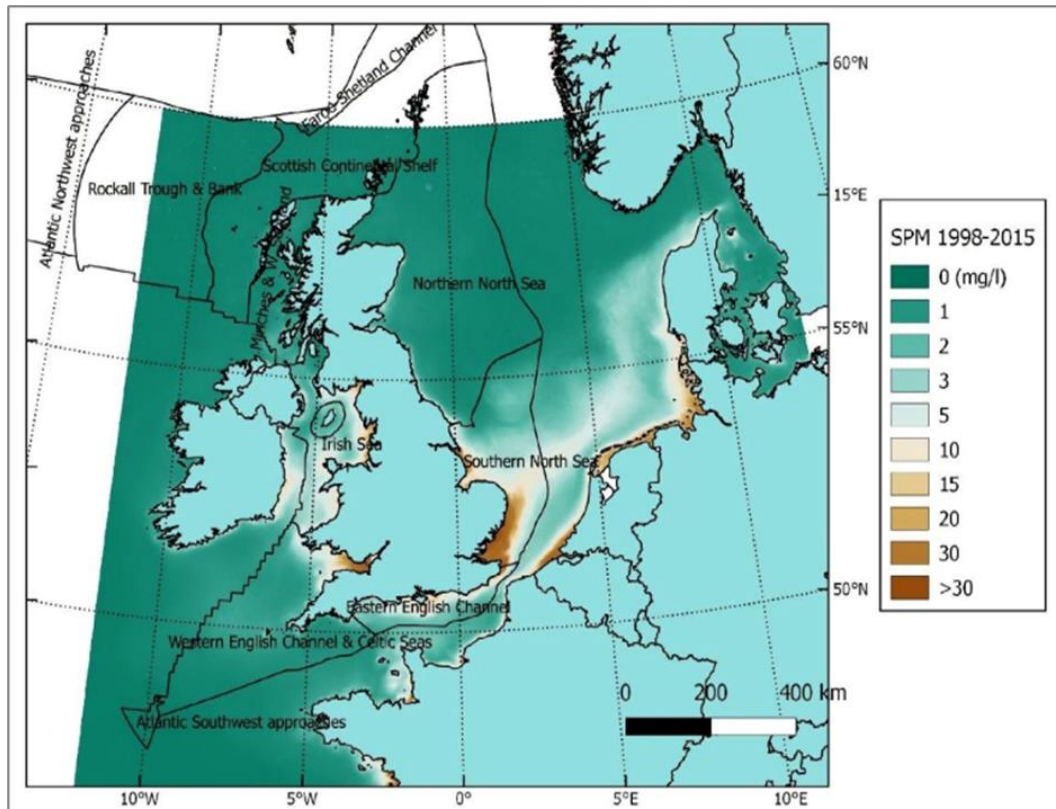


Plate 8-5: Average suspended sediment around the UK¹³⁰

Bathymetry

- 8.3.27 The overall bathymetry of the English Channel is shown in **Plate 8-6**. Dungeness is located within the north-east section of the English Channel¹³¹. The nearshore depths near Dungeness range from approximately 0m to -12m relative to MSL (-0.12 to -12.12 ODN) whilst the bathymetry offshore remains relatively shallow compared to other locations within the channel¹³¹.

¹³⁰ Cefas. 2016. Suspended Sediment Climatologies around the UK. Available at: [CEFAS 2016 Suspended Sediment Climatologies around the UK.pdf \(publishing.service.gov.uk\)](#). [Accessed 23/10/2025].

¹³¹ Gupta, S., Collier, J. S., Garcia-Moreno, D., Oggioni, F., Trentesaux, A., Vanneste, K., De Batist, M., Camelbeeck, T., Potter, G., Vilet-Lanoe, B. and Arthur, J. C. R. 2017. Two-stage opening of the Dover Strait and the Origin of island Britain. Nature Communications 8 (15101).

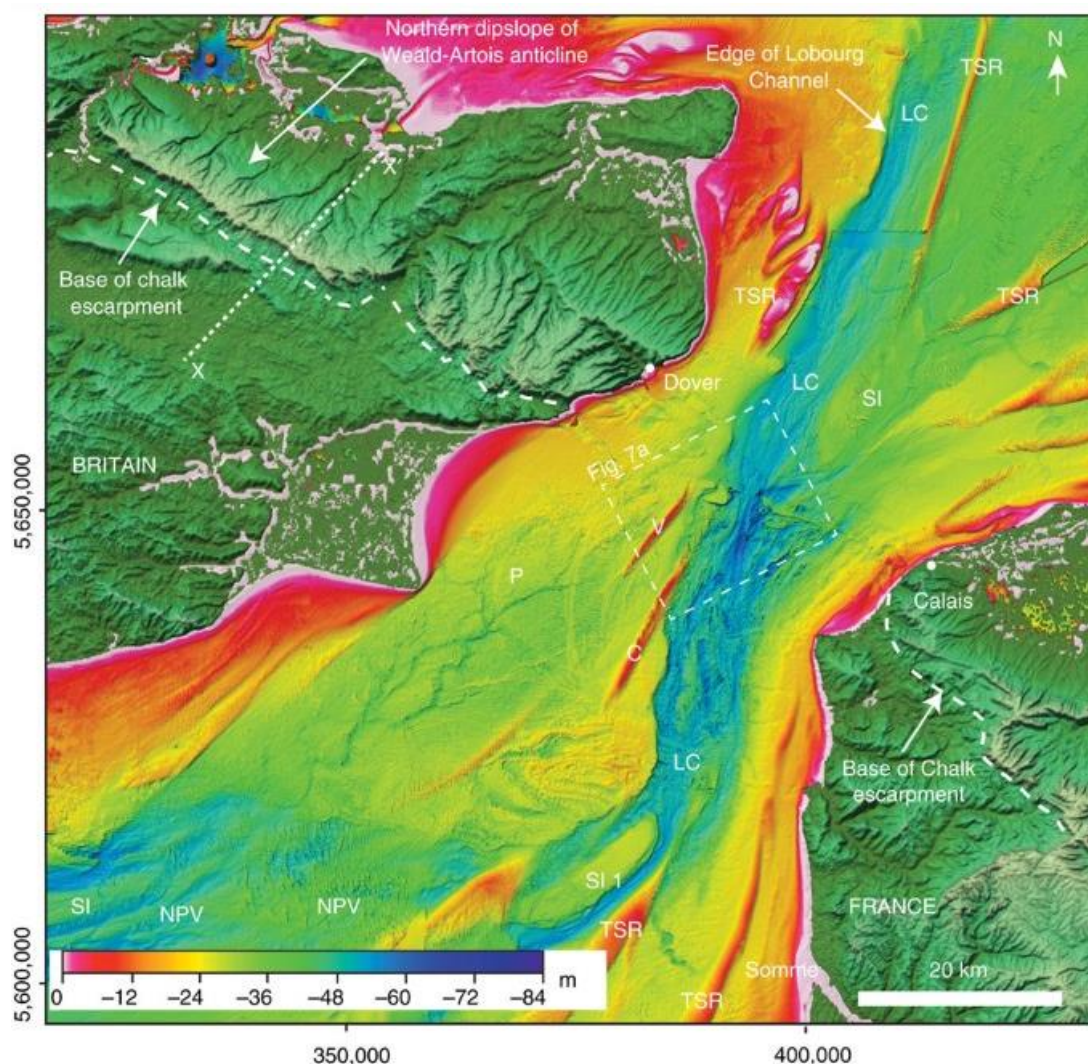


Plate 8-6: Bathymetry of the English Channel and Dungeness¹³²

- 8.3.28 Nearshore bathymetry information is available from the CCO¹³³ for the year 2013 and presented for the offshore area east of the Works Area. This data was presented in the WSP Dungeness Shingle Recycling Operations for Flood Defence Report¹³⁴ associated with the planning application for the continuation of beach replenishment activities at Dungeness for a further 15 years. **Plate 8-7** illustrates the gradient of the Dungeness foreland nearshore seabed is orientated south-west to north-east. It is also evident that the inshore seabed gradient is steeper than the surrounding coastline areas. A nearshore shingle bar is also present, widening and extending to -8m ODN, forming a shore attached shingle bar.
- 8.3.29 To the north and west of Dungeness Point, the seabed is shallow and gently sloping, consisting of featureless sand. Although directly south of the

¹³² Gupta, S., Collier, J. S., Garcia-Moreno, D., Oggioni, F., Trentesaux, A., Vanneste, K., De Batist, M., Camelbeeck, T., Potter, G., Vilet-Lanoe, B. and Arthur, J. C. R. 2017. Two-stage opening of the Dover Strait and the Origin of island Britain. Nature Communications 8 (15101).

¹³³ Channel Coastal Observatory. 2013. CCO South East Swath Bathymetry 2013. Available at: <https://www.data.gov.uk/dataset/daa1b24c-fdde-4d2e-bb1c-5d83c3ea922b/cco-south-east-swath-bathymetry-2013>. [Accessed 09/10/2025].

¹³⁴ WSP. 2025. Dungeness Shingle Recycling Operations for Flood Defence, Environmental Statement: Appendix 9.1 – Assessment of Geomorphology and Sediment Transport Impacts. EDF Energy Nuclear Generation Limited.

headland, the bathymetry descends from -5m to -25m ODN (-0.9m to -20.9m CD) across a distance of 150m. It then remains at a relatively constant depth of -35m OD (-30.9m CD) from 350m offshore, which can be seen in **Plate 8-8**¹³⁵.

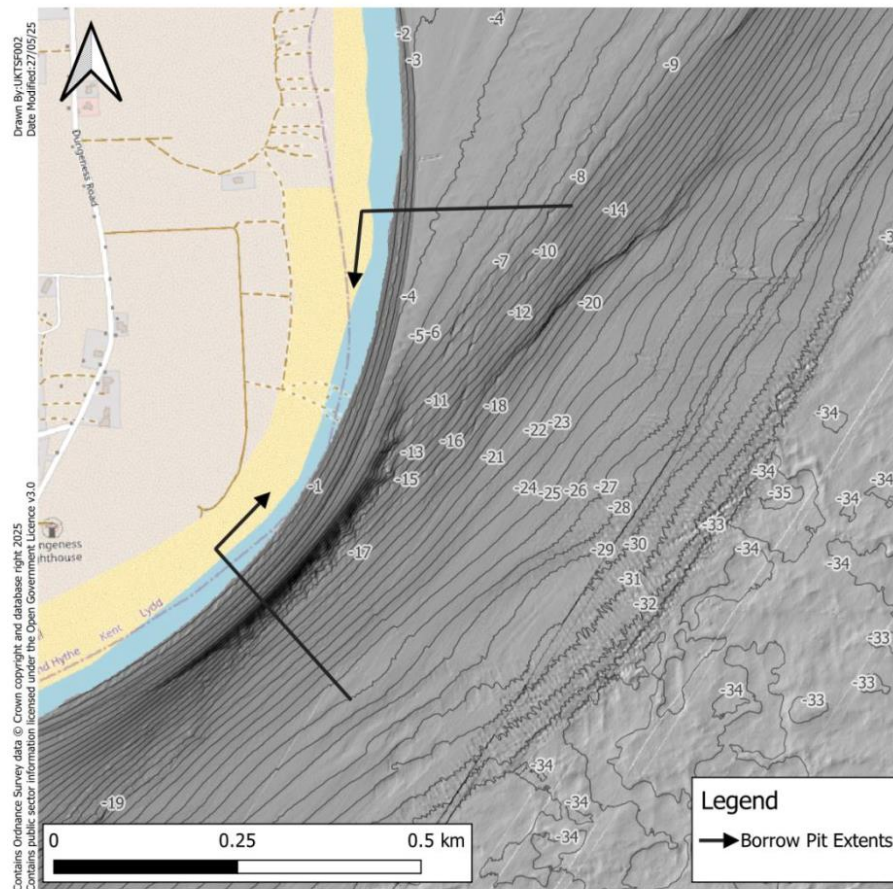


Plate 8-7: Nearshore bathymetry¹³⁵

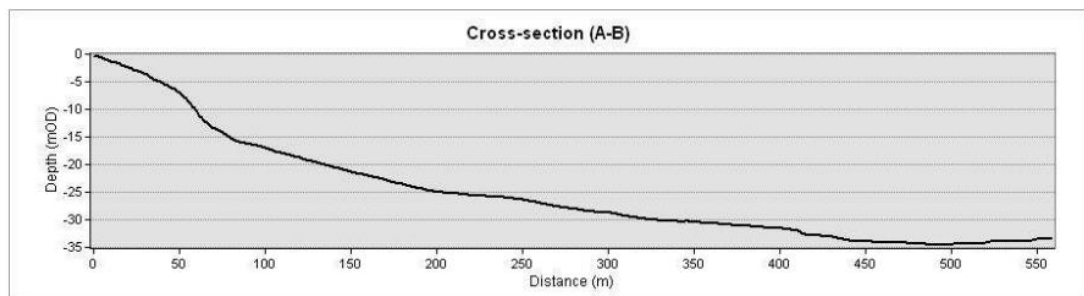


Plate 8-8: Cross-Section of the Seabed at Dungeness Point¹³⁵

Geomorphology and Sediment Transport Processes

8.3.30 Dungeness is the largest shingle progradation feature (known as a 'ness' or cusped foreland) in the UK, consisting of over 500 shingle ridges along approximately 40km of coastline which is backed by fine marsh sediments¹³⁵.

¹³⁵ WSP. 2025. Dungeness Shingle Recycling Operations for Flood Defence, Environmental Statement: Appendix 9.1 – Assessment of Geomorphology and Sediment Transport Impacts. EDF Energy Nuclear Generation Limited.

- 8.3.31 Cuspate forelands typically develop where longshore drift currents moving in opposite directions meet at the boundary between two sediment cells. As the opposing currents converge, sediment carried by both is deposited seaward, forming a triangular or cusp-shaped feature¹³⁶. Dungeness is a well-known example, which stretches approximately 11km to the south-east.
- 8.3.32 Key receptors associated with the geomorphology of Dungeness include shingle ridges and stony banks, subsurface geology, shingle wetlands, and subtidal coarse and mixed sediments and subtidal sand (offshore). The foreland progradation is a result of both storm events and temporal changes in sediment supply and processes. Therefore, the deposition of successive gravel recycles is episodic rather than continuous¹³⁷.
- 8.3.33 The National Oceanography Centre (2015) carried out a modelling sediment transport study at Dungeness. Via particle tracking simulations, results showed that suspended sediment transport in this region is variable depending on grain size and the prevailing meteorological conditions¹³⁸.
- 8.3.34 The study also identified the major pathway of sediment transport was north-eastwards which can be attributed to the long-term wind and wave direction and the trend of longshore drift (see below). The particle tracking presented that 19,000 tonnes (t) of fine sand was advected during a stormy month from Rye Bay to the east of the Works Area. The amount of sand advected also decreased significantly when grain size increased and wind and wave forcing calmed. The results demonstrated that there was limited south-westward transport of suspended sediment during calmer months, and that the majority of suspended sediment transport was north-eastwards¹³⁸.
- 8.3.35 The beach at Dungeness is subject to longshore drift, although this has been modified by beach replenishment and coastal protection structures defending Dungeness A and B. Beach replenishment has been operating since the 1960s. The probable sediment pathways and shoreline trends throughout history and in the 20th century are shown schematically in **Plate 8-9**¹³⁹. As mentioned in the 'Overview of the Coastal Environment' section above, beach recycling still occurs by relocating shingle (overland) from an area of deposition known as Borrow Pit to renourish the storm berm at Dungeness A and B and Jury's Gap¹⁴⁰.

¹³⁶ BGS. 2025. Dungeness, Coastal Case Study. Available at: <https://storymaps.arcgis.com/stories/6dceea2cd5454cd6a6b862e861e55d7b> [Accessed 30/10/2025].

¹³⁷ WSP. 2025. Dungeness Shingle Recycling Operations for Flood Defence, Environmental Statement: Appendix 9.1 – Assessment of Geomorphology and Sediment Transport Impacts. EDF Energy Nuclear Generation Limited.

¹³⁸ Phelps, J,J,C., Brown, J,M., Plater, A, J., Barkwith, A., Hurst, M, D., Ellis, M, A. 2015. Modelling coastal erosion and sediment transport on the Dungeness Foreland, UK. National Oceanography Centre, 30pp. (National Oceanography Centre Research and Consultancy Report, 48). Available at: <https://nora.nerc.ac.uk/id/eprint/511382/> [Accessed: 27/10/2025].

¹³⁹ JNCC, 2007, Coastal Geomorphology of Great Britain, Chapter 6: Gravel and 'shingle' beaches – GCR site reports, Site: Dungeness (GCR ID: 2771). Available at: <https://jncc.gov.uk/jncc-assets/GCR/gcr-site-account-2771.pdf> [Accessed 24/10/2025].

¹⁴⁰ Moffatt & Nichol. 2024. Annual Management Report – Dungeness Shingle Recycling.

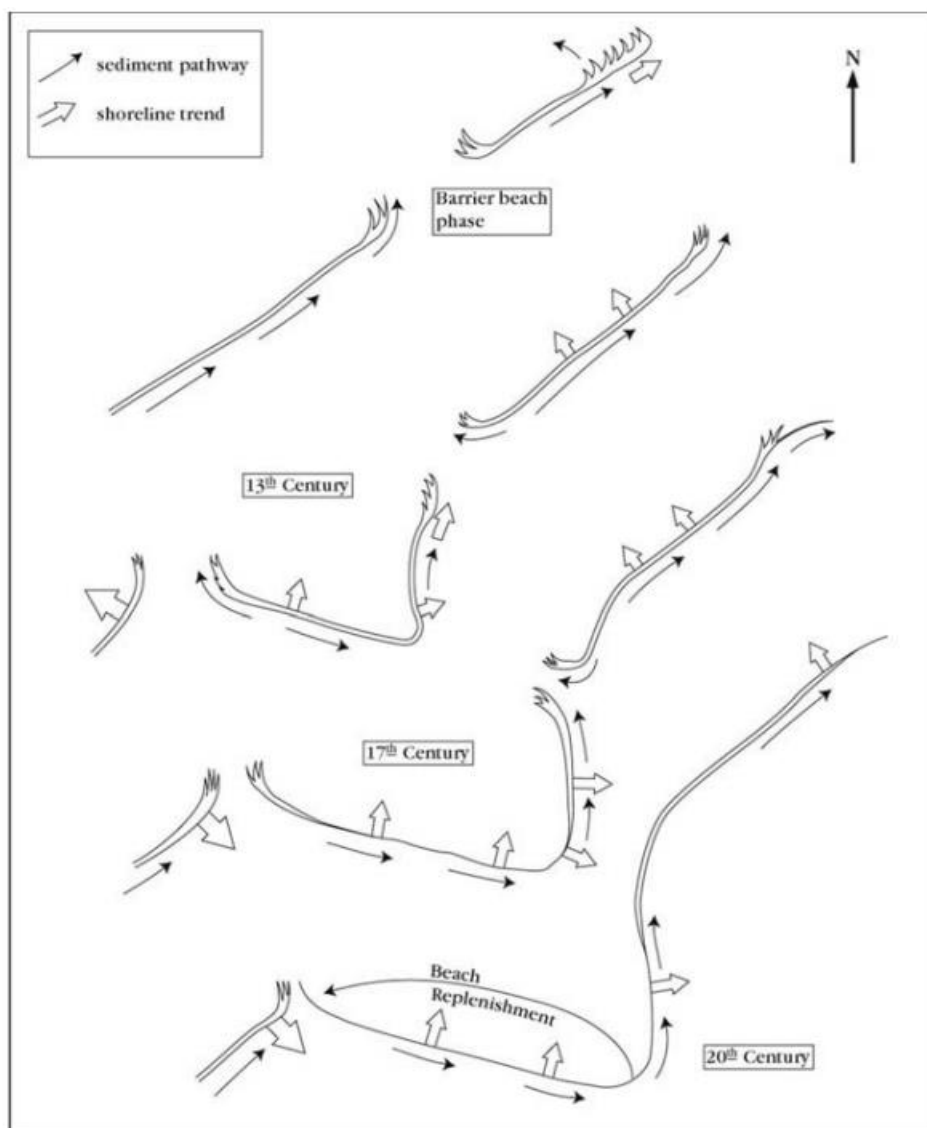


Plate 8-9: Historical and 20th century sediment pathways and development at Dungeness²⁷

Marine Sediment Quality

- 8.3.36 Marine sediment quality can be affected by the deposition and accumulation of substances on the seabed. Historically, the English Channel and its coastal zones have been heavily impacted by anthropogenic activities, such as dredging, which can result in significant chemical pollution.
- 8.3.37 Metals occur naturally in the marine environment and are widely distributed in both dissolved and sedimentary forms. Rivers, coastal discharges and the atmosphere are the principal modes of entry for metals into the marine environment, with anthropogenic inputs occurring as a result of industrial and municipal wastes. The metals most characteristic in offshore sediments include barium (Ba), chromium (Cr), lead (Pb) and zinc (Zn). Trace metal contaminants are most prone to various environmental interactions and transformations (physical, chemical and biological), potentially increasing their biological availability.
- 8.3.38 Total Organic Carbon (TOC) is often used as a non-specific indicator of water quality. Furthermore, organic material in disturbed sediments can act

as an energy source for marine micro-organisms, reducing dissolved oxygen availability in the water.

- 8.3.39 Total Hydrocarbon Content (THC) values are used to describe the quantity of hydrocarbon impurities present and are generally associated with compounds derived from crude oil, such as petrochemicals. Polycyclic Aromatic Hydrocarbon (PAH) are contaminants with moderate to low water solubility, generated from coal and oil combustion. They are also released during transportation or industrial use of petroleum; wastewater effluent discharge and sewer overflows; urban runoff; and natural seeps.
- 8.3.40 There is no local sediment sampling data available sufficiently near Dungeness to use for this impact assessment. The project-specific marine surveys that will be undertaken to inform the marine ecology assessment will inform and help determine sediment composition in the vicinity of the Works Area and whether it contains any contaminants.

Surveys

- 8.3.41 As mentioned in the Data Gathering Methodology section above, project-specific marine surveys will be undertaken to inform the marine ecology assessment. Data from these surveys will benefit coastal processes impact assessment. Surveys include a walkover (intertidal), subtidal grab samples and subtidal DDV and could provide useful contextual information.

Summary of Future Baseline

- 8.3.42 This section presents a summary of the potential impact of climate change on the physical environment in the future and potential changes to the existing baseline conditions as described above.
- 8.3.43 A detailed future baseline summary will be provided during the impact assessment to be reported in the ES once all parameters associated with the Proposed Works have been finalised.

Climate Change

- 8.3.44 For the appraisal of the impact of climate change on the physical environment in the future, the UK guidance and projection of sea level rise and changing storm conditions are applied to the baseline. Guidance on changes in future wind and wave conditions is provided by the Environment Agency¹⁴¹. The guidance states that wind speeds and wave height would increase by 5% between 1990 and 2055, then by 10% for 2056 to 2115.
- 8.3.45 UK Climate Projections (UKCP18) (Met Office, 2019) provides the most up-to-date assessment of climate change for the period up to 2100 and then beyond 2100. Sea level rise data have been sourced from the Met Office UKCP18 website. By 2050, sea level may rise by 0.23m above 2025 levels and by 0.98m by 2100 at Dungeness. This is estimated for a high emissions scenario (Representative Concentration Pathway (RCP) 8.5) in the 95th percentile.

¹⁴¹ Environment Agency. 2022. Flood Risk Assessments: climate change allowance. Available at: <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>. [Accessed 09/10/2025].

- 8.3.46 The Marine Works will be completed within the Initial Decommissioning Works and be completed by 2049.

Anthropogenic Activities

- 8.3.47 As noted above in the Geomorphology and Sediment Transport Processes section, subject to consent, the existing beach recycling activities will continue until at least the year 2041. **Table 8-5** outlines the management approaches detailed in SMP11: South Foreland to Beachy Head¹⁴² for the unit relevant to the Works Area (Dungeness Power Station 4C13) and the adjacent units.

Table 8-5: Management approaches defined in SMP11: South Foreland to Beachy Head

SMP Unit	2025-2055	2055-2100
Romney Sands to Dungeness 4C12	Hold the line	Hold the line
Dungeness Power Station 4C13	Hold the line	Hold the line
Lydd Ranges 4C14	Managed realignment (set back defence)	Managed realignment (set back defence)

8.4 Consultation

- 8.4.1 No consultation has been undertaken with regard to coastal processes to date or proposed. Should comments be included within the Pre-application Opinion that require further discussion, these would be discussed with relevant parties during the preparation of the ES.

8.5 Scope for Mitigation

- 8.5.1 There are no mitigation measures specific to coastal processes, however mitigation identified within other assessments (such as **Chapter 13: Marine Ecology** and **Chapter 19: Water Environment and Flood Risk**) in relation to water quality. These measures will be detailed within the Environmental Management Plan.

8.6 Potential Effects

- 8.6.1 This section identifies the potential effects of the Proposed Works upon coastal processes. The Initial Decommissioning Works is the only phase which would include coastal and marine works and therefore only this phase has been considered herein.
- 8.6.2 Changes in coastal processes within the Study Area as a result of the Proposed Works are considered to be ‘sources’ of a change and ‘impact pathways’ for effects which have potential influence on other environmental receptors.

Marine Works

- 8.6.3 The Marine Works would include:

¹⁴² Halcrow. 2006. South Foreland to Beachy Head SMP. Available at: <https://environment.data.gov.uk/shoreline-planning/shoreline-management-plan/SMP11#downloads>. [Accessed 23/10/2025].

- Installation of an AAEDL in the form of a smaller pipe within the existing outfall structure;
- Installation of an ATSDL in the form of a smaller pipe within the existing outfall structure; and

8.6.4 The existing intake infrastructure would be sealed within the Area A of the Works Area.

8.6.5 The Marine Works would involve the use of anchors on the seabed to maintain the position of the barges and the placement of a Jack-up Barge (JUB) during the construction of the above. The number of vessels and anchor points is currently unknown, but it is likely to include one JUB, one barge, one tug and one safety boat.

Impact Pathways

8.6.6 This section identifies whether there are any impact pathways that could give rise to potentially significant effects on the receptors associated with the physical environment.

8.6.7 The potential impact pathways on coastal processes are likely to include (and discussed below):

- Increased suspended sediment;
- Changes to seabed morphology;
- Changes to beach morphology;
- Disturbance of contaminated sediment; and
- Release of contaminants in water column.

Increased Suspended Sediment Concentration in the Water Column

Scour

8.6.8 The scour of sediment from the seabed can lead to increased amounts of sediment being released into the water column and increasing water column turbidity. Plumes of suspended sediment may then be transported elsewhere by sea currents.

8.6.9 Since the infrastructure itself would not change as part of the Proposed Works, there would be no change to the size and placement of this outfall/infrastructure in the offshore environment. Therefore, the scour associated with infrastructure would not change and thus would not cause any impacts.

8.6.10 Scour about the outfall may also occur as a result of water discharged from the proposed discharge lines. It is proposed that two smaller discharge lines would be installed within the existing outfall structure which are expected to discharge at a lower flow rate. The existing baseline discharge rate under an ebb tide is 10m³/s and is dominated by cooling water, which also conveys treated active effluents and sewage to their permitted discharge point. The proposed new flow will be several orders of magnitude lower than this on an ebb tide after cooling water flows are no longer needed. At this much lower discharge rate, scour of the seabed is expected to be less and there would be an associated reduction in the amount of sediment suspended as a result of discharge associated scour. However, as the new discharge rate has yet

to be confirmed, this potential impact will be scoped into the coastal processes assessment.

Temporary Disturbance of Sediments

- 8.6.11 The installation of both the AAEDL and the ATSDL may require the use of a JUB and/or flat-top barge near the cooling water (CW) outfall, with temporary infrastructure in place to pull or thread the new discharge lines through the existing outfall culvert. The installation would also require the temporary use of anchors on the seabed to maintain the position of the JUB. Marine installation activities near the CW outfall may temporarily disturb the seabed and lead to the suspension of fine sediments into the water column, increasing water column turbidity. Changes to baseline conditions are likely to be temporary (up to 3 months in duration), and any sediment disturbed would either settle back onto the seabed or be transported in suspension and dispersed via natural currents and wave regimes.
- 8.6.12 The water column itself (as part of the marine physical environment) would not experience any adverse impact due to increased levels of suspended sediment associated with scour or installation works. However, the increased turbidity of the water column could act as an impact pathway for other receptors, for example the impact of increased sediment suspension levels on sensitive habitats and species (refer to **Chapter 13: Marine Ecology**). The sediment composition within the marine environment is currently unknown and therefore the proposed marine surveys will aid the coastal processes assessment of temporary disturbance of sediments.

Summary

- 8.6.13 The impact of increased suspended sediment as a result of scour in the water column is scoped in for further assessment as there is uncertainty as to the sediment composition of the seabed near the outfall. The proposed surveys that will be carried out for the marine ecology assessment will benefit the coastal processes assessment and provide details of marine sediment composition.

Changes to Seabed Morphology

Scour

- 8.6.14 Since the infrastructure itself would not change as part of the Proposed Works, there would be no change to the size and placement of the outfall/infrastructure in the offshore environment. Therefore, the scour associated with infrastructure would not change which would cause no impact to seabed morphology.
- 8.6.15 Following the Preparation Works phase, water would be discharged via the new active effluent and sewerage discharge lines. Discharge flow from the outfall pipes could cause scouring of the seabed around the outfall, altering its morphology. The discharge rates are expected to be less than the current discharge rate and therefore would have no negative impact on seabed morphology. However, as the new discharge rate has yet to be confirmed, this impact will be scoped into the coastal processes assessment.

Temporary Disturbance of Sediments

- 8.6.16 As part of the installation works of the new discharge lines within the existing outfall, a JUB and/or a flat-top barge and other installation related

infrastructure would need to be temporarily positioned in the marine environment. As a result, the legs of the barge and the use of anchors may cause localised seabed penetration and displace sediments, altering local bathymetry.

- 8.6.17 However, as works would be temporary and as the sea is a naturally dynamic environment that undergoes changes over varying timescales (both on a local and wider scale), the seabed is expected to quickly recover once works are finished and return to equilibrium conditions. The magnitude of the impact is assessed as being very low. Resultant effects upon seabed morphology would be negligible (not significant) and thus temporary disturbance of sediments from barge and the use of anchors will be scoped out of the coastal processes assessment.

Changes to Beach Morphology

- 8.6.18 There is no proposed change to the existing infrastructure in the coastal setting, therefore there would be no change to current baseline conditions, including to sediment transport patterns that influence beach morphology. No change to beach or coastal morphology due to the change in infrastructure use is anticipated.
- 8.6.19 The Marine Works are expected to last up to 3 months. The use of installation machinery on/near the beach may locally disturb the beach surficial morphology. Such impacts are expected to be very low in magnitude as the works would be temporary. Further, the beach at Dungeness is considered dynamic and will be resilient to temporary changes. The assessment of this impact pathway assumes that the current beach recycling works will continue until at least 2041 (in line with the SMP policies) at which point future management will be determined and the necessary actions continued in alignment with a future revision to the Dungeness B Safety Case. The resultant effects upon beach or coastal morphology would be negligible (not significant) and thus changes to beach/coastal morphology will be scoped out of the coastal processes assessment.

Release of Contaminants in the Water Column

- 8.6.20 The suspension of sediment into the water column may lead to the release of contaminants previously bound within the seabed sediments, leading to water quality deterioration. This may include controlled discharges of permitted radioactive substances potentially released during the operational lifetime of Dungeness B from the outfall pipe, this may also include general sediment contamination arising from historical industrial activity, legacy pollutants or diffuse inputs that have accumulated over time. The discharges of radioactive substances are controlled under a permit and not expected to be of significance. Sediment disruption may occur due to scouring and erosion of the seabed around the outfall pipe, and due to the disturbance of the seabed using anchors and the JUB during installation works.
- 8.6.21 While a reduction in water quality is not associated with any impact to coastal processes or the marine physical environment, the release of contaminants from the seabed due to scour may act as an impact pathway for sensitive habitats and species in the marine environment – such issues are considered in **Chapter 13: Marine Ecology** and **Chapter 19: Water Environment and Flood Risk**.

- 8.6.22 The suspension of sediment and associated release of general contamination are anticipated to have a very low impact magnitude but will be considered and discussed within the ES to enable the assessments as detailed in **Chapter 13: Marine Ecology** to be undertaken.

8.7 Assessment Methodology

- 8.7.1 **Chapter 5: EIA Methodology** sets out the overarching approach which will be used to define potential environmental effects associated with the Proposed Works.
- 8.7.2 This section describes the technical methods that will be used to determine the sensitivity of the receptors and magnitude of impacts and sets out the effect significance criteria that will be used for the coastal processes assessment.

Approach and Assessment Criteria

Sensitivity

- 8.7.3 The sensitivity or value of a receptor is largely the product of the importance of an asset, as informed by legislation and policy, and as qualified by professional judgement. To determine sensitivity of the receptor, the vulnerability of the receptor to the impact and its ability to recover and adapt will be considered. The criteria for assessing the sensitivity of the coastal process receptors were developed by AECOM and have been applied to other development projects, which are defined in **Table 8-6**.
- 8.7.4 The importance, or value, of the receptor on an international, national and local scale has also been considered in assessing sensitivity.

Table 8-6: Receptor Sensitivity Criteria

Sensitivity criteria Definition

High	Receptor has little or no ability to absorb change without fundamentally altering its character. For example: - The receptor has low/no capacity to return to baseline conditions within 10 + years, e.g. low tolerance to change and low recoverability. - The receptor is a designated feature of a protected site, is rare or unique; or receptor is economically valuable.
Medium	Receptor has moderate capacity to absorb change without substantially altering its character. For example, - The receptor has a medium capacity to return to baseline condition, e.g. >5 up to 10 years; or - The receptor is valued, but not protected.
Low	The receptor is tolerant to change without significant detriment to its character. For example, - Disturbance to unconsolidated seabed sediments or sandwaves; or - The receptor has a high capacity to return to baseline condition, e.g. within 1 year or up to 5 years; or - The receptor is common and/or widespread.
Very low	The receptor's character, survival or viability has a high tolerance to change.

Magnitude of Impact

- 8.7.5 The magnitude of change/impact affecting a coastal processes receptor will be identified on a scale from very low impacts or change, up to high impacts or the total or substantial loss of the receptor.
- 8.7.6 The magnitude of impact will be considered in terms of the spatial extent, duration and timing of the impact in question. A summary of the magnitude criteria applicable to coastal processes were developed by AECOM and have been applied to other projects, which are detailed in **Table 8-7**.

Table 8-7: Impact Magnitude Criteria

Magnitude	General criteria
High	Adverse: Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements. Beneficial: Large scale or major improvement of resource = quality; extensive restoration; major improvement of attribute quality.
Medium	Adverse; Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements. Beneficial: benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality.
Low	Adverse: Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements Beneficial: Minor benefit to, or in addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk or negative impact occurring.
Very low	Adverse: Very minor loss of detrimental alteration to one or more characteristics, features or elements. Beneficial: Very minor benefit to or positive addition of one or more characteristics, features or elements.

Significance of Effects

- 8.7.7 The significance of effects with regard to coastal processes will be derived by reference to information about the nature of the Proposed Works, the sensitivity or value of receptors that could be affected, together with the magnitudes of change/impact that are likely to occur. The effect significance matrix is illustrated in **Chapter 5: EIA Methodology** (refer to **Table 5.1** therein).

Assumptions and Limitations

- 8.7.8 The assessment assumes that responsible parties are currently implementing the policies of the SMP (SMP11: South Foreland to Beachy Head) within the Study Area and the proposed marine surveys due to take place collect representative sediment data for the coastal processes assessment.

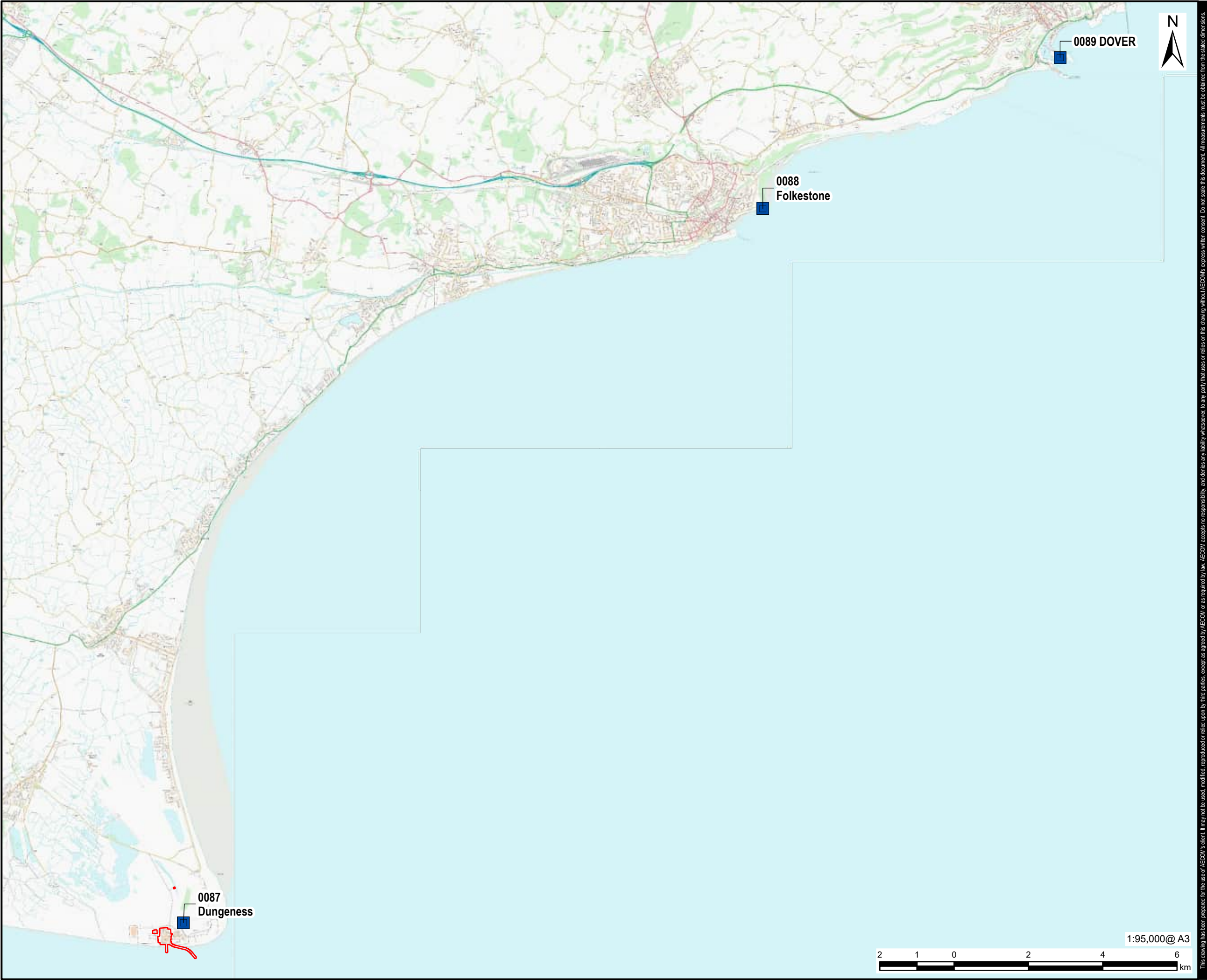
8.8 Summary of Potential Likely Significant Effects

- 8.8.1 **Table 8-8** provides a summary of the potential significant effects proposed to be considered in the Coastal Processes chapter of the ES. Please refer to **Section 8.6** where justification of the scope is provided.

Table 8-8: Summary of Potential Effects Scoped In/Out of the Coastal Process Assessment (during the Initial Decommissioning Works)

Pathway	Scoped in/out
Water Column - Scour	Scoped in
Seabed Morphology – Direct effects	Scoped out
Seabed Morphology – Scour	Scoped in
Beach morphology – Scour	Scoped out
Water Column – Potential release of sediment-bound contaminants*	Scoped in

* including consideration of radioactive substances controlled by discharge permits during operation of the power station is excluded.



AECOM

PROJECT

Dungeness B Nuclear
Decommissioning

CLIENT

EDF Energy Nuclear
Generation Limited

CONSULTANT

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LEGEND

- The Works Area
- Tide Port

NOT PROTECTIVELY MARKED

NOTES

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TotalTide software (UKHO, 2022).

ISSUE PURPOSE

EIA Scoping Report

PROJECT NUMBER

60739933

FIGURE TITLE

Admiralty Total Tide Standard and
Secondary Ports near Dungeness

FIGURE NUMBER

Figure 8-1

REV

0

DOCUMENT NUMBER

9. Climate Change

9.1 Introduction

- 9.1.1 This chapter sets out the proposed scope and methodology for the assessment of effects of the Proposed Works on the climate and of the impact of climate change on the Works Area. This has been informed by a review of the environmental baseline conditions, along with the UKCP18 Climate Projections and anticipated key issues likely to be associated with the Proposed Works.
- 9.1.2 To align with the requirements of the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999¹⁴³, consideration will be given to the three aspects of climate change assessment identified in **Table 9-1**.

Table 9-1 Definition of the Elements of the Climate Change Assessment

Assessment Type	Definition
Lifecycle greenhouse gas (GHG) impact assessment	Impact of GHG emissions arising from the Works Area on the climate, including how it will affect the UK meeting its national carbon budgets.
Climate change resilience assessment (CCRA)	The resilience of the Works Area to climate change impacts, including how the design will consider projected impacts of climate change.
In-combination climate change impact (ICCI) assessment	The combined impact of the Proposed Works and potential climate change on receptors in the receiving environment.

- 9.1.3 This chapter should be read in conjunction with the description of the Proposed Works presented in **Chapter 2: The Decommissioning and Dismantling Process**. Other relevant topic chapters include:
- **Chapter 6: Air Quality;**
 - **Chapter 7: Conventional Waste and Materials;**
 - **Chapter 8: Coastal Processes;** and
 - **Chapter 19: Water Environment and Flood Risk.**

9.2 Relevant Legislation, Policy and Guidance

Legislation

- 9.2.1 Legislation which is relevant to the assessment of effects on the Climate and the assessment of climate change impacts is presented in **Table 9-2**.

¹⁴³ The Nuclear Reactors (Environmental Impact Assessment for Decommissioning) (Amendment) Regulations (2018). Available at: <https://www.legislation.gov.uk/uksi/2018/834/contents/made> [Accessed 24/10/2025].

Table 9-2 Legislation Relevant to Climate Change

Legislation	Legislation details
United Nations Framework Convention on Climate Change (UNFCCC) Paris Agreement	The Paris Agreement ¹⁴⁴ is a legally binding agreement within the UNFCCC dealing with GHG emissions mitigation, adaptation and finance starting in the year 2020. It requires all signatories to strengthen their climate change mitigation efforts to keep global warming to well below 2 °C this century and to pursue efforts to limit global warming to 1.5 °C.
Climate Change Act 2008 and Climate Change Act (2050 Target Amendment)	In June 2019, the Climate Change Act ¹⁴⁵ was amended, requiring the government to reduce the UK's net emissions of GHGs by 100% (net zero) relative to 1990 levels by 2050 ¹⁴⁶ .
Carbon Budgets Order 2009	This legislation implements the carbon budgets set out in the Climate Change Act 2008. The budgets require the UK to continually reduce emissions in line with the carbon reduction commitments established under that Act. The carbon budgets are set out in Table 9-8 .

Policy

- 9.2.2 Policy relating to Climate Change and relevant to the assessment of effects of the Proposed Works is presented in **Table 9-3**.

Table 9-3 Policy Relevant to Climate Change

Policy	Policy details
Transport Decarbonisation Plan, Decarbonising Transport: a better, greener Britain ¹⁴⁷	The UK Government has published a Transport Decarbonisation Plan titled "Decarbonising Transport: a better, greener Britain", which outlines its plans to reduce transport emissions in order to achieve its goal of net zero emissions by 2050.
Nuclear Decommissioning Authority – Net Zero Agreement ¹⁴⁸	On Tuesday 15 November 2022, leaders from the United States Department of Energy (DOE), the United Kingdom's NDA, and Atomic Energy of Canada Limited (AECL), reaffirmed their collaboration to share information, lessons learned, and good practices in multiple aspects of sustainability.
Kent County Council (KCC) Environmental ¹⁴⁹ and Net Zero Policy ¹⁵⁰	KCC published an Environment Policy in January 2025 which sets out their environmental aims and goals, as well as how they will be delivered. This includes goals to ' <i>deliver green energy and reduce carbon emissions</i> ', collaborating with partners to ' <i>achieve countywide net zero emissions</i> ' alongside circular economy

¹⁴⁴ United Nations Framework Convention on Climate Change (UNFCCC). 2016. Paris Agreement.

¹⁴⁵ Climate Change Act (2008). Available at: <https://www.legislation.gov.uk/ukpga/2008/27/contents> [Accessed 24/10/2025].

¹⁴⁶ Carbon Budget Order (2021). Available at: <https://www.gov.uk/guidance/carbon-budgets#setting-of-the-first-to-third-carbon-budget> [Accessed 24/10/2025].

¹⁴⁷ Department for Transport (2021). Decarbonising Transport: A Better, Greener Britain. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1009448/decarbonising-transport-a-better-greener-britain.pdf [Accessed 24/10/2025].

¹⁴⁸ UK Government (2022). Reaffirming the commitment to continue collaborating on sustainability in legacy nuclear sites. Available at: <https://www.gov.uk/government/news/reaffirming-the-commitment-to-continue-collaborating-on-sustainability-in-legacy-nuclear-sites> [Accessed 24/10/2025].

¹⁴⁹ Kent County Council (2025). Available at: [KCC-Environmental-Policy.pdf](#). [Accessed 24/10/2025].

¹⁵⁰ Kent County Council (2021). Available at: [KCC-Net-Zero-action-Plan.pdf](#). [Accessed 24/10/2025].

Policy	Policy details
	aims to '<i>minimise waste, reuse and recycle materials, enabling the development of a circular economy in Kent</i>'. KCC's Net Zero policy was set out in 2021, aiming to reach net zero by 2030 (across the KCC own estate, operations and wholly traded services). KCC has no specific nuclear policy.

Guidance

- 9.2.3 Guidance which is relevant to the assessment of effects on Climate Change is presented in **Table 9-4**.

Table 9-4 Guidance Relevant to Climate Change

Guidance	Guidance details
ISEP: Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance ¹⁵¹	The approach to assessing the significance of GHG emissions from the Proposed Works has been undertaken in accordance with this guidance.
ISEP: Environmental Impact Assessment Guide to: Climate Change Resilience and Adaptation ¹⁵²	The approach for assessing the significance of climate change risks on the Proposed Works has been undertaken in accordance with this guidance.
The GHG Protocol ¹⁵³	The GHG Protocol is a widely used standard for measuring and managing GHG emissions. Developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), the protocol provides guidance on how to identify, measure, report and verify GHG emissions from various sources, such as energy use, transportation, and waste. The GHG Protocol includes two main standards: the Corporate Standard, which outlines how to measure and report emissions from business activities, and the Product Standard, which provides guidance on how to measure the lifecycle emissions of a product or service. The GHG Protocol has been adopted by governments, businesses, and organisations around the world to help them manage their emissions and track progress towards climate goals.
PAS 2080 ¹⁵⁴	PAS 2080 is a standard developed by the British Standards Institute (BSI) that provides guidance on how to manage carbon emissions and promote sustainability in infrastructure projects. The standard outlines a framework for the management of GHG emissions throughout the project lifecycle. It encourages collaboration between project stakeholders, such as investors,

¹⁵¹ Institute of Sustainability and Environmental Professionals (ISEP). 2022. ISEP Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance.

¹⁵² Institute of Sustainability and Environmental Professionals (ISEP). 2020. Environmental Impact Assessment Guide to: Climate Change Resilience & Adaptation.

¹⁵³ World Resources Institute (WRI) & World Business Council for Sustainable Development (WBCSD). 2015. The GHG Protocol', A Corporate Accounting and Reporting Standard.

¹⁵⁴ British Standards Institute. 2016. Carbon management in infrastructure. Available at: <https://shop.bsigroup.com/products/carbon-management-in-infrastructure/standard> [Accessed 24/10/2025].

Guidance	Guidance details
	designers, and contractors, and provides guidance on how to identify and prioritise opportunities to reduce emissions and promote sustainability.
Office for Nuclear Regulation – Climate Change Guidance ¹⁵⁵	The ONR climate hazard guidance provides recommendations and guidelines to help nuclear site operators in the UK to assess and manage the risks posed by climate hazards such as flooding, extreme weather events, and sea-level rise. The guidance considers the potential impacts of climate change on nuclear sites and facilities and provides a framework for assessing and managing these risks. It recommends that site operators consider a range of scenarios and probabilities for climate hazards and develop appropriate risk management strategies and emergency response plans.
Office for Nuclear Regulation – Use of UK Climate Projections 2018 (UKCP18) ¹⁵⁶	The ONR Use of UKCP18 guidance recommends how UKCP18 should be used in climate change assessments for nuclear installations. The use of UKCP18 is considered relevant good practice in determining climate change allowances for relevant natural hazards at existing sites.

9.3 Baseline Conditions

- 9.3.1 This section provides a summary of the approach used to inform the current baseline conditions relevant to the climate assessment.

Data Gathering Methodology

- 9.3.2 A desk-based study will be undertaken to inform the baseline characterisation on which the impact assessment will be based.
- 9.3.3 The principal data source used to inform the current baseline conditions presented in this section beyond those identified in **Chapter 5: EIA Methodology** comprise the following:
- Operational emission data of the existing Work Area;
 - Historical climate data obtained from the Met Office¹⁵⁷; and
 - Climate hazards identified from Think Hazard.

Study Area

Lifecycle GHG Impact Assessment

- 9.3.4 The study area for the Lifecycle GHG impact assessment is all GHG emissions arising from the Proposed Works and the Works Area. This includes both direct emissions (resulting from site clearance, construction, grounds maintenance, deconstruction and dismantling) and indirect emissions (raw material extraction, transportation, processing and embodied carbon in materials).

¹⁵⁵ Office for Nuclear Regulation. 2021. Climate hazard guidance: Assessing the risk to nuclear sites from climate change. <https://www.onr.org.uk/climate-change/guidance.htm> [Accessed 24/10/2025].

¹⁵⁶ Office for Nuclear Regulation. 2022. Use of UK Climate Projections 2018. Available at: <https://www.onr.org.uk/media/ismlkpgi/ukcp18-position-statement-rev-2.pdf> [Accessed 05/01/2026].

¹⁵⁷ Met Office. Available at: <https://www.metoffice.gov.uk/research/climate/maps-and-data/location-specific-long-term-averages/u109tudb4> [Accessed 21/11/2025].

CCRA

- 9.3.5 The study area for the CCRA will be the Works Area.

ICCI

- 9.3.6 The study area for the ICCI assessment will be determined by the EIA topic assessments. Relevant topic chapters may include:

- **Chapter 6: Air Quality;**
- **Chapter 7: Conventional Waste and Materials;**
- **Chapter 18: Terrestrial Ecology;** and
- **Chapter 19: Water Environment and Flood Risk.**

Surveys

- 9.3.7 No surveys are required for the climate change assessment. All of the necessary information will be accessed from desk-based sources.

Summary of Existing Baseline***Lifecycle GHG Impact Assessment***

- 9.3.8 For the GHG impact assessment, the current baseline is the present emissions associated with defueling activities. This has not been quantified for the purpose of this Scoping Report but will be in the ES.
- 9.3.9 The GHG baseline will be established by quantifying any GHG emissions from existing sources within the Works Area. Where data is available, benchmarks, estimates, or approximations will be used based on professional judgment.

CCRA and ICCI Assessment

- 9.3.10 As the receptor for the CCRA and ICCI assessment is the Works Area and the Proposed Works itself (including workers, infrastructure and visitors), the current baseline will be established by understanding the historical/current climate in the location of the Works Area and surrounding environment by reviewing historic climate data obtained from the Met Office website. The 1981-2010 time period was used as the baseline, as this is the time period for which projection data is compared in UKCP18 projections in **Table 9-6**. The 'Dungeness' weather station has been used to inform the baseline climate average data for 1981-2010 as summarised in **Table 9-5**.

Table 9-5 Historical Climate Data for Climate Station: Dungeness 1981-2010

Climatic Variable	Baseline data 1981-2010
Mean annual maximum daily temperature (°C)	12.96
Mean summer maximum daily temperature (°C)	18.74
Mean winter minimum daily temperature (°C)	2.69
Number of days of air frost per annum	26.69
Highest daily temperature for baseline period (°C)	34.62 (10 th August 2003)

Climatic Variable	Baseline data 1981-2010
Lowest daily temperature for baseline period (°C)	-13.08 (8 th January 1985)
Mean annual rainfall (mm)	682.2
Mean summer rainfall (mm)	144.02
Mean winter rainfall (mm)	175.88
Wettest month on average (mm)	85.15 (November)
Driest month on average (mm)	43.18 (May)

Summary of Future Baseline

Lifecycle GHG Impact Assessment

- 9.3.11 A desk-based study will be undertaken to inform the future GHG baseline characterisation on which the impact assessment will be based.
- 9.3.12 The future GHG baseline for the assessment is a projected 'business as usual' scenario where the Proposed Works are not carried out and the Works Area is left in situ. This scenario assumes any emissions associated with the Proposed Works will not occur and emissions within the Works Area will be considered as zero. A zero-emission scenario is used as this would be the worst-case scenario with any emissions from the Proposed Works being considered additional.
- 9.3.13 If existing emissions are large enough and if we have the information to do so, a baseline including nuclear defueling could be considered.

CCRA and ICCI

- 9.3.14 The future climate baseline for each of the three phases of the Proposed Works will be based on UK Climate Projection 2018 (UKCP18) data¹⁵⁸ from the Met Office for the 25km grid square adjacent to where the Works Area is located. The future climate baseline for the Works Area is displayed in **Table 9-6**. The RCP 8.5 scenario was used to represent a worst-case climate change scenario where GHG emissions grow unmitigated¹⁵⁹.

¹⁵⁸ Met Office. 2018. Available at: <https://ukclimateprojections-ui.metoffice.gov.uk/products> [Accessed 21/11/2025].

¹⁵⁹ Environment Agency. 2018. UKCP18 Guidance: Representative Concentration Pathways. Available at: <https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/research/ukcp/ukcp18-guidance---representative-concentration-pathways.pdf> [Accessed 05/01/2026].

Table 9-6 Climate Change Baseline and Projection Data

Climatic Variable	Baseline data	Projection (change)			Beyond 2100	Projected Trend	Climate projection source
	1981-2010	2020 - 2049	2040 - 2069	2070-2099			
Temperature							
Mean annual maximum daily temperature (°C)	12.96	+1.18°C (+0.53°C to +1.81°C)	+2.06°C (+1.03°C to +3.11°C)	+3.89°C (+2.20°C to +5.67°C)	No projection data available, trend towards increasing temperatures expected to continue	↑	UKCP18 RCP8.5
		14.14°C (13.49°C to 14.77°C)	15.02°C (13.99°C to 16.07°C)	16.85°C (15.16°C to 18.63°C)			
Mean summer maximum daily temperature (°C)	18.64	+1.51°C (+0.35°C to +2.60°C)	+2.65°C (+0.99°C to +4.39°C)	+5.19°C (+2.29°C to +8.18°C)		↑	UKCP18 RCP8.5
		20.15°C (18.99°C to 21.24°C)	21.29°C (19.63 to 23.03°C)	23.83°C (20.93°C to 26.82°C)			
Mean winter minimum daily temperature (°C)	2.69	+1.00°C (+0.11°C to +2.01°C)	+1.88°C (+0.47°C to +3.42°C)	+3.43°C (+1.14°C to +6.04°C)		↑	UKCP18 RCP8.5
		3.69°C (2.80°C to 4.70°C)	4.57°C (3.16°C to 6.11°C)	6.12°C (3.83°C to 8.73°C)			
Number of days of air frost per annum	26.69	Reports have shown that the number of frost air and ground frost days have decreased since the 1960s ¹⁶⁰ .				↓	Met Office
Rainfall							
Mean annual rainfall (mm)	682.20	+0.67% (-4.73% to +6.10%)	-1.55% (-8.07% to +5.08%)	-1.31% (-10.48% to +8.03%)	No projection data available. Possible for future trend to increase or decrease.	↑↓	UKCP18 RCP8.5
		686.77 (649.93 to 723.82)	671.63 (627.15 to 716.86)	673.26 (610.71 to 736.98)			

¹⁶⁰ Met Office, (online). Available at: <https://www.metoffice.gov.uk/research/climate/understanding-climate/uk-and-global-extreme-events-cold>
<https://www.metoffice.gov.uk/research/climate/understanding-climate/uk-and-global-extreme-events-cold> (Accessed 24/10/2025).

Climatic Variable	Baseline data		Projection (change)			Projected Trend	Climate projection source
	1981-2010	2020 - 2049	2040 - 2069	2070-2099	Beyond 2100		
Mean summer rainfall (mm)	144.02	-9.83% (-31.95% to +12.17%)	-19.72% (-47.66% to +6.92%)	-40.19% (-69.51% to -2.14%)	No projection data available, possible for decrease in summer rainfall trend to continue	↓	UKCP18 RCP8.5
		129.86 (98.01 to 161.55)	115.62 (75.38 to 153.99)	86.14 (43.91 to 147.10)			
Mean winter rainfall (mm)	175.88	+7.89% (-2.81% to 20.05%)	+10.7% (-4.35% to +28.37)	+22.30% (-1.82% to +50.90%)	No projection data available, increase in winter rainfall possible	↑	UKCP18 RCP8.5
		189.76 (170.94 to 211.14)	194.70 (168.23 to 225.78)	215.10 (179.08 to 265.40)			
Other							
Sea Level Rise (m)	1995-2014 baseline	+0.12	+0.27	+0.67	+0.99 (2120 projection)	↑	SSP5-8.5 ¹⁶¹
Storms	The UKCP18 model suggest a small contribution from storm surges, however it is unclear if the frequency and severity of future storm surges is going to change. Rising sea levels due to climate change are expected to worsen the impacts of storm surges.					↑↓	UKCP18 RCP8.5
Droughts	The Met Office has projected a trend towards drier summers on average, with the trend being stronger under a high GHG emission scenario compared to a low one, however, it is the distribution of rainfall throughout the seasons that will determine UK drought risk.					↑	UKCP18 RCP8.5
Wildfires	The wildfire hazard is classified as high according to the information that is currently available in the Think Hazard tool ¹⁶² . This means that there is a greater than 50% chance of encountering weather that could support a hazardous wildfire that may pose some risk to life and property loss in any given year. Climate projections identify a likely increase in the frequency of fire weather occurrence in this region, as well as indicating there could be an increase in the severity of fires.					↑	Think Hazard

¹⁶¹ NASA (2023). IPCC 6th Assessment Report Sea Level Projections. (online). Available at: <https://sealevel.nasa.gov/ipcc-ar6-sea-level-projection-tool>. (Accessed 24/10/2025).

¹⁶² Think Hazard, (2023); (Online). Available at: <https://www.thinkhazard.org/en/report/40110-united-kingdom-england-greater-london> (Accessed 24/10/2025).

Climatic Variable	Baseline data		Projection (change)			Projected Trend	Climate projection source
	1981-2010	2020 - 2049	2040 - 2069	2070-2099	Beyond 2100		
Coastal erosion	Coastal erosion is an increasing threat due to climate change. The UK Government has committed to funding vulnerable locations ¹⁶³ . Dungeness B is currently managed and will continue to be managed using a Hold the line approach across the coast parallel to Dungeness B. This involves retaining a defence and replacing defences when needed.					↑	UK Government shoreline planning ¹⁶⁴

¹⁶³ [National assessment of flood and coastal erosion risk in England 2024](#) (Accessed 24th October 2025)

¹⁶⁴ [Dungeness Power Station 4C13 | Shoreline Management Plans](#). (Accessed 24th October 2025)

9.4 Consultation

- 9.4.1 No engagement is proposed in relation to the climate change assessment. Should comments be included within the Pre-application Opinion that require further discussion, these would be discussed with relevant parties during the preparation of the ES.

9.5 Scope for Mitigation

- 9.5.1 Where necessary, embedded mitigation and monitoring measures will be proposed to reduce impacts at sensitive locations within and around the Works Area.

Lifecycle GHG Impact Assessment

- 9.5.2 The scope for mitigating climate change effects on and from the Works Area will be determined following completion of the lifecycle GHG impact assessment. Mitigation will focus on measures to reduce GHG emissions from all phases of the Proposed Works to align with the Government's target to achieve net zero emissions by 2050 and remain so thereafter.
- 9.5.3 Any emissions beyond this date are expected to be balanced by removals. For example, this may include utilising low-carbon energy sources during the Proposed Works and defining design principles with the purpose of reducing embodied carbon associated with materials.

CCRA and ICCI

- 9.5.4 Mitigation measures relevant to the CCRA and ICCI would reduce climate change risks to the Zone A of the Works Area and receptors in the surrounding environment.
- 9.5.5 Climate change mitigation/adaptation measures have been embedded within the development of the decommissioning strategy.
- 9.5.6 Whilst the Dungeness B Safety Case will be maintained, reviewed and updated throughout the Proposed Works, to ensure the Site remains resilient to current and projected climate hazards to nuclear safety. Any additional resilience measures identified will be captured in the EMP and implemented through design and construction controls.
- 9.5.7 Following completion of defueling, a Post Defueling Safety Case (PDSC) will be brought forward in support of the transition to decommissioning. The PDSC will consider all relevant risks including those arising from climate change, and demonstrate through assessment and defined controls how risks are reduced to ALARP for nuclear safety. THE PDSC will also signpost subsequent decommissioning safety submissions and confirm arrangements for ongoing monitoring and adaptive management of climate risks.

9.6 Scope of Assessment

Lifecycle GHG Impact Assessment

- 9.6.1 The impact of the Proposed Works is defined as an increase in GHG emissions to the global atmosphere. Increasing GHG emissions contributes to global warming and global climate change.
- 9.6.2 The assessment will quantify absolute GHG emissions from the Proposed Works and report any change relative to this baseline without presupposing the outcome or significance.
- 9.6.3 Known effects of climate change include increased frequency and duration of extreme weather events, temperature changes, rainfall and flooding, and sea level rise and ocean acidification. These effects are largely accepted to be negative, profound, global, likely, long-term to permanent, and are transboundary and cumulative from many global actions.
- 9.6.4 The aim of the lifecycle GHG impact assessment will be to quantify the GHG emissions from the lifecycle of the Proposed Works. The assessment will adopt a project lifecycle approach to identify 'hot spots' of GHG emissions (i.e. the project stage(s) likely to generate the largest amount of GHG emissions) and enable priority areas for mitigation to be identified. This approach is consistent with the principles set out in the ISEP guidance¹⁶⁵.
- 9.6.5 To assess the potential impacts of GHG emissions on the climate arising from the Proposed Works, likely activities and their associated GHG emissions sources will be estimated. Potential activities related to the Proposed Works that could cause GHG emission impacts are summarised below and presented in **Table 9-7**:
- Direct GHG emissions during the Initial Decommissioning Works:
 - Dismantling of existing structures and buildings; and
 - Construction, operation, deconstruction and dismantling of waste management facilities.
 - Establishment of the Safestore structure; and
 - Direct GHG emissions during Care and Maintenance:
 - Building and grounds maintenance in Care and Maintenance Phase.
 - Direct GHG emissions during Final Site Clearance:

¹⁶⁵ Met Office, (2023); UK and Global extreme events – Wind storms (online). Available at: <https://www.metoffice.gov.uk/research/climate/understanding-climate/uk-and-global-extreme-events-wind-storms> (Accessed 24/10/2025).

¹⁶⁵ GOV, (2023); Flood risk information for this location. (online). Available at: [Get flood risk information for planning in England - Flood map for planning - GOV.UK](https://www.gov.uk/get-flood-risk-information-for-planning-in-england-flood-map-for-planning) (Accessed 24/10/2025).

¹⁶⁵ Met Office, (2023); UK and Global extreme events – Wind storms (online). Available at: <https://www.metoffice.gov.uk/research/climate/understanding-climate/uk-and-global-extreme-events-wind-storms> (Accessed 24/10/2025).

¹⁶⁵ Institute of Environmental Management and Assessment (IEMA), Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2022.

- Construction, operation, deconstruction and dismantling of the Waste Management Centre; and
- Deconstruction and dismantling of existing reactor (including Safestore) and debris vaults alongside waste management facility.
- Indirect GHG emissions occurring offsite during the Initial Decommissioning Works:
 - Raw material extraction and manufacturing of materials to create the on-site waste management facilities;.
 - Transportation of construction workers and waste associated with dismantling of buildings and construction of waste management centre;
 - Processing and packaging of decommissioning waste; and
 - Embodied carbon in materials, transportation, waste processing and waste disposal.
 - Raw material extraction and manufacturing of materials to create the Safestore structure.
- Indirect GHG emissions occurring offsite during Care and Maintenance:
 - Transport of workers, materials and waste associated with maintenance operations.
- Indirect GHG emissions occurring offsite during the Final Site Clearance:
 - Transportation, waste processing and disposal of dismantled reactors, debris vaults, earthworks and waste disposal;
 - Raw material extraction and manufacturing of materials to create the Waste Management Centre for reactor dismantling and debris vault waste processing requirements;
 - Transportation of products/materials associated with services and facilities; and
 - Transport of construction workers and materials associated with the provision of the necessary infrastructure, services and facilities.

9.6.6 Whilst the bullet points above identify the GHG impact assessment will include the Care and Maintenance and Final Site Clearance phases, these assessments will consider the current understanding of activities proposed and professional judgment.

Scoped In

9.6.7 Based on data availability, the cradle to grave (A1-C4) PAS 2080 lifecycle stages (**Plate 10-1**¹⁶⁶) are proposed to be scoped into the lifecycle GHG impact assessment.

¹⁶⁶ BS EN 17472 (2022). Sustainability of Construction Works. (online) Available at: <https://knowledge.bsigroup.com/products/sustainability-of-construction-works-sustainability-assessment-of-civil-engineering-works-calculation-methods> (Accessed 21/11/2025)

Scoped Out

- 9.6.8 Module D of the PAS 2080 lifecycle stages¹⁶⁷ (beyond the system boundary) is scoped out of the assessment as there are immaterial impacts beyond the system boundary (see **Plate 10-1**).

¹⁶⁷ Module D of PAS 2080 guidance considers the GHG emissions savings outside the defined system boundary. (online) Available at: https://www.ice.org.uk/media/vm0nwehp/2023-03-29-pas_2080_guidance_document_april_2023.pdf (Accessed 21/11/2025)

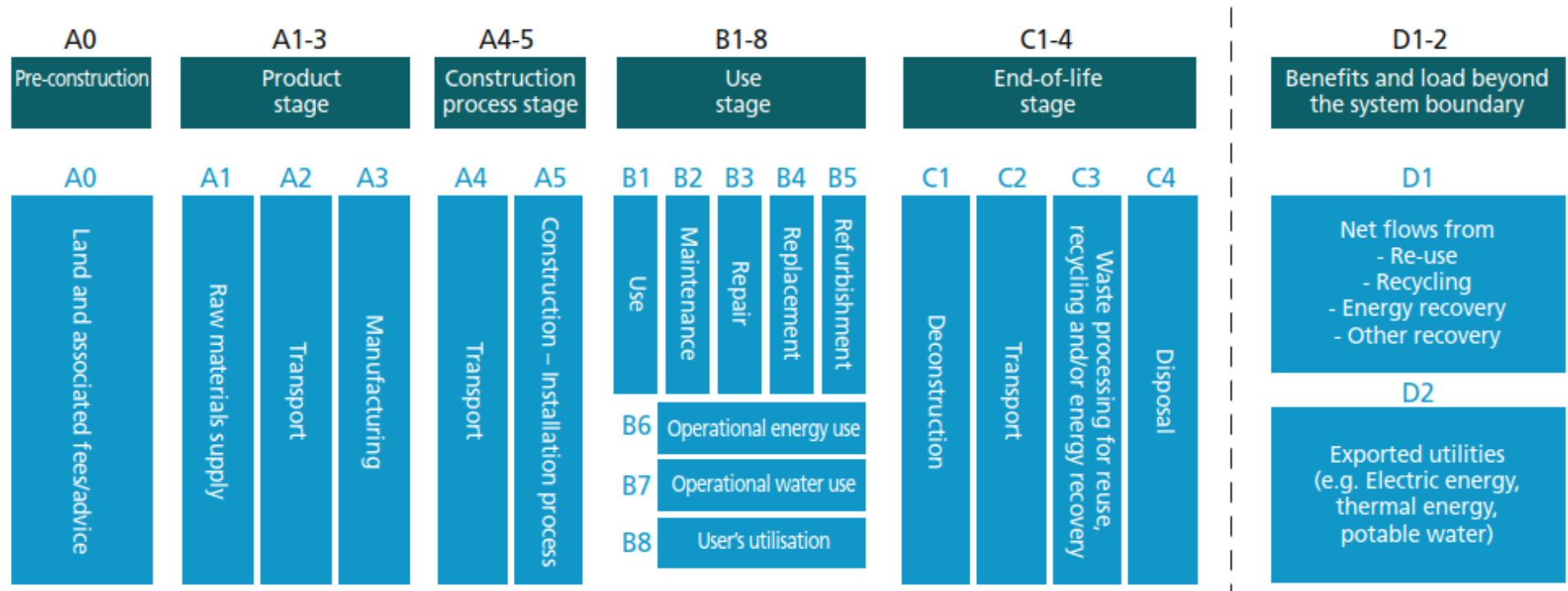


Plate 9-1: PAS 2080 Lifecycle Stages

Table 9-7: Summary of Potential Significant Effects to be Considered in the ES

Lifecycle Stage	Activity	Primary Emission Sources
Initial Decommissioning Works		
Site Clearance – Demolition and Dismantling	On-site deconstruction activity i.e., dismantling of existing structures and buildings (e.g. the waste management facilities).	GHG emissions from fuel consumption from construction plants and vehicles, generators on-site, and worker commuting.
	Transportation and disposal of dismantled equipment, earthworks and disposal of waste	Transportation and disposal of dismantled equipment, earthworks and waste disposal.
	Land clearance	GHG emissions associated with the loss of carbon stock.
Product manufacture	Raw material extraction and manufacturing of products/materials associated construction of the waste management facilities.	Embodied GHG emissions associated with product and material manufacture
	Transport of products/materials to the Works Area associated with the construction of the waste management facilities.	GHG emissions from fuel consumption of transportation of products and materials to the Works Area.
Construction	On-site construction activity associated with the construction of the waste management facilities.	Energy (electricity, fuel, etc.) consumption from plant and vehicles, generators on-site, and material consumption.
	Transport of construction workers associated with the construction of the waste management facilities.	Energy (electricity, fuel, etc.) consumption from worker commuting.
	Transportation and disposal of earthworks/waste associated with the construction of the waste management facilities.	GHG emissions from transportation and disposal/treatment of earthworks/construction waste.
	The processing, packaging and removal of some operational Higher Activity Waste (HAW) that have been safely stored on-site and the processing, packaging of Lower Activity Waste (LAW) generated as a result of de-planting and demolition activities.	GHG emissions from transportation and disposal of HAW and processing and packing of LAW.
Operation	Emissions from the operation of the waste management facilities	GHG emissions from energy use, waste disposal, provision and disposal of water
Care and Maintenance Phase		

Lifecycle Stage	Activity	Primary Emission Sources
Product manufacture	Raw material extraction and manufacturing of products/materials associated with the construction and maintenance of the Safestore and the Waste Management Centre	Embodied GHG emissions associated with product and material manufacture.
Construction	On-site construction activity associated with the construction of the Safestore and the Waste Management Centre.	Energy (electricity, fuel, etc.) consumption from plant and vehicles, generators on-site, and material consumption.
	Transport of construction workers associated with the construction of the Safestore and the Waste Management Centre.	Energy (electricity, fuel, etc.) consumption from worker commuting.
	Transportation and disposal of earthworks/waste associated with the construction of the Safestore and the Waste Management Centre.	GHG emissions from transportation and disposal/treatment of earthworks/construction waste.
Operation	Operation of the Works Area under continuous monitoring and surveillance	GHG emissions from energy use, transport emissions, provision of potable water, and treatment of wastewater.
	Works Area building (including Safestore) and grounds maintenance	Emissions associated with any maintenance, repair, replacement and refurbishment activities and associated materials including PAS 2080 lifecycle stages B2, B3, B4 and B5.
Final Site Clearance		
Product manufacture	Raw material extraction and manufacturing of products/materials associated with the provision of the necessary infrastructure, services and facilities for the final dismantling tasks	Embodied GHG emissions associated with product and material manufacture.
	Transport of products/materials to the Works Area associated with the provision of the necessary infrastructure, services and facilities for the final dismantling tasks	GHG emissions from fuel consumption of transportation of products and materials to the Works Area.
Construction	On-site construction activity associated with the provision of the necessary infrastructure, services and facilities for the final dismantling tasks	Energy (electricity, fuel, etc.) consumption from plant and vehicles, generators on-site, and material consumption.
	Transport of construction workers associated with the provision of the necessary infrastructure, services and facilities for the final dismantling tasks	Energy (electricity, fuel, etc.) consumption from worker commuting.

Lifecycle Stage	Activity	Primary Emission Sources
	Transportation and disposal of earthworks/waste associated with the provision of the necessary infrastructure, services and facilities for the final dismantling tasks	GHG emissions from transportation and disposal/treatment of earthworks/construction waste.
Decommissioning and Dismantling	On-site deconstruction activity i.e., dismantling of existing, reactors and debris vaults, existing waste management facility etc.	GHG emissions from fuel consumption from construction plants and vehicles, generators on-site, and worker commuting.
	Transportation, waste processing and disposal of dismantled reactors, debris vaults, earthworks and disposal of waste	Transportation and disposal of dismantled equipment, earthworks and waste disposal. Additionally, any emissions associated with waste treatment such as specialised radioactive waste treatment operations.
	Land clearance, leaving the site flat and level.	GHG emissions associated with the loss of carbon stock.

CCRA

- 9.6.9 The CCRA will qualitatively assess how resilient the Proposed Works and Works Area are to current and projected future climate conditions by identifying the likelihood, consequence and significance of climate risks to the Proposed Works over its lifecycle.
- 9.6.10 The CCRA will be completed in liaison with the project design team and the other EIA technical disciplines by considering the UKCP18 projections for the geographical location and timeframe of the Proposed Works.
- 9.6.11 The most extreme UKCP18 scenario, RCP8.5 will be considered in this CCRA (SSP5-8.5 for Sea Level Rise projection). Using the most extreme scenario prepares the Proposed Works for worsening effects of climate change to prevent climate-related impacts.
- 9.6.12 The CCRA will focus on the Initial Decommissioning Works and will provide a high-level assessment of the Care and Maintenance and Final Site Clearance Phases.

Scoped In

- 9.6.13 The potential climate change impact to the Proposed Works and Works Area will be determined based on the UKCP18 projections are as follows:
- Extreme weather events (including wildfires and droughts);
 - Changes in temperature;
 - Changes in precipitation;
 - Fluvial flooding;

- Surface flooding;
- Groundwater flooding; and
- Changes to the baseline wind conditions.

Scoped Out

Sea Level Rise

- 9.6.14 Sea level rise will not be considered within the CCRA. Details of the existing standards of protection and of the proposed assessments related to flood risk (including consideration of sea level rise) are provided in **Chapter 19: Water Environment and Flood Risk** of this Scoping Report. The CCRA within the ES will summarise the findings of these assessments.
- 9.6.15 Noting the requirement for the Dungeness B Safety Case to be reviewed and updated throughout the Proposed Works, it is considered that any nuclear safety risks associated with sea level rise would be adequately mitigated through further intervention under this process.

Coastal Erosion

- 9.6.16 Coastal erosion will not be considered within the CCRA. Beach replenishment activities are currently undertaken in order to 'hold the line' for both Dungeness A and Dungeness B and are currently consented until October 2026 (reference SH/11/852). An application for permission to continue beach replenishment activities for a further 15 years (beyond the point of completion of defueling activities) has been submitted to Kent County Council (reference FH/25/1883). The proposals, if consented, would protect Dungeness A and B against a 1 in 10,000-year storm event and erosion by the sea. Nuclear safety risks associated with coastal erosion will be considered as part of the post defueling Safety Case for Dungeness B and appropriate measures will be put in place.

ICCI

- 9.6.17 The ICCI assessment will consider the existing and projected future climate conditions for the Works Area through the Proposed Works lifecycle to determine how the resilience of various receptors in the surrounding environment (such as local waterways or local heritage assets etc.) are affected by the Proposed Works in combination with future climatic conditions.
- 9.6.18 The ICCI assessment will consider the ways in which projected climate change impacts could increase the significance of an effect already identified by other Environmental Disciplines, as a result of the combined effects of the Proposed Works and climate change.
- 9.6.19 Where ICCI risks are identified, their likelihood, consequence, mitigation and significance will be presented in this chapter.
- 9.6.20 As with the CCRA, the ICCI assessment will focus on the Initial Decommissioning Works and will provide a high-level assessment of the Care and Maintenance and Final Site Clearance Phases.

Scoped In

9.6.21 The ICCI assessment will consider UKCP18 projections for the geographical location and lifetime of the Works Area and the receptors identified by technical specialists. The climate parameters relevant to the Works Area for the ICCI assessment are as follows:

- Extreme weather events (including wildfires and droughts);
- Changes in temperature;
- Changes in precipitation;
- Fluvial flooding;
- Surface flooding;
- Groundwater flooding;
- Changes to the baseline wind conditions.

Scoped Out

Sea Level Rise

9.6.22 As described for the CCRA, risks associated with SLR would be adequately mitigated through the existing standards of protection defined in **Chapter 19: Water Environment and Flood Risk**, and the requirement to regularly review and update the Dungeness B Safety Case.

Coastal Erosion

9.6.23 As described for the CCRA, risks associated with coastal erosion are adequately mitigated through existing and proposed operations as well as the requirement to review and update the Dungeness B Safety Case post defueling.

9.7 Assessment Methodology

9.7.1 This section provides a summary of the Climate Change assessment methodology.

Approach and Assessment Criteria

Lifecycle GHG Impact Assessment

Quantifying Emissions

9.7.2 In line with the WBCSD and WRI GHG Protocol guidelines¹⁶⁸, the lifecycle GHG impact assessment will be reported as tonnes of carbon dioxide equivalent (tCO₂e) and will consider the seven Kyoto Protocol gases:

- Carbon dioxide (CO₂);
- Methane (CH₄);
- Nitrous oxide (N₂O);
- Sulphur hexafluoride (SF₆);

¹⁶⁸ World Resources Institute (WRI) & World Business Council for Sustainable Development (WBCSD), 'The GHG Protocol', A Corporate Accounting and Reporting Standard, 2004.

- Hydrofluorocarbons (HFC);
- Perfluorocarbons (PFC); and
- Nitrogen Trifluoride (NF₃).

9.7.3 Expected GHG emissions arising from the Proposed Works will be quantified using a calculation-based methodology as per the following equation and aligned with the GHG Protocol:

$$\text{Activity data} \times \text{GHG emissions factor} = \text{GHG emissions}$$

- 9.7.4 The resulting carbon footprint will be compared to the existing and future baseline conditions.
- 9.7.5 If relevant GHG activity data are unavailable, the assessment may be more qualitative and/or assumptions and estimations developed. Any assumptions, inclusions and exclusions that inform the GHG emissions calculation will be clearly described.
- 9.7.6 The Department for Energy Security and Net Zero (DESNZ) emissions factors¹⁶⁹ and embodied carbon data from the Inventory of Carbon and Energy (ICE)¹⁷⁰ will be used as the source of emissions factors for calculating GHG emissions where possible. Any other emission factors used will be referenced in the GHG assessment.
- 9.7.7 The most up to date DESNZ and ICE carbon emission factors will be used. The DESNZ Emissions Factors are regularly updated to reflect changes in the UK energy mix and to ensure that they remain up to date with the latest emissions data. The data in the ICE database is based on rigorous life cycle assessment (LCA) methodology and is regularly updated to reflect changes in manufacturing processes and materials.

Sensitivity

- 9.7.8 In GHG accounting, it is considered good practice to contextualise emissions against pre-determined carbon budgets. Therefore, in line with ISEP GHG assessment guidance, the Works Area emissions will be compared against the UK carbon budgets. The UK has a defined national carbon budget and budgets set by devolved administrations, which will be determined as being compatible with net zero and international climate commitments.
- 9.7.9 Additionally, indicative sectoral waste and construction carbon budgets are available based on the Committee on Climate Change's (CCC) balanced net-zero pathway. These sectoral budgets are not legally binding in the way that the UK National Carbon Budgets are, instead providing an indicative value for what the CCC calculates is needed to reach net zero. For additional contextualisation, sectoral budgets will be explored, such as the waste and Industry balanced net-zero pathways from the CCC¹⁷¹, which

¹⁶⁹ Department for Energy Security and Net Zero (2025) Greenhouse gas reporting: conversion factors 2025. (online). Available at: [Greenhouse gas reporting: conversion factors 2025 - GOV.UK](https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2025) (Accessed 24/10/2025).

¹⁷⁰ Inventory of Carbon and Energy V4.0 (ICE). (online). Available at: [Embodied Carbon Footprint Database - Circular Ecology](https://www.ice.v4.0.org/) (Accessed 24/10/2025).

¹⁷¹ Climate Change Committee. The charts and data behind the 6th Carbon Budget reports. (online). Available at: <https://www.theccc.org.uk/publication/sixth-carbon-budget/#supporting-information-charts-and-data> (Accessed 24/10/2025)

potentially might be appropriate to apply to the construction and waste emissions associated with the Proposed Works. If deemed suitable by the practitioner's professional judgement during the ES these may be used for additional contextualisation. This will be determined once data is available.

9.7.10 The global climate is the receptor for the purposes of the GHG assessment. The sensitivity of the climate to GHG emissions is 'high'. The rationale is as follows:

- GHG emission impacts could compromise the CCC's sectoral construction and net-zero pathways and therefore the ability to meet its future carbon reduction trajectory;
- GHG emission impacts could compromise the UK's ability to reduce its GHG emissions and therefore the ability to meet its future legally binding carbon budgets;
- the extreme importance of limiting global warming to below 2 °C above industrial levels, while pursuing efforts to limit such warming to 1.5 °C as set out in the Paris Agreement¹⁷² and a recent report by the Intergovernmental Panel on Climate Change (IPCC)¹⁷³ highlighted the importance of limiting global warming below 1.5 °C; and
- Disruption to global climate is already having diverse and wide-ranging impacts to the environment, society, economic and natural resources.

Magnitude of Impact

9.7.11 Emissions from the Proposed Works will also be considered in the context of the UK carbon budgets¹⁷⁴. The UK carbon budgets are in place to restrict the amount of GHG emissions the UK can legally emit in a five-year period. The UK is currently in the 4th carbon budget period, which runs from 2023 to 2027, as detailed in **Table 9-8**. The 3rd, 4th and 5th carbon budgets reflect the previous 80% reduction target by 2050. The 6th carbon budget aligns with the legislated 2050 net zero commitment.

9.7.12 As net-zero sectoral trajectories exist for construction and waste emissions these will be explored as a secondary measure to identify if the trajectories are appropriate secondary measures to contextualise the emissions from the Works Area.

9.7.13 It is noted that the contribution of most individual projects to national-level budgets will be small, so the UK context will have limited value. The GHG impact assessment will consider the UK carbon budgets **Table 9-8** when determining effect significance.

¹⁷² United Nations (2015). The Paris Agreement. Available at: https://unfccc.int/sites/default/files/english_paris_agreement.pdf (Accessed 24/10/2025).

¹⁷³ IPCC (2021) Assessment Report 6. Available at: <https://www.ipcc.ch/assessment-report/ar6/> (Accessed 24/10/2025).

¹⁷⁴ Committee on Climate Change, (2021); UK Carbon Budgets. Available at: [The Carbon Budget Order 2021](#) (Accessed 24/10/2025).

Table 9-8 UK Carbon Budgets and Indicative Carbon Budgets Based Upon the CCC's Balanced Net-Zero Pathway

Carbon budget	Indicative CCC's Waste Carbon Budgets based upon the CCC's balanced net-zero pathway for Waste (MtCO₂e)	Indicative CCC's Industry Carbon Budgets based upon the CCC's balanced net-zero pathway for Industry (MtCO₂e)	UK Carbon Budget (MtCO₂e)	Indicative Carbon Budgets based upon the CCC's balanced net-zero pathway (MtCO₂e)
4 th (2023-2027)	-	-	1,950	-
5 th (2028-2032)	95	158	1,725	-
6 th (2033-2037)	62	104	965	-
7 th (2038-2042)	42	54	535	-
8 th (2043-2047)	30	28	-	220
9 th (2048-2050)	16	11	-	23

- 9.7.14 The 7th carbon assessment report published by the CCC no longer contains construction carbon budgets, therefore carbon budgets for industry will be used as a proxy for construction budgets.
- 9.7.15 In order to illustrate the Proposed Works' trajectory towards net zero by 2050, the CCC balanced net zero pathway will be utilised post-2043, in the absence of any nationally legally binding carbon budgets after using the subsequent 7th carbon budget recommended by the CCC. The CCC, as the UK Government's statutory advisor, is responsible for recommending the level of each 5-year carbon budget. Therefore, CCC budgets are used where published UK carbon budgets are not available. Beyond 2050, it is legally required that the UK will remain at net zero.
- 9.7.16 However, it should be noted that the supplementary carbon budgets beyond 2037 have not been formally adopted by the government or ratified by parliament and can only be used as an indicative measure to contextualise the progress of the Proposed Works toward the national net-zero trajectory.

Significance of Effects

- 9.7.17 The ISEP guidance states that there are currently no agreed methods to evaluate quantified levels of GHG significance, that the application of the standard EIA significance criteria is not considered to be appropriate for climate change mitigation assessments, and that professional judgement is required to contextualise a project's GHG emission impacts.
- 9.7.18 On 28th February 2022, IEMA (now ISEP) published a revision of the 2017 IEMA guidance on Assessing Greenhouse Gas Emissions and Evaluating their Significance. The ISEP guidance aims to assist climate practitioners with addressing GHG emissions assessment, mitigation, and reporting in EIAs. It complements ISEP's guide on Climate Change Resilience and

Adaptation published in 2020¹⁷⁵ and builds on the Climate Change Mitigation and EIA overarching principles.

- 9.7.19 In the revised guidance, mitigation is no longer an element to be considered towards the later stage of EIA process. Instead, mitigation should be considered from the outset and throughout the project's lifetime whilst also helping to deliver proportionate EIAs. Once the magnitude of emissions is determined, mitigation measures should be proposed. Any mitigation measures that are committed to within the Proposed Works need to be included within the final assessment.
- 9.7.20 The updated guidance describes five distinct levels of significance which are not solely based on whether a project emits GHG emissions alone, but how the project makes a relative contribution towards achieving a science-based 1.5°C aligned transition towards net zero. The different levels of significance are plotted against the UK's net zero compatible trajectory as presented in **Table 9-9** to determine the scheme's significance.
- 9.7.21 **Table 9-9** presents the different significance levels as per the latest ISEP guidance. The guidance emphasises that *"a project that follows a 'business-as-usual' or 'do minimum' approach and is not compatible with the UK's net zero trajectory or accepted aligned practice or area-based transition targets, results in a significant adverse effect. It is down to the practitioner to differentiate between the 'level' of significant adverse effects e.g. 'moderate' or 'major' adverse effects."* Moderate and Major adverse impacts, as well as beneficial impacts, are considered to be significant, while all other significance levels are deemed to be not significant.
- 9.7.22 A 'minor adverse' or 'negligible' non-significant effect conclusion does not necessarily refer to the magnitude of GHG emissions being carbon neutral (i.e. zero on balance) but refers to the likelihood of avoiding severe climate change, aligning project emissions with a science-based 1.5°C compatible trajectory and achieving net zero by 2050.
- 9.7.23 A project can move from causing significant adverse to non-significant effects by incorporating mitigation measures that substantially improve on business-as-usual and meet or exceed the science-based emissions trajectory of ongoing but declining emissions towards net zero.

Table 9-9 Definition of Levels of Significance

Effects	Significance Level	Description	Example in the ISEP guidance
Significant adverse	Major adverse	A project that follows a 'business-as-usual' or 'do minimum' approach and is not compatible with the UK's net zero trajectory or accepted aligned practice or area-based transition targets.	The project's GHG impacts are not mitigated or are only compliant with do-minimum standards set through regulation, and do not provide further reductions required by existing local and national policy for projects of this type. A project with major adverse effects is locking in emissions and does not

¹⁷⁵ Institute of Environmental Management and Assessment (IEMA), Environmental Impact Assessment Guide to: Climate Change Resilience & Adaptation, 2020

Effects	Significance Level	Description	Example in the ISEP guidance
	Moderate adverse	It is down to the practitioner to differentiate between the 'level' of significant adverse effects e.g. 'moderate' or 'major' adverse effects.	make a meaningful contribution to the UK's trajectory towards net zero. The project's GHG impacts are partially mitigated and may partially meet the applicable existing and emerging policy requirements but would not fully contribute to decarbonisation in line with local and national policy goals for projects of this type. A project with moderate adverse effects falls short of fully contributing to the UK's trajectory towards net zero.
Not significant	Minor adverse	A project that is compatible with the budgeted, science based 1.5°C trajectory (in terms of rate of emissions reduction) and which complies with up-to-date policy and 'good practice' reduction measures to achieve that. It may have residual emissions but is doing enough to align with and contribute to the relevant transition scenario, keeping the UK on track towards net zero by 2050 with at least a 78% reduction by 2035 and thereby potentially avoiding significant adverse effects.	The project's GHG impacts would be fully consistent with applicable existing and emerging policy requirements and good practice design standards for projects of this type. A project with minor adverse effects is fully in line with measures necessary to achieve the UK's trajectory towards net zero.
	Negligible	A project that achieves emissions mitigation that goes substantially beyond the reduction trajectory, or substantially beyond existing and emerging policy compatible with that trajectory and has minimal residual emissions. This project is playing a part in achieving the rate of transition required by nationally set policy commitments.	The project's GHG impacts would be reduced through measures that go well beyond existing and emerging policy and design standards for projects of this type, such that radical decarbonisation or net zero is achieved well before 2050. A project with negligible effects provides GHG performance that is well 'ahead of the curve' for the trajectory towards net zero and has minimal residual emissions.
Significant beneficial	Beneficial	A project that causes GHG emissions to be avoided or removed from the atmosphere. Only projects that actively reverse (rather than only reduce) the risk of severe climate change can be judged as having a beneficial effect.	The project's net GHG impacts are below zero and it causes a reduction in atmospheric GHG concentration, whether directly or indirectly, compared to the without-project baseline. A project with beneficial effects substantially exceeds net zero

Effects	Significance Level	Description	Example in the ISEP guidance
			requirements with a positive climate impact.

Climate Change Resilience Assessment

Sensitivity

- 9.7.24 The CCRA considers the impact of climate change on the Works Area by identifying likely changes to the climate and potential climate hazards over the life of the Proposed Works. The CCRA will evaluate likelihood, consequence and significance of climate risks identified for the Proposed Works.
- 9.7.25 The CCRA will provide commentary on how resilient the Proposed Works are expected to be against the predicted future climate baseline using the UK Climate Projections 2018. UKCP18 projections for the 25km grid cell adjacent to where the Works Area is located will be used to examine future climate parameters (Dungeness did not fall within any of the UKCP 25km grid cells). This climate projection data provides a probabilistic indication of how global climate change is likely to affect the Works Area using defined climate variables and time periods.

Magnitude of Impact

- 9.7.26 The CCRA will consider the potential consequence of the relevant projections from UKCP18 to receptors and likelihood of occurrence, taking account of the measures incorporated into the design of the Proposed Works.
- 9.7.27 The following key terms and definitions relating to the CCRA will be used:
- Climate change hazard – a weather or climate related event, which has potential to do harm to environmental or community receptors or assets, for example, increased winter precipitation;
 - Climate change impact – an impact from a climate hazard which affects the ability of the receptor or asset to maintain its function or purpose; and
 - Consequence – any effect on the processes/activities or receptors/assets resulting from the Climate hazard having an impact.
- 9.7.28 The criteria which will be used to determine the likelihood of a climate change hazard occurring are detailed in **Table 9-10**. The event is defined as the climate event (such as heatwave), while the hazard is defined as the impact on the Works Area caused by the climate event (such as overheating of electrical equipment).
- 9.7.29 Engagement will be undertaken with relevant environmental disciplines to discuss the CCRA and identify mitigation measures for incorporation into the design of the Proposed Works.
- 9.7.30 The likelihood of a climate impact occurring is based on likelihood of the hazard occurring combined with the vulnerability of the Works Area, which will be determined using professional judgement in discussion with the wider

project team. Embedded mitigation measures will also be considered, and a likelihood rating will be assigned as described in **Table 9-10**.

- 9.7.31 Following the identification of climate hazards, the likelihood and consequences will be assessed according to **Table 9-10** and **Table 9-11**, respectively. The categories and descriptions provided below are based on the AECOM risk framework.

Table 9-10 Description of Likelihood for Climate Change Hazard

Level of likelihood of climate hazard	Qualitative description	Quantitative Description
Almost certain	Very likely to occur	Climate projection ensemble mean for the percentage of years throughout the considered time period with an event occurrence is 80 to 95%.
Likely	Likely to occur	Climate projection ensemble mean for the percentage of years throughout the considered time period with an event occurrence is 50 - 80%.
Moderate	As likely to occur as not	Climate projection ensemble mean for the percentage of years throughout the considered time period with an event occurrence is 20 – 50%
Unlikely	Unlikely to occur	Climate projection ensemble mean for the percentage of years throughout the considered time period with an event occurrence is 5 - 20%.
Rare	Highly unlikely to occur	Climate projection ensemble mean for the percentage of years throughout the selected time period has an event occurrence of <5%.

Table 9-11 Description of Consequences

Consequence of impact	Description
Catastrophic	Disaster with the potential to lead to shutdown or collapse or loss of the asset/network
Major	A critical event that requires extraordinary/emergency business continuity actions
Moderate	A serious event that requires additional emergency business continuity actions
Minor	An adverse event that can be absorbed by taking business continuity actions
Insignificant	Impact can be absorbed through normal activity

Significance of Effects

- 9.7.32 The CCRA will assess the significance of effects by evaluating the combination of the likelihood of the climate-related impact occurring and the consequence, as per the risk assessment matrix in **Table 9-12**.

Table 9-12 Significance of Effect Matrix for CCRA (where 'S' is significant and 'NS' is not significant)

		Likelihood of climate-related impact occurring				
		Rare	Unlikely	Moderate	Likely	Almost certain
Measure of consequence	Insignificant	Low (NS)	Low (NS)	Low (NS)	Medium (NS)	High (S)
	Minor	Low (NS)	Low (NS)	Medium (NS)	High (S)	High (S)
	Moderate	Medium (NS)	Medium (NS)	High (S)	High (S)	Extreme (S)
	Major	High (S)	High (S)	Extreme (S)	Extreme (S)	Extreme (S)
	Catastrophic	Extreme (S)	Extreme (S)	Extreme (S)	Extreme (S)	Extreme (S)

In Combination Climate Impact Assessment**Sensitivity**

- 9.7.33 Environmental receptors and their sensitivity to ICCI impacts will be defined by other respective technical disciplines as part of the ES.

Magnitude of impact

- 9.7.34 Once potential ICCIs have been identified for the Proposed Works, the likelihood of their occurrence will be categorised. The likelihood of a climate impact occurring is based on likelihood of the hazard occurring combined with the vulnerability of the Works Area. These will be determined using professional judgement of the technical specialists responsible for preparing the applicable technical chapters. Embedded mitigation measures will also be considered when determining a likelihood rating in accordance with **Table 9-13**.

Table 9-13 Level of likelihood of the ICCI occurring

ICCI Likelihood rating	Qualitative description
High	Likelihood of climate hazard occurring is high and impact is always/almost always going to occur.
Moderate	Likelihood of climate hazard occurring is high and impact occurs often or the likelihood of climate hazard occurring is moderate and impact is likely to occur always/almost always.
Low	Likelihood of climate hazard occurring is high, but impact rarely occurs or the likelihood of climate hazard occurring is moderate and impact sometimes occurs or the likelihood of climate hazard occurring is low and impact is likely to occur always/almost always.
Negligible	All other eventualities – highly unlikely but theoretically possible.

- 9.7.35 Once the likelihood of an ICCI has been identified, the assessment then will consider the consequence of the relevant ICCIs.

- 9.7.36 The ICCI consequence criteria are defined in **Table 9-14** and are based on the change to the significance of the impact already identified by the environmental discipline within the respective assessment. To assess the consequence of an ICCI, each discipline will assign a level of consequence to an impact based on the criteria description and their discipline assessment methodology.

Table 9-14 Consequence Criteria for In-Combination Climate Change Impact Assessment

ICCI Consequence rating	Consequence criteria
High	The climate change parameter in-combination with the effect of the Proposed Works causes the significance of the effect of the Proposed Works on the resource/receptor, as defined by the topic, to increase from negligible, minor, or moderate to major.
Moderate	The climate change parameter in-combination with the effect of the Proposed Works causes the effect defined by the topic to increase from negligible or minor, to moderate.
Low	The climate change parameter in-combination with the effect for the Proposed Works, causes the significance of effect defined by the topic, to increase from negligible to minor.
Negligible	The climate change parameter in-combination with the effect of the Proposed Works does not alter the significance of the effect defined by the topic.

Significance of Effects

- 9.7.37 The significance of potential ICCI effects will be determined using the matrix in **Table 9-15**. Where an effect has been identified as medium or high, it will be classed as a significant ICCI effect. If significant ICCI effects are assessed, then appropriate additional mitigation measures (secondary mitigation) will be identified.

Table 9-15 Significance of Effect Matrix for ICCI (where 'S' is significant and 'NS' is not significant)

		Likelihood of ICCI Occurring			
		Negligible	Low	Moderate	High
Consequence of ICCI Occurring	Negligible	Low (NS)	Low (NS)	Medium (NS)	Medium (NS)
	Low	Low (NS)	Medium (NS)	Medium (NS)	High (S)
	Moderate	Medium (NS)	Medium (NS)	High (S)	High (S)
	High	High (S)	High (S)	Extreme (S)	Extreme (S)

Assumptions and Limitations

- 9.7.38 It is assumed that necessary quantitative data will be available to inform the lifecycle GHG impact assessment for the Indicative Decommissioning Works only. Where quantitative data is not available, reasonable assumptions will be made and agreed upon with the project team. Where it is neither possible to quantify the required data nor to use reasonable assumptions, a

qualitative statement will be made on the environmental impact based on professional experience and expertise.

- 9.7.39 For the CCRA, UKCP18 data is limited to the projected time period of 2100 and therefore, climate impacts beyond this time period will not be presented in the ES. UKCP18 data is provided beyond 2100 for sea level rise, although with large uncertainties. However, as sea level rise is scoped out for the ES, this data is not required. A general qualitative assessment will be made due to the uncertainty of climate projection data beyond the end of the century.

9.8 Summary of Potential Likely Significant Effects

- 9.8.1 This section provides a summary of the proposed scope of the Climate Change chapter of the ES. Please refer to **Section 9.6** where justification of the scope is provided

GHG Impact Assessment

- 9.8.2 A quantitative assessment of the GHG impacts of the Proposed Works will be prepared. The GHG impact assessment of the Care and Maintenance and Final Site Clearance phases will consider the current understanding of activities proposed and professional judgment.

CCRA

- 9.8.3 The CCRA will consider the following climate impacts:
- Extreme weather events (including wildfires and droughts);
 - Changes in temperature;
 - Changes in precipitation;
 - Fluvial flooding;
 - Surface flooding;
 - Groundwater flooding; and
 - Change to the baseline wind conditions.

ICCI

- 9.8.4 The ICCI will consider the following climate parameters:
- Extreme weather events (including wildfires and droughts);
 - Changes in temperature;
 - Changes in precipitation; and
 - Change to the baseline wind conditions.

10. Historic Environment

10.1 Introduction

- 10.1.1 This chapter sets out the proposed scope and methodology for the assessment of effects of the Proposed Works on the historic environment. This has been informed by a review of the environmental baseline conditions, and consideration of the anticipated pathways and receptors where likely significant effects could arise as a result of the Proposed Works.
- 10.1.2 This chapter should be read in conjunction with the description of the Proposed Works presented in **Chapter 2: The Decommissioning and Dismantling Process** as well as the assessment methodologies presented, **Chapter 12: Landscape and Visual** and **Chapter 14: Noise and Vibration** of this Scoping Report. Maritime heritage is considered within **Chapter 20: Other Environmental Topics**.

10.2 Relevant Legislation, Policy and Guidance

Legislation

- 10.2.1 Legislation which is relevant to the assessment of effects on the historic environment is presented in **Table 10-1**.

Table 10-1: Legislation Relevant to the Historic Environment

Legislation	Legislation details
Ancient Monuments and Archaeological Areas Act 1979 (as amended) ¹⁷⁶	The Ancient Monuments and Archaeological Areas Act 1979 (hereafter referred to as 'the Act') is the central piece of legislation that protects the archaeological resource. The first section of the Act requires the Secretary of State for Digital, Culture, Media and Sport to maintain a schedule of nationally important sites. The Act defines what constitutes a 'monument' or 'ancient monument' and provides criteria by which the Secretary of State can determine whether an asset is deemed of national importance and best managed by scheduling.
Planning (Listed Buildings and Conservation Areas) Act 1990 (as amended) ¹⁷⁷	The Planning (Listed Buildings and Conservation Areas) Act 1990 ('the Act') sets out the principal statutory provisions that must be considered in the determination of any application affecting listed buildings and conservation areas.

Policy

- 10.2.2 Policy relating to the historic environment and relevant to the assessment of effects of the Proposed Works is presented in **Table 10-2**.

¹⁷⁶ Ancient Monuments and Areas Act 1979 (as amended). Available at: www.legislation.gov.uk/ukpga/1979/46 [Accessed 21/10/2025].

¹⁷⁷ Planning (Listed Buildings and Conservation Areas) Act 1990. (online). Available at: <https://www.legislation.gov.uk/ukpga/1990/9/contents> (accessed 21/10/2025).

Table 10-2: Policy Relevant to the Historic Environment

Policy	Policy details
NPPF (2024) ¹⁷⁸	The NPPF sets out the Government's planning policies for England and how these should be applied to contribute to the achievement of sustainable development. Section 16 of the NPPF deals specifically with the historic environment. Where changes are proposed, the NPPF sets out a clear framework to ensure that heritage assets are conserved, and where appropriate enhanced, in a manner that is consistent of their significance. Significance and setting of heritage assets are defined in Annex 2 of the NPPF.
Folkestone and Hythe 'Places and Policies' Local Plan (Adopted 2020) ¹⁷⁹	The Local Plan sets out policies for a heritage assets and archaeology. Relevant policies include: - Policy HE1 Heritage Assets; - Policy HE2 Archaeology; - Policy HE3 Local List of Heritage Assets; and - Policy HE4 Folkestone's Historic Gardens.

Guidance

10.2.3 Guidance which is relevant to the assessment of effects on the historic environment is presented in **Table 10-3**.

Table 10-3: Guidance Relevant to the Historic Environment

Guidance	Guidance details
The Planning Practice Guidance (PPG) ¹⁸⁰	The PPG is a government document that provides further advice and guidance that expands the policy outlined in the National Planning Policy Framework. It expands on terms such as 'significance' and its importance in decision making. Paragraph 009 explores the significance of heritage assets. It states that heritage assets may be affected by direct physical change or by change in their setting. Paragraph 013 recognises that the contribution that setting makes to the significance of the heritage asset does not depend on there being public right or the ability to experience that setting. Paragraph 017 discusses how to assess if there is substantial harm. A key consideration when assessing where there is an adverse impact on a listed building is whether the adverse impact seriously affects a key element of its special architectural or historic interest. It is the degree of harm to the asset's significance rather than the scale of development that is to be assessed.

¹⁷⁸ MHCLG (2024). Revised National Planning Policy Framework (NPPF) Section 16: Conserving and enhancing the historic environment. Ministry of Housing, Communities and Local Government. (online). Available at: <https://www.gov.uk/government/collections/revised-national-planning-policy-framework> (accessed 21/10/2025).

¹⁷⁹ Folkestone and Hythe District Council (2020a). Places and Policies Local Plan. (online). Available at: <https://www.folkestone-hythe.gov.uk/downloads/file/3598/places-and-policies-local-plan> (accessed 21/10/2025).

¹⁸⁰ MHCLG (2019). National Planning Policy Framework (NPPF) Planning Practice Guidance (PPG). Conserving and enhancing the historic environment. Ministry of Housing, Communities and Local Government. (online). Available at: <https://www.gov.uk/guidance/conserving-and-enhancing-the-historic-environment> (accessed 21/10/2025).

Guidance	Guidance details
Historic England Good Practice Advice (GPA)	Historic England has published a series of GPA notes of which those most relevant to this Proposed Works are mentioned below: - GPA 2¹⁸¹ emphasises the importance of having a knowledge and understanding of the significance of heritage assets likely to be affected by the development. - GPA 3¹⁸² provides advice on the setting of heritage assets. Historic England states that setting does not have a boundary and what comprises an asset's setting may change as the asset and its surroundings evolve. The contribution of setting to the significance of an asset is often expressed by reference to views, Paragraph 11 identified those views, such as those that were designed or those that were intended, that contribute to understanding the significance of heritage assets. - Advice Note 12¹⁸³ outlines a recommended approach to assessing the significance of heritage assets in line with the requirements of NPPF. The Advice Note also offers an interpretation of various forms of heritage interest that an asset can possess, namely archaeological, architectural, artistic, and historic.
Principles of Cultural Heritage Impact Assessment in the UK (IEMA, 2021 ¹⁸⁴) ¹⁸⁵	Provides a set of guiding principles to supplement existing guidance and provide a consistent framework for cultural heritage impact assessment in a variety of settings. The document provides guidance for cultural heritage practitioners regarding the principles of a Cultural Heritage Impact Assessment, these are understanding cultural heritage assets (a) and evaluating the consequences of change (b). Understanding cultural heritage assets distinguishes between describing the asset (what it is and what is known about it); ascribing cultural significance (a description of what is valued about it); and attributing importance (a scaled measure of the degree to which the cultural significance of that asset should be protected).

¹⁸¹ Historic England (2015). Historic Environment Good Practice Advice in Planning Note 2. Managing Significance in Decision Taking in the Historic Environment. English Heritage, Swindon. (online). Available at: <http://historicengland.org.uk/images-books/publications/gpa2-managing-significance-in-decision-taking/> (accessed 21/10/2025).

¹⁸² Historic England (2017). Historic Environment Good Practice Advice in Planning Note 3 (December 2017) - The Setting of Heritage Assets. Historic England. (online). Available at: <https://historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/> (accessed 21/10/2025).

¹⁸³ Historic England (2019). Historic England Advice Note 12 (October 2019) - Statements of Heritage Significance: Analysing Significance in Heritage Assets. (online). Available at: <https://historicengland.org.uk/images-books/publications/statements-heritage-significance-advice-note-12/heag279-statements-heritage-significance/> (accessed 21/10/2025).

¹⁸⁴ IEMA and ClfA (2021). Institute of Environmental Management and Assessment (IEMA) Principles of Cultural Heritage Assessment in the UK. (online). Available at: https://www.archaeologists.net/sites/default/files/2024-11/ClfA-IEMA-Principles-Cultural-Heritage-Impact-UK_2021.pdf (accessed 21/10/2025).

¹⁸⁵ ClfA (2020). Standard and guidance. Historic environment desk-based assessment. Chartered Institute for Archaeologists, Reading. (online). Available at: https://www.archaeologists.net/sites/default/files/ClfAS%26GDBA_3.pdf (accessed 21/10/2025).

Guidance	Guidance details
	b.) Evaluating the consequences of change also distinguishes between three separate analytical stages: understanding change (a factual statement of how a proposal would change a cultural heritage asset or its setting, including how it is experienced); assessing impact (a scaled measure of the degree to which any change would impact on cultural significance) and weighting the effect (the measure that brings together the magnitude of the impact and the cultural heritage asset's importance).
Chartered Institute for Archaeologists ¹⁸⁶	The Chartered Institute for Archaeologists (CIfA) has developed a range of Regulations, Standards, and guidance. The CIfA's "Standard and guidance for historic environment desk-based assessment", provides guidance on assessing the significance of heritage assets. The document also provides more detailed guidance on working in the legislative and practice framework of the UK.

10.3 Baseline Conditions

10.3.1 The principal data source used to inform the current baseline conditions presented in this Section beyond those identified in **Chapter 5: EIA Methodology** comprise the following:

- National Heritage List for England (NHLE) for designated heritage assets¹⁸⁷;
- KHER for non-designated heritage assets and historic landscape features¹⁸⁸; and
- The British Geological Survey for geology and topography¹⁸⁹.

Study Area

10.3.2 The Study Area was selected in consideration of several factors including:

- The coastal and rural location of the Works Area;
- The scale, height and massing of the existing structures at Dungeness B and the Proposed Works; and
- The relative significance of the heritage assets, guided by current technical standards, guidance and professional judgement.

10.3.3 The Study Area has been chosen to identify those heritage assets that may be affected by the Proposed Works and provide a contextual baseline of known heritage assets. For both designated and non-designated heritage

¹⁸⁶ CIfA (2020). Standard and guidance. Historic environment desk-based assessment. Chartered Institute for Archaeologists, Reading. (online). Available at:

https://www.archaeologists.net/sites/default/files/CIfAS%26GDBA_3.pdf (accessed 21/10/2025).

¹⁸⁷ Historic England (2025). National Heritage List for England. (online). Available at:

<https://historicengland.org.uk/listing/the-list/> (accessed 21/10/2025).

¹⁸⁸ Kent County Council (2025). Kent Historic Environment Records.

¹⁸⁹ British Geological Survey (2025). BGS Geology Viewer. (online). Available at: <https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/> (accessed 21/10/2025).

assets a Study Area extending 3km from the Works Area has been deemed appropriate. The designated and non-designated heritage assets within the 3km Study Area are represented on **Figure 10-2** and **Figure 10-3**¹⁹⁰, respectively.

- 10.3.4 The Study Area will be reviewed during the assessment process to ensure that it remains appropriate. Given the sensitivity of higher graded assets (i.e. World Heritage Sites, scheduled monuments, grade I and II* listed buildings and grade I and II* Registered Parks and Gardens), the assessment will consider assets beyond the Study Area based on their interaction with the Zone of Theoretical Visibility (ZTV) (**Figure 12-1**), which supports **Chapter 12: Landscape and Visual**. This ZTV defines the theoretical visibility of the Proposed Works and presents a theoretical zone of visual influence which will inform the assessment of the settings of built heritage assets.

Establishment of Baseline and Definition of Surveys

- 10.3.5 Baseline conditions for the historic environment will be described in a Desk-Based Assessment (DBA) which will be prepared in accordance with industry standards and good practice guidelines, and with reference to any statutory consultation responses received as part of the Pre-Application Opinion. The DBA will inform the baseline for the historic environment chapter of the ES and will form a technical appendix to the ES.
- 10.3.6 The DBA will present the historical background of the Works Area, including the designated and non-designated heritage assets within the Works Area and Study Area. In addition, the document will set out assessments of the significance of the heritage resource, including any contribution made by setting, and will identify likely impacts arising from the Initial Decommissioning Works and the Final Site Clearance.
- 10.3.7 The DBA will be supported by a walkover survey which will include a survey of known heritage assets within the Works Area boundary and the immediate vicinity to record their survival, extent, condition, setting and significance.
- 10.3.8 The walkover survey will also extend to the Study Area to assess the setting of assets which could potentially be affected by the Proposed Works. This site visit will establish the key features of the asset's setting, alongside any intervisibility with the Works Area. It will also consider the effect on the existing works on that setting in order to inform the Final Site Clearance stage assessment.
- 10.3.9 Sources of information that will be consulted include:
- NHLE database;
 - KHER including the Historic Landscape Characterisation (HLC) data;

¹⁹⁰ Assets such as TR01 NE6 (St Lawrence's Battery 1798) and TR01 NE225 (The site of Dungeness lighthouse, as it stood from 1635 to c.1790. Erected by William Lamplough) are shown 'in the sea', however these locations are those held by HER and are presumed to not be accurate as they are terrestrial heritage assets. Maritime heritage assets are considered in **Chapter 20: Other Environmental Topics**.

- Various online resources including the BGS Geology of Britain Viewer and the local planning portal for the Local Plan and other planning information;
- Published and unpublished literature;
- Available 1 m and 2 m spatial resolution LiDAR data published by the Environment Agency;
- Documentary, cartographic and other resources as deposited within the local Archives and Local Studies Library and the National Archives at Kew; and
- Local Planning Authority Plans, Guidance and Lists.

Summary of Existing Baseline

Geology and Topography

- 10.3.10 The bedrock geology at Dungeness is composed of layers of sandstone, siltstone and mudstone, known as the Hastings Beds Formation. This sedimentary bedrock was formed approximately 134 to 145 million years ago in the Cretaceous Period, when the local environment was dominated by swamps, estuaries and deltas. The bedrock geology is concealed by the superficial geology. Across much of Dungeness, including the Works Area, Storm Beach Deposits are present, whilst Tidal Flat Deposits are noted to the north and Beach and Tidal Flat Deposits can be found to the north-east. These deposits are predominantly shallow-marine to coastal in origin¹⁹¹.
- 10.3.11 The Works Area is wholly situated on the Dungeness cusplate foreland, a geological feature primarily formed as a result of longshore drift. The current landscape of Dungeness is characterised by a series of sub-parallel shoreline ridges (composed largely of flint shingle) separated by lower-lying areas that formed back-beach depositional areas (composed largely of finer materials). This composition is unusual and has resulted in extensive surface and buried shingle ridges that first formed during the Neolithic period, some 5000 years before present (BP)¹⁹². The ridges can be directly related to the development of the cusplate foreland which has extended and evolved through a series of beach recurves as well as the redistribution of shingle from these barrier beaches (*ibid*). Such shingle barriers have three key phases of development. In the case of that at Dungeness, the first phase (in the prehistoric period) was the rapid evolution of a shingle barrier which stretched from near Fairlight (on the western side of Rye Bay) to Dymchurch. Throughout the entirety of this phase, the Works Area would have been below sea level. In the second phase, (in the medieval period) the shingle was consolidated, and the shingle promontory and 'sink' of Dungeness began to develop. The ridges of shingle, which can be seen clearly at Dungeness represent former beaches which have been fossilised in the landscape, providing evidence of the gradual extension of the foreshore to

¹⁹¹ British Geological Survey (2023). Dungeness Coastal Case Study. (online). Available at: <https://storymaps.arcgis.com/stories/6dc3ee2cd5454cd6a6b862e861e55d7b> (accessed 21/10/2025).

¹⁹² Clark, F. (2018). 'Appendix 1: Theme 1c Landscape – Dungeness' in *Folkestone & Hythe District Heritage Strategy*. (online). Available at: <https://www.folkestone-hythe.gov.uk/downloads/file/2287/12-3-theme-1a-landscape-romney-marsh> (accessed 21/10/2025).

what exists today. The area is currently in the third stage, where shingle is no longer being replenished across much of the peninsula, the shingle ness of Dungeness remains a dynamic features, with waves transporting shingle along the coast by the process of longshore drift¹⁹³. The processes of longshore transport at Dungeness have been modified, first by a system of beach replenishment where the shingle near the ness has been returned to the western end of the beach since the 1950s. The second system has involved the construction of coastal protection structures to protect the power stations from inundation¹⁹⁴.

Designated Heritage Assets

10.3.12 There are no designated heritage assets within the Works Area and no World Heritage Sites, registered battlefields or registered parks and gardens in the Study Area. One scheduled monument, one conservation area, and five listed buildings are located within the Study Area, as shown on **Figure 10-2**.

10.3.13 Lade Fort (**NHLE 1004205**) is the only scheduled monument to be noted within the Study Area, located approximately 2.4km north-east of the Works Area. This post-medieval fort is the only surviving coastal battery between Deal and Eastbourne, having been built in 1798 as a defensive measure to the French Revolutionary Wars. It was subsequently converted into a coastguard station in the 19th century and was occupied for defensive purposes during the Second World War.

10.3.14 Dungeness Conservation Area is located approximately 75m east of the Works Area at its closest point (associated with the location of the intake pipeline), but is approximately 300m east of Area A of the Works Area. Dungeness is designated as a conservation area due to its the presence of vegetated shingle and for the survivability of its natural environment and built environment, which serves as an interesting example of a historically significant socio-economic movement. The area contains a large and varied collection of characteristic 'beach house' type buildings and whilst few of these buildings have intrinsic architectural interest, they represent a sense of escape from society¹⁹⁵.

10.3.15 There are four listed buildings within this conservation area, namely:

- Dungeness Lighthouse (**NHLE 1390640**), grade II* listed, located approximately 630m east of the Works Area (Area A);
- The Old Lighthouse (**NHLE 1252010**), grade II listed, located approximately 390m east of the Works Area (Area A);
- Dungeness Lighthousemen's Dwellings (**NHLE 1068933**), grade II listed, located approximately 550m east of the Works Area (Area A); and

¹⁹³ Fiona Fyfe Associates (2016). Romney Marsh Landscape Character Assessment for the Fifth Continent Landscape Partnership and Shepway District Council. Available at: <https://www.folkestone-hythe.gov.uk/downloads/file/2230/9-14-romney-marsh-local-character-assessment>

¹⁹⁴ May, V. J. (2007). "Dungeness", in Coastal Geomorphology of Great Britain Chapter 6: Gravel and 'shingle' beaches – GCR Site Reports. Available at: <https://jncc.gov.uk/jncc-assets/GCR/gcr-site-account-2771.pdf>

¹⁹⁵ Warshaw, J. et al. (2006). Conservation Area Appraisal: Dungeness. Shepway District Council. (online). Available at: <https://www.folkestone-hythe.gov.uk/downloads/file/2495/dungeness-conservation-area-appraisal-part-1> (accessed 21/10/2025).

- Net Boiler (**NHLE 1252214**), grade II listed, located approximately 790m north-east of the Works Area (Area C) at its closest point, and approximately 1.6km north-east of Area A of the Works Area.

10.3.16 Further inland at Lydd-on-Sea, the grade II listed building 1, Toby Road is situated (**NHLE 1344123**) just north of Lade Fort (**NHLE 1004205**) approximately 2.6km north of the Works Area (Area C). This cottage is the only listed building within the Study Area to be situated outside of the Dungeness Conservation Area.

Non-Designated Heritage Assets

- 10.3.17 The KHER records 108 non-designated heritage assets within the 3km Study Area. Of these, only one is recorded as crossing the Works Area, namely an extensive stretch of Second World War anti-invasion beach scaffolding related to Dungeness West Coastal Battery (**1533475**). This feature was removed prior to aerial photographs taken in 1962.
- 10.3.18 There is no evidence for prehistoric (Palaeolithic, Mesolithic, Neolithic, Bronze Age and Iron Age) activity within the Study Area owing to the fact that the shoreline throughout these periods was much further inland. Research has suggested that by the Iron Age, the shoreline was to the north-west of the modern village of Lydd, approximately 5.7km from the Works Area.
- 10.3.19 The Study Area would also have been submerged during the Roman period, although the shoreline had advanced to the modern village of Lydd by this period. The earliest archaeological evidence within the Study Area comes in the form of a gold ring of Probus washed up on the coast of Dungeness in the mid-20th century (**TR 01 NE 1**). This ring was perforated in many places, indicating significant sea action, and as such its original context is unknown.
- 10.3.20 The accretion of the Dungeness foreshore continued throughout the early medieval period. By approximately 800 AD, the exposed shingle shoreline was located around 1.4km west of the Works Area. Just beyond the shoreline of 800 AD, a saltmarsh was located which existed throughout the early medieval and within which an 11th century coin hoard was discovered which contained coins from the reign of Edward the Confessor, Harold Godwinson and William the Conqueror (**TR 01 NE 2**). This coin hoard was located approximately 2.9km north-west of the Works Area.
- 10.3.21 Approximately 2.6km north-west of Area C of the Works Area, whale bones were recovered which were radiocarbon dated to between 840 AD and 1031 AD (**TR 02 SE 152**). These bones presented with cut marks indicative of butchery and are thought to have been preserved *in situ*. As they were recovered approximately 1.8km east of where research suggests the coastline was by 800 AD, it would suggest that the later date identified by radiocarbon dating is more likely and that the coastline had expanded east by this time.
- 10.3.22 Whilst the coastline continued to advance, part of the Works Area remained submerged at the end of the medieval period. As such, the substantial medieval remains are all noted beyond 2.5km north-west of Area C of the Works Area. Finds in this area include two scatters of medieval pottery (**TR 01 NE 205**, **TR 01 NE 212**), a rectangular ditched enclosure (**TR 01 NE 216**), linear anomalies thought to be medieval ditches (**TR 01 NE 211**), and a medieval farmstead noted on early cartographic evidence (**TR 01 NE 210**).

Two isolated finds have been noted closer to the Works Area, namely a copper alloy pilgrim badge recovered approximately 650m north-east of Area C of the Works Area (**MKE120406**) and a bronze arms of the See of Canterbury found approximately 1km to the north-east of Area C of the Works Area (**TR 01 NE 226**), both of which can be attributed to casual loss and were likely transported to the above locations by sea action.

- 10.3.23 Maritime evidence from the early post-medieval suggests that the modern landscape of Dungeness had not yet formed. Research suggests that the area to the east and north-east of the Works Area was still underwater by 1400 AD and likely until the end of the 16th century given the presence of shipwrecks dated to the Tudor dynasty. The most prominent example is the Denge Tudor Wreck, noted approximately 1.3km north-east of Area C of the Works Area within Denge Quarry (**TR 01 NE 260**, **TR 01 NE 261**, **TR 01 NE 262**). This vessel was dated using dendrochronology to the late 16th century and was deemed to be of national significance¹⁹⁶.
- 10.3.24 Beyond maritime remains (Maritime heritage remains are discussed in **Chapter 20: Other Environmental Topics** of this Scoping Report), 27 non-designated heritage assets dated to the post-medieval period are present within the Study Area. Only four of these are extant farmsteads, which is unsurprising as Dungeness is known for being largely uninhabited during the post-medieval period. All four are located beyond 2.85km north-west of the Area B Works Area (**MKE88273**, **MKE88278**, **MKE88279**, **MKE88314**). A number of buildings were constructed along the coastline in the post-medieval period to warn ships of their proximity to land. Extant buildings are designated assets, but the non-designated assets include the now demolished Fog Horn House (**TR 01 NE 241**) and Daboll's Fog-Trumpet (**TR 01 NE 240**) located from 660m north-east of the Area B of the Works Area. Approximately 620m south of the Area A Works Area, the original Dungeness Lighthouse was located upon the seabed (**TR 01 NE 225**). It stood from 1635 until c.1790.
- 10.3.25 The buildings on the coast of Dungeness were connected to the wider Romney Marsh area by the Lydd and New Romney Branch Railway (**TR 02 SW 148**), with Dungeness Station located approximately 580m east of Area B of the Works Area (**TR 01 NE 214**). The railway opened in 1884 and passed as close as 130m from the Works Area. To accommodate passengers, a halt was opened at Lydd on Sea in 1881 along an earlier section of the railway, located approximately 890m north of Area C of the Works Area (**TR 01 NE 215**).
- 10.3.26 Military development continued into the modern period, with military remains dominating the archaeological record. This includes seven aircraft crash sites, the closest being located approximately 940m south of Area A of the Works Area where a Messerschmitt Bf109E-4 crashed into the sea (**TR 01 NE 234**). Within the Study Area, three Second World War PLUTO (Pipeline Under The Ocean) pumping stations have also been identified, the closest being located 1km east of Area A of the Works Area (**MWX51504**). These

¹⁹⁶ Draper, G. (2024). 'A Tudor shipwreck on Dungeness: shipping and wrecks around Lydd in the medieval and early modern periods', in *Archaeologia Cantiana*, Volume 145. Maidstone: Kent Archaeological Society. (online). Available at: <https://www.kentarchaeology.org.uk/journal/145/tudor-shipwreck-dungeness> (accessed 21/10/2025).

were a crucial part of the Allies' logistics plan pumping fuel to France for Operation Overlord. Beyond this, a significant number of Second World War infrastructure has been recorded, including a coastal battery located 25m south of Area A the Works Area (**MWX51339**), an anti-aircraft battery located 142m east of Area A of the Works Area (**MWX51349**), and Dungeness West emergency coastal battery located 100m east of the Works Area (**1533417**). Almost all of the Second World War infrastructure, including those previously noted, have been disassembled or demolished.

- 10.3.27 Beyond military installations, a historic garden is noted by Kent County Council approximately 800m north-east of Area C of the Works Area (**TR 01 NE 229**). Prospect Cottage garden is renowned for its garden, a rare site in the flat expanse of the shingle beach. The garden combines the indigenous plants of the area with flints and sculptures as well as introduced flowers and shrubs.
- 10.3.28 An aerial photograph from the 1940s records the Works Area prior to the construction of Dungeness A and B (Historic England Archive 1941). This shows the Lydd and New Romney Railway (**TR 02 SW 148**) which terminated at Dungeness Lighthousemen's Dwellings (**NHLE 1068933**) and The Old Lighthouse (**NHLE 1252010**). To the west of the railway, Dungeness Redoubt is depicted (**TR 01 NE 5**), although it appears that the 18th century buildings within it had already been demolished (**TR 01 NE 243**). The Works Area itself in the 1940s is shown to be an undeveloped section of shingle beach.
- 10.3.29 The existing buildings which comprise Dungeness B are not recorded as heritage assets on the LHER; however, these structures do have a level of heritage interest due to their contribution to the development of Britain's nuclear industry. Dungeness B was the first AGR nuclear power station to begin construction in the UK, which were the second generation of gas-cooled reactors in Britain. AGR technology is unique to the United Kingdom, with Dungeness B forming an important step in the development of Britain's nuclear industry. Dungeness A and B are also prominent landmarks on this part of the south coast of England and the English Channel due to their location on the distal end of the Dungeness headland, and due to their size. Further assessment of the historic interest of Dungeness B and its setting with the wider Dungeness Complex will be undertaken during the baseline research for the ES.
- 10.3.30 Four non-designated heritage assets of an unknown date have been noted within the Study Area, three of which are located beyond 2.9km to the north-east of Area B of the Works. These include linear features (**TR 01 NE 206**), a double-ditched feature (**TR 01 NE 207**) and a possible fish trap (**TR 02 SE 63**). Approximately 2.55km west of Area B of the Works Area, steel pontoons are reported to have washed up on Denge Beach (**812977**).

Future Baseline

- 10.3.31 The future historic environment baseline for the Proposed Works is not anticipated to change in a scenario where Dungeness B has been defueled but not decommissioned. The assessment for Final Site Clearance will be high-level given the uncertainties owing to the long timescales.

10.4 Consultation

- 10.4.1 Initial consultation was undertaken on 15 September 2025 with Kent County Council via email to agree upon an appropriate scope and assessment methodology for this Scoping Report. The Kent County Council Archaeological Advisor requested a 3km Study Area for the Proposed Works to identify all heritage assets that may be impacted by the Proposed Works.

10.5 Scope for Mitigation

- 10.5.1 Possible mitigation through archaeological investigation and recording may be undertaken, the scope of archaeological mitigation would be set out in an appropriately worded Written Scheme of Investigation (WSI) and would be developed in consultation with the Kent County Council Archaeological Advisor, if required.
- 10.5.2 Possible mitigation by design could include providing a similar surface treatment for the Safestore facility to that of the current reactor house.
- 10.5.3 Possible mitigation to reduce the changes to the setting of heritage assets during the Proposed Works could include measures to be set out within the Environmental Management Plan. These will include standard working hours as well as mitigation related to noise and dust suppression and the use of lighting that minimises glare or backscatter.

10.6 Potential Impacts

Potential Receptors

- 10.6.1 The high-level desk-based appraisal undertaken to inform this Scoping Report has revealed that the Works Area was located beyond the Dungeness foreshore until at least the 17th century. Therefore, archaeological remains within the Study Area which predate this are limited, with an overwhelming majority of the 108 non-designated heritage assets noted by the KHER dated to the post-medieval and modern periods. Those which do predate the 17th century largely consist of isolated finds and shipwrecks. This suggests that there is limited potential for the presence of previously unknown terrestrial archaeological remains of all periods predating the 17th century within the Works Area, however, there is a moderate potential for land-based maritime archaeology remains to be present within the Works Area (Maritime heritage is discussed in **Chapter 20: Other Environmental Topics** of this Scoping Report).
- 10.6.2 There are a number of designated and non-designated heritage assets within the Study Area which may be affected by the Proposed Works. While no direct physical effects on known heritage assets are anticipated, there is potential for effects on the significance of heritage assets to occur through change to their setting during the Proposed Works.
- 10.6.3 An initial appraisal of those designated and non-designated heritage assets that may be affected by temporary visual, noise and dust impacts has been undertaken. Changes to their setting are likely to arise from de-planting, dismantling and deconstruction activities. In addition, setting changes may also result from the potential construction and operation of the new on-site

waste management facilities. Heritage assets with a setting that may be affected include but are not limited to:

- Dungeness Conservation Area;
- The Grade II* listed Dungeness Lighthouse (**NHLE 1390640**);
- The Grade II listed The Old Lighthouse (**NHLE 1252010**);
- The Grade II listed Dungeness Lighthousemen's Dwellings (**1068933**);
- Dungeness Redoubt (**TR 01 NE 5**) and Royal Naval Shore Signal Service Cottages 285m north-east of Area B of the Works Area;
- Prospect Cottage garden 800m north-east of Area C of the Works Area (**TR 01 NE 229**);
- St Lawrence's Battery 575m east of Area A of the Works Area (**TR 01 NE 6**); and
- Dungeness Station 580m east of Area B of the Works Area (**TR 01 NE 214**).

10.6.4 The cumulative effects on the setting of heritage assets, resulting from the long-term decommissioning of the Dungeness A and Dungeness B, will be undertaken during the baseline research for the ES.

Potential Effects

10.6.5 Given the importance of the heritage assets potentially affected by the Proposed Works, there is a requirement for further assessment of cultural heritage as part of the EIA. The final scope of the assessment will be confirmed following the completion of the Desk-based Assessment and agreed with Kent County Council Archaeological Advisor. In the absence of this study all aspects of terrestrial cultural heritage (archaeological remains, historic buildings, and historic landscapes) will be scoped into the EIA process, excluding maritime non-designated heritage assets which are located within the Study Area but beyond the shingle peninsula, as discussed with Kent County Council. It is considered likely that on completion of the Desk-Based Assessment archaeology may be scoped out of the assessment.

10.6.6 There is potential for effects on both designated and non-designated heritage assets during the Initial Decommissioning Works. These are likely to comprise temporary changes to the setting of heritage assets arising from visual intrusion of cranes and other plant and increased noise, dust and lighting.

10.6.7 During the Care and Maintenance Phase potential effects arising from presence of the Safestore will be limited to changes to the setting of designated and non-designated heritage assets. However, the Safestore will encase the existing reactor building, occupying the same location and being of comparable size, shape and massing as the existing structure. The Safestore is therefore not anticipated to result in any significant change to the setting or value of designated and non-designated heritage assets within the 3km Study Areas during the Care and Maintenance Phase.

- 10.6.8 The Final Site Clearance Phase could result in both temporary changes to the setting of heritage assets, through visual intrusion of cranes and other plant and increased noise, dust and lighting. Effects during the Initial Decommissioning Works are considered to be representative of the effects during the Final Site Clearance phase. In addition, permanent changes to the setting of heritage assets could arise through the absence of Dungeness B within the landscape on completion of the Final Site Clearance.

10.7 Assessment Methodology

- 10.7.1 The proposed generic project-wide approach to the assessment methodology is set out in **Chapter 5: EIA Methodology**.
- 10.7.2 This section provides a summary of the historic environment assessment methodology. The scope of assessment will focus on the impacts and resultant effects during the Initial Decommissioning Works with a high level assessment of the Final Site Clearance.

Scope of Assessment

- 10.7.3 The scope set out below reflects the existing assessment parameters as set out within **Chapter 5: EIA Methodology**. Change to the design/dismantling approach could reduce the potential effects and any designated assets that are shown to have no visibility of the Proposed Works may be scoped out of further assessment.
- 10.7.4 Depending on their proximity to the Works Area, heritage assets that are shown to have potential visibility of the Proposed Works, or are otherwise considered to have the potential for impact as a result of the Proposed Works, will be assessed.
- 10.7.5 The assessment of effects arising through change to setting of heritage assets will refer to **Chapter 12: Landscape and Visual**. Where relevant, and through consultation, viewpoints will be included to demonstrate the visual impact of the Proposed Works on heritage assets. This may include heritage assets with views towards the Works Area e.g., along the coastline and those for which the Works Area forms part of their setting. The assessment will also refer to **Chapter 14: Noise and Vibration** as appropriate.

Approach and Assessment Criteria

Sensitivity

- 10.7.6 The value of a heritage asset (its heritage significance) is guided by its designated status but is derived also from its heritage interest which may be archaeological, architectural, artistic or historic¹⁹⁷. Each identified heritage asset can be assigned a value in accordance with the criteria set out in **Table 10-4**. Using professional judgement and the results of consultation carried out as part of the assessment, heritage assets are also assessed on

¹⁹⁷ MHCLG (2024). Revised National Planning Policy Framework (NPPF) Section 16: Conserving and enhancing the historic environment. Ministry of Housing, Communities and Local Government. (online). Available at: <https://www.gov.uk/government/collections/revised-national-planning-policy-framework> (accessed 21/10/2025).

an individual basis and regional variations and individual qualities are taken into account where applicable to assign the heritage value (or heritage significance).

Table 10-4: Criteria for Assessing the Value of Heritage Assets

Asset value	Description
High	World Heritage Sites. Scheduled Monuments. Grade I and II* listed buildings. Registered battlefields. Grade I and II* registered parks and gardens. Conservation areas of demonstrable high value (i.e. containing a notable concentration of high value assets). Non-designated heritage assets (archaeological sites, historic buildings, monuments, parks, gardens or landscapes) that can be shown to have demonstrable national or international importance. Well preserved historic landscape character areas, exhibiting considerable coherence, time-depth or other critical factor(s).
Medium	Grade II listed buildings. Conservation areas. Grade II registered parks and gardens. Non-designated heritage assets (archaeological sites, historic buildings, monuments, park, gardens or landscapes) that can be shown to have demonstrable regional importance. Averagely preserved historic landscape character areas, exhibiting reasonable coherence, time-depth or other critical factor(s). Historic townscapes with historic integrity in that the assets that constitute their make-up are clearly legible.
Low	Locally listed buildings. Non-designated heritage assets (archaeological sites, historic buildings, monuments, park, gardens or landscapes) that can be shown to have demonstrable local importance. Assets whose values are compromised by poor preservation or survival of contextual associations to justify inclusion into a higher grade. Historic landscape character areas whose value is limited by poor preservation and/or poor survival of contextual associations.
Very Low	Assets identified on national or regional databases, but which have very limited archaeological, architectural, artistic or historic value. Landscape with no or little significant historical merit.

Magnitude of Impact

- 10.7.7 Having identified the value of the heritage assets, the next stage of the assessment will be to identify the level and degree of impact to each asset arising from the Proposed Works. Impacts can be temporary, reversible, or permanent. Impacts can occur to the physical fabric of the asset or affect its setting. The contribution that setting makes to the heritage value of any affected heritage assets will be subject to assessment.
- 10.7.8 The level and degree of impact (impact magnitude) will be assigned with reference to a four-point scale as set out in **Table 10-5**. The assessment of the level and degree of impact will be made in consideration of any embedded mitigation. If no impact is identified, no impact magnitude will be given and no resulting effect will be reported.

Table 10-5: Factors Influencing the Assessment of Magnitude of Impacts

Magnitude of Impact	Description of impact
High	Changes such that the value of the asset is totally altered or destroyed. Comprehensive change to, or total loss of, elements of setting that would result in harm to the asset and our ability to understand and appreciate its value.
Medium	Change such that the value of the asset is significantly altered or modified. Changes such that the setting of the asset is noticeably different, affecting value and resulting in changes in our ability to understand and appreciate the value of the asset.
Low	Changes such that the value of the asset is slightly affected. Changes to the setting that have a slight impact on value resulting in changes in our ability to understand and appreciate the value of the asset.
Very Low	Changes to the asset that hardly affect value. Changes to the setting of an asset that have little effect on value and no real change in our ability to understand and appreciate the value of the asset.

Significance of Effects

- 10.7.9 An assessment to classify the significance of the effect, having taken into consideration any embedded mitigation, will be determined using the matrix in **Chapter 5: EIA Methodology**, which takes account of the value of the asset and the predicted magnitude of impact.
- 10.7.10 Effects can be neutral, adverse or beneficial. Major or moderate effects will be considered to be significant in accordance with standard EIA practice. Minor and negligible effects are deemed to be 'not significant'.

Assumptions and Limitations

- 10.7.11 At this stage, no site visit has been undertaken. As such, the Historic Environment Summary of Existing Baseline has relied upon data and records provided by third parties, and therefore it has been assumed that this information is accurate and up to date at the time of reporting.

10.8 Summary of Potential Likely Significant Effects

- 10.8.1 **Table 10-6** provides a summary of the proposed scope of the Historic Environment chapter of the ES. Please refer to **Section 10.6** where justification of the scope is provided.

Table 10-6: Summary of Elements to be Considered in the ES

Pathway	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
Change to the setting of designated and non-designated heritage assets (Built Heritage and Archaeology).	Scoped in	Scoped in	Scoped in
Direct effects on archaeology	Scoped in*	Scoped out	Scoped in*

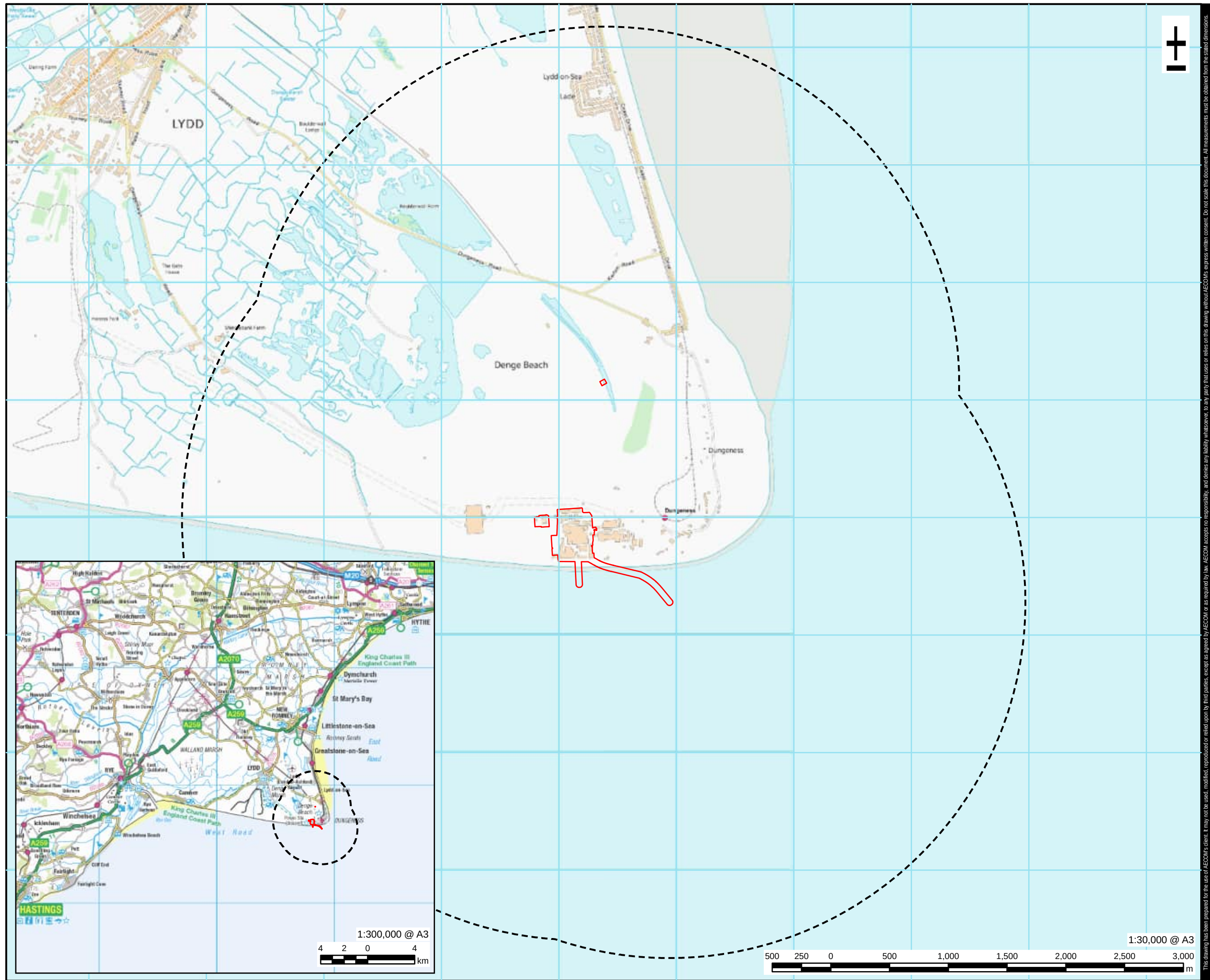
Pathway

**Initial Decommissioning
Works**

**Care and
Maintenance**

**Final Site
Clearance**

**To be confirmed following completion of the Desk-Based Assessment.*



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LEGEND

 The Works Area

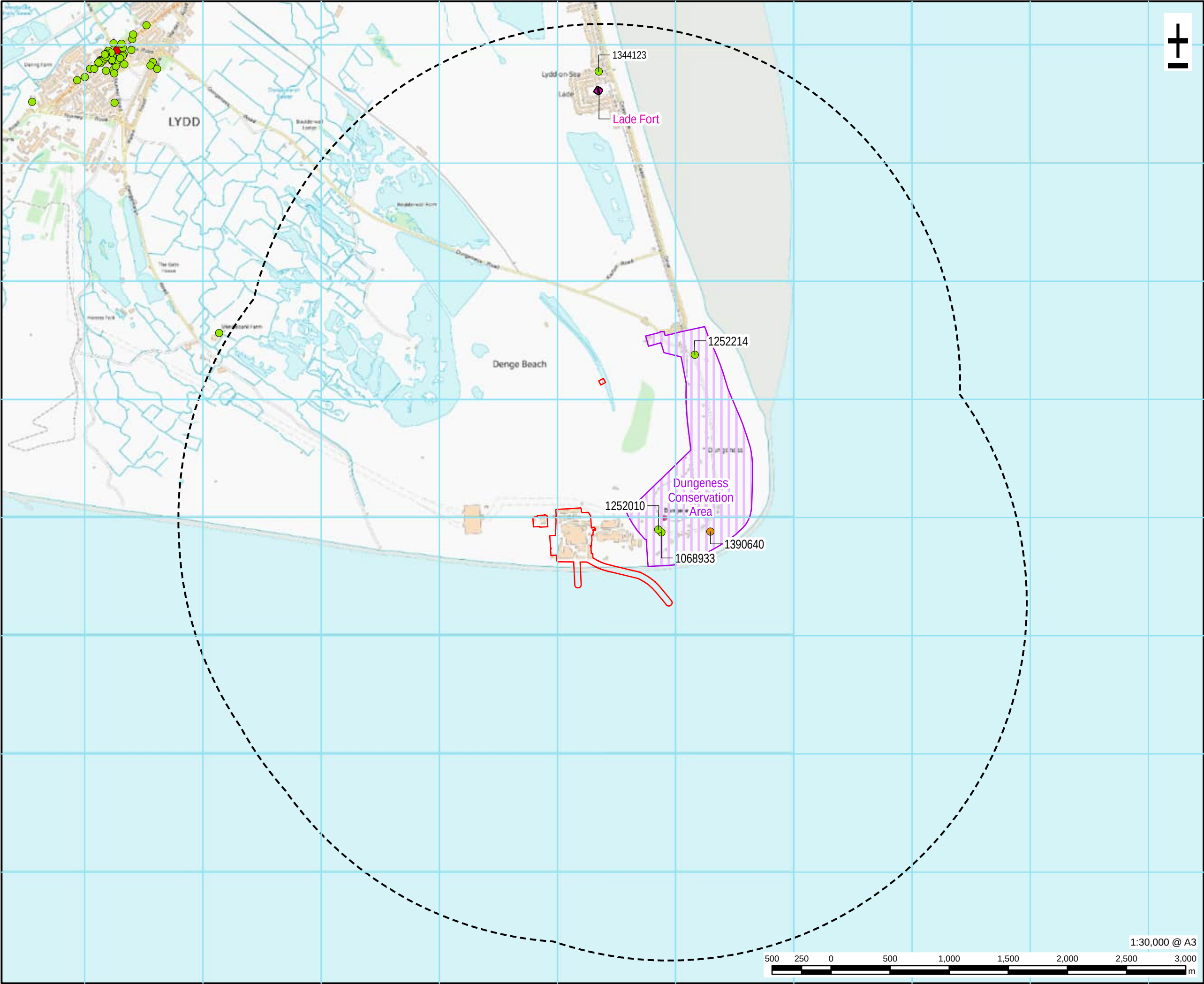
 3km Study Area

NOTES

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ISSUE PURPOSE
EIA Scoping Report
PROJECT NUMBER
60739933
FIGURE TITLE
Site Location Plan

DOCUMENT NUMBER



AECOM

PROJECT

Dungeness B Nuclear
Decommissioning

CLIENT

EDF Energy Nuclear
Generation Limited

CONSULTANT

AECOM Limited
Aldgate Tower
2 Leman Street
London, E1 8FA
www.aecom.com

LEGEND

- The Works Area
- 3km Study Area
- Designated Heritage Assets**
- Conservation Area
- Scheduled Monument
- Listed Buildings - Grade**
- I
- II*
- II

NOT PROTECTIVELY MARKED

NOTES

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EIA Scoping Report

PROJECT NUMBER

60739933

FIGURE TITLE

Designated Heritage Assets

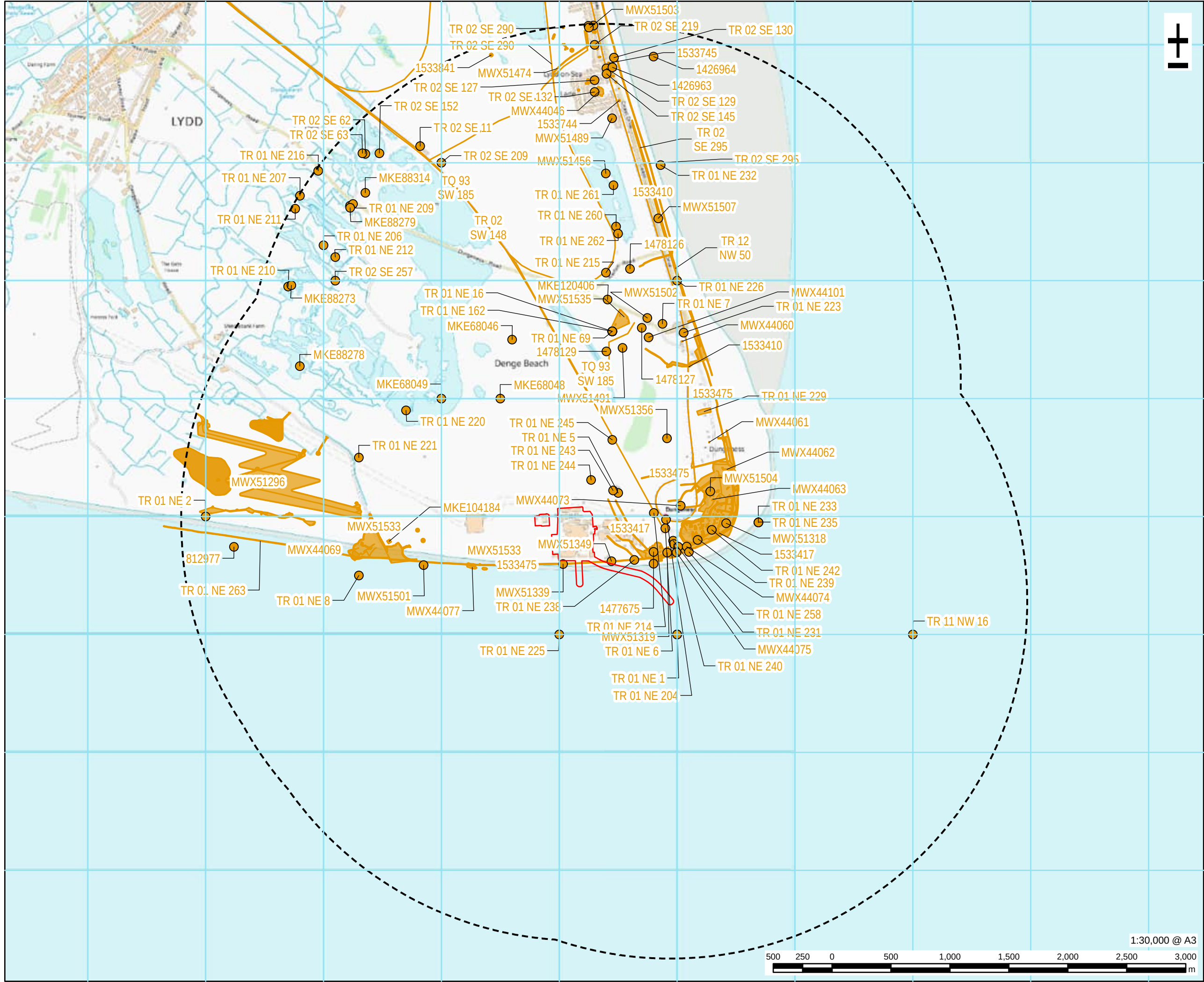
FIGURE NUMBER

Figure 10-2

REV

0

DOCUMENT NUMBER



PROJECT

Dungeness B Nuclear
Decommissioning

CLIENT

EDF Energy Nuclear
Generation Limited

CONSULTANT

AECOM Limited
Aldgate Tower
2 Leman Street
London, E1 8FA
www.aecom.com

LEGEND

- The Works Area
- 3km Study Area
- Non-Designated Terrestrial Heritage Assets**
- Terrestrial Monument (Point)
- Monument (Line)
- Monument (Polygon)

NOT PROTECTIVELY MARKED

NOTES

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EIA Scoping Report

PROJECT NUMBER

60739933

FIGURE TITLE

Non-Designated Terrestrial Heritage
Assets

FIGURE NUMBER

Figure 10-3

REV

0

DOCUMENT NUMBER

11. Human Health

11.1 Introduction

- 11.1.1 This chapter sets out the proposed scope and methodology for the assessment of effects of the Proposed Works on Human Health. This has been informed by a review of the environmental baseline conditions, and consideration of the anticipated pathways and receptors where likely significant effects could arise as a result of the Proposed Works.
- 11.1.2 This chapter should be read in conjunction with the description of the Proposed Works presented in **Chapter 2: The Decommissioning and Dismantling Process**.
- 11.1.3 Other relevant topics will also inform the Human Health assessment. These are as follows:
- **Chapter 6: Air Quality;**
 - **Chapter 9: Climate Change;**
 - **Chapter 12: Landscape and Visual;**
 - **Chapter 14: Noise and Vibration;**
 - **Chapter 15: Socio-Economics;**
 - **Chapter 16: Soils and Geology;**
 - **Chapter 17: Traffic and Transport;** and
 - **Chapter 19: Water Environment and Flood Risk.**

11.2 Relevant Legislation, Policy and Guidance

Legislation

- 11.2.1 Legislation which is relevant to the assessment of effects on Human Health is presented in **Table 11-1**.

Table 11-1: Legislation Relevant to Human Health

Legislation	Legislation details
Health and Care Act ¹⁹⁸	In April 2022, the Government passed a new Health and Care Act 2022. The Act is relevant to Human Health as it sets national priorities for improving population health and reducing health inequalities, aligning with assessing potential health impacts and the consideration of vulnerable groups.
Health and Safety at Work Act ¹⁹⁹	The Health and Safety at Work Act was established in 1974. This legislation sets out that employers must

¹⁹⁸ Health and Care Act 2022. (online). Available at: <https://www.legislation.gov.uk/ukpga/2022/31/contents> (Accessed 30/09/2025)

¹⁹⁹ Health and Safety at Work etc. Act 1974 (as amended) (online). Available at: <https://www.legislation.gov.uk/ukpga/1974/37/contents> (Accessed 30/09/2025)

Legislation**Legislation details**

protect the 'health, safety and welfare' of all employees in the workplace, as well as others on the premises.

Policy

- 11.2.2 Policy relating to Human Health and relevant to the assessment of effects of the Proposed Works is presented in **Table 11-2**.

Table 11-2: Policy Relevant to Human Health

Policy	Policy details
NPPF ²⁰⁰	Section 8 of the NPPF "Promoting healthy and safe communities" states that policies should aim to achieve healthy, inclusive, and safe places which: promote social interaction; are safe and accessible; and enable and support healthy lives.
Folkestone and Hythe District Core Strategy Review ²⁰¹	The Core Strategy Review outlines how the council plans for the district to comprise sustainable, distinctive, healthy and cohesive communities where residents enjoy the advantages of living locally and having good access to services, opportunities and green spaces. Policy CSD4 specifically focuses on delivering a coherent network of green infrastructure, open spaces and recreation provision across the district, including in new development. This has a direct bearing on healthy communities (physical activity, mental health, access to nature) and on social inclusion by making those spaces accessible to all.
Folkestone and Hythe District Council Places and Policies Local Plan (2020) ²⁰²	The Local Plan sets out priorities for nature and the wider environment. Of relevance to this human health is: Policy HW2: Requires new development to consider health and wellbeing impacts. Where adverse impacts are identified, appropriate mitigation must be provided or secured through planning conditions or obligations.

Guidance

- 11.2.3 Guidance which is relevant to the assessment of effects on Human Health is presented in **Table 11-3**.

²⁰⁰ UK Government, (2024). National Planning Policy Framework. (online). Available at: [National Planning Policy Framework](#) (Accessed 30/09/2025)

²⁰¹ Folkestone and Hythe District Council (2022). Core Strategy Review (online). Available at: [Core Strategy Review – Folkestone & Hythe District Council](#) (Accessed 30/09/2025)

²⁰² Folkestone and Hythe District Council. (2020). Places and Policies Local Plan. (online). Available at: <https://www.folkestone-hythe.gov.uk/planning-policy/adopted-development-plan> (Accessed: 30/09/2025).

Table 11-3: Guidance Relevant to Human Health

Guidance	Guidance details
Guide to Effective Scoping of Human Health in Environmental Impact Assessment ²⁰³	In November 2022, the IEMA (now ISEP) published guidance on scoping human health as part of EIA. IEMA 'Guide to Effective Scoping of Human Health in Environmental Impact Assessment' (2022) guidance provides a framework for scoping health in EIA, including identifying relevant health determinants, vulnerable populations, and appropriate geographical scope. It emphasises the importance of proportionality and focusing on likely significant effects that are directly attributable to the works. The guidance has informed the scoping process for the human health assessment and ensures that all potential health pathways are considered.
Determining Significance for Human Health in Environmental Impact Assessment ²⁰⁴	IEMA (now ISEP) also published guidance on assessing human health as part of EIA in November 2022. Prior to this guidance, there was no consolidated methodology or practice for the assessment of effects on human health. The human health assessment will be based on this guidance.

11.3 Baseline Conditions

Data Gathering Methodology

11.3.1 Baseline data to support the Scoping Report have been collected through a desk-based research exercise using publicly available sources, documents, and web-based applications. The following overview of baseline health and wellbeing indicators is based on the following data sources:

- Office for National Statistics (ONS) 2021 Census Data²⁰⁵;
- ONS Claimant Count September 2025²⁰⁶;
- Office for Health Improvement and Disparities (OHID) Local Authority Profiles²⁰⁷;
- OHID Local health, public health data for small geographic areas²⁰⁸; and
- ONS Population Projections – Local authority based by single year of age 2018)²⁰⁹.

²⁰³ Institute of Environmental Management and Assessment (IEMA) (2022) Guide to Effective Scoping of Human Health in Environmental Impact Assessment (online). Available at: [iema-eia-guide-to-effective-scoping-of-human-health-nov-2022.pdf](#) (Accessed 30/09/2025)

²⁰⁴ IEMA (2022) *Determining Significance for Human Health in Environmental Impact Assessment* (online). Available at: [iema-eia-guide-to-determining-significance-for-human-health-nov-2022.pdf](#) (Accessed 30/09/2025)

²⁰⁵ Office for National Statistics (ONS) 2021 Census Data. (online). Available at: [2021 Census - Census of Population - Data Sources - home - Nomis - Official Census and Labour Market Statistics](#) (Accessed 01/12/2025)

²⁰⁶ ONS (2025) Claimant Count (online). Available at: [Claimant Count : K02000001 UK : People : SA : Thousands - Office for National Statistics](#) (Accessed 30/09/2025)

²⁰⁷ Office for Health Improvement and Disparities (2025) Local Authority Health Profiles (online). Available at: [Local Authority Health Profiles | Fingertips | Department of Health and Social Care](#) (Accessed 01/12/2025)

²⁰⁸ Office for Health Improvement and Disparities (2025) Public health data for small geographic areas (online). Available at: [Local health, public health data for small geographic areas | Fingertips | Department of Health and Social Care](#) (Accessed 01/12/2025)

²⁰⁹ ONS (2022) Subnational population projections for England: 2022-based. (online). Available at: [Subnational population projections for England - Office for National Statistics](#) (Accessed 01/12/2025)

- 11.3.2 The baseline will be updated as required, as part of the EIA, using the same sources. However, no surveys are proposed as part of the Human Health baseline assessment.

Study Area

- 11.3.3 The baseline assessment set out below includes a description of the local population and health profile, followed by an identification of any nearby facilities or assets which are relevant to health and wellbeing.
- 11.3.4 The Works Area is within the ward of Walland and Denge Marsh; for the local population and health profile, this ward has been used as the Study Area for this baseline assessment. The ward falls within Folkestone and Hythe district, Kent County, and the South East region, all of which will be used in the assessment as comparators, along with the English national average.
- 11.3.5 To identify nearby facilities or assets which are relevant to health and wellbeing, a 1km radius from the Works Area has been used.
- 11.3.6 The Study Area used to assess health effects within the ES will be confirmed as part of the EIA process and will reflect the study areas used by other EIA disciplines which are drawn upon to inform the human health assessment.

Summary of Existing Baseline

Local Population and Health Profile

- 11.3.7 Indicators deemed relevant to likely health impacts of the Proposed Works for each area have been identified, with data relating to these and the comparative geographies set out in **Table 11-4**.

Table 11-4: Human Health Baseline Indicators

	Walland and Denge Marsh	Folkestone and Hythe	Kent	South East	England
Population (2021)	7,869	109,759	1,576,067	9,278,063	56,490,047
Population aged under 16 (%) (2021)	16.5	16.6	19.0	18.6	18.6
Population aged 65+ (%) (2021)	26.2	25.0	20.3	19.4	18.4
Claimant Count (%) (September 2025)	3.4	3.8	3.3	3.1	4.1
Economically Active Unemployment Rate 2021 (%)	2.7	3.2	3.1	3.3	3.5
General Health – good or very good (%) (2021)	74.9	78.2	82.2	84.0	82.2
General Health – bad or very bad (%) (2021)	7.4	6.5	6.0	4.2	5.2

	Walland and Denge Marsh	Folkestone and Hythe	Kent	South East	England
Life expectancy at birth (female) (2021 - 2023) ²¹⁰	81.8	82.6	83.3	84.1	83.1
Life expectancy at birth (male) (2021-2023)	81.6	77.8	79.3	80.3	79.1
Overweight adults (%) (2023/24)	-	68.9	64.8	63.2	64.5
Obese children (year 6) (%) (2023/24)	-	20.7	21	19.2	22.1
Smoking prevalence in adults (%) (2023)	-	6.2	11.4	10.6	11.6
Mortality rate from cardiovascular disease (2023)	-	56.2	66.4	62.1	77.4
Physically inactive adults (%) (2023)	-	28.6	33.1	29.5	32.6

Local Facilities and Assets

- 11.3.8 There are two community facilities within 1km of the Works area. The first is the Dungeness Railway Station (approximately 600m east of the Works Area), which forms part of the Romney, Hythe & Dymchurch Railway. The station hosts community events and includes amenities such as a restaurant, gift shop, ticket office, and a picnic area. The second is the Dungeness Lighthouse and Roundhouse, which is located approximately 500m east of the Works Area. The Lighthouse and Roundhouse can be visited by the public and also booked for private events.
- 11.3.9 The Dungeness Bird Observatory, a local asset, is located approximately 300m north-east of Area A of the Works Area. This facility forms part of the wider Dungeness National Nature Reserve, which surrounds the Works Area.
- 11.3.10 There is a network of Public Right of Way (PRoW) including publicly accessible footpaths and recreational routes which traverse the area surrounding the Works Area within 1km which include: Footpath 0162/HL 30, Footpath 0162/HL 4, Footpath 0162/HL 29, and Footpath 0162/HL 31. These footpaths are shown on **Figure 2-1**.
- 11.3.11 The Works Area is also adjacent to sections of the Dungeness Beach (to the south and east) and Denge Beach (to the west), which may be used as informal open space and recreational walking routes.

²¹⁰ Ward-level life expectancy is only available up to 2021, as such, the values from this year have been used against values for other geographical levels from 2023. It is reasonable to assume that these figures still provide a valid and accurate baseline and comparison of the Study Area.

- 11.3.12 There are no further local facilities or assets directly relevant to health and wellbeing within 1km of the Works Area.

Summary of Future Baseline

- 11.3.13 Office for National Statistics population projections show that over the 25-year period from 2022 to 2047 (which is the maximum range available), the population across all available relevant geographies is expected to grow. By 2047, the population of Folkestone and Hythe is expected to rise from 110,356 in 2022, to 125,398, representing an increase of 13.6%. This rate of growth is expected to be less than the growth over the same period in Kent (15.9%), but higher than the South East (13.3%) and England (12.7%). A breakdown of these projections is shown in **Table 11-5**.

Table 11-5: Population Projections

Projected Year	Folkestone and Hythe	Kent	South East	England
2022	110,356	1,594,467	9,387,286	57,112,542
2032	116,921	1,715,130	9,986,840	60,759,847
2042	122,580	1,805,039	10,423,741	63,261,582
2047	125,398	1,848,555	10,636,045	64,388,886

- 11.3.14 In terms of the local economy, it would be reasonable to expect that employment and Gross Value Added (GVA) would increase, associated with the expected increase in population.
- 11.3.15 Due to the broad range of individual and environmental determinants that can influence physical and mental health outcomes, the future community health baseline over the long-term is highly uncertain. Due to this uncertainty, for the purposes of this assessment, it is assumed that the future baseline relevant for the Proposed Works would be unchanged from the current baseline.

11.4 Consultation

- 11.4.1 No specific consultation relevant to the Human Health assessment is proposed. Should comments be included within the Pre-application Opinion that require further discussion, these would be discussed with relevant parties during the preparation of the ES.

11.5 Scope for Mitigation

- 11.5.1 Where necessary, embedded mitigation and monitoring measures will be proposed to reduce impacts at sensitive locations within and around the Works Area.
- 11.5.2 Embedded mitigation requirements will be determined based on an evaluation of the results of the health assessment, which will incorporate the findings of the chapters listed in **Section 11.1** as well as reflecting the embedded mitigation set out for those topics.

11.6 Potential Effects

- 11.6.1 The health and wellbeing of individuals is determined by a broad range of individual constitutional and behavioural factors (or 'determinants'), as well as broader environmental, social, and economic factors. Some factors are direct and obvious, whilst others are indirect. IEMA Health Assessment Guidance provides a list of determinants to be scoped in or out of the human health impact assessment. The basis of scoping health-related determinants was derived from a review of the project against those contained in the IEMA Health Assessment Guidance.
- 11.6.2 **Table 11-6** is broadly based on the IEMA guidance and lists the main determinants of health for consideration in scoping health assessments. Each determinant of health in the IEMA guidance has been reviewed to determine whether it should be 'scoped in' or 'scoped out' for the Proposed Works, on the basis of the baseline presented above and the potential impacts.
- 11.6.3 Any assessment of effects during the Care and Maintenance Phase would be qualitative and based on professional judgement and the material available at the point of submission.
- 11.6.4 Where determinants are scoped in for the Final Site Clearance Phase, it is currently assumed that the effects identified for the Initial Decommissioning Works will be representative of effects during the Final Site Clearance Phase. The Final Site Clearance Phase will be considered qualitatively, applying professional judgement.

Table 11-6: Proposed Scope of Human Health Assessment

Wider Determinant of Health	Indicative Dismantling Works	Care and Maintenance Phase	Final Site Clearance	Justification
Physical Activity	Scoped Out	Scoped Out	Scoped Out	There are not expected to be any behavioural change effects relating to physical activity which are not already covered under other determinants of health below.
Risk Taking Behaviour	Scoped Out	Scoped Out	Scoped Out	There are not expected to be any behavioural change effects on the local population as a result of the Proposed Works. Issues such as addictions and communicable diseases are unlikely to be relevant.
Diet and Nutrition	Scoped Out	Scoped Out	Scoped Out	Given the nature of the Proposed Works, there are not anticipated to be any direct effects on the local population relating to diet and nutrition which should be assessed under this determinant.
Housing	Scoped Out	Scoped Out	Scoped Out	The Proposed Works do not include provision of housing, loss of housing or are likely to lead to displacement of housing.
Relocation	Scoped Out	Scoped Out	Scoped Out	Given the nature of the Proposed Works and the Works Area, the Proposed Works are not anticipated to require any relocation of residents, businesses or other stakeholders.
Open Space, Leisure, and Play	Scoped In	Scoped Out	Scoped In	There are no open spaces or recreational facilities that could be affected directly, and a limited number of open space and recreational facilities within the study area and which could be affected indirectly by the Proposed Works during the Initial Decommissioning Works and Final Site Clearance. Given the nature of the Care and Maintenance Phase it is not anticipated that there would be any effect on open space and recreational facilities within the study area during this phase.
Transport Modes, Access and Connections	Scoped In	Scoped Out	Scoped In	While the site is remote from public transport facilities, the Proposed Works may impact highways due to infrequent abnormal indivisible loads . This, together with potential impacts on active travel opportunities, could have various knock-on implications for health during the Initial Decommissioning Works and Final Site Clearance. The health assessment will draw on assessments and conclusions laid out in Chapter 17: Traffic and Transport. Given the nature of the Care and Maintenance Phase it is not anticipated that there would be any effect on transport modes, access and connections within the study area during this phase.

Wider Determinant of Health	Indicative Dismantling Works	Care and Maintenance Phase	Final Site Clearance	Justification
Community Safety	Scoped Out	Scoped Out	Scoped Out	Given the nature and scale of the Proposed Works, which would be primarily undertaken within the secure the terrestrial areas of the Works Area (Areas A, B and C), and would be segregated from the public through methods such as site perimeter fencing, the Proposed Works are not anticipated to impact community safety.
Social participation, interaction and support	Scoped In	Scoped Out	Scoped In	The changes represented by the Proposed Works during the Initial Decommissioning Works and Final Site Clearance may affect local people's sense of wellbeing and social cohesion, and this determinant is therefore scoped in. Given the nature of the Care and Maintenance Phase it is not anticipated that there would be any effect on social participation, interaction and support within the study area during this phase.
Community identity, culture, resilience and influence	Scoped In	Scoped In	Scoped In	The employment and wider activities associated with Dungeness B may be an important element of local community identity. Therefore this determinant has been scoped in for all phases of the Proposed Works.
Education and training	Scoped In	Scoped Out	Scoped In	Due to the scale and duration of the Initial Decommissioning Works and the Final Site Clearance, there is possibility for education and training opportunities. The Care and Maintenance Phase would be considerably smaller in scale, due to the long duration of the phase, education and training opportunities may also be possible during this phase. The health assessment will draw on assessments and conclusions laid out in Chapter 15: Socio-economics .
Employment and income	Scoped In	Scoped Out	Scoped In	Due to the scale and duration of the Initial Decommissioning Works and the Final Site Clearance there is expected to be an impact employment and income. The health assessment will draw on assessments and conclusions laid out in Chapter 15: Socio-economics . The Care and Maintenance Phase would be considerably smaller in scale and unlikely to have significant effects related to employment and income.
Climate change mitigation and adaption	Scoped In	Scoped Out	Scoped In	The Proposed Works during the Initial Decommissioning Works and Final Site Clearance phases may impact human health through altering pollutant emissions that drive climate change. The health assessment will draw on assessments and conclusions laid out in Chapter 9: Climate Change .

Wider Determinant of Health	Indicative Dismantling Works	Care and Maintenance Phase	Final Site Clearance	Justification
				Given the nature of the Care and Maintenance Phase it is not anticipated that there would be any effect on climate change mitigation and adaption within the study area during this phase.
Air quality	Scoped In	Scoped Out	Scoped In	The Proposed Works may impact human health through changes in air quality during the Initial Decommissioning Works and Final Site Clearance. The health assessment will draw on assessments and conclusions laid out in Chapter 6: Air Quality. Given the nature of the Care and Maintenance Phase it is not anticipated that there would be any effect on air quality within the study area during this phase.
Water quality	Scoped In	Scoped Out	Scoped In	The Proposed Works may impact human health through contamination of water resources through transmission through surface and/or groundwater, including flooding, during the Initial Decommissioning Works and Final Site Clearance. The health assessment will draw on assessments and conclusions laid out in Chapter 19: Water Environment and Flood Risk. During the Care and Maintenance Phase, intrusive activities would be limited; however, residual contamination and the long-term condition of site assets could present a potential pathway to water quality effects if not appropriately managed. Ongoing inspection, maintenance and asset management arrangements would be in place to prevent contamination and loss of containment. On this basis, no significant effects on water quality, and subsequently human health are anticipated during the Care and Maintenance Phase.
Land quality	Scoped In	Scoped Out	Scoped In	The Proposed Works may impact human health through work in and around potential areas of contamination, during the Initial Decommissioning Works and Final Site Clearance. The health assessment will draw on assessments and conclusions laid out in Chapter 16: Soils and Geology. During the Care and Maintenance Phase, intrusive activities would be limited; however, residual contamination and the long-term condition of site assets could present a potential pathway to land-quality effects if not appropriately managed. Ongoing inspection, maintenance and asset management arrangements would be in place to prevent degradation and loss of containment. On this basis, no significant effects on land quality, and subsequently human health are anticipated during the Care and Maintenance Phase.

Wider Determinant of Health	Indicative Dismantling Works	Care and Maintenance Phase	Final Site Clearance	Justification
Noise	Scoped In	Scoped Out	Scoped In	The Proposed Works may impact human health through noise effects during the Initial Decommissioning Works and Final Site Clearance. The health assessment will draw on assessments and conclusions laid out in Chapter 14: Noise and Vibration . Given the nature of the Care and Maintenance Phase it is not anticipated that there would be any effect on noise within the study area during this phase.
Vibration	Scoped Out	Scoped Out	Scoped Out	A detailed assessment of vibration is scoped out of the EIA (see Chapter 14: Noise and Vibration for further details) and therefore it is not anticipated that there would be any relevant effects on human health within the study area during the Proposed Works.
Radiation	Scoped Out	Scoped Out	Scoped Out	Radiological effects related to the Proposed Works will be covered outside of the ES in line with relevant legislation and associated licenses/permits.
Health and social care services	Scoped In	Scoped Out	Scoped In	While there are no healthcare and social care facilities within the immediate local area, the health assessment will consider whether indirect impacts relating to an incoming workforce and transport severance during the Initial Decommissioning Works and Final Site Clearance could affect access to healthcare as a determinant of human health, drawing on analysis within Chapter 15: Socio-economics . Given the nature of the Care and Maintenance Phase it is not anticipated that there would be any effect on health and social care services within the study area during this phase.
Built environment	Scoped Out	Scoped Out	Scoped Out	The Proposed Works are located in a rural area and are therefore not anticipated to impact the built environment during the Initial Decommissioning Works and Final Site Clearance. Given the nature of the Care and Maintenance Phase it is not anticipated that there would be any effect on built environment within the study area during this phase.
Landscape and visual	Scoped In	Scoped In	Scoped In	Given that the Works Area is situated in a unique landscape, it is possible that the Proposed Works will affect the scenic beauty of nearby landscapes and viewpoints, which could in turn adversely affect sense of place and other amenity benefits, potentially leading to adverse mental health effects. The health assessment will draw on assessments and conclusions laid out in Chapter 12: Landscape and Visual .

Wider Determinant of Health	Indicative Dismantling Works	Care and Maintenance Phase	Final Site Clearance	Justification
Wider societal infrastructure and resources	Scoped Out	Scoped Out	Scoped Out	Given the nature of the Proposed Works and limited scale, the Proposed Works are not anticipated to impact wider societal infrastructure and resources.

11.7 Assessment Methodology

- 11.7.1 The proposed generic project-wide approach to the assessment methodology is set out in **Chapter 5: EIA Methodology**. This section provides a summary of the assessment methodology for human health.

Approach and Assessment Criteria

- 11.7.2 As mentioned above, the human health assessment will be based on IEMA guidance and will consider the potential impacts for each phase of the Proposed Works. As set out within the IEMA guidance, health is influenced by a range of factors, termed the 'wider determinants of health', which span bio-physical, social, behavioural, economic and institutional dimensions.
- 11.7.3 The significance of human health effects is assessed on the basis of the sensitivity of receptors and magnitude of impacts. Where possible, the impacts identified in the assessment will be appraised against relevant national standards. Where relevant standards do not exist, professional experience and expert judgement of the author will be applied and justified.

Sensitivity

- 11.7.4 Sensitivity of human health receptors including general populations and potentially vulnerable sub-populations is driven by a number of factors which are set out in **Table 11-7** and are based on IEMA guidance. Specific values in terms of sensitivity are not attributed to population health due to the diverse range of determinants and indicators that can determine overall health. However, the assessment takes account of the qualitative (rather than quantitative) sensitivity of relevant populations and their likely ability to adapt to change. Sensitivity can be informed by baseline data, including demographic statistics, public health statistics and deprivation mapping. It can also be informed by professional judgements about the characterisation of the relevant population, e.g., in relation to their capacity to adapt and the likely presence of vulnerable groups.

Table 11-7: Sensitivity Criteria for Human Health Receptors

Level of Sensitivity	Indicative Criteria
High	High levels of deprivation (including pockets of deprivation); reliance on shared resources (between the population and the Proposed Works); existing wide inequalities between the most and least healthy; a community whose outlook is predominantly anxiety or concern; people who are prevented from undertaking daily activities; dependents; people with very poor health status; and/or people with a very low capacity to adapt.
Medium	Moderate levels of deprivation; few alternatives to shared resources; existing widening inequalities between the most and least healthy; a community whose outlook is predominantly uncertainty with some concern; people who are highly limited from undertaking daily activities; people providing or requiring a lot of care; people with poor health status; and/or people with a limited capacity to adapt.
Low	Low levels of deprivation; many alternatives to shared resources; existing narrowing inequalities between the most and least healthy; a community whose outlook is predominantly ambivalence with some concern; people who are slightly limited from undertaking

Level of Sensitivity	Indicative Criteria
	daily activities; people providing or requiring some care; people with fair health status; and/or people with a high capacity to adapt.
Very low	Very low levels of deprivation; no shared resources; existing narrow inequalities between the most and least healthy; a community whose outlook is predominantly support with some concern; people who are not limited from undertaking daily activities; people who are independent (not a carer or dependent); people with good health status; and/or people with a very high capacity to adapt.

Magnitude of Impact

- 11.7.5 Magnitude of impact is driven by a number of factors which are set out in **Table 11-8**, based on IEMA guidance. Magnitude of impact reflects the scale of the exposure of the population to an impact; whether the impact is one-off or continuous; the likely nature of the human health impact; the permanence of the change; and the proportion of the relevant study area population that would be affected. Magnitude of impact will be informed by the findings of other ES chapters detailed in **Section 11.1**, including their zones of influence and expected degrees of change.

Table 11-8: Magnitude Criteria for Human Health

Magnitude	Description
High	High exposure or scale; long-term duration; continuous frequency; severity predominantly related to mortality or changes in morbidity (physical or mental health) or very severe illness/injury outcomes; majority of population affected; permanent change; substantial service quality implications
Medium	Low exposure or medium scale; medium-term duration; frequent events; severity predominantly related to moderate changes in morbidity or moderate change in quality of life; large minority of population affected; gradual reversal; small service quality implications
Low	Very low exposure or small scale; short-term duration; occasional events; severity predominantly related to minor change in morbidity or moderate change in quality of life; small minority of population affected; rapid reversal; slight service quality implications
Very low	Negligible exposure or small scale; very short-term duration; one off frequency; severity predominantly relates to minor change in quality of life; very few people affected; immediate reversal once activity complete; no service quality implications.

Significance of Effects

- 11.7.6 The overall effects of the Proposed Works are defined as one of the following, as referenced in **Chapter 5: EIA Methodology**.
- **Beneficial** - an advantageous or beneficial effect on a receptor;
 - **Negligible** - an imperceptible effect on a receptor;
 - **Adverse** - a disadvantageous or negative effect on a receptor; or
 - **No effect** – no discernible effects on a receptor.
- 11.7.7 Duration of effect is also considered, with more weight given to reversible long-term or permanent changes than to temporary ones. For the purposes

of this assessment, short-term effects are of one year or less, medium-term effects of one to five years and long-term effects for over five years.

- 11.7.8 Where an effect is assessed as being beneficial or adverse, the effect has been classified as major, moderate, minor or negligible. The assessment of significance is informed by considering the sensitivity of the receptor and the magnitude of impact. The overarching significance matrix that will be used to classify effects is detailed in **Chapter 5: EIA Methodology** and is shown in **Table 11-9** below.

Table 11-9: Significance Matrix

Magnitude Value and sensitivity of receptor

	High	Medium	Low	Very Low
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Minor
Low	Moderate	Minor	Minor	Negligible
Very Low	Minor	Minor	Negligible	Negligible

Assumptions and Limitations

- 11.7.9 The assessment of the significance of effects will be undertaken against the benchmarks of current human health baseline conditions prevailing around the Proposed Works, as far as is possible within the limitations of such a dataset. Baseline data is also subject to a time lag between collection and publication. As with any dataset, these conditions may be subject to change over time which may influence the findings of the assessment. Baseline conditions reported in **Section 11.3** are based on the latest data available at the time of writing but will be updated in the assessment if new data become available.
- 11.7.10 The effects of the Proposed Works will be informed by other environmental topic assessments as listed in **Section 11.1**. Where this is the case, the assumptions and limitations relevant to those topics will also apply to the assessment of health effects.

11.8 Summary of Potential Likely Significant Effects

- 11.8.1 **Table 11-10** outlines the potential significant effects relevant to human health which will be considered in the ES. Please refer to **Section 11.6** where justification of the scope is provided.

Table 11-10: Summary of Human Health Potential Likely Significant Effects by Phase

Type of Effect	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
Physical Activity	Scoped out	Scoped out	Scoped out
Risk Taking Behaviour	Scoped out	Scoped out	Scoped out
Diet and Nutrition	Scoped out	Scoped out	Scoped out
Housing	Scoped out	Scoped out	Scoped out
Relocation	Scoped out	Scoped out	Scoped out

Type of Effect	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
Open Space, Leisure and Play	Scoped in	Scoped out	Scoped in*
Transport Modes, Access and Connections	Scoped in	Scoped out	Scoped in*
Community Safety	Scoped out	Scoped out	Scoped out
Social participation, interaction and support	Scoped in	Scoped out	Scoped in*
Community identity, culture, resilience and influence	Scoped in	Scoped in*	Scoped in*
Education and training	Scoped in	Scoped out	Scoped in*
Employment and income	Scoped in	Scoped out	Scoped in*
Climate change mitigation and adaption	Scoped in	Scoped out	Scoped in*
Air quality	Scoped in	Scoped out	Scoped in*
Water quality	Scoped in	Scoped out	Scoped in*
Land quality	Scoped in	Scoped out	Scoped in*
Noise	Scoped in	Scoped out	Scoped in*
Vibration	Scoped out	Scoped out	Scoped out
Radiation	Scoped out	Scoped out	Scoped out
Health and social care services	Scoped in	Scoped out	Scoped in*
Built environment	Scoped out	Scoped out	Scoped out
Landscape and visual	Scoped in	Scoped in*	Scoped in*
Wider societal infrastructure and resources	Scoped out	Scoped out	Scoped out

* Applying professional judgement, qualitative assessments of the Care and Maintenance and Final Site Clearance phases will be undertaken

12. Landscape and Visual

12.1 Introduction

- 12.1.1 This chapter sets out the proposed scope and methodology for assessing the potential effects of the Proposed Works on landscape character and visual amenity (i.e. landscape and visual). The scope has been informed by a review of the existing environmental baseline and consideration of the anticipated pathways and receptors where likely significant effects could arise as a result of the Proposed Works.
- 12.1.2 The landscape and visual impact assessment process requires that a clear distinction be drawn between landscape and visual effects:
- Landscape effects: effects on the landscape (including townscape and seascape) as a resource in its own right; and
 - Visual effects: effects on specific views and on the general visual amenity experienced by people.
- 12.1.3 For the purposes of the landscape and visual impact assessment, impacts will be considered as the action which results in an effect and are identified as adverse or beneficial as appropriate.
- 12.1.4 The following figures have been prepared to support this chapter:
- **Figure 12-1: Zone of Theoretical Visibility** of the tallest existing building (the reactor building) based on the four corners of the building.
 - **Figure 12-2: Landscape Designations** including National Parks/National Landscapes/Registered Parks and Gardens, Conservation Areas, Special Landscape Areas (SLAs), Local Landscape Areas (LLAs) as defined in Folkestone and Hythe Places & Policies Local Plan 2020.
 - **Figure 12-3: Landscape Character Areas** showing National Character Area (NCA) 120: Wealden Greensand, NCA 119: North Downs, NCA 123: Romney Marshes and Landscape Character Areas from the Romney Marsh Landscape Assessment 2016.
- 12.1.5 This chapter should also be read in conjunction with the description of the Proposed Works presented in **Chapter 2: The Decommissioning and Dismantling Process** of this Scoping Report and relevant aspects of and **Chapter 10: Historic Environment** and **Chapter 18: Terrestrial Ecology**, in so far as they relate to landscape and visual issues.

12.2 Relevant Legislation, Policy, and Guidance

Legislation

- 12.2.1 Legislation which is relevant to the assessment of effects on landscape and visual is presented in **Table 12.1**.

Table 12-1: Legislation relevant to landscape and visual

Legislation	Legislation details
The European Landscape Convention (ELC) ²¹¹	The ELC was signed by the UK Government in 2006 and came into effect in March 2007. The ELC recognises landscape in law. It focuses specifically on landscape issues and highlights the importance of integration of landscape into areas of policy, to promote protection, management and planning of all landscapes including the assessment of landscape and analysis of landscape change. The ELC defines landscape as ‘an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.’ The ELC considers landscape as a whole (land or marine), from urban to rural areas, and whether special or degraded.

Policy

- 12.2.2 Policy relating to landscape and visual and relevant to the assessment of effects of the Proposed Works is presented in **Table 12-2**.

Table 12-2: Policy Relevant to Landscape and Visual

Policy	Policy details
Places and Policies Local Plan Adopted September 2020 ²¹²	Paragraph 6.121 to 6.1.25 Dungeness <i>6.121 Having evolved over centuries of isolation, interrelations and harsh lifestyles, the culture of Dungeness is unique. Traditionally, there was no road onto the spit and people had to move around by using contraptions called backstays, which were attached to a person's feet creating a large surface area, therefore making walking across shingle much easier.</i> <i>6.122 The Dungeness Shingle Landscape Character Area includes the settlement of Lydd. Dungeness is a unique environment within the UK, comprising extensive deposits of shingle, interspersed with smaller areas of farmland, wetland, and settlement. Shingle ridges further inland are well-established, while those at the sea's edge are very mobile, and the landform is constantly evolving. The earliest evidence for settlement on Romney Marsh has been found here, including prehistoric tools and pottery associated with Roman salt production. The area is of international importance for its wildlife and habitats, including its bird life, and the rare and often colourful plants which colonise the shingle, including low-lying prostrate vegetation. Much of the area is a National Nature Reserve and is popular with visitors.</i> <i>6.123 This is an extraordinarily evocative and powerful landscape, its mood constantly changing in response to light, weather, and season. The landscape is dominated by a combination of natural shingle (and associated vegetation) with a strong horizontal form, and large man-made vertical structures including lighthouses, Dungeness Nuclear Power Station, pylons, and sound mirrors. There are also structures associated with continuing military use of the area. The historic town of Lydd has strong visual and cultural connections with Dungeness. On Dungeness</i>

²¹¹ The European Landscape Convention.

²¹² Folkestone and Hythe District Council (2020a). Places and Policies Local Plan. (online). Available at: <https://www.folkestone-hythe.gov.uk/downloads/file/3598/places-and-policies-local-plan> (accessed 21/10/2025).

Policy**Policy details**

itself, settlement comprises fishermen's huts and temporary buildings, which give it a sense of impermanence, a quirky character, and a very strong sense of place.

6.124 This area, despite its well-established designations, is a victim of its own success. Drawn by the romanticism of the bleak, desolate fishing shed on the coast, 'weekenders' are gradually imposing order on the wilderness with smart, careful landscaping. There are still more permanent residents at Dungeness than there are temporary visitors, but this small change has caused a shift in the landscape towards something bordering well kept.

6.125 Given the uniqueness of Dungeness, planning applications should take into account and respect the following important designations and design advice:

- *Dungeness Conservation Area, and guidance in the Conservation Area Appraisal;*
- *The Article 4 Direction for the settlement; International, European, and National wildlife and biodiversity guidance, including for the Ramsar site;*
- *The Dungeness Shingle Landscape Character Assessment; and*
- *The emerging Folkestone & Hythe Heritage Strategy*

Policy NE3: Protecting the District's Landscapes and Countryside

Special Landscape Areas

Special Landscape Areas (SLAs) are defined as follows and shown on the Policies Map:

- *North Downs (including the scarp and crest);*
- *Old Romney Shoreline; and*
- *Dungeness.*

Proposals should protect or enhance the natural beauty of the Special Landscape Area. The Council will not permit development proposals that are inconsistent with this objective unless the need to secure economic and social wellbeing outweighs the need to protect the SLAs' county-wide landscape significance.

Local Landscape Areas

Local Landscape Areas are defined as follows and illustrated on the Policies Map:

- *Romney Marsh;*
- *Sandgate Escarpment and Seabrook Valley;*
- *Eaton Lands;*
- *Coolinge Lane and Enbrook Valley; and*
- *Mill Lease Valley.*

Proposals should protect or enhance the landscape character and functioning of Local Landscape Areas. The Council will not permit development proposals that are inconsistent with this objective unless the need to secure economic and social wellbeing outweighs the need to protect the area's local landscape importance.

Landscape Character Areas

Proposals should demonstrate that their siting and design are compatible with the pattern of natural and man-made features of the Landscape Character Areas, including their cultural and historical associations.

Opportunities for remediation and improvement of damaged landscapes will be taken as they arise.

Guidance

- 12.2.3 Guidance which is relevant to the assessment of effects on landscape and visual is presented in **Table 12-3**.

Table 12-3: Guidance Relevant to Landscape and Visual

Guidance	Guidance details
Guidelines for Landscape and Visual impact Assessment (GLVIA) (Third Edition) ²¹³	GLVIA3, published by the Landscape Institute and Institute of Environmental Management and Assessment in 2013, forms the primary guidance and methodology for assessment of landscape and visual effects.
Landscape Institute Technical Note 06/19: Visual Representation of Development Proposals ²¹⁴	This guidance aims to help select types of visualisations which are appropriate to the circumstances in which they will be used. It provides guidance as to appropriate techniques to capture site photography and produce appropriate visualisations.
Landscape Institute Technical Guidance Note: TGN-02-21- Assessing Landscape Value Outside National Designations ²¹⁵	This technical guidance note (TGN) provides information and guidance to landscape professionals and others who need to make judgments about the value of a landscape (outside national landscape designations). It is also intended to be of assistance to those who review these judgements, so that there is a common understanding of the approach.

12.3 Baseline Conditions

Data Gathering Methodology

- 12.3.1 The principal data source used to inform the current baseline conditions presented in this section beyond those identified in **Chapter 5: EIA Methodology** comprise the following:

- Data sites held within the Multi Agency Geographic Information for the Countryside (MAGIC) website²¹⁶;
- Natural England's National Character Area Profiles²¹⁷;
- Seascape Character assessment for the Dover Strait²¹⁸;
- The Landscape Assessment of Kent²¹⁹; and

²¹³ Landscape Institute and Institute of Environmental Management and Assessment (2013). Guidelines for Landscape and Visual Impact Assessment, 3rd Edition.

²¹⁴ Landscape Institute. 2019. Landscape Institute Technical Guidance Note. Visual Representation of Development Proposals.

²¹⁵ Landscape Institute. 2021. Landscape Institute Technical Guidance Note. Assessing landscape value outside national designations

²¹⁶ Defra Magic Map Application. (online). Available at: <https://magic.defra.gov.uk/magicmap.aspx> (Accessed 02/12/2025)

²¹⁷ Natural England. National Character Area Profiles. (online). Available at: <https://nationalcharacterareas.co.uk/> (Accessed 02/12/2025)

²¹⁸ Kent County Council. 2015. Seascape Character assessment for the Dover Strait (online). Available at: https://www.kent.gov.uk/_data/assets/pdf_file/0020/213068/Dover-Strait-seascape-character-assessment-summary.pdf (Accessed 02/12/2025)

²¹⁹ Kent County Council (2004). The Landscape Assessment of Kent (online). Available at: https://www.kent.gov.uk/_data/assets/pdf_file/0010/182368/Landscape-Assessment-of-Kent.pdf (Accessed 02/12/2025)

- Shepway District Council ²²⁰ Romney Marsh Landscape Character Assessment (2016)²²¹.

12.3.2 A project specific landscape walkover survey and photography from representative viewpoints will be undertaken in advance of the assessment to be presented in the ES.

Study Area

- 12.3.3 An initial Study Area of 10km from the outer edge of the Works Area has been identified for the landscape and visual assessment. The extent of the Study Area has been defined in accordance with good practice guidance, including GLVIA3, and informed by a review of the Proposed Works, initial evaluation of theoretical visibility by use of a ZTV, desk-based research, knowledge of the area and professional judgement. It is anticipated that significant landscape or visual effects will be unlikely beyond 10km noting the nature of the Initial Decommissioning Works and that a 10km Study Area is appropriate and proportionate.
- 12.3.4 The study area will be further refined following further desk-based review and site survey undertaken as part of the assessment process and tailored as required to ensure a proportional approach, focused on potential significant effects.

Surveys

- 12.3.5 An initial site visit has been undertaken to supplement the desk-based study and verify initial findings. The site visit was undertaken on a targeted basis using publicly accessible locations and informed by analysis of mapping and ZTV modelling to focus on likely key receptors. Identified landscape character units will be reviewed and amended where required to reflect existing conditions.
- 12.3.6 Further site surveys will be undertaken to confirm baseline conditions established by reference to published data, such as landscape character assessments covering the Study Area.
- 12.3.7 The surveys will include a single season (targeted as winter) of photography from representative viewpoints and note potential for mitigation as well as any specific landscape or visual baseline elements or potential impacts which will require consideration in the LVIA.
- 12.3.8 The site visits will also aid the identification of key visual receptor locations and establish the nature of the existing views. In addition to informing the baseline, the site visit will also guide judgements relating to nature of receptor (sensitivity), nature of effect (magnitude) and significance of effect and identify potential for mitigation and/or enhancement.

²²⁰ Shepway District Council was renamed Folkestone and Hythe District Council

²²¹ Romney Marsh Landscape Character Assessment (2016) available at [914-romney-marsh-local-character-assessment](#) (accessed 27/01/2026).

Summary of Existing Baseline

Works Area Context

- 12.3.9 Dungeness B is situated on the South Kent coast centred approximately at Ordnance Survey National Grid Reference Eastings 608091, Northings 116841 (See **Figure 12-1**). The Works Area covers approximately 20.97ha and is bounded by the English Channel to the south and surrounded by Denge Beach to the northeast and Denge Marsh to the north and west.
- 12.3.10 The Works Area itself comprises the existing Dungeness B. Following end of generation, Dungeness B is currently in the process of defueling. Dungeness A is located immediately to the east of Dungeness B and is currently being decommissioned by NRS. The presence of Dungeness A and B provides an industrialised context in what is predominantly a rural area.
- 12.3.11 The nearest town is Lydd, located approximately 4.3km north-west of the Works Area. There are several residential receptors in proximity to the Works Area, the closest of which are the houses and holiday rental accommodation along Dungeness Road, located approximately 125m north-east, at its closest point. Nearby commercial receptors include tourist attractions along Dungeness Road, such as the Prospect Cottage, Dungeness Lighthouse and Dungeness Station for the Romney, Hythe & Dymchurch Railway, located approximately 550m and 560m east respectively. There are also amenities along Dungeness Road, the closest of which is the Britannia Inn, located approximately 780m east of the Works Area.
- 12.3.12 The surrounding area immediately to the west and northwest of the Works Area is largely uninhabited with extensive areas of open shingle, intermixed with gravel workings and some areas of vegetation. Dungeness substation, Lydd military firing range, and Herons Park campsite and events venue are located approximately 410m west, 4km west, and 3.8km northwest, respectively, from the Works Area.
- 12.3.13 The landscape and visual context of the works area include the dramatic shingle of Dungeness beach, and the striking contrast of open areas of largely uninhabited reclaimed marsh with the scale and prominence of Dungeness A and B power stations forming a constant focal point. At times and away from the crowds which are present at peak times, the area has a wilderness and abandoned and desolate feel, desert-like in places and accentuated by unique flora and habitats of international value. These factors combine to create a unique sense of place reflected in the local designation of Dungeness Special Landscape Area.

Designated Sites

- 12.3.14 The High Weald National Landscape and Kent Downs National Landscape both lie outside of the 10km boundary of the Study Area. No national level statutory landscape designations of value have been identified within the Study Area. Other landscape related designations are shown on **Figure 12-2**.
- 12.3.15 There are several Conservation Areas within the Study Area, the closest being the Dungeness Conservation Area located approximately 80m east of the Works Area at its closest point (associated with the location of the intake pipeline), approximately 300m east of Dungeness B. Dungeness

Conservation Area covers the beach dwellings which arose unplanned and represented a sense of escape, for artists and free-thinkers, from the world developing at pace in the post war period. None of the buildings are of architectural merit in themselves but they represent a socio-economic movement and capture an idea of freedom. Elsewhere, Lydd Conservation Area lies approximately 5km from the Works Area, New Romney - High Street Conservation Area at approximately 7.9km, New Romney - Cannon Street at approximately 8.2km, Old Romney Conservation Area at approximately 9.1km and Littlestone Conservation Area at approximately 7.8km.

- 12.3.16 Although Conservation Areas are of some relevance to landscape value, they are primarily a planning and architectural designation but are indicative of landscape/townscape/built quality and value as the primary reason for their designation. Similarly, there are numerous listed buildings within the wider context of the Study Area, mostly at Lydd and New Romney, and numerous scheduled monuments related to prehistoric sites, all of which add to landscape value. Further detail on built heritage, including the Dungeness Conservation Area, is provided in **Chapter 10: Historic Environment** of this Scoping Report.
- 12.3.17 There are multiple designations relating to biodiversity value covering much of the Study Area, including: Dungeness, Romney Marsh and Rye Bay Ramsar/SSSI; Dungeness SAC as well as Romney Warren Local Nature Reserve (LNR). These are primarily designated for their coastal habitats and wildlife and are discussed in **Chapter 18: Terrestrial Ecology**. These add to landscape value but are primarily ecological designations, rather than landscape designations and, for that reason, are not shown on **Figure 12-2**.

National Character Areas

- 12.3.18 The Works Area and Study Area are located within National Character Area: 123 - Romney Marshes. A description of NCA 123 along with a summary of its key characteristics is provided in **Table 12-4**.

Table 12-4: Description and Characteristics of NCA 123- Romney Marshes as Outlined in Natural England's National Character Area Profiles

Published Character Area	Description/Key Characteristics
NCA 123 - Romney Marshes	<i>"The Romney Marshes is an open landscape of reclaimed, low-lying marshland. The area is bounded to the south and east by the English Channel and to the north and west by the clearly recognisable ancient cliff-line, which now forms the backdrop to the marshes. It includes the vast sand and shingle beaches and flat marshland between Hythe in Kent and Pett in Sussex. This unique and sometimes forbidding area has a character all of its own and contains a wealth of wildlife and geomorphological features. Dungeness is an area of international importance for its geomorphology, plants, invertebrates, and birds. Home to some of the UK's rarest species it is designated as a National Nature Reserve, Special Area of Conservation, Special Protection Area, and Site of Special Scientific Interest, as well as being a proposed Ramsar site. Dungeness and Rye Harbour comprise the largest cusped shingle foreland in Europe, one of the few such large examples in the world."</i>

Marine Character Areas

12.3.19 In relation to seascape, the Study Area encompasses Marine Character Areas (MCA):

- MCA 9: Eastbourne, Pevensey and Rye Bays;
- MCA 10: Hythe and East Wear Bays; and
- MCA 12: English Channel (East)/Dover Strait.

12.3.20 A description of these MCAs along with a summary of key characteristics is provided in **Table 12-5**.

Table 12-5: Description and Characteristics of MCAs as Outlined in the Seascape Character Assessment for the Dover Strait

Published Character Area	Description/Key Characteristics
MCA 9: Eastbourne, Pevensey and Rye Bays	<i>"A predominantly low-lying coastline with a series of long sweeping bays of sand and shingle beaches from Dungeness to Fairlight Cove and larger shingle beaches defended with groynes from Bexhill to Eastbourne. The internationally important sandstone cliffs at Fairlight Cove and Hastings are part of the High Weald Area of Outstanding Natural Beauty (AONB)."</i>
MCA 10: Hythe and East Wear Bays	<i>"The MCA is characterised by a generally low lying coastline with views to the wooded slopes of the Kent Downs Area of Outstanding Natural Beauty (AONB) behind, and the distinctive chalk and clay cliffs east of Folkestone. The relatively urbanised coastal towns of Folkestone and Hythe lie to the north of the MCA whilst the holiday resorts of Dymchurch and St Mary's Bay front the sandy beaches to the south of Hythe Bay. Dungeness is one of the largest expanses of shingle in the world and supports a large number of rare habitats."</i>
MCA 12: English Channel (East)/Dover Strait	<i>"This MCA has a rich physical and cultural heritage that is reflected in its character today. It is one of the busiest shipping channels in the world; the organised movement of the many ships, cargo vessels and tankers through the channel evoking a strong sense of place. The Character Area is strongly associated with the defence of Britain over the centuries, including its role in the early stages of the Battle of Britain. The seabed is littered with both sea and air-borne casualties from both World Wars as a legacy of the most recent conflicts. Intervisibility with both the French and English coasts, with their corresponding white cliffs and prominent headlands, provides a unique setting for the Dover Strait."</i>

Landscape Character Areas

12.3.21 At a more local level the Study Area includes a range of landscapes and coastal/seascapes covered by the Landscape Assessment of Kent and the Romney Marsh Landscape Character Assessment (2016), covering the Folkestone and Hythe District within the Study Area. The Romney Marsh Landscape Character Assessment is based on the Landscape Assessment of Kent but provides a more detailed local appraisal which will be adopted for the LVIA.

12.3.22 At the county level, the Works Area is located in Dungeness Shingle LCA. **Table 12-6** provides a description of the Dungeness Shingle LCA

summarising its characteristics as set out within The Landscape Assessment of Kent.

Table 12-6: Description and Characteristics of Dungeness Shingle LCA

Published Character Area	Description/Key Characteristics
Dungeness Shingle LCA	<i>“Dominant landform, flat with microrelief of long shingle ridges. Remote, exposed coastal location, constant wind or breeze, extremes of climate. Specialized vegetation. Big skies and atmospheric quality of light. Few roads, very inaccessible. Scarce settlement, unusual buildings, few boundaries to dwellings.”</i> <i>“Landform and landscape elements are strongly unified in this unique coastal landscape. However, there are many visual detractors of large-scale gravel extraction, security fencing, transmission towers and the power station. The unique and diverse semi-natural habitats of shingle, tidal, salt and freshwater areas provide almost total coverage of the area. The condition of heritage features is variable - stunted hollies and willow carr are unique, but the hollies are mature and felt to be vulnerable. Built form includes localised structures such as the lighthouse and fishermen's huts, and also large corporate buildings and small scale temporary buildings. These have an overall negative impact on the large scale landscape.”</i>

12.3.23 The Romney Marsh Landscape Character Assessment identifies the following LCAs located within the Study area, as shown on **Figure 12-3**:

- LCA 1 - Romney Marsh Proper Farmlands
- LCA 2 - Brookland Farmlands
- LCA 3 - Walland Marsh Farmlands
- LCA 6 - Dungeness Shingle
- LCA 7 - Romney Marsh Coast
- LCA 8 - Camber Coast

12.3.24 The Works Area is located in LCA 6 Dungeness Shingle. A description of these LCAs, taken from the Romney Marsh Landscape Character Assessment is provided in **Table 12-7**.

Table 12-7: Description of Study Area LCAs as Outlined in the Romney Marsh Landscape Character Assessment (2016)

Published Character Area	Description/Key Characteristics
LCA 1 - Romney Marsh Proper Farmlands	<i>This LCA comprises the area of Romney Marsh which was drained and settled by the end of the Saxon period, although in Roman times it comprised salt marsh surrounding a tidal lagoon. Today it is mainly arable farmland (with pockets of sheep pasture) but until recent years it had been used predominantly for grazing sheep. Fields are usually divided by a network of drainage ditches, although there are some hedgerows alongside roads. The predominance of ditches (which are often not visible from roads and paths) as field boundaries creates an open feel to the landscape. Nevertheless it feels relatively settled, with evenly-spaced historic villages</i>

Published Character Area	Description/Key Characteristics
LCA 2 – Brookland Farmlands	<i>interspersed with farms. The towers of village churches are distinctive features within the landscape, and there are some trees, particularly around villages. The villages are connected by a network of distinctive narrow lanes. Many of these lanes are sinuous in form and raised above the surrounding fields, reflecting their origins as salt-marsh creeks which were embanked as part of the process of reclaiming land from the sea over a thousand years ago.</i> <i>The boundaries of this LCA broadly follow an area of marsh which was reclaimed from the sea and settled in the early medieval period. This process was undertaken systematically, creating a strongly linear landscape, with parallel lanes and field boundaries, although the pattern is stronger at the western end of the LCA. The historic pattern of strip-shaped parish boundaries also shows how the reclaimed land was divided between existing parishes located in Romney Marsh Proper. The only village within this LCA is Brookland, although there are scattered farms (mostly along roads) and the ruin of Midley church. This is the most densely-treed LCA, and parallel lines of trees (mostly willow) and hedgerows are a distinctive feature of this LCA, particularly in the western part. Land use is predominantly arable, although there are some small areas of surviving sheep pasture.</i>
LCA 3 - Walland Marsh Farmlands	<i>This LCA approximates to an area of salt marsh which was reclaimed for use as grazing land in the 15th and 16th Centuries. Some parts of the area (particularly around its edges) had previously been reclaimed but subsequently lost to the sea. The few farms are accessed by tracks (there are no public roads apart from at the peripheries of the LCA) and the only village within the LCA is Guldeford, at the western edge. Large parts of the LCA are still used as sheep pasture, particularly in the south, although arable crops and turf growing also occur. The lack of settlement and the large scale of the irregular fields give the LCA an exceptionally open and expansive feel with low horizons and big skies. In the parts which are still under pasture it is possible to have a glimpse of what most of Romney Marsh must have looked like until it was ploughed in recent decades. The Little Cheyne Court windfarm was constructed in 2008, and is now a prominent feature in views across Walland Marsh.</i>
LCA 6 - Dungeness Shingle	<i>Dungeness is a unique environment within the UK, comprising extensive deposits of shingle, interspersed with smaller areas of farmland, wetland and settlement. Shingle ridges further inland are well-established, whilst those at the sea's edge are very mobile, and the landform is constantly evolving. The earliest evidence for settlement on Romney Marsh has been found here, including prehistoric tools and pottery associated with Roman salt production. The area is of international importance for its wildlife and habitats, including its bird life, and the rare and often colourful plants which colonise the shingle, including low-lying prostrate vegetation. Much of the area is a National Nature Reserve, and it is popular with visitors.</i> <i>This is an extraordinarily evocative and powerful landscape, its mood constantly changing in response to light, weather and season. The landscape is dominated by a combination of natural shingle (and associated vegetation) with a strong horizontal form, and large man-made vertical structures</i>

Published Character Area	Description/Key Characteristics
	<i>including lighthouses, Dungeness nuclear power station, pylons, and sound mirrors. There are also structures associated with ongoing military use of the area. The historic town of Lydd has strong visual and cultural connections with Dungeness. On Dungeness itself, settlement comprises fishermen's huts, holiday cottages and temporary buildings, which give it a sense of impermanence, a quirky character and a very strong sense of place.</i>
LCA 7 - Romney Marsh Coast	<i>This LCA comprises a strip of developed east-facing coastline, including associated shingle, sandy beaches and sand dunes. Settlements vary in age from the historic towns of New Romney (a planned Norman town and Cinque Port) and Dymchurch, through to the Edwardian development of Littlestone-on-Sea and 20th Century coastal bungalows, caravan parks and housing estates. Despite the developed nature of the settlements, the constant presence of the sea to the east and Romney Marsh to the west means that it retains its open and rural context. The settlements are connected by the Romney, Hythe and Dymchurch Railway, and small-scale steam engines are a regular sight and sound.</i>
LCA 8 - Camber Coast	<i>This LCA is the most recently-settled within Romney Marsh, and comprises the south-facing coast of Camber Sands and the associated tourism and recreational development. This is a sandy landscape, with an extensive sandy beach at Camber Sands, and a mobile dune system to the north, much of which is used as a golf links. The village of Camber developed as a tourist resort associated with the beach in the Mid-20th Century, largely around the Pontins development. Also within this LCA are the former aggregate quarry at Northpoint (which is now a lake used for recreation and watersports) and the adjacent strip of salt marsh along the margin of the river Rother. The feel of the landscape varies greatly depending on weather and season. In the summer it is warm and bustling, but in winter it can feel very desolate. The Camber sand dunes reach over 10m high, and afford good views across Walland Marsh.</i>

Proposed Representative Viewpoints

- 12.3.25 A ZTV has been generated to show theoretical visibility of the existing structures at Dungeness B. The ZTV is based on potential visibility of the tallest existing building (the reactor building), by using the four corners of this, and then using National Forest Inventory woodland dataset at 12m high, based on an observer eye height of 1.7m and points at 25m grid within in a 10km study area. The Digital Terrain Model does not fully take into account the screening effect of vegetation outside of the national Forest Inventory dataset, buildings, and other structures.
- 12.3.26 The ZTV has also considered the Proposed Works, comprising the waste management facilities and the Safestore. Whilst the locations of the waste management facilities will be located within the existing Dungeness B security fence, these would have a maximum height of 15m. The Safestore structure would require modification to the existing reactor building but is not expected to change the maximum height.

- 12.3.27 Analysis of the ZTV has led to identification of representative viewpoints which are summarised in **Table 12-8** and shown on **Figure 12-1**. These cover the range of receptors and potential range of views, accepting that not all viewpoint locations require identification or assessment and that there will be replication in the type of change in visual amenity throughout the Study Area, illustrated by representative viewpoints.
- 12.3.28 In accordance with best practice in GLVIA3 these locations are being presented at Scoping to agree the number and locations with the ONR and Folkestone and Hythe District Council.
- 12.3.29 Photo viewpoint panoramas will be obtained at each location and presented as Type 1 visualisations for the illustration of context.

Table 12-8: Provisional Representative Viewpoints

Representative Viewpoint	Reason for Inclusion
VP1: Dungeness Station.	Location likely to be visited by recreational users of the Romney Hythe & Dymchurch Railway to enjoy views on the foreshore/coast from the heritage railway line. Also representing views from Dungeness Conservation Area.
VP2: Lydd Beach Boardwalk.	Location likely to be visited by recreational users to enjoy views on the foreshore/coast from the King Charles III England Coast Path. Also representing views from Dungeness Conservation Area.
VP3: Dungeness Beach.	Location likely to be visited by recreational users of the beach, including to enjoy views/the natural environment.
VP4: Prospect Cottage.	Promoted recreational location likely to be visited by recreational users enjoying the garden of Derek Jarman and views on the foreshore/coast. Also representing views from Dungeness Conservation Area.
VP5: Dungeness Road	Highway location accessing Dungeness beach and the recreational areas of the Dungeness Conservation Area (viewpoint external to the Conservation Area).
VP6: Pleasance Road North, Lydd-on-Sea.	View from the residential edge of Lydd-on-Sea.
VP7: near the Victorian Fountain, Littlestone.	View from the parade at Littlestone likely to be visited by recreational users of the open space and beach.
VP8: Church Lane New Romney.	View from the residential edge of New Romney.
VP9: Robin Hood Lane/Tourney Road, Lydd.	View from the residential edge of Lydd.
VP10: King Charles III England Coast Path.	View of users of the King Charles III England Coast Path national trail likely to be visited by recreational users to enjoy views/the natural environment.
VP11: Jurys Gap.	Highway location accessing Dungeness beach and the recreational areas of the Dungeness Conservation Area.

- 12.3.30 Photomontages are not required to undertake landscape and visual impact assessment but may be useful to illustrate conclusions and/or inform public consultation. EDF Energy will seek to agree the number and location of any

photomontages with both the ONR and FHDC and may include Type 3²²² or Type 4²²³ visualisations as set out in Landscape Institute Technical Note 06/19: Visual Representation of Development Proposals²²⁴.

Summary of Future Baseline

- 12.3.31 The future baseline assumes the power station has finished generation and has been defueled. It assumes that no decommissioning and dismantling works would take place, but that the station would otherwise be maintained in accordance with nuclear site licence conditions.
- 12.3.32 Any future existing conditions in the Works Area and surrounding area which relate to a modified baseline will be considered and assessed in the LVIA.
- 12.3.33 The definition of a future baseline for those phases beyond the Initial Decommissioning Works will necessarily be uncertain given the long timescales involved.

12.4 Consultation

- 12.4.1 No engagement or consultation has been undertaken to date with respect to the scope or assessment methodology for this chapter, however, statutory bodies will be consulted prior to completing the assessment:
- 12.4.2 These will include the ONR and FHDC in respect of representative viewpoint locations and appropriate cumulative schemes to be assessed alongside the Proposed Works.

12.5 Scope for Mitigation

- 12.5.1 Where necessary, embedded mitigation and monitoring measures will be proposed to reduce impacts at sensitive locations within and around the Works Area.
- 12.5.2 Embedded mitigation requirements will be determined based on an evaluation of the results of the LVIA, and likely effects on existing/future receptors.
- 12.5.3 Based on the scale and nature of the potential landscape and visual impacts, embedded mitigation measures to be included within the Environmental Management Plan for the Initial Decommissioning Works may include:
- Use of hoardings where works are located outside of existing fenced areas;
 - Fencing to protect any vegetation to be retained; and
 - Measures to reduce visual impact in construction (e.g. dust suppression on site and adjacent highways).
- 12.5.4 Tree cover within LCA 6 Dungeness Shingle is extremely sparse and not a characteristic landscape element. In addition, screening using tree planting

²²² Type 3 visualisations are photomontages or wirelines which are used to convey a design, form and context to a reasonable degree of accuracy, but do not need to be verifiable.

²²³ Type 4 visualisation provides the most accurate representation of any development proposal.

²²⁴ https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2019/09/LI_TGN-06-19_Visual_Representation.pdf

is highly unlikely to be effective or appropriate as a form of mitigation, given the nature of the Proposed Works, the coastal location and the limited scope for planting within the Works Area. Based on these considerations there is no proposal to mitigate using tree planting.

12.6 Potential Effects

- 12.6.1 This section provides a summary of the potential changes resulting from the Proposed Works and with the potential to result in construction and operational phase landscape and visual impacts.
- 12.6.2 For the purposes of the EIA, the scope of assessment is focussed on the Initial Decommissioning Works which are expected to have a duration of approximately 20 years. The assessment of effects for those phases beyond the Initial Decommissioning Works will necessarily be high-level and qualitative given the uncertainties associated with the long timescales.
- 12.6.3 The LVIA will acknowledge that the Proposed Works will primarily occur within the confines and context of the existing nuclear facilities at Dungeness B such that the magnitude of change is likely to be lower than similar activities in a less industrialised context. Similarly, there may be beneficial landscape and visual effects due to the removal of existing buildings which, as noted in The Landscape Assessment of Kent, currently have an adverse effect on landscape character and visual amenity.

Initial Decommissioning Works

- 12.6.4 The Initial Decommissioning Works, comprises the following activities relevant to LVIA:
- Completion of enabling projects, such as the new on-site waste management facilities to support radioactive waste processing activities.
 - Decommissioning, de-planting and dismantling of redundant plant, buildings and infrastructure to take the respective structures back to the existing ground levels.
 - The processing, packaging and removal of some operational HAW has been intentionally and safely accumulated on-site during generation in dedicated storage locations and the processing, packaging and disposal of LAW generated as a result of de-planting and dismantling activities.
- 12.6.5 These activities may result in the following temporary impacts which have the potential to result in significant effects on landscape and visual receptors:
- Physical change to the landscape or to views as a result of dismantling of structures and buildings.
 - Change to the landscape or views as a result of the introduction of construction activity, both stationary and moving machinery and vehicles, and traffic management elements and introduction of temporary construction compounds, material storage areas, access tracks and construction and later dismantling of any new waste management facilities, including the use of cranes.
 - Lighting (both fixed and from construction vehicles) to allow works required in low light conditions. Any lighting assessment will be a

qualitative element within the LVIA and considered subjectively against the baseline lighting context of the Proposed Works.

12.6.6 Potential landscape receptors which may be impacted by Initial Decommissioning Works include:

- National Character Area: 123 - Romney Marshes;
- LCAs defined in the Romney Marsh Landscape Character Assessment including: LCA 1 - Romney Marsh Proper Farmlands/LCA 2 – Brookland Farmlands/LCA 3 - Walland Marsh Farmlands/LCA 6 - Dungeness Shingle/LCA 7 - Romney Marsh Coast and LCA 8 - Camber Coast.

12.6.7 It is proposed to scope out assessment on Marine Character Area MCA 9: Eastbourne, Pevensey and Rye Bays; MCA 10: Hythe and East Wear Bays; and MCA 12: English Channel (East)/Dover Strait, due to the Initial Decommissioning Works and Care and Maintenance Phase being modification to an existing land based structures unlikely to lead to significant effects on seascape character. The Final Site clearance would result in the final removal of all infrastructure within Area A of the Works Area which could have a beneficial impact on seascape.

12.6.8 Visual receptors which may experience visual impacts because of the construction and operation of the Proposed Works options fall into three main types, as follows:

- Residential receptors, including:
 - Residents in the housing areas of Lade, Lydd, Littlestone, New Romney and in smaller settlements throughout the Study Area.
- Recreational receptors, including
 - Including users of the King Charles III England Coast Path, local PRoW; and
 - Visitors to Scheduled Monuments as well as general recreational locations including The Dungeness Station of the Romney, Hythe and Dymchurch Railway, Dungeness Lifeboat Station, Dungeness Road, Lydd beach, and at noted viewpoints such as Prospect Cottage and the Dungeness Lighthouse.
- People at work (excludes those engaged in activity at Dungeness B or Dungeness A), including those at:
 - Recreational sites;
 - Restaurants; and
 - Other workplaces in the Study Area.
- Users of the road network, including multiple B class and unclassified roads.

Care and Maintenance

12.6.9 The Care and Maintenance Phase comprises the following activities relevant to LVIA:

- Modification of the existing reactor building to create the Safestore structure, including use of cranes.

- The presence of new large infrastructure, including the Safestore building.
- Presence of ancillary infrastructure, such as signage, barriers and lighting and level of activity (compared to the baseline).

12.6.10 These activities may result in the following temporary impacts which have the potential to result in significant effects on landscape and visual receptors:

- Change in visual amenity as a result of views of construction activity, vehicles and tall machinery including cranes.
- Change in landscape character as a result of the Safestore building. However, the proposed Safestore Facility will encase the existing reactor building, occupying the same location and being of comparable size, shape, and massing as the existing structure.
- Change in visual amenity as a result of views of the Safestore building, noting the likely similarity of built form to the existing structures.
- Change in landscape character/visual amenity as a result of the additional activity on site.

Final Site Clearance

12.6.11 The Final Site Clearance comprises the following activities relevant to LVIA:

- Dismantling of the Safestore building; and
- Post demolition Works Area without any buildings.

12.6.12 These activities may result in the following temporary impacts which have the potential to result in significant effects on landscape and visual receptors:

- Loss of landscape elements and/or change in landscape character as a result of introduction of construction activity; and
- Loss of landscape elements and/or change in landscape character as the Works Area becomes clear of buildings and infrastructure.

12.7 Assessment Methodology

12.7.1 The proposed generic project-wide approach to the assessment methodology is set out in **Chapter 5: EIA Methodology**.

12.7.2 This section provides a summary of the assessment methodology which will be used for the LVIA.

Approach and Assessment Criteria

Sensitivity

Landscape Receptors

12.7.3 Landscape receptors are components of the landscape that are likely to be affected by the Proposed Works. These can include overall character and key characteristics, individual elements or features and specific aesthetic or perceptual aspects. It is the interaction between the different components of the Proposed Works and these landscape receptors which has potential to result in landscape impacts and effects (both adverse and beneficial).

- 12.7.4 The sensitivity of the landscape receptor will be derived by combining the value of the landscape (undertaken as part of the baseline study) and the susceptibility of the receptor to change associated with the Proposed Works.
- 12.7.5 Landscape value is frequently addressed by reference to international, national, regional, and local designations. Absence of such a designation does not necessarily imply a lack of quality or value. Factors such as accessibility and local scarcity can render areas of nationally unremarkable quality, highly valuable as a local resource. The evaluation of landscape value will be informed by Landscape Institute Technical Guidance Note 02/21²²⁵ and undertaken considering the following factors and classified as high, medium, or low with evidence provided as to the basis of the evaluation:
- Natural heritage - landscape with clear evidence of ecological, geological, geomorphological, or physiographic interest which contribute positively to the landscape;
 - Cultural heritage - landscape with clear evidence of archaeological, historical, or cultural interest which contribute positively to the landscape;
 - Landscape quality/condition - the measure of the physical state of the landscape including the intactness of the landscape and the condition of individual elements;
 - Scenic quality - the level of visual and sensory appeal of the landscape;
 - Perceptual aspects - the extent that the landscape receptor is recognised for its perceptual qualities (e.g. scenic, wildness or tranquillity);
 - Functional - landscape which performs a clearly identifiable and valuable function, particularly in the healthy functioning of the landscape;
 - Rarity - the presence of unusual elements or features;
 - Representativeness/distinctiveness - the presence of particularly characteristic features;
 - Recreation - the extent that recreational activities contribute to the landscape receptor; and
 - Association – the extent that cultural or historical associations contribute to the landscape receptor.
- 12.7.6 Landscape susceptibility relates to the ability of a particular landscape to accommodate the Proposed Works. It is assessed through consideration of the baseline characteristics of the landscape, and in particular, the scale or complexity of a given landscape. The evaluation of landscape susceptibility will be defined as high, medium, low or very low and will be supported by a clear explanation based upon the analysis of the landscape receptor and the extent to which it is able to accommodate the changes that would result from the Proposed Works.
- 12.7.7 The overall sensitivity assessment of the landscape receptor will be made by applying professional judgement to combine and analyse the identified value

²²⁵ Landscape Institute (2021) TGN 02-21: Assessing landscape value outside national designations (online) Available at: <https://www.landscapeinstitute.org/publication/tgn-02-21-assessing-landscape-value-outside-national-designations/>. Accessed September 2023

and susceptibility ratings. Overall sensitivity has been rated as high, medium, or low. **Table 12-9** outlines indicators that inform landscape value, susceptibility, and sensitivity. The basis of the assessment will be made clear in the evaluation of each landscape receptor to be considered in the assessment.

Table 12-9: Sensitivity of Landscape Receptors

	Higher Sensitivity	Lower Sensitivity
Criteria		
Value	A designated landscape (National Park, Area of Outstanding Natural Beauty, National Scenic Area, World Heritage Site) or a landscape in very good condition, exceptional scenic quality and high recreational opportunities or a high degree of rarity.	Landscapes containing few if any notable elements/features, of poor condition or containing several detracting features and limited aesthetic qualities. Landscapes which are not formally designated.
Susceptibility	Attributes that make up the character of the landscape which offer very limited opportunities to accommodate change of the type proposed without fundamentally altering key characteristics.	Attributes that make up the character of the landscape which are tolerant of a large degree of the type of change proposed without fundamentally altering the key characteristics.

Visual Receptors

- 12.7.8 Sensitivity of visual receptors has been defined through an appraisal of the viewing expectation, or value placed on the view as identified in the baseline study, and its susceptibility to change.
- 12.7.9 Value of the view is an appraisal of the value attached to views and is often informed by the appearance on Ordnance Survey or tourist maps and in guidebooks, literature, and art, or identified in policy. Value can also be indicated by the provision of parking or services and signage and interpretation. The nature and composition of the view and its scenic quality is also an indicator. The value of a view will be classified as high, medium, low, or very low and is supported by evidenced, professional judgements.
- 12.7.10 The susceptibility of visual receptors to change has been established as a function of the occupation or activity of people experiencing the view, and the extent to which their attention or interest is focused on the view and the visual amenity they experience. For example, walkers whose interest may tend to be focused on the landscape or a particular view, or visitors at an attraction where views are an important part of the experience, indicate a higher level of susceptibility. Conversely receptors engaged in outdoor sport where views are not important or receptors at their place of work are considered less susceptible to change.
- 12.7.11 Judgements about the susceptibility of visual receptors will be ascribed using high, medium, low, or very low ratings using consistent and reasoned judgements.
- 12.7.12 The overall sensitivity assessment of the visual receptor will be determined by applying professional judgement to combine the value and susceptibility ratings. Overall visual sensitivity will be rated as high, medium, low, or very low. **Table 12-10** outlines indicators that inform value of the view,

susceptibility, and sensitivity of visual receptors. The basis of the assessment is made clear in the evaluation of each visual receptor.

Table 12-10: Sensitivity of Visual Receptors

	Higher Sensitivity	Lower Sensitivity
Criteria		
Value	Views protected by designation, or nationally recognised, or recorded on maps/guidebooks or with cultural associations. Views that have high scenic qualities relating to the content and composition of the view.	Views which are not documented or protected with minimal or no cultural associations. Views that exhibit low scenic qualities relating to the content and composition of the view.
Susceptibility	Viewers whose attention or interest is focused on their surroundings.	People whose attention or interest is not focused on their surroundings and where the view is incidental to their enjoyment.

Magnitude of Impact

Landscape

12.7.13 Landscape magnitude of impact refers to the extent to which the Proposed Works would alter the existing characteristics of the landscape. It is an expression of the size or scale of change to the landscape, the geographical extent of the area influenced, and its duration and reversibility. The variables involved are:

- The extent of existing landscape elements that would be lost, the proportion of the total extent that this represents and the contribution of that element to the character of the landscape;
- The extent to which aesthetic or perceptual aspects of the landscape are altered either by removal of existing components of the landscape or by the addition of new components;
- Whether the change alters the key characteristics of the landscape that are integral to its distinctive character;
- The geographic area over which the change will be experienced (for example within the Works Area, the immediate setting around that boundary, at the local landscape character area scale, or on a larger scale influencing broader areas of landscape character); and
- The duration of the change (i.e. short term, medium term, or long term), as defined in **Chapter 5: EIA Methodology**, and its reversibility (i.e. whether it is permanent, temporary, or partially reversible).

12.7.14 Landscape change can be both direct, through alteration of physical components, or indirect, resulting from changes to perceptual aspects of character and how it is experienced.

12.7.15 An overall assessment of the magnitude of landscape change resulting from the Proposed Works on landscape receptors will be made by combining the above judgements using evidence and professional judgement. The levels of landscape magnitude of change are described as being high, medium, low, very low and none as defined in **Table 12-11**.

Table 12-11: Magnitude of Impact – Landscape Receptors

Magnitude	Criteria
High	Large alteration to the landscape receptor or may impact an extensive area or unique characteristics at a local level. May be longer term, permanent or reversible.
Medium	Partial alteration to the landscape receptor or may impact a wide area or characteristics at a local level. May be medium term, permanent or reversible.
Low	Slight alteration to the landscape receptor or may impact a restricted area and few key characteristics. May be short to medium term, permanent or reversible.
Very Low	Very slight alteration to the landscape receptor or may impact a limited area or no key characteristics. May be short term, permanent or reversible.
None	No change to the landscape receptor.

Visual

12.7.16 Visual magnitude of impact relates to the extent to which the Proposed Works would alter the existing view and is an expression of the size or scale of change in the view, the geographical extent of the area influenced and its duration and reversibility. The variables involved are described below:

- The scale of the change in the view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the Proposed Works;
- The degree of contrast or integration of any new features or changes in the form, scale, composition, and focal points of the view;
- The nature of the view of the Proposed Works in relation to the amount of time over which it will be experienced, and whether views of this will be visible fully, partially or glimpsed;
- The angle of view in relation to the main activity of the receptor, distance of the viewpoint from the Proposed Works and the extent of the area over which the changes would be visible; and
- The duration of the change (i.e. short term, medium term, or long term), as defined in **Chapter 5: EIA Methodology**, and its reversibility (i.e. whether it is permanent, temporary, or partially reversible).

12.7.17 An overall assessment of the magnitude of visual change resulting from the Proposed Works on the visual receptor will be made combining the above judgements using evidence and professional judgement. The levels of visual

magnitude of change are described as being high, medium, low, very low and none as defined in **Table 12-12**.

Table 12-12: Magnitude of Impact – Visual Receptors

Magnitude	Criteria
High	A pronounced change to the composition of the view or change that may be viewed in the foreground or directly. May be longer term, permanent or reversible.
Medium	A noticeable change to the composition of the view or change that may be viewed in the middle ground or indirectly. May be medium term, permanent or reversible.
Low	An unobtrusive change in the composition of the view or change that may be viewed in the background or obliquely. May be short to medium term, permanent or reversible.
Very Low	A barely perceptible change in the composition of the view or change that may be viewed in the background and/or very obliquely. May be short term, permanent or reversible.
None	No change to the view.

Significance of Effects

- 12.7.18 Determination of the significance of landscape and visual effects will be undertaken by employing professional judgement and experience to combine the magnitude of change against the identified sensitivity of landscape and visual receptors.
- 12.7.19 The landscape assessment will take account of direct and indirect changes to existing landscape elements, features, key characteristics and will evaluate the extent to which these would be lost or modified, in the context of their importance in determining the existing baseline character.
- 12.7.20 The visual assessment will take account of the likely changes to the visual composition, including the extent to which new features would distract or screen existing elements in the view or disrupt the scale, structure, or focus of the existing view.
- 12.7.21 The significance of landscape and visual effects will be described with reference to the criteria presented in **Table 5.1** included in **Chapter 5: EIA Methodology** of this scoping report. For the purposes of the assessment, effects rated as being of moderate or major will be considered to be significant.

Assumptions and Limitations

- 12.7.22 An initial visit has been made to the wider Dungeness area to assess the existing character of the landscape and visit potential representative viewpoints, but this did not include capture of viewpoint photography.
- 12.7.23 The range and locations of representative viewpoints have not yet been agreed with FHDC. GLVIA3 suggests agreeing viewpoint locations with the relevant stakeholders in advance of the landscape and visual impact assessment. All viewpoints will be from publicly accessible land.
- 12.7.24 It is assumed that any site visit will be conducted over two seasons, i.e. winter and summer, and in a wide range of light and weather conditions.

Given the importance of summer vegetation in the context of some views, potentially significant differences between seasonal views, will be outlined where relevant within the assessment. The site visits will be undertaken in clear weather with 'good' to 'very good' visibility of at least 10km.

- 12.7.25 If photomontages are required, their locations will be agreed with FHDC using the winter photography. Any photomontages will be used to illustrate the change in views, but the assessment will not rely upon them as the basis of conclusions.

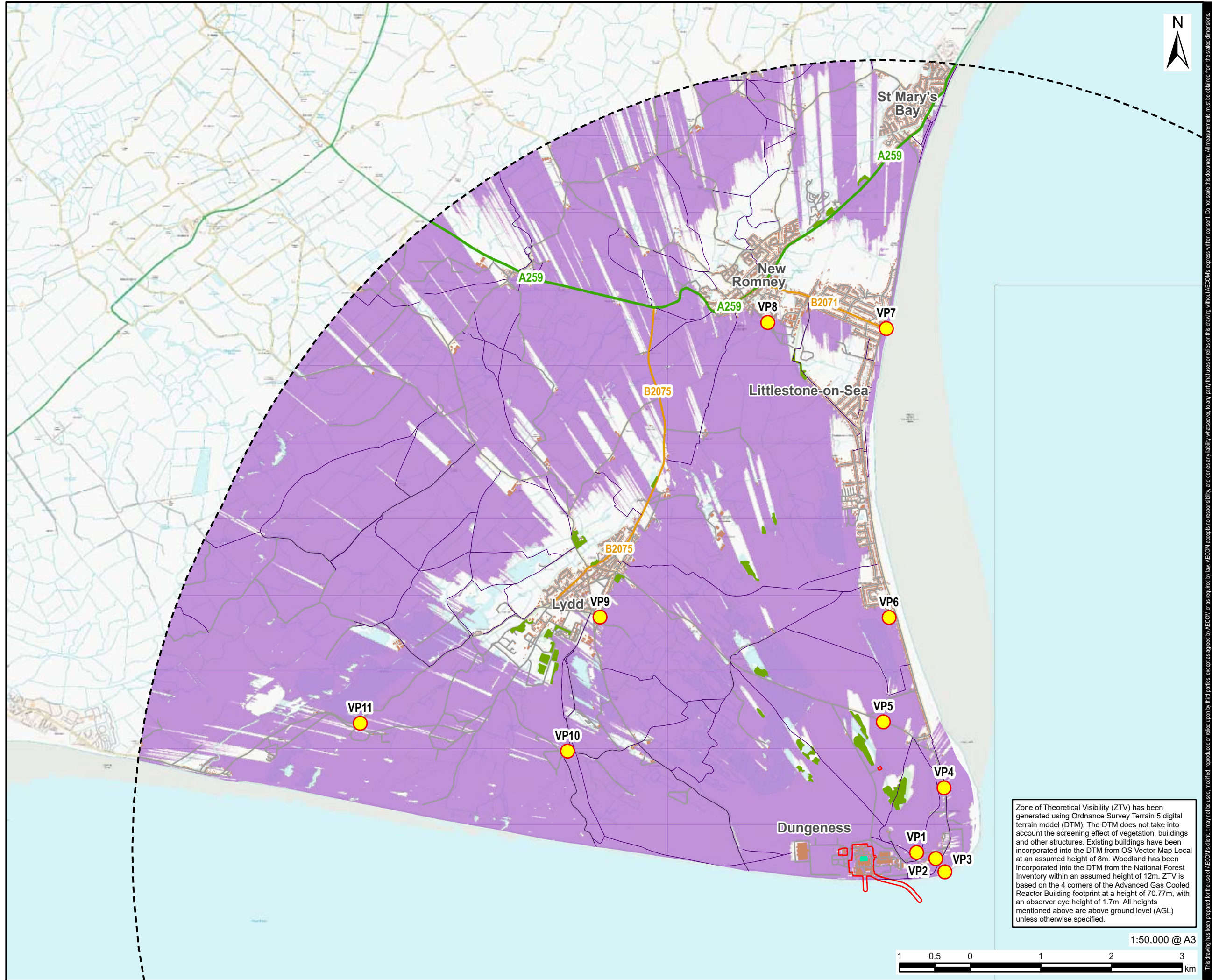
12.8 Summary of Potential Likely Significant Effects

- 12.8.1 **Table 12-13** provides a summary of the potential significant effects proposed to be considered in the chapter of the ES. Please refer to **Section 12.6** where justification of the scope is provided.

Table 12-13: Summary of Elements to be Considered in the ES

Pathway	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
Loss of landscape elements and/or change in landscape character	Scoped In	Scoped In*	Scoped In*
Change in Seascape character	Scoped out	Scoped out	Scoped out
Change in visual amenity	Scoped In	Scoped In*	Scoped In*

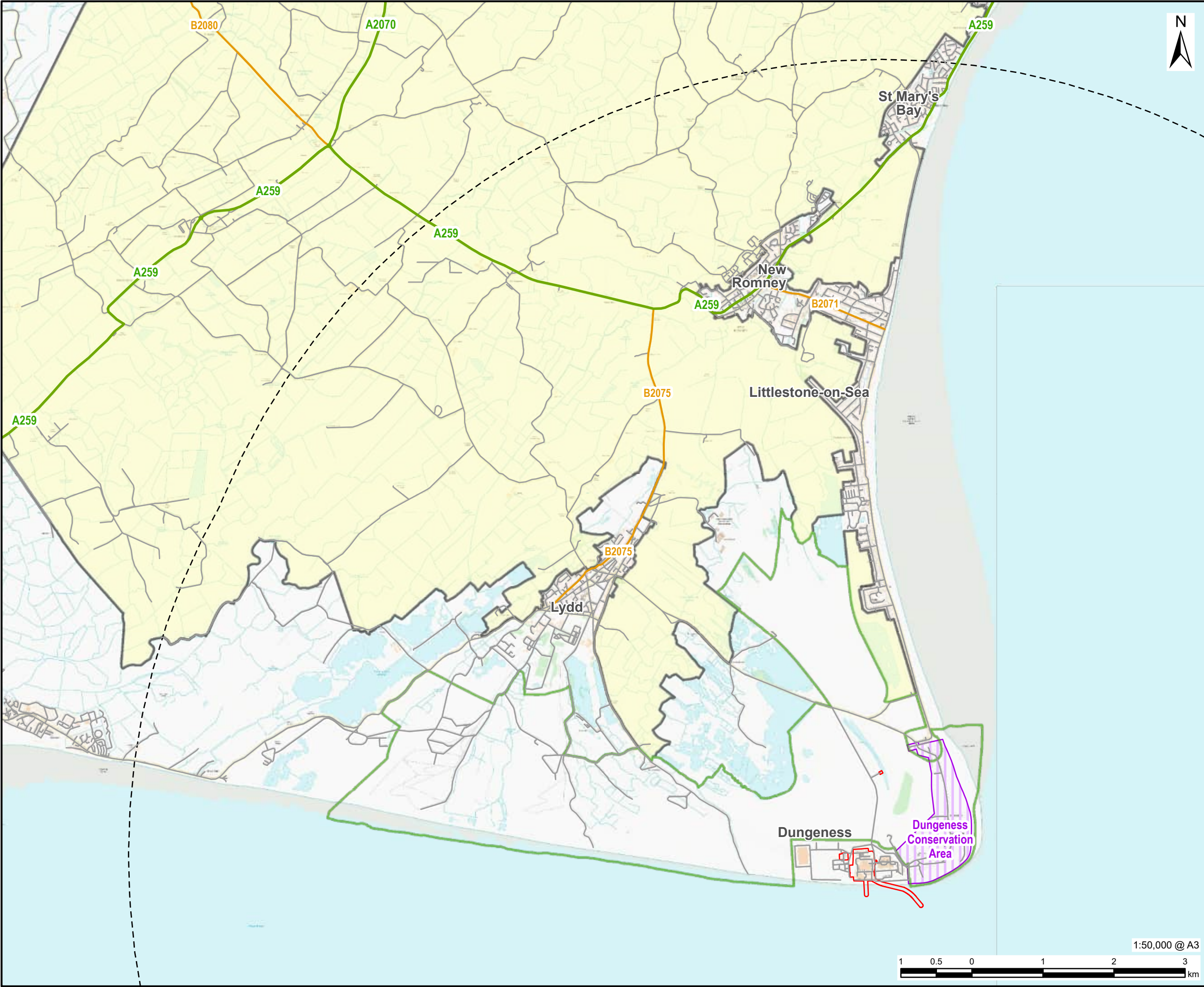
* The Care and Maintenance and Final Site Clearance phases will be discussed at a high level, applying professional judgement.



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PROJECT

Dungeness B Nuclear
Decommissioning

CLIENT

EDF Energy Nuclear
Generation Limited

CONSULTANT

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LEGEND

- The Works Area
- Landscape Study Area (10km Buffer)
- A Road
- B Road
- Minor Road
- Conservation Area
- Special Landscape Area
- Local Landscape Area

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NOTES

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ISSUE PURPOSE

EIA Scoping Report

PROJECT NUMBER

60739933

FIGURE TITLE

Landscape Designations

FIGURE NUMBER

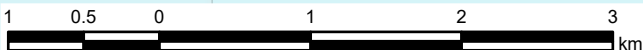
Figure 12-2

REV

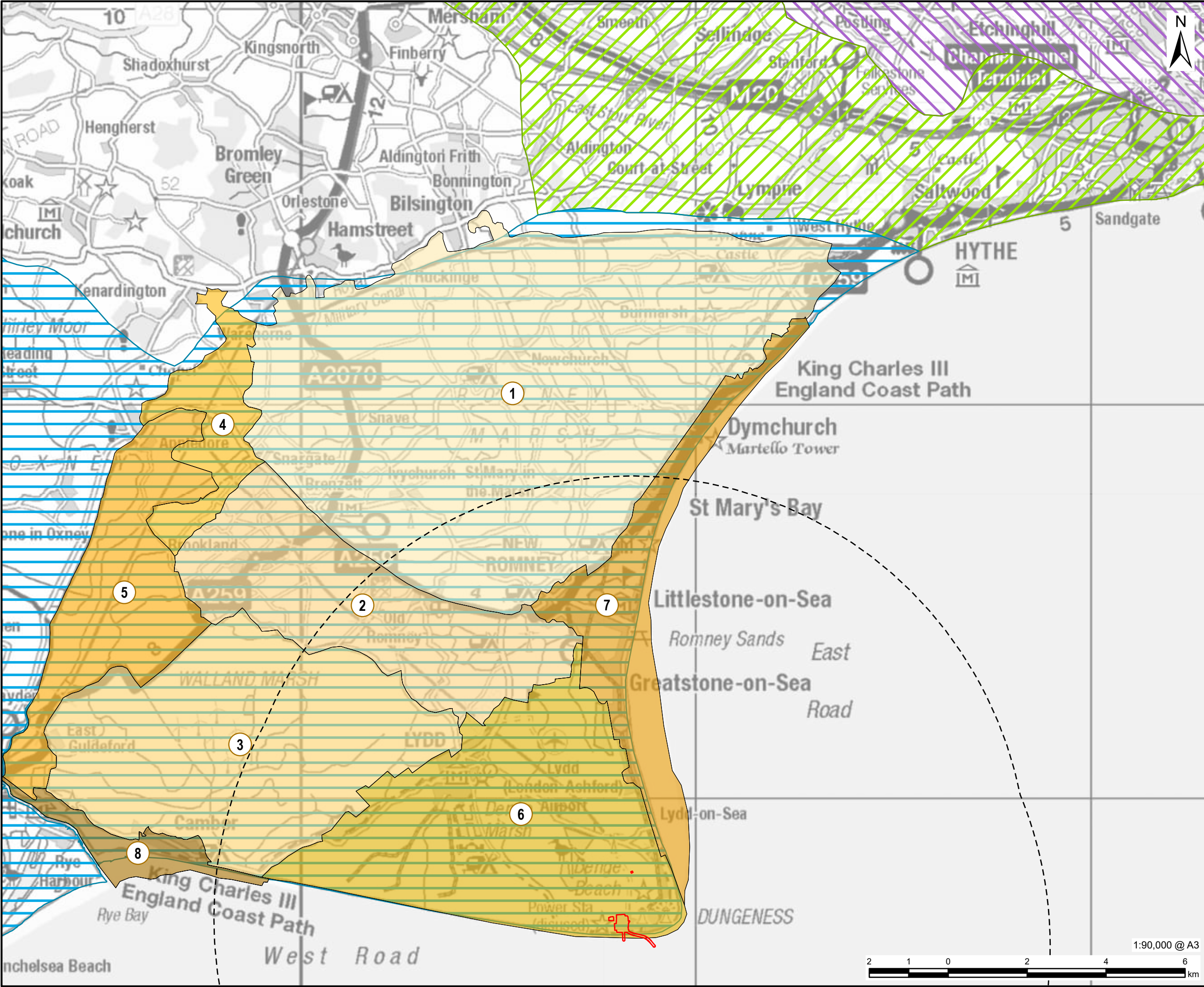
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LEGEND

The Works Area

Landscape Study Area (10km Buffer)

Romney Marsh Landscape Character Assessment (2016):

- 1 - Romney Marsh Proper Farmlands
- 2 - Brookland Farmlands
- 3 - Walland Marsh Farmlands
- 4 - The Dowels Farmlands
- 5 - Highknock Channel Farmlands
- 6 - Dungeness Shingle
- 7 - Romney Marsh Coast
- 8 - Camber Coast

National Character Area

- NCA 119: North Downs
- NCA 120: Wealden Greensand
- NCA 123: Romney Marshes

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ISSUE PURPOSE
EIA Scoping Report

PROJECT NUMBER
60739933

FIGURE TITLE
Landscape Character Area

FIGURE NUMBER
Figure 12-3

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13. Marine Ecology

13.1 Introduction

- 13.1.1 This chapter sets out the proposed scope and methodology for the assessment of effects of the Proposed Works on marine ecology. This chapter has been informed by a review of the environmental baseline conditions, and consideration of the anticipated pathways and receptors where likely significant effects could arise as a result of the Proposed Works.
- 13.1.2 The marine components of Dungeness B extend approximately 340m from the coastline in the form of a CW outfall pipeline, intake pipeline and associated infrastructure. No works are currently planned for the intake pipeline and it is assumed it will be sealed, terrestrially, from within Dungeness B, rather than within the marine environment.
- 13.1.3 The planned activities within the marine environment (hereafter referred to collectively as ‘the Marine Works’) are the installation of the AAEDL, the ATSDL, and Surface Water Discharge. These systems are anticipated to utilise the existing CW outfall, using new transfer pipelines and pumping infrastructure which will be threaded through the existing infrastructure. The discharge configurations will be adequately sized to accommodate decommissioning operations.
- 13.1.4 At present, assumptions have been made regarding the likely method of installing the new transfer pipelines within the existing infrastructure. It is anticipated that either some limited drilling or a gravity-based pipe-weight system may be required.
- 13.1.5 This chapter should be read in conjunction with the description of the Proposed Works presented in **Chapter 2: The Decommissioning and Dismantling Process**, and the related assessments in **Chapter 8: Coastal Processes**, **Chapter 14: Noise and Vibration**, and **Chapter 18: Terrestrial Ecology** of this Scoping Report. Ornithological features of interest are considered with **Chapter 18: Terrestrial Ecology** and will not be reported in the marine ecology assessment.

13.2 Relevant Legislation, Policy and Guidance

Legislation

- 13.2.1 Legislation which is relevant to the assessment of effects on marine ecology is presented in **Table 13-1**.

Table 13-1: Legislation Relevant to Marine Ecology

Legislation	Legislation details
Marine and Coastal Access Act 2009 ²²⁶	Provides the legal mechanism to help ensure clean, healthy, safe and productive and biological diverse oceans and seas.

²²⁶ The Marine and Coastal Access Act 2009 (online), Available at: <https://www.legislation.gov.uk/ukpga/2009/23/contents> (accessed 21/11/2025)

Legislation	Legislation details
Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 ²²⁷	This involved the transfer of functions from the European Commission to appropriate authorities in England and Wales. Several changes were made to the Habitats Regulations when they were amended in 2019, including the creation of a national site network within UK territory which included sites already designated under the Nature Directives;
The Marine Strategy Regulations 2010 ²²⁸	Transpose the Marine Strategy Framework Directive (2008/56/EC) into UK legislation and defines measures required to achieve Good Environmental Status with the UK's marine environment.
The Wildlife and Countryside Act 1981 (as amended) ²²⁹	Includes provisions relating to nature conservation. Through the Wildlife and Countryside Act, it is an offence to deliberately take, kill or injure a wild animal, or to intentionally, or recklessly, disturb such an animal in its place of shelter, or to damage, destroy or obstruct access to its place of shelter
The Water Environment (Water Framework Directive (WFD)) (England and Wales) Regulations 2017	Transposes the EU Water Framework Directive (2000/60/EC) into UK legislation. They provide a framework for improving and protecting the water environment in England and Wales and introduced a comprehensive river basin management system
Natural Environment and Rural Communities (NERC) Act 2006 ²³⁰	Lists habitats and species of principal importance (Habitats of Principal Importance (HOPI) and Species of Principal Importance (SOPI)) for the purpose of conservation of biodiversity and requires public authorities to consider what actions can be taken to further the general biodiversity objective for the conservation and enhancement of biodiversity.
The Environment Act 2021 ²³¹	Sets clear statutory targets for the recovery of the natural world in four priority areas: air quality, biodiversity, water (including the marine environment) and waste.
The Salmon and Freshwater Fisheries Act 1975 (as amended) ²³²	Relates to the protection of salmon and freshwater fisheries, as well as preventing the obstruction of fish migratory routes.
The Eels (England and Wales) Regulations 2009 ('the Eels Regulations') ²³³	Implement Council Regulation (EC) No 1100/2007 (EC) No 1100/2007 establishing measures for the recovery of the stock of European eel including providing for the free passage of eels.

²²⁷ Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (online), Available at: <https://www.legislation.gov.uk/ukdsi/2019/9780111176573> (accessed 21/11/2025).

²²⁸ The Wildlife and Countryside Act 1981 (as amended) (online), Available at: <https://www.legislation.gov.uk/ukpga/1981/69> (accessed 21/11/2025).

²²⁹ The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (online), Available at: <https://www.legislation.gov.uk/uksi/2017/407/contents> (accessed 21/11/2025).

²³⁰ Natural Environment and Rural Communities Act 2006 (online), Available at: <https://www.legislation.gov.uk/ukpga/2006/16/contents> (accessed 21/11/2025).

²³¹ The Environment Act 2021 (online), Available at: <https://www.legislation.gov.uk/ukpga/2021/30/contents> (accessed 21/11/2025).

²³² The Salmon and Freshwater Fisheries Act 1975 (as amended) (online), Available at: <https://www.legislation.gov.uk/ukpga/1975/51> (accessed 21/11/2025).

²³³ The Eels (England and Wales) Regulations 2009 (online), Available at: <https://www.legislation.gov.uk/uksi/2009/3344/contents> (accessed 21/11/2025)

Legislation	Legislation details
Conservation of Seals Act 1970 ²³⁴	Provides protection and conservation for seals in England, Wales and Scotland, and adjacent territorial waters. This Act makes it an offence to take, injure or capture a seal.
Invasive Alien Species (Enforcement and Permitting) Order 2019 ²³⁵	Brings EU legislation into UK law, for the implementation of management measures for invasive alien species, including a number of marine species.
Convention for the Protection of the Marine Environment of the North-East Atlantic (the 'OSPAR Convention') 1992 (last amended 2025) ²³⁶	Establishes an international legal framework for the protection and conservation of the marine environment of the North-East Atlantic, promoting cooperation among contracting parties to prevent and eliminate pollution and to safeguard marine biodiversity. It entails a list of threatened and/or declining species (OSPAR list).

Policy

13.2.2 Policy relating to marine ecology and relevant to the assessment of effects of the Proposed Works is presented in **Table 13-2**.

Table 13-2: Policy Relevant to Marine Ecology

Policy	Policy details
UK Marine Policy Statement (2011) ²³⁷	Aims to achieve sustainable development in the UK marine area.
South Inshore Marine Plan ²³⁸	Covers an area of around 20,000 square kilometres of inshore and offshore waters across 1,000 kilometres of coast line from Folkestone to the river Dart. The Plan identifies 12 objectives which provides a framework for development within its defined area aiming to protect the marine environment
Adopted Development Plan for Folkestone and Hythe District (2025a) ²³⁹	The Adopted Development Plan comprises the Core Strategy Review (2022), Places and Policies Local Plan (2020), The St. Mary in the Marsh Neighbourhood Plan (2019) and Kent Waste and Minerals Local Plan, which all set out visions, objectives and development strategy for development in the local district, including in the marine environment.,

²³⁴ Conservation of Seals Act 1970 (online), Available at: <https://www.legislation.gov.uk/ukpga/1970/30> (accessed 21/11/2025)

²³⁵ Invasive Alien Species (Enforcement and Permitting) Order 2019 (online), Available at: <https://www.legislation.gov.uk/uksi/2019/527/contents> (accessed 21/11/2025)

²³⁶ Convention for the Protection of the Marine Environment of the North-East Atlantic (the 'OSPAR Convention') 1992 (online), Available at: <https://www.ospar.org/work-areas/bdc/specieshabitats/list-of-threatened-declining-species-habitats> (accessed 21/11/2025)

²³⁷ HM Government. (2011). UK Marine Policy Statement. London: The Stationery Office.

²³⁸ South Inshore Marine Plan (2018) (online), Available at: https://assets.publishing.service.gov.uk/media/5b4f39fbcd915d43776f3fd9/South_Marine_Plan_2018.pdf (accessed 21/11/2025)

²³⁹ Folkestone and Hythe District Council. (2025a). Adopted Development Plan. (Online) Available at: <https://www.folkestone-hythe.gov.uk/planning-policy/adopted-development-plan> (Accessed: 21/10/2025).

Policy	Policy details
Folkestone and Hythe District Council Local Plan and Strategy Review (2025b) ²⁴⁰	The Local Plan and Strategy Review sets out district priorities for nature and the wider environment. Several policies of the Local Plan and Strategy Review include provision for the environment, including Policy NE2 Biodiversity and Policy NE8 Integrated Coastal Zone Management

Guidance

- 13.2.3 Guidance which is relevant to the assessment of effects on marine ecology is presented in **Table 13-3**.

Table 13-3: Guidance Relevant to Marine Ecology

Guidance	Guidance details
CIEEM Guidelines for Ecological Impact Assessment in Britain and Ireland – Terrestrial, Freshwater, Coastal and Marine (2024) ²⁴¹	This guidance provides practical advice for ecological evaluation and assessment for proposed developments in terrestrial, freshwater, marine and coastal environments.

13.3 Baseline Conditions

Data Gathering Methodology

- 13.3.1 At the scoping stage, the marine ecology baseline is based solely on desktop data, and no site-specific marine surveys have been undertaken to date. The principal data source used to inform the current baseline conditions presented in this section beyond those identified in **Chapter 5: EIA Methodology** comprise the following:
- EDF Dungeness Land Management Annual Reviews 2016 – 2023^{242,243,244}
 - Data held by the Dungeness Bird Observatory;
 - International Council for the Exploration of the Sea (ICES) Greater North Sea Ecoregion reviews²⁴⁵;
 - MAGIC Maps for designated and protected sites²⁴⁶;

²⁴⁰ Folkestone and Hythe District Council. (2025b). Local Plan and Strategy Review. (Online). Available at: <https://www.makingspacefornaturekent.org.uk/wp-content/uploads/2025/01/Folkestone-Hythe-local-plan-and-strategy-review-.pdf> (Accessed: 21/10/2025).

²⁴¹ CIEEM. (2024). Guidelines for Ecological Impact Assessment (EclA). (Online). Available at: <https://cieem.net/resource/guidelines-for-ecological-impact-assessment-ecia/>. (Accessed: 21/10/2025).

²⁴² EDF Energy. (2016). Dungeness Annual Land Management Review 2016.

²⁴³ EDF Energy. (2019). Dungeness Annual Land Management Review 2019.

²⁴⁴ EDF Energy. (2021). Dungeness Annual Land Management Review 2021.

²⁴⁵ ICES. (2025). Ecosystem Overviews – Greater North Sea Ecoregion. Ecosystem components: Marine mammals. (Online). Available at: <https://www.ices.dk/advice/ESD/Pages/Greater-North-Sea-Marine-mammals.aspx> (Accessed: 15/10/2025).

²⁴⁶ Defra. (2025). Multi-Agency Geographic Information for the Countryside. (Online) Available at: <https://magic.defra.gov.uk/> (Accessed: 17/10/2025).

- Fisheries Sensitivity Maps^{247,248};
- European Marine Observation Data Network (EMODnet) Seabed Habitats Project data for broad-scale habitat maps of the Study Area²⁴⁹;
- European Union Nature Identification System (EUNIS) for classifying benthic habitats^{250,251,252,253};
- Designated sites condition assessments as available; and
- Academic papers and online reports as available.

13.3.2 Project specific marine surveys will be undertaken in advance of the assessment to be presented in the ES.

Study Area

13.3.3 The Study Area has been based on the likely Zol for the Proposed Works in the Greater North Sea and English Channel. The Zol represents the largest area over which marine ecology features may be impacted by the Marine Works and associated activities. Furthermore, the Study Area for the marine ecology baseline has been defined on a precautionary basis to obtain sufficient data to determine the Zol for the purpose of the ecological impact assessment (EclA). The Study Areas for individual receptor groups are summarised in **Table 13-4** with justification provided below.

13.3.4 An initial 8km Study Area has been applied for marine ecology features. This is based on tidal excursion data provided by the ABPmer UK Marine Renewables Atlas (2018)²⁵⁴ and therefore is considered to represent the largest zone of influence based on movement of water and therefore transport of sediment. Some marine species such as marine mammals and migratory fish are highly mobile receptors and therefore the Study Area considered can be further refined based on ecological sensitivities and foraging distances for different species groups. Therefore, whilst the Study Area primarily focuses on the subtidal waters surrounding the Marine Works up to 8km away and marine ecological features present within this area, further consideration has also been given to the wider North Sea and English Channel for receptors (and associated designated sites), such as migratory fish and marine mammals that could be present in the area of the Marine Works.

13.3.5 For migratory fish, a precautionary 50km Study Area has been used. However, many migratory fish may travel further than 50km and therefore to

²⁴⁷ Coull, K. A., Johnstone, R. and Rogers, S. I. (1998). Fisheries Sensitivity Maps in British Waters. UKOOA Ltd.

²⁴⁸ Ellis, J., Milligan, S., Readdy, L., Taylor, N. and Brown, M. (2012). Spawning and nursery grounds of selected fish species in UK waters. Cefas.

²⁴⁹ EMODnet. (2021). EMODnet Map Viewer. (Online). Available at: <https://emodnet.ec.europa.eu/geoviewer/#/> (Accessed: 17/10/2025).

²⁵⁰ European Environment Agency. (2019a). Littoral coarse sediment. (Online). Available at: <https://eunis.eea.europa.eu/habitats/436>. (Accessed: 17/10/2025).

²⁵¹ European Environment Agency. (2019b). Littoral sand and muddy sand. (Online). Available at: <https://eunis.eea.europa.eu/habitats/437>. (Accessed: 17/10/2025).

²⁵² European Environment Agency. (2019c). Circalittoral sandy mud. (Online). Available at: <https://eunis.eea.europa.eu/habitats/5433>. (Accessed: 17/10/2025).

²⁵³ European Environment Agency. (2019d). Circalittoral fine sand. (Online). Available at: <https://eunis.eea.europa.eu/habitats/5428>. (Accessed: 17/10/2025).

²⁵⁴ ABPmer. (2018). UK Marine Renewables Atlas. (Online). Available at: <https://www.renewables-atlas.info/explore-the-atlas/>. (Accessed: 17/10/2025).

ensure any migratory fish that may pass through the Study Area are considered, a regional approach has been adopted. The regional approach scopes in any designated sites for which an interaction may occur but is beyond this initial 8km screening distance, following guidance from ABPmer, 2014 (**Plate 13-1**)²⁵⁵. For marine mammals, marine mammal management units (MMMU) and seal management units (SMU) have also been considered²⁵⁶. The maximum foraging ranges for seals are also considered, these being 273km for harbour seal (*Phoca vitulina*) and 448km for grey seal (*Halichoerus grypus*)²⁵⁷.

Table 13-4: Marine Ecology Study Areas

Receptor Group	Study Area	Source
Marine Ecology	8km	ABPmer UK Marine Renewables Atlas (2018)
Migratory Fish (refined study area)	50km whilst also adopting a regional approach (see Plate 13-1)	ABPmer (2014)
Marine Mammals (refined study area)	North Sea Marine mammal management unit (Harbour Porpoise) South East England Seal Management Unit	Inter-Agency Marine Mammal Working Group (IAMMWG) (2023), SCOS (2024)

²⁵⁵ ABPmer. (2014). Wave and Tidal Further Leasing. HRA Principles Document, Screening Report and Appropriate Assessment Information Report. Crown Estate.

²⁵⁶ Inter-Agency Marine Mammal Working Group (IAMMWG). (2023). Review of Management Unit boundaries for cetaceans in UK waters. JNCC Report 734, JNCC, Peterborough, ISSN 0963-8091. (Online) Available at: <https://hub.jncc.gov.uk/assets/b48b8332-349f-4358-b080-b4506384f4f7>. (Accessed: 17/10/2025).

²⁵⁷ Carter, M.I.D., et al. (2022). Sympatric Seals, Satellite Tracking and Protected Areas: Habitat-Based Distribution Estimates for Conservation and Management. Frontiers in Marine Science.

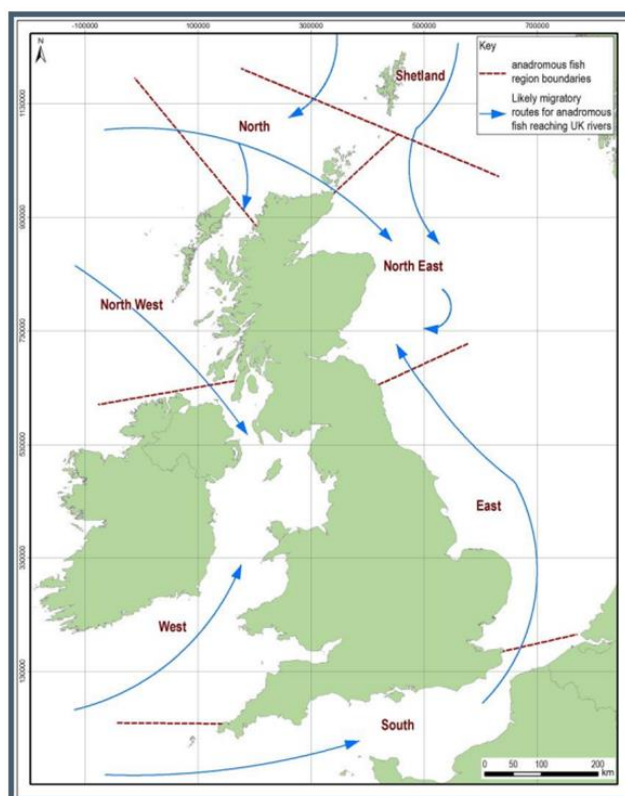


Plate 13-1: Location and extent of coastal regions to be used for screening fish qualifying interests (provided by ABPMer 2014)

Surveys

- 13.3.6 Several marine surveys are proposed to characterise the intertidal and subtidal benthic environment. The surveys may involve a walkover (intertidal), subtidal grab samples and subtidal DDV. Grab samples would provide information on sediment characteristics around the outfall and intake area, whilst DDV would provide further information on specific benthic habitats within which potential temporary habitat disturbance could occur during the Marine Works.
- 13.3.7 During baseline airborne noise monitoring and bird surveys undertaken at the Proposed Works to inform the baselines in **Chapter 14: Noise and Vibration** and **Chapter 18: Terrestrial Ecology**, any opportunistic sightings of seals on Dungeness Beach and cetaceans in offshore waters will be recorded, including their location. If this indicates the requirement for a full seal survey, this will be carried out in future stages of the project. Survey data collected will be supported by ALMR studies, ALMR data will be included in the analysis of the survey data.

Summary of Existing Baseline

- 13.3.8 This summary of existing baseline data focuses on marine ecological receptors relevant to the North Sea and English Channel below the MHWS, apart from birds which are considered in **Chapter 18: Terrestrial Ecology**. This includes any SPA in place for the protection of birds.
- 13.3.9 The Marine Works are located entirely in subtidal waters offshore from Dungeness Beach in the Greater North Sea and English Channel marine region. The existing CW outfall and intake infrastructures are located

approximately 160m and 340m from the shoreline respectively and are in water which is between 0m and 12m deep.

Designated Sites

- 13.3.10 No designated sites fall within the initial 8km Study Area for marine ecology. However, there are five designated sites which protect mobile species which have been considered in this assessment, based on the Study Areas provided in Paragraph 13.3.4 and **Table 13-4**. These designated sites and their relevant reason(s) for designation are listed in **Table 13-5**, along with distances to the Marine Works.

Table 13-5: Designated Sites within the Study Area

Site name	Relevant reason(s) for designation	Approximate Distance from Works Area [km]
Southern North Sea SAC	Harbour porpoise (<i>Phocoena phocoena</i>)	52
Medway Estuary Marine Conservation Zone (MCZ) – Zone 2	Smelt (<i>Osmerus eperlanus</i>)	55
Dolphin Head Highly Protected Marine Area (HPMA)	Grey seal Harbour porpoise	121
The Wash and North Norfolk Coast SAC	Harbour seal	213
Humber Estuary SAC	Grey seal	283

- 13.3.11 The nearest MCZ is located 9.5km to the south of the Marine Works and is designated for benthic broadscale habitats. Therefore, it falls outside of the benthic ecology Study Area. However, the Medway Estuary MCZ (Zone 2) is designated for smelt and is within the Regional Study Area for migratory fish. A detailed MCZ Screening Assessment is provided in **Appendix 13A**.
- 13.3.12 There are no SSSI or Ramsar sites of relevance to marine ecology features located in the Study Area. Designated sites are considered within **Chapter 18: Terrestrial Ecology**.

Benthic Ecology

Intertidal Habitats

- 13.3.13 The Marine Works are situated entirely within the subtidal area off Dungeness Beach. No access is envisaged as required to the intertidal area required during the Marine Works. However, due to the location of the Marine Works and the potential for some indirect impact pathways to affect the intertidal area (i.e. airborne pollutant deposition, airborne noise affecting seals hauled-out on Dungeness Beach), intertidal habitat has been included within the baseline for completeness.

13.3.14 The intertidal habitat at Dungeness primarily consists of a shingle beach with a mixture of soft sediment and gravel and cobbles²⁵⁸. The specific habitat types include:

- A2.1 – littoral coarse sediment; and
- A2.2 – littoral sand and muddy sand.

13.3.15 These intertidal habitats do not fall within the footprint of the Marine Works. Other intertidal habitats present include infralittoral fine sand (A5.23) and infralittoral muddy sand (A5.24).

13.3.16 There are no Annex I habitats present in the intertidal area adjacent to the Marine Works.

Subtidal Habitats

13.3.17 The Marine Works are largely situated within subtidal soft sediment (A5.2 – sublittoral sand) and high energy circalittoral seabed (**Figure 13-1** and **Figure 13-2**). Other subtidal habitats which are present in the wider Study Area include:

- Circalittoral fine sand (A5.25) or circalittoral muddy sand (A5.26);
- High energy circalittoral seabed and circalittoral coarse sediment (A5.14);
- Circalittoral sandy mud (A5.35);
- Deep circalittoral mud (A5.37); and
- Deep circalittoral coarse sediment (A5.15).

13.3.18 Subtidal benthic surveys will be undertaken in the vicinity of the Marine Works to confirm the presence and absence of different sediment habitat types. The survey results will be considered in the marine ecology assessment within the ES.

Benthic Invertebrates

13.3.19 The intertidal habitat of coarse shingle sediment on Dungeness Beach supports relatively few species and are often devoid of macrofauna, with the potential for small numbers of crustaceans such as sand hopper (*Pectenogammarus planicrurus*)²⁵⁹. In comparison the sand and muddy sand habitat found down shore in the intertidal zone typically have a higher species richness, with communities include amphipods, polychaetes and bivalves²⁶⁰.

13.3.20 The subtidal soft sediment found in the 8km Study Area is typically characterised by a range of echinoderms, bivalves and polychaetes including white furrow shell (*Abra alba*), sand star (*Astropecten irregularis*)

²⁵⁸ South East Regional Coastal Monitoring Programme. (2025). Dungeness Power Station – 2022 Baseline Survey Report. 4cSU13.

²⁵⁹ European Environment Agency. (2019a). Littoral coarse sediment. (Online). Available at: <https://eunis.eea.europa.eu/habitats/436>. (Accessed: 17/10/2025).

²⁶⁰ European Environment Agency. (2019b). Littoral sand and muddy sand. (Online). Available at: <https://eunis.eea.europa.eu/habitats/437>. (Accessed: 17/10/2025).

and bristleworm (*Lagis koreni*)^{261,262}. In coarser sediment, certain species of sea cucumber such as the gravel sea cucumber (*Neopentadactyla mixta*) are reported to be present in similar locations.

13.3.21 Further data on the composition of the benthic invertebrate community, in the 8km Study Area, will be collected during the site-specific marine surveys.

Fish and Shellfish

13.3.22 Both pelagic (i.e. species that live in the water column) and demersal (i.e. species that live on or near the seafloor) species are expected to be present in the 8km Study Area, based on regional fisheries data and habitat characteristics reported in Coull et al., 1998; Ellis et al., 2012^{263,264}.

13.3.23 Pelagic species which commonly occur in the North Sea and English Channel include herring (*Clupea harengus*), cod (*Gadus morhua*), sprat (*Sprattus sprattus*), mackerel (*Scomber scombrus*) and horse mackerel (*Trachurus trachurus*).

13.3.24 Demersal species are expected to include whiting (*Merlangius merlangus*), plaice (*Pleuronectes platessa*), lemon sole (*Microstomus kitt*), Dover sole (*Solea solea*) and Raitt's sandeel (*Ammodytes marinus*).

13.3.25 Several species of elasmobranch are also considered likely to be present, including tope shark (*Galeorhinus galeus*), thornback ray (*Raja clavata*), spotted ray (*Raja montagui*), basking shark (*Cetorhinus maximus*) and spurdog (*Squalus acanthias*). These species are protected by national or international legislation, with all but basking shark listed on the Oslo and Paris Conventions (OSPAR) list of threatened and/or declining species. Basking shark are protected under the Wildlife and Countryside Act 1981.

13.3.26 Diadromous (i.e. migratory) fish which are known to migrate through coastal environments (i.e. where the Marine Works are located) include European eel (*Anguilla anguilla*), Atlantic salmon (*Salmo salar*), brown trout (*Salmo trutta*), sea lamprey (*Petromyzon marinus*), river lamprey (*Lampetra fluviatilis*), European smelt, Allis shad (*Alosa alosa*) and twaite shad (*Alosa fallax*). The following rivers which provide habitat for migratory fish have been considered as part of a regional approach for migratory fish:

- The River Rother located approximately 13km west of the Marine Works includes small numbers of brown and sea trout;
- The River Swale located approximately 48km north of the Marine Works provides habitat for smelt;
- The River Thames and Thames River Basin (including the Thames, Medway and Colne rivers), located approximately 57km from the Marine

²⁶¹ European Environment Agency. (2019c). Circalittoral sandy mud. (Online). Available at: <https://eunis.eea.europa.eu/habitats/5433>. (Accessed: 17/10/2025).

²⁶² European Environment Agency. (2019d). Circalittoral fine sand. (Online). Available at: <https://eunis.eea.europa.eu/habitats/5428>. (Accessed: 17/10/2025).

²⁶³ Coull, K. A., Johnstone, R. and Rogers, S. I. (1998). Fisheries Sensitivity Maps in British Waters. UKOOA Ltd.

²⁶⁴ Ellis, J., Milligan, S., Readdy, L., Taylor, N. and Brown, M. (2012). Spawning and nursery grounds of selected fish species in UK waters. Cefas.

Works, is one of the most important rivers for European eel in the UK²⁶⁵. Salmon and small numbers of brown trout, lamprey and smelt are also present. The River Thames is also considered to be one of the largest known breeding grounds for smelt in the UK²⁶⁶; and

- The River Stour (Essex) located approximately 117km north of the Marine Works is thought to include small numbers of salmon and lamprey.

13.3.27 Based on shellfish landings data in waters surrounding Dungeness coastline (MMO, 2025), the most common shellfish present in the 8km Study Area are whelks (*Buccinum undatum*). Other species also present include brown crab (*Cancer Pagurus*), European lobster (*Homarus gammarus*), scallops (*Pecten maximus*), European spider crab (*Hyas araneus*), Norway lobster (*Nephrops norvegicus*) and queen scallop (*Aequipecten opercularis*). Cephalopod species of squid and cuttlefish have also been recorded in landings data²⁶⁷.

13.3.28 The occurrence, distribution and abundance of many fish and shellfish within the 8km Study Area is determined by their tendency to aggregate within specific areas to spawn. 'Spawning grounds' are defined either by the species behaviour and therefore may cover a wide area, or by specific habitat preferences (e.g., gravel), which may restrict spatial extent. Fish exhibit several modes of reproduction, the most common being broadcast spawning, where eggs and sperm are released into the water column. Other species deposit egg-cases or egg mats onto the seafloor making them more vulnerable to seabed disturbance. Fisheries sensitivity maps have provided information on important spawning and nursery grounds for selected fish and shellfish, including those present in the 8km Study Area (**Table 13-6** and **Table 13-7**) (**Figure 13-3** to **Figure 13-6**)^{268,269}.

Table 13-6: Spawning Grounds within the Study Area

Species	Ellis <i>et al.</i> , 2012	Coull <i>et al.</i> , 1998
Whitting	No	Yes
Cod	Low intensity	No
Horse mackerel	Low intensity	N/A
Sandeel	Low intensity	Yes
Mackerel	Low intensity	No
Plaice	High intensity	Yes
Dover sole	High intensity	Yes

²⁶⁵ Pecorelli, J.P., Macphie, K., Hebditch, C., Clifton-Dey, D., Thornhill, I. and Debney, A. (2019). Using citizen science to improve the conservation of the European Eel (*Anguilla anguilla*) in the Thames River Basin District. Freshwater Science.

²⁶⁶ Zoological Society of London. (2020). Thames Tideway Aquatic Ecology Research Smelt surveys on the Thames. (Online). Available at: https://www.tideway.london/media/5274/zsl_tideway_smeltreport_final_dec20.pdf. (Accessed: 23/10/2025).

²⁶⁷ Marine Management Organisation (MMO). (2025). UK sea fisheries annual statistics report 2023 - UK fleet landings by rectangle stock port and EEZ 2019-2023. (Online). Available at: <https://www.gov.uk/government/statistics/uk-sea-fisheries-annual-statistics-report-2023>. (Accessed: 21/10/2025).

²⁶⁸ Ellis, J., Milligan, S., Readdy, L., Taylor, N. and Brown, M. (2012). Spawning and nursery grounds of selected fish species in UK waters. Cefas.

²⁶⁹ Coull, K. A., Johnstone, R. and Rogers, S. I. (1998). Fisheries Sensitivity Maps in British Waters. UKOOA Ltd.

Species	Ellis <i>et al.</i> , 2012	Coull <i>et al.</i> , 1998
Lemon sole	N/A	Yes
Sprat	N/A	Yes

Table 13-7: Nursery Grounds within the Study Area

Species	Ellis <i>et al.</i> , 2012	Coull <i>et al.</i> , 1998
Whiting	Low intensity	Yes
Undulate ray	Low intensity	N/A
Sandeel	Low intensity	Yes
Mackerel	Low intensity	Yes
Plaice	Low intensity	Yes
Dover sole	Low intensity	Yes
Lemon sole	N/A	Yes
Thornback ray	Low intensity	N/A

*Intensity level of spawning is not provided for herring and whiting in Ellis *et al.*, 2012 in the Study Area, only the location of the spawning grounds and larval data for these species are provided.

Marine Mammals

Cetaceans

- 13.3.29 The Marine Works are located within the ICES Greater North Sea Ecoregion which encompasses the eastern English Channel²⁷⁰. This region, in part, forms the basis for IAMMWG MMMU boundaries²⁷¹.
- 13.3.30 Twenty-six cetacean species are known to occur within the Greater North Sea Ecoregion. However, only four of those cetacean species commonly occur or are considered resident: Harbour porpoise (*Phocoena phocoena*), bottlenose dolphin (*Tursiops truncatus*), white-beaked dolphin (*Lagenorhynchus albirostris*) and minke whale (*Balaenoptera acutorostrata*). A further six species are considered less common but regular: common dolphin (*Delphinus delphis*), Atlantic white-sided dolphin (*Lagenorhynchus acutus*), long-finned pilot whale (*Globicephala melas*), Risso's dolphin (*Grampus griseus*), humpback whale (*Megaptera novaeangliae*) and killer whale (*Orcinus orca*).
- 13.3.31 Most cetacean species are more common in deeper offshore waters. White-beaked dolphin and bottlenose dolphin have been occasionally recorded off Dungeness Point, as recorded in the EDF Energy Dungeness Annual Land Management Reviews.

²⁷⁰ ICES. (2025). Ecosystem Overviews – Greater North Sea Ecoregion. Ecosystem components: Marine mammals. (Online). Available at: <https://www.ices.dk/advice/ESD/Pages/Greater-North-Sea-Marine-mammals.aspx>. (Accessed: 15/10/2025).

²⁷¹ Inter-Agency Marine Mammal Working Group (IAMMWG). (2023). Review of Management Unit boundaries for cetaceans in UK waters. JNCC Report 734, JNCC, Peterborough, ISSN 0963-8091. (Online) Available at: <https://hub.jncc.gov.uk/assets/b48b8332-349f-4358-b080-b4506384f4f7>. (Accessed: 17/10/2025).

- 13.3.32 The nearest designated site for cetaceans is the Southern North Sea SAC which protects harbour porpoise and is located approximately 52km north of the Marine Works.
- 13.3.33 Harbour porpoises are commonly recorded in Dungeness waters. Regular monitoring of the Dungeness coastline as part of the EDF Land Management Annual Review has noted regular recordings of harbour porpoise in Dungeness coastal waters, with daily numbers in the 2021 report regularly reaching more than 50 individuals depending on tidal and sea state conditions, although numbers in 2023 were comparatively lower. Peak counts are typically observed during late spring through to the summer months. However, the EDF Energy Annual Land Management Reviews from 2012 to 2021 regularly note harbour porpoise presence throughout the year in varying abundances. The Dungeness Bird Observatory also regularly record the presence of harbour porpoise in waters offshore from Dungeness²⁷².

Pinnipeds

- 13.3.34 Seven species of seal are known to occur in the Greater North Sea Ecoregion, but only two of these are common: harbour seal (*Phoca vitulina*) and grey seal (*Halichoerus grypus*)²⁷³.
- 13.3.35 The closest seal haul-out site to the Marine Works is located in Rye Harbour Nature Reserve on the River Rother, approximately 13km west of the Marine Works. Small numbers of both harbour seal and grey seal are regularly observed resting in the inlets of the River Rother and swimming in the inshore waters of the harbour mouth and neighbouring Rye Bay. Both species are also regularly observed resting on Dungeness beach in small numbers and swimming in the surrounding coastal waters. Therefore, both harbour and grey seal are expected to be present in waters surrounding the Marine Works.
- 13.3.36 A larger haul-out site for both species is also be found on Goodwin Sands²⁷⁴, where harbour seals are reported to breed and pup. Goodwin Sands is located approximately 44km north of the Marine Works. The closest designated site for harbour seal is the Wash and North Norfolk Coast SAC which is located approximately 213km north of the Marine Works. For grey seal, the closest designated site is the Dolphin Head HPMA, located approximately 121km southwest of the Marine Works. Both harbour and grey seal can travel long distances from haul-out sites for foraging, with a maximum foraging range of 273km and 448km respectively²⁷⁵.

²⁷² Dungeness Bird Observatory. (2025). Observatory Blog Archive. (Online). Available at: <http://www.dungenessbirdobs.org.uk/2025/10/13th-oct.html>. (Accessed: 16/10/2025).

²⁷³ ICES. (2025). Ecosystem Overviews – Greater North Sea Ecoregion. Ecosystem components: Marine mammals. (Online). Available at: <https://www.ices.dk/advice/ESD/Pages/Greater-North-Sea-Marine-mammals.aspx>. (Accessed: 15/10/2025).

²⁷⁴ Cox, T., Barker, J., Bramley, J., Debnery, A., Thompson, D. and Cucknell, A. (2020). Population trends of harbour and grey seal in the Greater Thames Estuary. Mammal Communications, 6, 9.

²⁷⁵ Carter, M.I.D., et al. (2022). Sympatric Seals, Satellite Tracking and Protected Areas: Habitat-Based Distribution Estimates for Conservation and Management. Frontiers in Marine Science.

Summary of Future Baseline

13.3.37 For the purposes of the marine ecology assessment, it is considered that the future baseline would remain consistent with the existing baseline as it is not possible to predict changes in habitat composition or species distribution.

13.4 Consultation

13.4.1 No consultation has been undertaken to date on marine ecology. However, during the assessment of marine ecology, consultation will be undertaken with regulators and stakeholders including Natural England, Joint Nature Conservation Committee (JNCC), MMO, throughout the next stages of the Proposed Works.

13.5 Scope for Mitigation

13.5.1 Where necessary, embedded mitigation and monitoring measures will be proposed to reduce ecological impacts at sensitive locations within and around the Marine Works. Embedded mitigation requirements will be determined as the design of the Marine Works progresses and based on the marine ecology assessment and the location of existing receptors.

13.5.2 Embedded mitigation measures to be captured within the Environmental Management Plan could include the following:

- Evolution of design and working methods to avoid or minimise impacts;
- Production of a Marine Works Environmental Management Plan including an Emergency Spill Response Plan and Waste Management Plan, Marine Pollution Contingency Plan (MPCP) or Shipboard Oil Pollution Emergency Plan (SOPEP) could be included where considered proportionate to the risk/need as well as a dropped objects procedure;
- The management of construction site runoff, spillage risk and the dispersion of suspended sediments; see **Chapter 19: Water Environment and Flood Risk**);
- All project vessels would comply with the International Regulations for Preventing Collisions at Sea 1972²⁷⁶, regulations relating to International Convention for the Prevention of Pollution from Ships²⁷⁷ (the MARPOL Convention 73/78), with the aim of preventing and minimising pollution from ships and the International Convention for the Safety of Life at Sea²⁷⁸ (SOLAS 1974); and
- All project vessels to comply with the International Convention for the Control and Management of Ships' Ballast Water and Sediments with the aim of preventing the spread of marine invasive non-native species (INNS), and International Maritime Organization (IMO) Guidelines for the control and management of ships' biofouling to minimise the transfer of invasive aquatic species.
- Minimisation of the use of anti-fouling materials to reduce harmful chemicals/biocides released into the environment. For example, the

²⁷⁶ IMO (1972/77), Convention on the International Regulations for Preventing Collisions at Sea, 1972

²⁷⁷ IMO (1973/78), International Convention for the Prevention of Pollution from Ships (MARPOL).

²⁷⁸ IMO (1974/80), International Convention for the Safety of Life at Sea (SOLAS).

AAEDL and ASTPL discharge lines, which will extend from the existing outfall infrastructure, will be used minimally to reduce the release of harmful chemicals and biocides.

- Appropriate management of pollution risk and implementation of pollution controls.
- Consideration of sensitive species and timings of the Marine Works may allow some potential effects, which might arise temporally, to be minimised.

13.5.3 The need (or otherwise) for the following additional mitigation measures may also be applied to avoid significant effects:

- Restriction of working hours to daytime only to avoid the use of artificial lighting and therefore limiting visual disturbance; and
- Adoption of standard JNCC guidelines, where appropriate, regarding the minimisation of injury from underwater sound for marine mammals.

13.6 Potential Effects

13.6.1 Considering the baseline collated to date, the assessment will focus on the following receptor groups:

- Benthic habitats and species;
- Fish, including migratory fish;
- Harbour porpoise; and
- Pinnipeds;
 - Harbour seal; and
 - Grey seal.

13.6.2 **Table 13-8** summarises the scoping outcome of the impact pathways.

Table 13-8: Summary of Elements Scoped In and Out for Marine Ecology

Impact pathway	Scoping outcome	Justification
Temporary physical disturbance to subtidal benthic habitats and species	Scoped in	As described in Chapter 2: The Decommissioning and Dismantling Process, the Marine Works would require the temporary use of anchors on the seabed to maintain position of barges and the placement of JUB legs during. This could result in temporary disturbance to benthic habitats and species present in the surrounding subtidal area. The exact number of vessels required and therefore the number of anchor points required is currently unknown. However, the plant list is expected to include at least one JUB, one barge, one tug and one safety boat with temporary seabed anchors. The area of temporary disturbance is considered to be low and limited to the footprint of the anchors, anchor chains and JUB legs. However, this will be assessed in more detail once the parameters of the Marine Works have been determined. Therefore, this impact pathway has been scoped in for further assessment.
Temporary increase in suspended sediment concentrations (SSC) sediment deposition from potential anchoring of vessels leading to contaminant mobilisation turbidity and smothering effects on subtidal habitats and species	Scoped in	The placement of anchors, anchor chains and JUB legs on the sea floor could result in disturbance to sediment, leading to increased SSC and sediment plumes. Sediment plumes can result in smothering of benthic invertebrates and some fish and shellfish species, leading to clogged respiratory systems and in some cases mortality of fish eggs and larvae. Due to the presence of spawning and nursery grounds for several fish species in the Study Area, this impact pathway has been scoped in for further assessment.
Airborne noise (and vibration) and visual disturbance to seals	Scoped in	Seals can be sensitive to disturbance and auditory injury from anthropogenic noise and the presence of construction equipment. Therefore, potential effects from airborne noise disturbance (including auditory injury and disturbance behaviour) and changes in visual stimuli during the Proposed Works could occur (see also below for underwater noise). Impacts on marine mammals can be ruled out, as they do not remain above the water for a sufficient duration to be disturbed. Baseline airborne noise monitoring (as part of Chapter 14: Noise and Vibration) is to be undertaken and will include coverage of locations on Dungeness Beach where seals are commonly observed. Airborne noise calculations will be undertaken to inform the marine ecology assessment and will be compared to the baseline noise monitoring to determine potential impacts. This impact pathway has been scoped in for further assessment.

Impact pathway	Scoping outcome	Justification
Underwater noise effects on fish and marine mammals	Scoped in	Underwater noise may be produced during the Marine Works, particularly when inserting the new piping into the existing outfall infrastructure. The exact methodology to be used for threading new discharge piping through the existing outfall infrastructure has not yet been confirmed but is expected to include the use of hand tools (including some drilling). The use of vessels/barges is also required, and this is likely to produce underwater noise. Once specific activities have been confirmed, the sound characteristics for each sound source likely to be produced during the Marine Works will be determined based on publicly available online literature concerning values for common sound generating activities and by using professional judgement based on previous projects. Details on assumed sound intensity and operating frequency can also be inferred from available data sources. Once operating frequencies and sound levels have been established from the likely sound sources, they will be compared to the hearing range of fish and marine mammals to determine whether the hearing range and frequency of sound-generating Marine Works activities overlap. The process for determining underwater sound impacts on marine receptors is not straightforward. Marine mammals and fish, considered to be the marine receptors most sensitive to underwater sound and therefore at risk of potential impact, respond to underwater sound differently. Furthermore, the propagation of underwater sound in a marine environment can be dependent on several factors including water depth, seabed features and distance from the sound source. To obtain accurate measurements of underwater sound propagation and sound levels at a set distance from the sound (i.e. 100m, 200m, 1km), high-level modelling and/or calculations may be required which also factor in site-specific environmental conditions. To assess effects on marine receptors, the modelling results will be compared to thresholds and relative risk ratings provided by Popper et al. (2019) (for fish) and exposure criteria for auditory injury provided by United States National Marine Fisheries Service (for marine mammals)^{279,280}.

²⁷⁹ Popper, A.N., Hawkins, A.D., Fay, R.R., Mann, D.A., Bartol, S., Carlson, T.J. and Løkkeborg, S. (2014). Sound exposure guidelines. In ASA S3/SC1. 4 TR-2014 Sound Exposure Guidelines for Fishes and Sea Turtles: A Technical Report prepared by ANSI-Accredited Standards Committee S3/SC1 and registered with ANSI, 33-51.

²⁸⁰ National Marine Fisheries Service (NMFS). (2024). Update to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 3.0): Underwater and In Air Criteria for Onset of Auditory Injury and Temporary Threshold Shifts. U.S. Dept. of Commer., NOAA. NOAA Technical Memorandum NMFS-OPR-71, 182 p.

Impact pathway	Scoping outcome	Justification
		Due to regular use of waters in the Study Area by marine mammals and fish as described in Section 13.3 , the potential for effects resulting from the generation of underwater sound has been scoped in for further assessment.
Collision risk between Marine Works vessels and marine mammals	Scoped in	The operation of vessels and barges in subtidal waters close to the shoreline has the potential to increase collision risk with marine mammals. The exact number of vessels and barges required during the Marine Works has not yet been confirmed. Therefore, this impact pathway is scoped in on a precautionary basis for further assessment.
Direct loss and physical disturbance to benthic habitats and species during construction within the Zol	Scoped out	The Marine Works will use the existing outfall infrastructure. New piping will be placed inside the existing infrastructure and therefore there will be no placement of new permanent hard structures on the seabed which are not already in place. As a result, permanent direct habitat loss is not expected to occur and this pathway is scoped out.
Indirect effects to marine ecology from changes in existing thermal and chemical outputs from effluent discharge during operation	Scoped out	These discharges are already authorised under the EPR and subject to strict regulatory control by the Environment Agency. Any changes associated with the Alternative Discharge Lines will be assessed in detail through the permit application or variation process, ensuring compliance with established limits and monitoring requirements. Given this robust regulatory framework and the fact that the existing discharge regime is well understood and managed, this impact pathway is considered to be fully addressed through permitting and is therefore scoped out (see Chapter 4: Legislation and Policy Context).
Introduction and spread of Invasive Non-Native Species	Scoped out	The Marine Works do not involve the placement of any new materials which will be exposed to the marine environment for a prolonged period of time, which any INNS could colonise. Furthermore, as part of embedded mitigation measures, all vessels would be required to comply with International Convention for the Control and Management of Ships' Ballast Water and Sediments to prevent the spread of marine INNS, and IMO Guidelines for the control and management of ships' biofouling to minimise the transfer of invasive aquatic species ((see Section 13.5). Therefore, the risk of introduction and spread of INNS is considered highly unlikely and this impact pathway is scoped out.
Indirect effects to marine ecology from hydromorphology changes (i.e. changes to water flow or sediment movement and processes) within the Zol	Scoped out	The Marine Works do not include the placement of any permanent new structures on the seabed. Temporary anchor chains and JUB legs would introduce temporary disturbance. Therefore, there are expected to be no changes to the current hydromorphological baseline. Therefore, this impact pathway is scoped out.

Impact pathway	Scoping outcome	Justification
Physical disturbance and potential mortality to marine ecology from entrainment and impingement within the cooling water abstraction infrastructure during operation	Scoped out	The existing intake infrastructure will be sealed within the terrestrial portion of the Works Area, with the marine section remaining in situ. Therefore, the risk of potential entrainment and impingement has been avoided. Therefore, this impact pathway is scoped out.
Barriers to migration	Scoped out	given (i) the location of the Marine Works, i.e. a maximum of approximately 160m offshore from the Dungeness coastline, (ii) the short-term duration of the Marine Works in the marine environment and (iii) the limited potential pathways for impact, there is considered to be no barrier to migration for both migratory fish and marine mammals. Therefore, this impact pathway is scoped out.
Indirect effects to marine ecology from changes in water quality, including accidental spills and leaks from vessels	Scoped out	the Marine Works are only expected to require a small number of vessels/barges. With the adoption of embedded mitigation measures such as the International Convention for the Prevention of Pollution from Ships (the MARPOL Convention 73/78), and best practice techniques related to water quality during construction (e.g., the management of construction site runoff, spillage risk and the dispersion of suspended sediments; see Chapter 19: Water Environment and Flood Risk), there is considered to be negligible risk to water quality in the marine environment. Therefore, this impact pathway is scoped out

- 13.6.3 For the impact pathways scoped into the assessment, the relevant receptor groups are summarised in **Table 13-9**.

Table 13-9: Relevant Impact Pathways by Receptor Group

Impact pathways	Benthic habitats and species	Fish, including migratory fish	Harbour porpoise	Pinnipeds
Temporary physical disturbance to subtidal benthic habitats and species	X			
Temporary increase in SSC sediment deposition from potential anchoring of vessels leading to contaminant mobilisation turbidity and smothering effects on subtidal habitats and species	X			
Airborne noise (and vibration) and visual disturbance to seals				X
Underwater noise effects on fish and marine mammals		X	X	X
Collision risk between Marine Works vessels and marine mammals			X	X

Impact Pathways Considered within Other Assessments

- 13.6.4 Air quality effects on ecological receptors and effects on ornithological features of interest are considered with **Chapter 18: Terrestrial Ecology** and will not be reported in the marine ecology assessment.

13.7 Assessment Methodology

- 13.7.1 The proposed generic project-wide approach to the assessment methodology is set out in **Chapter 5: EIA Methodology**. The following section sets out the approach for assessing potential impacts from the Marine Works on marine ecology.

Approach and Assessment Criteria

- 13.7.2 The assessment methodology for marine ecology will be completed in accordance with the CIEEM Guidelines for EcIA in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine²⁸¹ with reference to the overarching impact methodology provided in **Chapter 5: EIA Methodology**. The methodology will be tailored to reflect the conditions of the marine ecological environment, considering the high levels of movement of marine receptors between habitats and populations. Therefore, the matrix-based

²⁸¹ CIEEM. (2024). Guidelines for Ecological Impact Assessment (EcIA). (Online). Available at: <https://cieem.net/resource/guidelines-for-ecological-impact-assessment-ecia/>. (Accessed: 21/10/2025).

approach provided **Chapter 5: EIA Methodology** has not been adopted for this marine ecology impact assessment.

Sensitivity

- 13.7.3 To determine sensitivity of the receptor, vulnerability, recoverability and importance will be considered. Vulnerability, the capacity to accommodate change, differs between species groups depending on different factors including habitat, fecundity and lifecycle for example. In addition, the ability to recover also differs between species, with some more likely to recover over a shorter timeframe due to increased fecundity for example. A sensitivity will be assigned in accordance with the criteria set out in **Table 13-10**.

Table 13-10: Sensitivity Criteria

Sensitivity/Value	Sensitivity/Value Criteria*
High	– Designated sites and qualifying/supporting features of international importance. – Species which are legally protected and/or in significant decline (i.e., classified as 'endangered' or 'critically endangered' according to the International Union for Conservation of Nature (IUCN) Red List. – High quality examples of rare habitats which are threatened throughout their range.
Medium	– Designated sites and qualifying/supporting features of national conservational importance. – Priority habitats and species or those considered to be of principal importance for the conservation of biodiversity in England and those species considered vulnerable to decline (i.e. classified as 'vulnerable' or 'near threatened' according to the IUCN Red List). – High quality examples of uncommon habitats which are vulnerable throughout their range.
Low	– Habitats and species of regional or local importance (i.e., Annex 1 habitats, in accordance with the Habitats Regulations, which are not a qualifying feature of a nearby designated site). – Those species considered to be of 'least concern' (according to the IUCN Red List or listed in the OSPAR list of threatened and/or declining species for the North-East Atlantic). – Poor quality examples of rare or uncommon habitats which are threatened or vulnerable throughout their range.
Very Low	– Habitats and species of low conservation importance, such as those generally abundant and widespread around the UK with no specific local value.

*Should there be any overlap in the description of a particular feature/receptor, the worst-case importance criteria are adopted.

Magnitude of Impact

- 13.7.4 The magnitude of an impact that could affect marine ecological receptors is influenced by several key factors, including the scale of the change (and how much the receptor is likely to be affected), the spatial extent over which the impact is likely to occur, and the duration and frequency of the impact. The magnitude criteria to be used are shown in **Table 13-11**.

Table 13-11: Magnitude of Impact Criteria

Magnitude	Magnitude Criteria
High	The impact occurs over a large spatial extent resulting in widespread, long-term, or permanent changes compared to the baseline conditions or affects a large proportion of a receptor population. The impact is very likely to occur and/or would occur at a high frequency or intensity. The impact may also relate to resources or features which are unique and which, if lost, either cannot be replaced or relocated or else may take a very long time to recover or be replaced. Adverse: Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements. Beneficial: Large scale or major improvement of resource and/or quality; extensive restoration; major improvement of attribute quality.
Medium	The impact occurs over a medium spatial extent resulting in medium-term, or partial changes compared to the baseline conditions or partially affects a proportion of a receptor population. The impact is likely to occur and/or would occur at a medium frequency or intensity. Adverse: Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements. Beneficial: benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality.
Low	The impact occurs over a small spatial extent resulting in short-term, or small changes compared to the baseline conditions, or partially affects a small proportion of a receptor population. The impact has a low likelihood of occurring and/or would occur at a low frequency or intensity. Adverse: Some measurable change in attributes, quality, minor loss of, or alteration to, one or more key characteristics, features or elements. Beneficial: Minor benefit to, or in addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk or negative impact occurring.
Very Low	The impact occurs over a minor spatial extent resulting in very short-term, or minor changes compared to the baseline conditions or partial effects to a very small proportion of a receptor population. The impact has a very low likelihood of occurring and/or would occur at a very low frequency or intensity. Adverse: Very minor loss of detrimental alteration to one or more characteristics, features or elements. Beneficial: Very minor benefit to or positive addition of one or more characteristics, features or elements.

Significance of Effects

- 13.7.5 CIEEM does not advocate a matrix approach for determining the significance of effects on ecological receptors.
- 13.7.6 To determine whether an effect is significant or not, the scale, nature and anticipated timeframe of the impact will be considered in addition to the sensitivity of affected receptors. Professional judgement will also be applied to allow for consideration of previous project knowledge and ecological context. Additionally, a precautionary approach will be taken with the worst-case scenario assessed for each impact, in order to account for any uncertainty or lack of baseline survey data in the assessment.

Assumptions and Limitations

- 13.7.7 No specific limitations have been identified for the available marine baseline data.
- 13.7.8 The following assumptions have been made when writing this marine ecology scoping report:
- The existing intake infrastructure will be sealed within the terrestrial Works Area and therefore there will be no drilling or capping of the existing intake in the marine environment;
 - New pipes will be installed within the existing infrastructure, with no requirement for a new outfall to be built and no permanent subtidal habitat loss because of the Marine Works;
 - The proposed effluent rates during the Proposed Works will be lower than the existing effluent rates, even if pipes with a smaller circumference are used, and will remain within the existing permitted limits;
 - The temperature of the proposed effluent will be no higher than the temperature of the existing effluent; and
 - At this stage, no marine surveys have been undertaken, and the assessments presented are based solely on available desktop data. This approach is considered proportionate and appropriate for the current stage of the project. Marine surveys are planned for a later phase and will be used to inform the EIA.

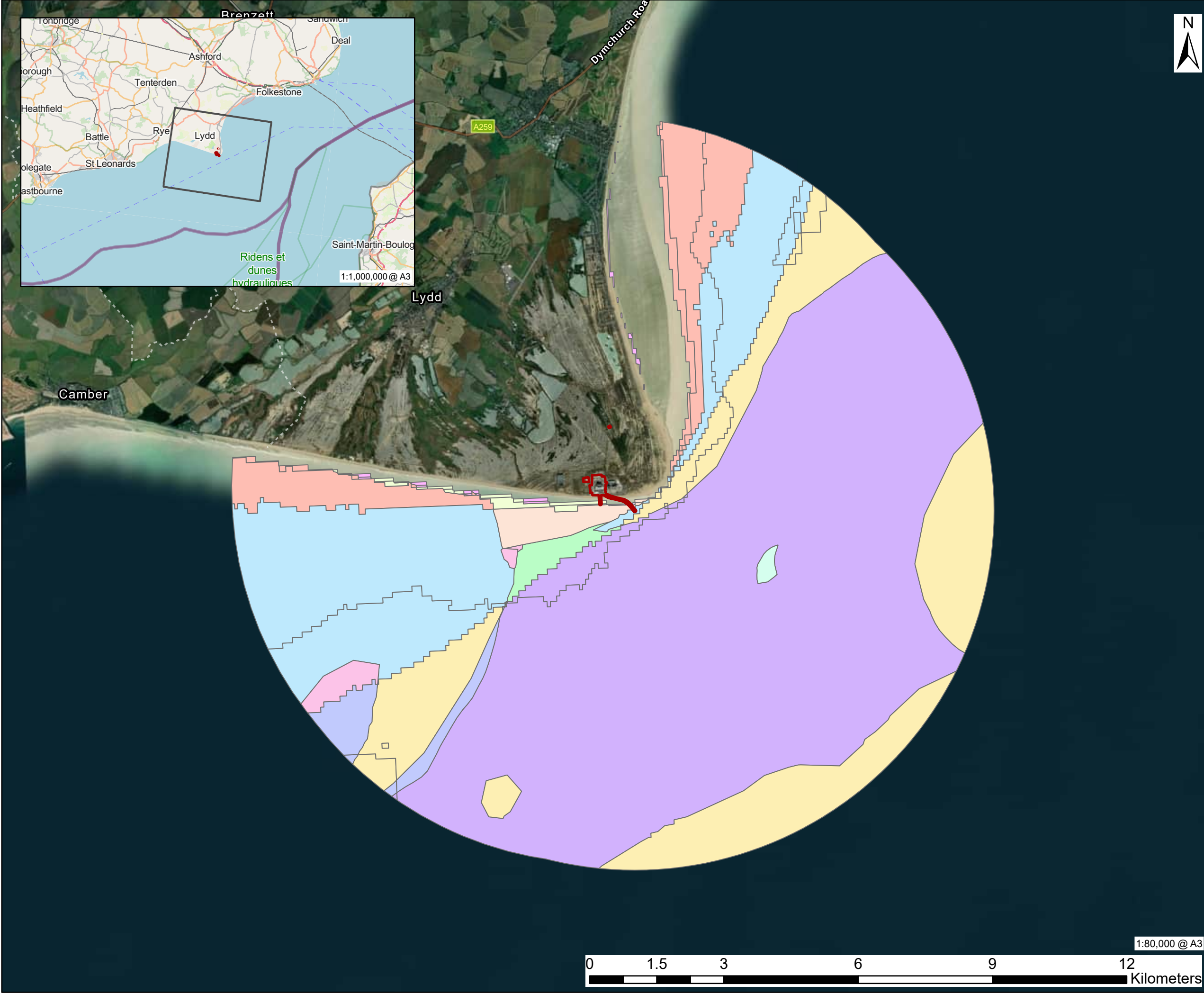
13.8 Summary of Potential Likely Significant Effects

- 13.8.1 A summary of proposed scope of the Marine Ecology ES chapter is provided in **Table 13-12**. Please refer to **Section 13.6** where justification of the scope is provided. These pathways will be further assessed and refined as the Marine Works design progresses.
- 13.8.2 The Marine Works would take place within Initial Decommissioning Works phase. No further works, other than routine maintenance, are proposed within the Care and Maintenance and Final Site Clearance phases.

Table 13-12: Summary of Elements Scoped In and Out for Marine Ecology

Impact pathway	Scoping outcome
Temporary physical disturbance to subtidal benthic habitats and species	Scoped in
Temporary increase in SSC sediment deposition from potential anchoring of vessels leading to contaminant mobilisation turbidity and smothering effects on subtidal habitats and species	Scoped in
Airborne noise and visual disturbance to seals	Scoped in
Underwater noise effects on fish and marine mammals	Scoped in
Collision risk between Marine Works vessels and marine mammals	Scoped in

Impact pathway	Scoping outcome
Direct loss and physical disturbance to benthic habitats and species during construction within the Zol	Scoped out
Indirect effects to marine ecology from changes in existing thermal and chemical outputs from effluent discharge during operation	Scoped out
Introduction and spread of Invasive Non-Native Species	Scoped out
Indirect effects to marine ecology from hydromorphology changes (i.e. changes to water flow or sediment movement and processes) within the Zol	Scoped out
Physical disturbance and potential mortality to marine ecology from entrainment and impingement within the cooling water abstraction infrastructure during operation	Scoped out
Barriers to migration	Scoped out
Indirect effects to marine ecology from changes in water quality, including accidental spills and leaks from vessels	Scoped out



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Dungeness B Nuclear
Decommissioning

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Limited

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United Kingdom

LEGEND

- Works Area
- EU Sea Map 2023
 - A5.14: Circalittoral coarse sediment
 - A5.15: Deep circalittoral coarse sediment
 - A5.23 or A5.24: Infralittoral fine sand or Infralittoral muddy sand
 - A5.25 or A5.26: Circalittoral fine sand or Circalittoral muddy sand
 - A5.27: Deep circalittoral sand
 - A5.35: Circalittoral sandy mud
 - A5.37: Deep circalittoral mud
 - Deep circalittoral sediment
 - High energy circalittoral seabed
 - High energy infralittoral seabed
 - Infralittoral seabed
 - Low energy infralittoral seabed
 - Moderate energy circalittoral seabed
 - Moderate energy infralittoral seabed

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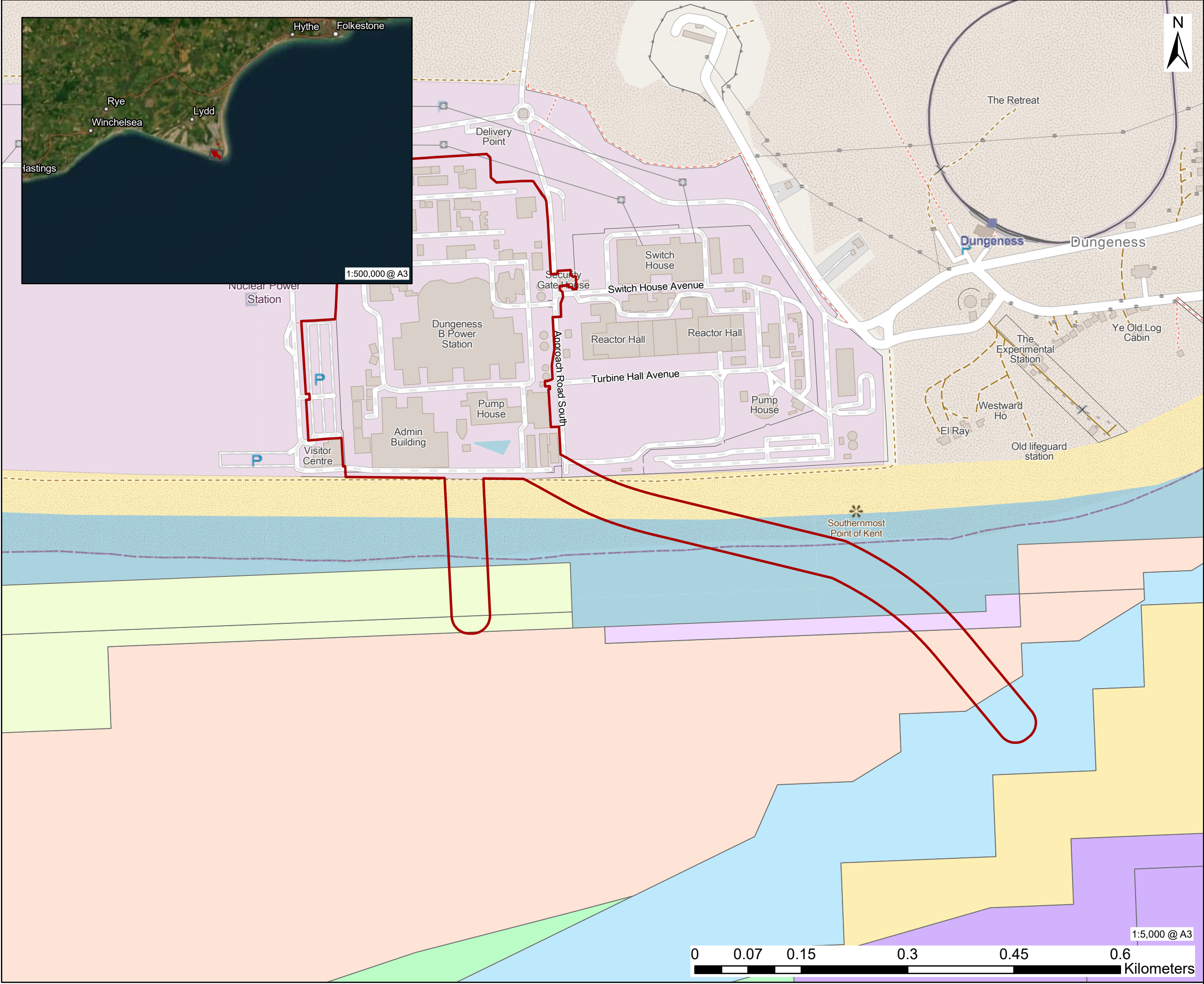
FIGURE TITLE

EU Sea Map (2023) in a 8 km radius

FIGURE NUMBER

Figure 13-1

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United Kingdom

LEGEND

Works Area

EU Sea Map 2023

- A5.14: Circalittoral coarse sediment
- A5.15: Deep circalittoral coarse sediment
- A5.23 or A5.24: Infralittoral fine sand or Infralittoral muddy sand
- A5.25 or A5.26: Circalittoral fine sand or Circalittoral muddy sand
- A5.27: Deep circalittoral sand
- A5.35: Circalittoral sandy mud
- A5.37: Deep circalittoral mud
- Deep circalittoral sediment
- High energy circalittoral seabed
- High energy infralittoral seabed
- Infralittoral seabed
- Low energy infralittoral seabed
- Moderate energy circalittoral seabed
- Moderate energy infralittoral seabed

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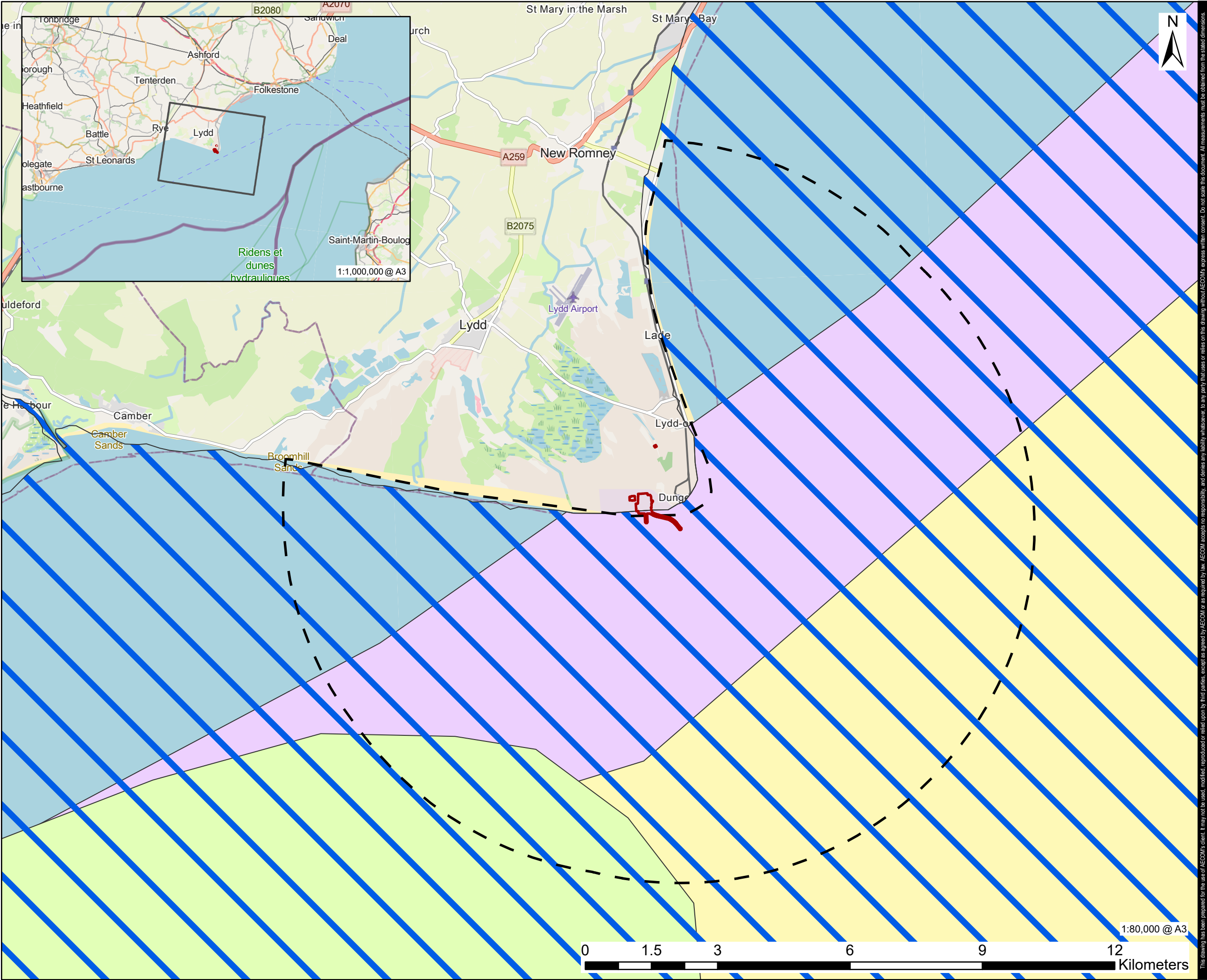
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FIGURE TITLE

EU Sea Map 2023 - Habitats inside the
Proposed Works Boundary

FIGURE NUMBER

Figure 13-2



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LEGEND

- Works Area
- 8 km Study Area
- Lemon Sole, Sole and Sprat
- Whiting
- Sandeel
- Plaice

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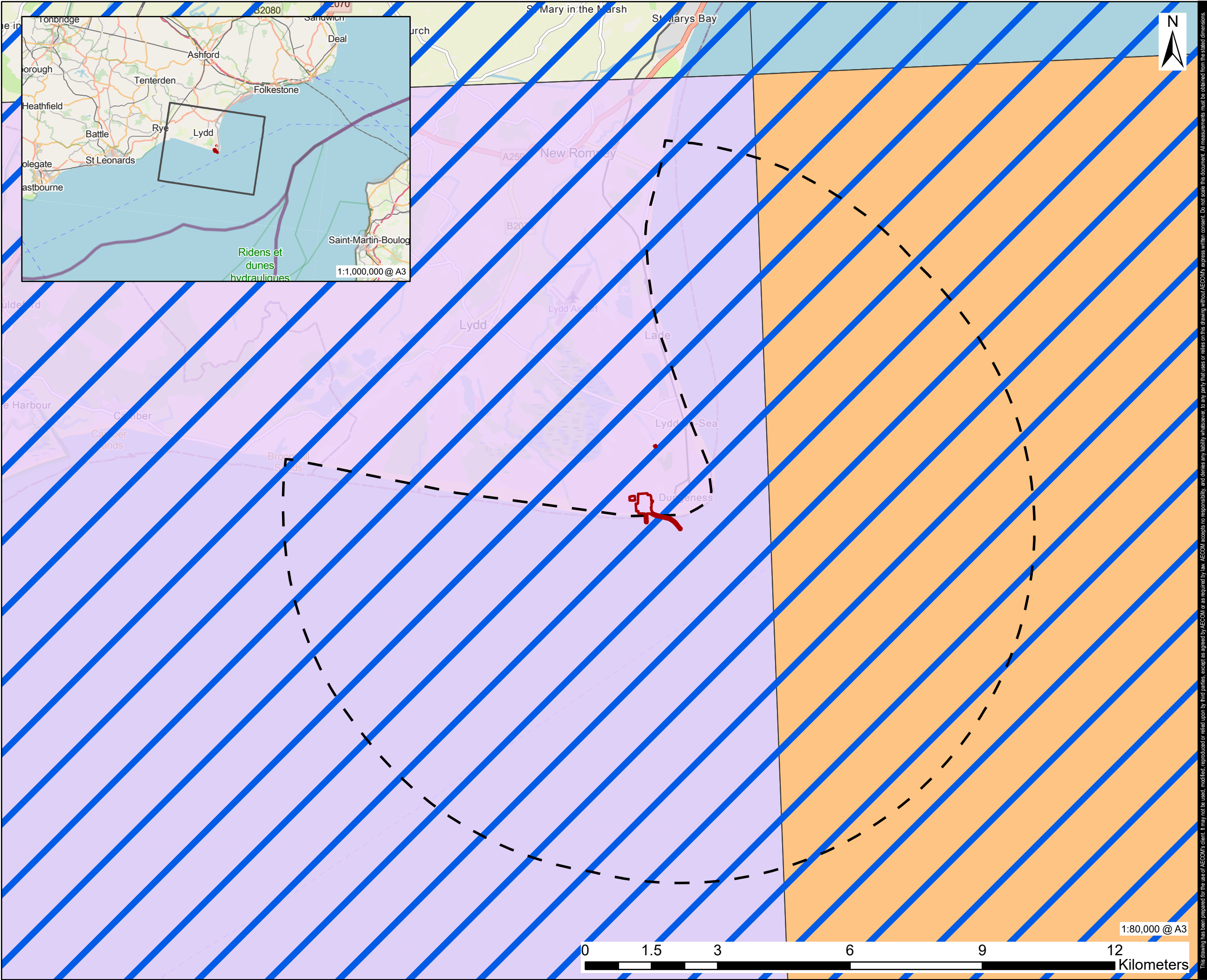
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FIGURE TITLE

Spawning Grounds (Coull et al., 1998) in a 8 km radius

FIGURE NUMBER

Figure 13-3



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LEGEND

- Works Area
- 8 km Study Area
- Sand Eel, Cod and Sole
- Mackerel and Horse Mackerel
- Plaice

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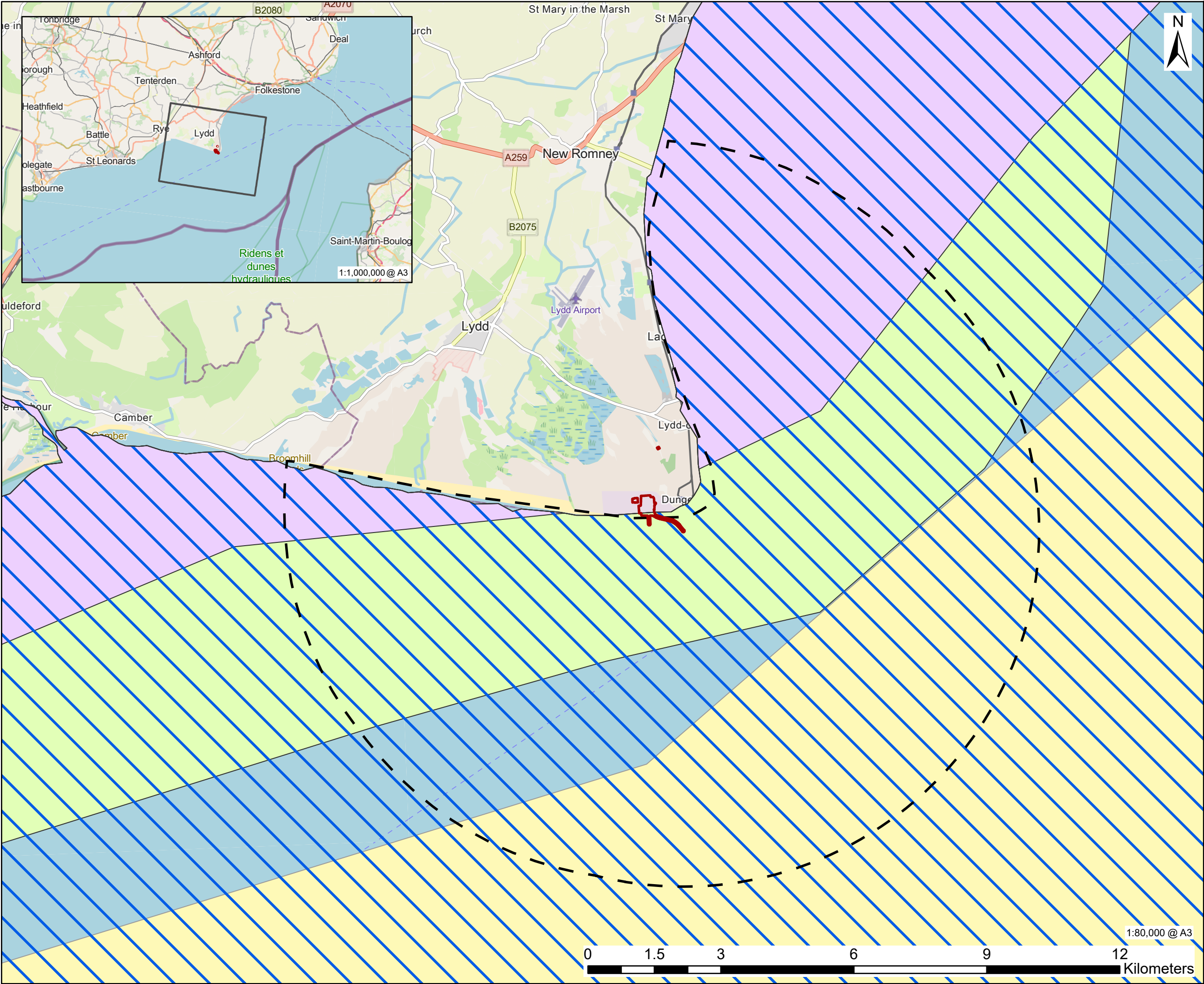
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FIGURE TITLE

Spawning Grounds (Ellis et al., 2012) in
a 8 km radius

FIGURE NUMBER

Figure 13-4



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LEGEND

- Works Area
- 8 km Study Area
- Lemon Sole and Mackerel
- Plaice
- Whiting
- Sandeel

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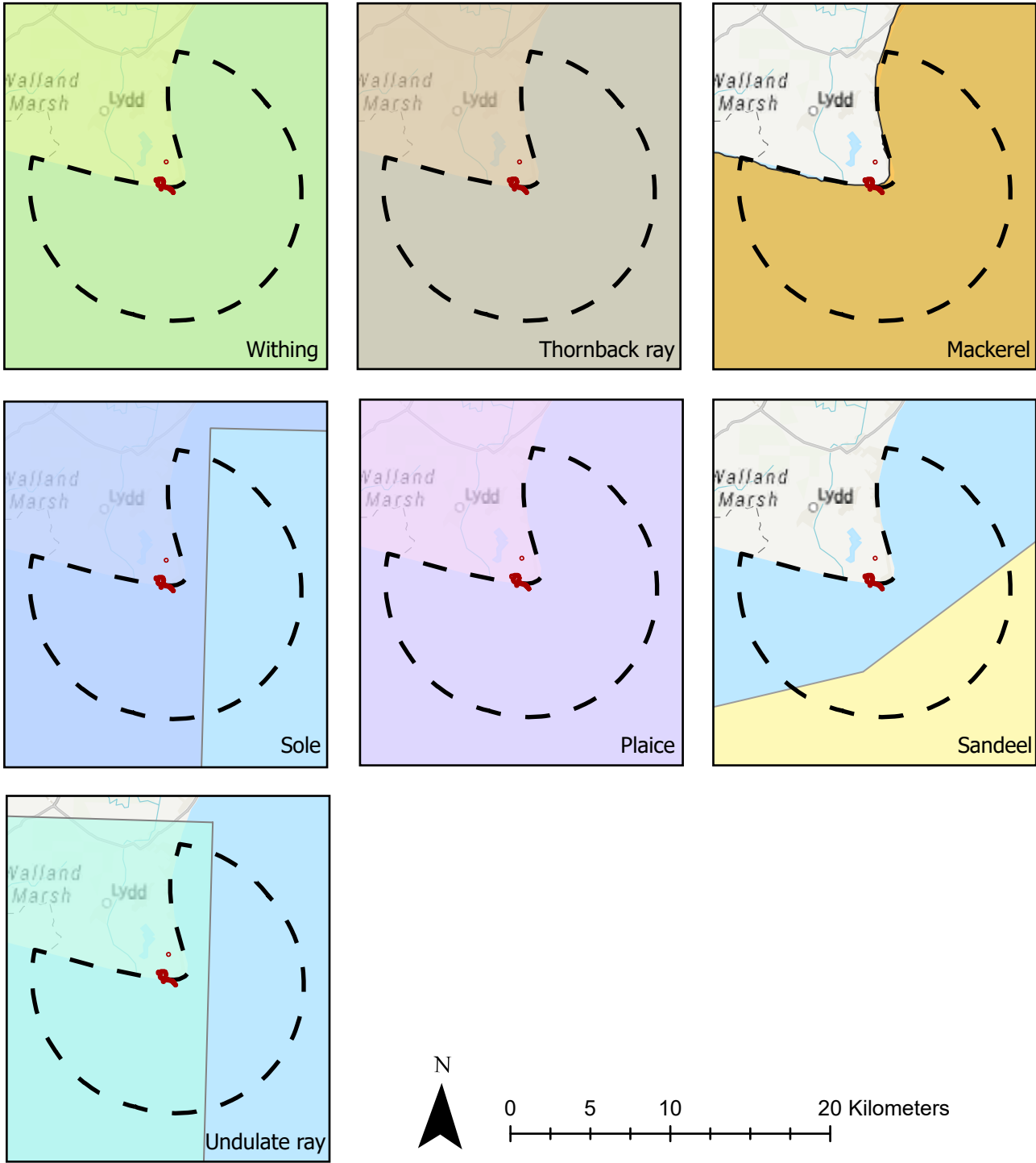
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FIGURE TITLE

Nursery Grounds (Coull et al., 1998) in a 8 km radius

FIGURE NUMBER

Figure 13-5



Project

Dungeness B Nuclear
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Project Number

60739933

Issue Purpose

EIA Scoping Report

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Figure Title

Nursery Grounds (Ellis et al.,
2012) in a 8 km radius

Figure Number

Figure 13-6

Legend

- Works Area
- 8 km Study Area
- Nursery Grounds (Ellis et al., 2012)
- Withing
- Thornback ray
- Undulate ray
- Mackerel
- Sole
- Plaice
- Sandeel

14. Noise and Vibration

14.1 Introduction

- 14.1.1 This chapter sets out the proposed scope and methodology for the assessment of effects of the Proposed Works upon noise sensitive receptors (NSR). This has been informed by an overview of the environmental baseline conditions, and consideration of the anticipated pathways and receptors where likely significant effects could arise as a result of the Proposed Works. Due to the nature of the works and the distance between the works and the receptors, the assessment of vibration impacts and effects has been scoped out (see **Section 14.6** below).
- 14.1.2 This chapter should be read in conjunction with the description of the Proposed Works presented in **Chapter 2: The Decommissioning and Dismantling Process**, and the assessment methodology presented in **Chapter 17: Traffic and Transport** of this Scoping Report. The findings of the noise assessment will also support the assessments outlined in **Chapter 10: Historic Environment**, **Chapter 13: Marine Ecology**, **Chapter 18: Terrestrial Ecology** and **Chapter 11: Human Health**.

14.2 Relevant Legislation, Policy and Guidance

Legislation

- 14.2.1 Legislation which is relevant to the assessment of effects on NSRs is presented in **Table 14-1**.

Table 14-1: Legislation Relevant to Noise and Vibration

Legislation	Legislation details
Environmental Protection Act, 1990 ²⁸²	The Environmental Protection Act (EPA) 1990 Part 3 identifies that noise (and vibration) emitted from premises (including land) can, at certain levels, be prejudicial to health or give rise to statutory nuisance. Local Authorities are required to investigate any public complaints of noise and if they are satisfied that a statutory nuisance exists, or is likely to occur or recur, they must serve a noise abatement notice. A notice is served on the person responsible for the nuisance. It requires either the abatement of the nuisance or works to abate the nuisance to be undertaken, or it prohibits or restricts the relevant activity. Contravention of a notice without reasonable excuse is an offence. Right of appeal to the Magistrates Court exists within 21 days of the service of a noise abatement notice. In determining if a noise complaint amounts to a statutory nuisance, the Local Authority can take account of various guidance documents and existing case law; however, no statutory noise limits exist. Demonstrating the use of 'Best Practicable Means' (BPM) to minimise noise levels is an accepted defence against a noise abatement notice.

²⁸² The Environmental Protection Act 1990 (c. 43). (online). Available at: <https://www.legislation.gov.uk/ukpga/1990/43/contents> (accessed 21/11/2025).

Legislation	Legislation details
Control of Pollution Act 1974 (CoPA) ²⁸³	Sections 60 and 61 of the CoPA 1974 provide the main legislation regarding demolition and construction site noise and vibration. If noise complaints are received, a Section 60 notice may be issued by the local planning authority with instructions to cease work until specific conditions to reduce noise have been adopted. Section 61 of the CoPA provides a means for applying for prior consent to undertake noise generating activities during construction. Once prior consent has been agreed under Section 61, a Section 60 notice cannot be served provided the agreed conditions are maintained on-site. The CoPA requires that BPM (as defined in Section 72 of CoPA) be adopted for construction noise on any given site. CoPA makes reference to British Standard 5228 (BSI), 2014a and b) (herein referred to as 'BS 5228) which provides guidance on mitigation measures.

Policy

- 14.2.2 Policy relating to noise and vibration to the assessment of effects of the Proposed Works is presented in **Table 14-2**.

Table 14-2: Policy Relevant to Noise and Vibration

Policy	Policy details
NPPF ²⁸⁴	The NPPF was first published on 2012, and last updated in February 2025, sets out that planning should make sufficient provision for “<i>conservation and enhancement of the natural, built and historic environment</i>” (Paragraph 20d). Consequently, the aim is to prevent both new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of noise pollution. Paragraph 187 of the NPPF states that: <i>“planning policies and decisions should contribute to and enhance the natural and local environment by:</i> <i>.....preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans.”</i> Paragraph 198 states that: <i>“Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to</i>

²⁸³ Control of Pollution Act, (online). Available at: <https://www.legislation.gov.uk/ukpga/1974/40> (accessed 21/11/2025).

²⁸⁴ Ministry of Housing, Communities and Local Government (MHCLG). (2025). National Planning Policy Framework. (online). Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2> (accessed 21/11/2025).

Policy

Policy details

impacts that could arise from the development. In doing so they should:

- *mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development - and avoid noise giving rise to significant adverse impacts on health and the quality of life;... [and]*
- *identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason".*

With regards to 'adverse effects' and 'significant adverse effects' the NPPF refers to the Noise Policy Statement for England (NPSE) Explanatory Note.

NPSE²⁸⁵

The NPSE seeks to clarify the underlying principles and aims in existing policy documents, legislation and guidance that relate to noise. The NPSE applies to all forms of noise, including environmental noise, neighbour noise and neighbourhood noise.

The statement sets out the long-term vision of the government's noise policy, which is to:

"promote good health and a good quality of life through the effective management of noise within the context of policy on sustainable development".

This long-term vision is supported by three aims:

- *"avoid significant adverse impacts on health and quality of life;*
- *mitigate and minimise adverse impacts on health and quality of life; and*
- *where possible, contribute to the improvements of health and quality of life."*

The long-term policy vision and aims are designed to enable decisions to be made regarding what is an acceptable noise burden to place on society.

The 'Explanatory Note' within the NPSE (Defra, 2010) provides further guidance on defining 'significant adverse effects' and 'adverse effects' using the concepts:

- no Observed Effect Level (NOEL) - the level below which no effect can be detected. Below this level no detectable effect on health and quality of life due to noise can be established;
- lowest Observed Adverse Effect Level (LOAEL) - the level above which adverse effects on health and quality of life can be detected; and
- significant Observed Adverse Effect Level (SOAEL) - the level above which significant adverse effects on health and quality of life occur.

The three aims can therefore be interpreted as follows:

- the first aim is to avoid noise levels above the SOAEL;
- the second aim considers situations where noise levels are between the LOAEL and SOAEL. In such circumstances, all reasonable steps should be taken to mitigate and minimise the effects. However, this does not mean that such adverse effects cannot occur; and

²⁸⁵ Department for Environment, Food and Rural Affairs (Defra). (2010). Noise Policy Statement for England. (online). Available at: <https://www.gov.uk/government/publications/noise-policy-statement-for-england> (accessed 21/11/2025)

Policy	Policy details
	the third aim seeks, where possible, to positively improve the health and quality of life through the pro-active management of noise whilst also taking account of the guiding principles of sustainable development. It is considered that the protection of quiet places and quiet times as well as the enhancement of the acoustic environment will assist with delivering this aim. The NPSE (Defra, 2010) recognises that it is not possible to have uniform objective noise-based measures that define the SOAEL, LOAEL and NOEL that are applicable to all sources of noise in all situations. The levels are likely to be different for different noise sources, receptors and times of the day.

- 14.2.3 Folkestone and Hythe District Council Core Strategy Review, March 2022²⁸⁶ and Folkestone and Hythe District Council Places and Policies Local Plan, September 2020²⁸⁷ have been reviewed and there are no policies related to noise from decommissioning activities or relevant to the Proposed Works.

Guidance

- 14.2.4 Guidance which is relevant to the assessment of noise and vibration effects on NSRs is presented in **Table 14-3**.

Table 14-3: Guidance Relevant to Noise and Vibration

Guidance	Guidance details
PPG ²⁸⁸	First published on 6th March 2014, this provides a web-based resource with more in-depth guidance to the NPPF (MHCLG, 2019). The PPG aims to make planning guidance more accessible, and to ensure that the guidance is kept up to date. The PPG was last updated for noise in July 2019. The guidance advises on: - whether or not a significant adverse effect is occurring or likely to occur, - whether or not an adverse effect is occurring or likely to occur, and - whether or not a good standard of amenity can be achieved. This guidance introduced the additional concepts of No Observed Adverse Effect Level (NOAEL), and Unacceptable Adverse Effect Level (UAEL).
BS 7445-1:2003 and 7445-2:1991 ²⁸⁹ Description and measurement of environmental noise	Defines parameters, procedures and instrumentation required for noise measurement surveys and analysis and has been used to inform the scope of baseline surveys.

²⁸⁶ Folkestone and Hythe District Council, (2022) Core Strategy Review. (online). Available at: <https://www.folkestone-hythe.gov.uk/core-strategy-review> (accessed 21/11/2025).

²⁸⁷ Folkestone and Hythe District Council, (2020) Places and Policies Local Plan. (online). Available at: <https://shepwayvox.org/wp-content/uploads/2021/04/Places-and-Policies-Local-Plan-2020.pdf> (accessed 21/11/2025).

²⁸⁸ Ministry of Housing, Communities and Local Government (MHCLG). (2019). Planning Practice Guidance. (online). Available at: <https://www.gov.uk/government/collections/planning-practice-guidance> (accessed 21/11/2025).

²⁸⁹ British Standards Institute (BSI). (2003). BS 7445-1:2003: 'Description and measurement of environmental noise - Guide to quantities and procedures'.

Guidance	Guidance details
BS 5228-1:2009+A1:2014 Noise and vibration on construction and open sites. Part 1: Noise ²⁹⁰	Provides a 'best practice' guide for noise control and includes sound power level (L_{WA}) data for individual plant as well as a calculation method for noise from construction activities. BS 5228-1 also provides example threshold values for potential significant effects at NSRs based upon the results of ambient sound monitoring (the ABC Method as presented in Annex E of BS 5228-1).
BS 5228-2:2009+A1:2014 Noise and vibration on construction and open sites. Part 2: Vibration ²⁹¹	Provides methods and criteria for assessing groundborne vibration, which have been used when considering the potential for significant effects due to vibration.
BS 6472-1:2008 'Guide to evaluation of human exposure to vibration in buildings Part 1: Vibration sources other than blasting' ²⁹²	Presents recommended frequency weighted vibration spectra (for continuous vibration) and vibration dose values (VDV) (for intermittent vibration), above which adverse comment is likely to occur in residential properties.
BS 7385-2:1993 'Evaluation and measurement for vibration in buildings. Guide to damage levels from ground borne vibration' ²⁹³	Presents guide values for transient and continuous vibration, above which there is a likelihood of cosmetic damage. The standard establishes the basic principles for carrying out vibration measurements and processing the data, with regard to evaluating vibration effects on buildings.
Calculation of Road Traffic Noise (CRTN) ²⁹⁴	Describes the procedures for calculating road traffic noise where road traffic noise may have an effect.
DMRB LA111 (Revision 2): Noise and vibration ²⁹⁵	Whilst the guidance is focused on road projects, is also useful for assessing changes in traffic noise levels as a result of 'non-road projects' such as the Proposed Works.
BS 4142:2014+A1:2019 ²⁹⁶	Presents guidance on the monitoring and assessment of industrial and commercial sound sources and is particularly orientated to the assessment of sound from factories, industrial premises, fixed installations or sources of an industrial/commercial nature affecting dwellings. The method compares the difference between ' <i>rating level</i> ' of the industrial sound, with the ' <i>background sound level</i> ' at the NSR position. This guidance will be used to assess the operation of the proposed waste management facilities.

²⁹⁰ British Standards Institute (BSI). (2014). BS 5228:2009+A1:2014: Code of practice for noise and vibration control on construction and open site– Part 1: Noise'.

²⁹¹ British Standards Institute (BSI). (2014b). BS 5228:2009+A1:2014: Code of practice for noise and vibration control on construction and open site – Part 2: Vibration'.

²⁹² British Standards Institute (2008) BS 6472-1 – Guide to evaluation of human exposure to vibration in buildings. Vibration sources other than blasting

²⁹³ British Standards Institute (1993) BS 7385-2 – Evaluation and measurement for vibration in buildings. Guide to damage levels from groundborne vibration

²⁹⁴ Department of Transport (DfT)/Welsh Office. (1998). Calculation of Road Traffic Noise

²⁹⁵ Highways England. (2020). Design Manual for Roads and Bridges LA 111 Noise and vibration – Version 2.

²⁹⁶ British Standards Institute (2019) BS 4142+A1:2019 – Methods for rating and assessing industrial and commercial sound

14.3 Baseline Conditions

- 14.3.1 The principal data source used to inform the current baseline conditions presented in this section beyond those identified in **Chapter 5: EIA Methodology** is limited to the UK environmental noise mapping undertaken as per the requirements of the Environmental Noise Directive²⁹⁷ and previous surveys and assessments associated with shingle renourishment operations.
- 14.3.2 Project specific baseline sound monitoring surveys will be undertaken in advance of the assessment to be presented in the ES.

Study Area

- 14.3.3 The study area covers the spatial extents over which potential direct and indirect noise and vibration effects of the Proposed Works could occur.
- 14.3.4 The study area for the assessment is defined by the locations of nearby NSRs with the potential to be affected by the Proposed Works. It is indicated in BS 5228-1:2009+A1:2014, for construction/decommissioning noise and vibration on-site, considering NSRs up to 300m and 100m of the Works Area respectively should be adequate to capture all potential significant effects. For operational noise from the waste processing facilities, BS4142:2014+A1:2019 suggests the study area should consider NSRs up to 500m from the Works Area. For road traffic noise, DMRB LA111 states that NSRs within 50m of the roads which would be used by vehicles associated with Proposed Works should be considered.
- 14.3.5 Noting the location of the nearest NSRs receptors to the Works Area, namely residential properties (including holiday lets) to the east on Dungeness Road, the study areas have been extended (where relevant) to include these, as shown on **Figure 14-1**. The study area also includes NSRs within 50m of all roads with potentially significant increases in road traffic noise levels resulting from the Proposed Works.
- 14.3.6 It is considered that if noise levels are suitably controlled at the nearest and most exposed receptors identified above, then noise levels will be suitably controlled at other more remote sensitive receptors in the surrounding area.

Potential Receptors

- 14.3.7 Receptors considered likely to be sensitive to changes in noise and vibration levels would typically include dwellings, hospitals, healthcare facilities, education facilities, community facilities, designated quiet areas or potential designated quiet areas, international and national or statutorily designated ecology sites, public rights of way and cultural heritage assets.
- 14.3.8 The nearest identified off-site human NSRs to the Proposed Works are located at least 340m to the east of the Works Area which are a mixture of holiday lets and private dwellings. The nearest small settlements are Lydd

²⁹⁷ Defra. Road Noise - All Metrics - England Round 4. (online). Available at: <https://environment.data.gov.uk/dataset/562c9d56-7c2d-4d42-83bb-578d6e97a517> (accessed 21/11/2025).

approximately 4.9km north-west of the Proposed Works and Lydd-on-Sea approximately 2km north-east of the Proposed Works.

- 14.3.9 It is proposed that human NSRs in the vicinity of the locations presented in **Table 14-4**, and shown on **Figure 14-1**, will be considered within the assessment of noise effects due to the Proposed Works as they represent the worst-case NSRs. Where additional human NSRs are identified during the EIA process, including through further consultation, it may be considered appropriate to include assessment of them in the ES. **Figure 14-1** also includes monitoring locations in the vicinity of ecological receptors.

Table 14-4: Receptors Proposed to be Included in the Noise Assessment

ID	Location	Approximate distance and direction from the Works Area
NSR1	Lloyd's Cottage,	340m east
NSR2	Westbeach	425m east
NSR3	Sunray Holiday Home	530m east
NSR4	Rosslyn	780m east

- 14.3.10 Other NSRs within 50m of key transport links to the Proposed Works may also be included within the assessment where a potentially significant volume of additional movements is expected. Further detail on this will be provided in the ES.
- 14.3.11 Consideration will also be given within the EIA to the potential indirect effects of noise and/or vibration on ecological receptors in **Chapter 13: Marine Ecology** and **Chapter 18: Terrestrial Ecology**, and cultural heritage assets in **Chapter 10: Historic Environment**. The noise assessment will also be considered in the context of human health within **Chapter 11: Human Health**.

Surveys

- 14.3.12 Baseline sound monitoring surveys will be undertaken to establish the existing ambient and background sound levels and to inform the ES. There are no known significant sources of vibration in the study area affecting receptors and therefore a baseline vibration survey is not proposed. Where works are undertaken at Dungeness A, they are likely to be temporary and of a similar nature to the Proposed Works and therefore unlikely to have an influence on baseline vibration levels within the study area. The baseline sound monitoring surveys will be planned to avoid noisy activities associated with the decommissioning works at Dungeness A and the annual shingle recycling works to maintain the flood defence berm to the south of Dungeness A and B.

Establishment of Baseline Sound Levels and Definition of Surveys

- 14.3.13 It is proposed to undertake unattended sound monitoring at the locations listed below, over a minimum of 5 days (ideally covering weekday and weekend periods). Where unattended monitoring is not possible due to access or security constraints, attended measurements will be undertaken covering a range of time periods including day and night on publicly accessible land.

14.3.14 The proposed sound monitoring locations are shown on **Figure 14-1**, although the exact locations chosen on-site will be dependent on factors including access to safe and secure locations and observations regarding localised sound sources. The baseline sound surveys will conform to BS 7445-1 and will aim to avoid monitoring during school holidays, any planned noisy works within the Dungeness Complex due to the ongoing decommissioning of Dungeness A and the shingle recycling works to maintain the flood defence berm to the south of Dungeness B.

14.3.15 The potential sound monitoring locations are as follows:

- ML1 – in the garden of residential property ‘Lloyd’s Cottage’;
- ML2 – in the garden of residential property ‘Westbeach’;
- ML3 – in the garden of holiday let ‘Sunray Holiday Let’; and
- ML4 – in the garden of holiday let ‘Rosslyn’.

14.3.16 In addition to the above locations, it is proposed that unattended sound monitoring will be undertaken at two of the locations below over a minimum of 5 days and additional short-term attended measurements will be undertaken at up to four locations along the beach during the daytime. The data collected at these locations will be used to assess noise effects on ecological habitats, refer to **Chapter 13: Marine Ecology** and **Chapter 18: Terrestrial Ecology**.

- Eco 1 – near to Long Pits to northeast of Dungeness B;
- Eco 2 – near outlet on southern boundary of Dungeness B; and
- Eco 3 to Eco 6 – four short-term attended measurements on the beach.

Summary of Existing Baseline

14.3.17 The existing sound sources in the local area include:

- Decommissioning works on Dungeness A;
- Ongoing defueling activities at Dungeness B;
- Road traffic noise along Dungeness Road, Rail Road, and Power Station Access Road;
- Romney, Hythe and Dymchurch Railway (a heritage railway line);
- Ambient noise associated with the coastal location such as breaking waves and winds; and
- Seasonal shingle recycling operations to maintain the flood defence berm to the south of Dungeness B.

Summary of Future Baseline

14.3.18 Whilst it is noted that the defueling works at Dungeness B would be completed prior to the Proposed Works, the main prevailing sound sources that influence the local acoustic environment are not anticipated to change significantly in the period between now and the commencement of Proposed Works or throughout its timeline.

14.4 Consultation

- 14.4.1 The Environmental Health Officer (EHO) at Folkestone and Hythe District Council will be contacted via email to discuss and agree the methodology and monitoring locations for the baseline surveys.

14.5 Scope for Mitigation

- 14.5.1 Where necessary, embedded mitigation and monitoring measures will be proposed to reduce impacts at sensitive locations within and around the Works Area.
- 14.5.2 Embedded mitigation requirements will be determined based on an evaluation of the predicted noise levels during the Proposed Works.
- 14.5.3 Measures to mitigate noise will be implemented during the decommissioning and dismantling works to minimise impacts at local human NSRs, particularly with respect to activities required outside of core working hours. Embedded mitigation to be set out within the Environmental Management Plan may include:
- Ensuring that processes are in place to minimise noise before works begin and ensuring that BPM are being achieved throughout the decommissioning and dismantling programme, including the use of localised screening around the main noise producing plant and activities;
 - Ensuring that modern plant is used, complying with applicable UK noise emission requirements, and selection of inherently quiet plant where possible;
 - Use of properly maintained and silenced plant and equipment where appropriate and possible, operated to prevent excessive noise, and switched off when not in use;
 - Use of hydraulic techniques for breaking, in preference to percussive techniques where reasonably practicable;
 - Off-site pre-fabrication for components of the waste processing facilities, where reasonably practicable;
 - All contractors to be familiar with legislation and the guidance applicable at the time of the works, through contract requirements;
 - Loading and unloading of vehicles, dismantling of equipment such as scaffolding or moving equipment or materials within the Works Area to be conducted in such a manner as to minimise noise generation, as far as reasonably practicable;
 - Appropriate routing of traffic related to the Proposed Works on public roads and along access tracks, to reduce traffic noise, as far as reasonably practicable; and
 - Monitoring of any noise complaints and reporting to NRS for immediate investigation.
- 14.5.4 Regular communication with the local community throughout the Proposed Works would also serve to publicise the works schedule, giving notification to residents regarding periods when higher levels of noise may occur during

specific operations, and providing lines of communication where any complaints can be addressed.

- 14.5.5 To minimise sound emissions from the operation of the waste management facilities, mitigation measures may include:
- Designing out of potential sound of a tonal, impulsive or intermittent nature during the detailed design stage by selection of appropriate plant, building cladding, louvres and silencers/attenuators are necessary; and
 - Orientation of plant within the Works Area to provide screening of low-level sound sources by other retained buildings or structures, or orientating fans and air inlets away from sensitive receptors.

14.6 Potential Effects

Noise

- 14.6.1 The noise impact pathways to be assessed in connection with the Proposed Works will be:
- Dismantling of buildings and plant and construction of the waste management facilities;
 - Transport movements to and from the Works Area; and
 - Operation of the waste management facilities.
- 14.6.2 Effects could occur during the Proposed Works, which are planned to occur over three phases as set out in **Chapter 2: The Decommissioning and Dismantling Process**.
- 14.6.3 The Proposed Works are separated into three distinct phases. It is currently anticipated that the effects identified for the Initial Decommissioning Works will be representative of the Final Site Clearance phase due to the nature of the works required. Confirmation of the effects to be considered and reported in the ES will be secured via further engagement with Folkestone and Hythe District Council (see above at **Section 14.4**).
- 14.6.4 Noise impacts associated with works in the marine environment, potentially affecting marine ecological receptors, will be considered within **Chapter 13: Marine Ecology** and impacts on terrestrial ecological receptors will be considered within **Chapter 18: Terrestrial Ecology**.
- 14.6.5 Noise impacts on cultural heritage assets will be considered in **Chapter 10: Historic Environment**.
- 14.6.6 The noise assessment will also be considered in the context of human health within **Chapter 11: Human Health**.

Vibration

Vibration – Demolition and Construction Activities Associated with the Proposed Works

- 14.6.7 As identified in BS 5228-2:2009+A1:2014, Groundborne vibration attenuates rapidly with distance and is usually considered where vibratory rollers or percussive piling is proposed in very close proximity to existing properties or

other vibration sensitive receptors. Due to the distance between the Proposed Works and the nearest identified receptors (at least 340m from the Works Area) and based on the criteria provided in BS 5228-;2009+A1:2014, no significant vibration effects (i.e. those typically associated with a medium or high magnitude impact) are expected, and therefore further assessment of vibration impacts on human receptors has been scoped out of the EIA.

Vibration – Vehicle Induced

- 14.6.8 Vibration from traffic on the highway network during the Decommissioning and Dismantling Phase has been scoped out. Former DMRB document HD 213/11 Rev 1²⁹⁸ reports that extensive research on a wide range of buildings found no evidence of traffic induced ground borne vibration being a source of significant damage to buildings and no evidence that exposure to airborne vibration has caused even minor damage. It was also stated that perceptible vibration only occurs in rare cases and identifies that the normal use of a building, such as closing doors and operating domestic appliances, can generate similar levels of vibration to that from traffic in most circumstances. In addition, DMRB LA 111 identifies that an assessment of road traffic vibration is not required for any project on the basis that a maintained road surface will be free from irregularities so operational vibration will not have the potential to lead to significant adverse effects. Should issues arise with Heavy Goods Vehicle movements over poor road surfacing, this can be resolved through routine road maintenance.

14.7 Assessment Methodology

- 14.7.1 The proposed generic project-wide approach to the assessment methodology is set out in **Chapter 5: EIA Methodology**.
- 14.7.2 The section below provides a summary of the noise assessment methodology which will be used for the EIA. The scope of quantitative noise assessment will consider the impacts and resultant effects during the Initial Decommissioning Works.

Approach and Assessment Criteria

Construction and Decommissioning and Dismantling Activities

- 14.7.3 The potential noise impacts arising from construction and decommissioning and dismantling site activities will be assessed in accordance with the methods and guidance in BS 5228:2009+A1:2014.
- 14.7.4 The assessment involves the calculation of noise emissions from the Works Area based on the sound power levels associated with the plant or equipment to be used, and the propagation from the noise sources to the NSR locations. Sound power levels will be taken from manufacturers data and/or archive data given in BS 5228 Part 1. The calculated noise levels will then be compared to the nominated criteria to determine whether an adverse impact is expected.

²⁹⁸ Highways Agency (2011) Design Manual for Roads and Bridges Volume 11 Section 2 Part 7 (HD 213/11) Noise and vibration.

- 14.7.5 The 'ABC' method (detailed in BS 5228 Part 1 Section E.3.2) sets construction noise thresholds for residential NSRs for different time periods (e.g. day, evening, night and weekends) based on the corresponding existing ambient noise levels. For each appropriate period (day, evening, night, weekend etc.), the existing ambient noise level is determined and rounded to the nearest 5 dB and the appropriate threshold value is then derived. The predicted construction noise level is then compared with this construction noise threshold value.

Operational Sound Associated with the Waste Management Facilities

- 14.7.6 The assessment of operational sound from the fixed plant associated waste management facilities will be assessed in accordance with BS 4142:2014+A1:2019 based on the information provided and representative *background sound levels*, subject to agreement with Folkestone and Hythe District Council.

Road Traffic

- 14.7.7 The traffic data from the Traffic and Transport assessment (see **Chapter 17: Traffic and Transport**) will be reviewed. If required, the change in road traffic noise levels, at a selection of relevant NSRs, will be predicted using the standard methodology outlined in CRTN/BS 5228 Haul Route. This will be based on the anticipated highest annual traffic flow associated with the Proposed Works to provide a worst case assessment. Traffic data will also be reviewed, where available from previous operational/defueling stages to provide context of changes in road traffic noise over time.
- 14.7.8 The significance of changes in road traffic noise levels will be assessed based on a range of relevant guidance, including DMRB.

Sensitivity

- 14.7.9 The scale of receptor sensitivity presented in **Table 14-5** is based on both professional judgement and classifications adopted for other recent EIAs.

Table 14-5: Sensitivity/Value of Receptors

Activity	Effect	Receptor (s)
High	Receptors where noise significantly affect the function of a receptor	• auditoria/studios • specialist medical/teaching centres, or laboratories with highly sensitive equipment
Medium	Receptors where people or operations are particularly susceptible to noise	• residential • quiet outdoor areas used for recreation • conference facilities • schools/educational facilities in the daytime • hospitals (health)/residential care homes • libraries
Low	Receptors moderately sensitive to noise where it may cause some distraction or disturbance	• offices • restaurants/retail • sports grounds when spectator or noise is not a normal part of the event and where quiet conditions are necessary (e.g. tennis, golf)

Activity	Effect	Receptor (s)
Very Low	Receptors where distraction or disturbance of people from noise is minimal	- residences and other buildings not occupied during working hours - factories and working environments with existing high noise levels - sports grounds when spectator or noise is a normal part of the event

Magnitude of Impact

Construction and Decommissioning and Dismantling Activities

14.7.10 Based upon the BS 5228 ABC method, the criterion proposed for the assessment for the determination of potentially significant effects is the exceedance of the $L_{Aeq,T}$ threshold level for the category appropriate to the ambient noise level at each NSR.

14.7.11 The magnitude of construction/decommissioning and dismantling noise on residential NSRs will be classified in accordance with the criteria in **Table 14-6**. These have been based on professional judgement and precedent.

Table 14-6: Construction Noise Magnitude of Impact for Residential NSRs

Magnitude of Impact	ABC Category Relative to Threshold Value $L_{Aeq,T}$ dB
High	Exceedance of ABC Threshold Value by $\geq +5$ dB
Medium	Exceedance of ABC Threshold Value by up to +5 dB
Low	Equal to or below the ABC Threshold Value by up to -5 dB
Very Low	Below the ABC Threshold Value by ≥ -5 dB

Operational Sound Associated with the Waste Management Facilities

14.7.12 Based on the guidance in BS 4142, **Table 14-7** illustrates the proposed magnitude of impact scale to be used in the assessment of operational/fixed plant noise. This is based upon the numerical level difference between the 'rating level' and the 'background sound level', although it should be remembered that the context assessment (including the absolute level of the sound under consideration) can vary the overall classification of effects.

Table 14-7: Magnitude of Impact for Industrial/Commercial Sound

Magnitude of Impact	BS 4142 Descriptor	Rating level minus background sound level (dB)
High	No BS 4142 descriptor for this magnitude level	>15
Medium	Indication of a significant adverse impact, depending upon context	+10 approx.
Low	Indication of an adverse impact, depending upon context	+5 approx.
Very Low	Indication of low impact, depending upon context	≤ 0

Road Traffic

14.7.13 The criteria for the assessment of the magnitude of traffic noise changes arising from road traffic associated with the Proposed Works have been taken from Table 3.17 of DMRB LA 111 Revision 2 (Highways England,

2020) and are reproduced in **Table 14-8**. The magnitude descriptors in parenthesis are provided to align with the descriptors used to be used in the assessment.

Table 14-8: Magnitude of Impact at NSRs from Construction Traffic

Magnitude of Impact	Change in traffic noise level $L_{A10,18h}$ dB
Major (high)	≥ 5
Moderate (medium)	3 to <5
Minor (low)	1 to <3
Negligible (very low)	<1

Significance of Effects

- 14.7.14 Noise effects are classified based on the relevant magnitude of the impact (as outlined above) and the sensitivity or value of the affected receptor. The classification of effects and the definitions of the effects can be found in **Chapter 5: EIA Methodology**.
- 14.7.15 For the purposes of this assessment, negligible and minor effects are not significant, whereas moderate effects may be considered significant (based upon specific scenarios and professional judgement) and major effects will be deemed significant. Where necessary the context of the existing acoustic environment will also be considered in determining the classification of effect.

Assumptions and Limitations

- 14.7.16 Noise levels will be predicted based on the decommissioning and dismantling schedule and information on the likely plant requirements. Where information on plant is unavailable, assumptions will be made using professional judgement based on experience of similar projects.
- 14.7.17 Operational sound levels will be predicted based on information on the likely plant requirements.

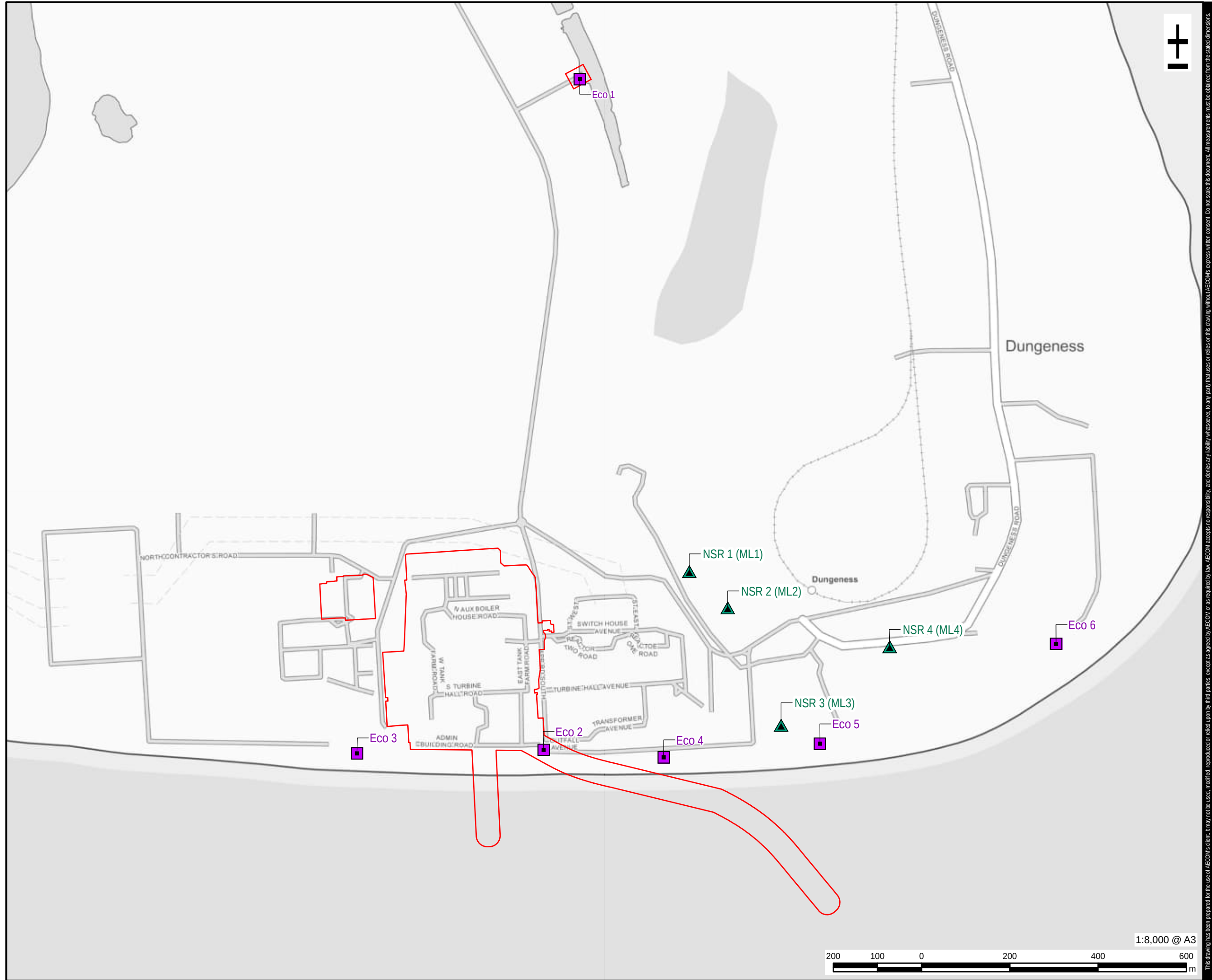
14.8 Summary of Potential Likely Significant Effects

- 14.8.1 **Table 12-13** provides a summary of the potential significant effects proposed to be considered in the Noise chapter of the ES. Please refer to **Section 14.6** where justification of the scope is provided.

Table 14-9: Summary of Elements to be Considered in the ES

Pathway	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
Noise	Scoped in	Scoped out	Scoped in*
Vibration	Scoped out	Scoped out	Scoped out

*It is currently assumed that the effects identified for the Initial Decommissioning Works will be representative of the Final Site Clearance Phase. The Final Site Clearance Phase will still be discussed qualitatively, applying professional judgement.



15. Socio-Economics

15.1 Introduction

- 15.1.1 This chapter sets out the proposed scope and methodology for assessing the potential effects of the Proposed Works on socio-economics. The scope has been informed by a review of the environmental baseline and consideration of the anticipated pathways and receptors where likely significant effects could arise as a result of the Proposed Works.
- 15.1.2 This chapter should be read in conjunction with the description of the Proposed Works presented in **Chapter 2: The Decommissioning and Dismantling Process** and **Chapter 5: EIA Methodology** of this Scoping Report.

15.2 Relevant Legislation, Policy and Guidance

Legislation

- 15.2.1 There is no applicable legislation specific to the socio-economic assessment.

Policy

- 15.2.2 Policy relating to socio-economics and relevant to the assessment of effects of the Proposed Works is presented in **Table 15-1**.

Table 15-1: Policy Relevant to the Socio-Economics Assessment

Policy	Policy details
Folkestone and Hythe District Council Core Strategy Review 2022 ²⁹⁹	The Local Plan acts as the development guiding policy for the area in which the Proposed Works lie. It sets out policies and development allocations relevant to the Works Area and its surroundings. These provide context for undertaking an assessment of socio-economic effects including future employment generation.
Folkstone and Hythe District Council. Places and Policies local plan 2020 ³⁰⁰	The Places and Policies Local Plan sets out Folkstone and Hythe's district councils plan for future development across the district including detailed development management policies to assess planning applications. These provide context for undertaking an assessment of socio-economic effects including future employment generation.

²⁹⁹ Folkestone and Hythe District Council (2022). Core Strategy review. (online). Available at: [Core Strategy Review – Folkestone & Hythe District Council](#) (Accessed 01/12/2025)

³⁰⁰ Folkestone and Hythe District Council (2020.) Places and Policies Local Plan. (online). Available at: <https://www.folkestone-hythe.gov.uk/planning-policy/adopted-development-plan> (Accessed 30/09/2025)

Policy	Policy details
Kent Minerals and Waste Local Plan 2024 to 2039 ³⁰¹	Sets out the vision and strategy for waste management and mineral provision up until (and including) the year 2039.

Guidance

- 15.2.3 Guidance which is relevant to the assessment of effects on socio-economics is presented in **Table 15-2**.

Table 15-2: Guidance Relevant to the Socio-Economics Assessment

Guidance	Guidance details
The Ministry of Housing, Communities and Local Government (MHCLG) Appraisal Guide ³⁰²	This guidance informs analysis of interventions and growth projects including any additionality effects in the assessment of impacts on local economies, such as labour market/employment effects in the distribution of benefits arising from interventions.
Homes and Communities Agency Employment Densities Guide ³⁰³	This guidance informs the analysis of employment based on typical densities associated with land uses and industries.

15.3 Baseline Conditions

Data Gathering Methodology

- 15.3.1 The principal data sources used to inform the current baseline conditions presented in this EIA Scoping Report comprise the following:
- Office for National Statistics, (2022); Census 2021³⁰⁴;
 - Office for National Statistics, (2012); Census 2011³⁰⁵;
 - Office for National Statistics, (2024); Business Register and Employment Survey 2023³⁰⁶;
 - Office for National Statistics, (2025); Annual Population Survey – January to December 2024³⁰⁷;
 - Office for National Statistics, (2025); Annual Population Survey – April 2024 to March 2025³⁰⁸;

³⁰¹ Kent County Council. Kent Minerals and Waste Local Plan 2024 to 2039 (2020). (online). Available at: [Kent Minerals and Waste Local Plan 2024-39 - adopted March 2025](#) (Accessed 01/12/2025)

³⁰² Ministry of Housing, communities and local government (MHCLG). Appraisal Guide: Third Edition. 2025. (online). Available at: [MHCLG: The Appraisal Guide](#) (Accessed 01/12/2025)

³⁰³ Homes and Communities Agency. Employment Densities Guide, Third Edition. 2015 (online). Available at: [Employment Density Guide 3rd Edition](#) (Accessed 01/12/2025)

³⁰⁴ Office for National Statistics Census 2021. 2022. (online). Available at: [2021 Census - Census of Population - Data Sources - home - Nomis - Official Census and Labour Market Statistics](#) (Accessed 01/12/2025)

³⁰⁵ Office for National Statistics Census 2011. 2012. (online). Available at: [2011 Census data - Office for National Statistics](#) (Accessed 01/12/2025)

³⁰⁶ Office for National Statistics. Business Register and Employment Survey 2023. 2024. (online). Available at: [Business Register and Employment Survey \(BRES\): provisional results 2023, revised results 2022 - Office for National Statistics](#) (Accessed 01/12/2025)

³⁰⁷ Office for National Statistics Annual Population Survey – January to December 2024 (2025).

³⁰⁸ Office for National Statistics Annual Population Survey – April 2024 to March 2025 (2025).

- Ministry of Housing, Communities and Local Government, (2019); Indices of deprivation³⁰⁹; and
- Office for National Statistics, (2025); Population projections 2022³¹⁰.

15.3.2 No surveys are proposed as part of the Human Health baseline assessment.

Study Area

- 15.3.3 A study area for the assessment of socio-economic effects will be established as part of the EIA process, with the study area varying based on the anticipated spatial area of impact as determined by guidance, aggregation of statistical data, professional experience, or derived from other EIA disciplines where relevant.
- 15.3.4 The potential economic and employment impacts arising from the Proposed Works, including GVA, and the impact of a changing influx of workers, are considered relative to a study area that represents the principal labour market catchment area for the Works Area and would be derived based on analysis of commuter patterns. Based on the type of activities during the Initial Decommissioning Works, the Care and Maintenance Phase, and the Final Site Clearance Phase of the Proposed Works, the relevant catchment area is likely to be a 45-minute drive time radius. The assessment of impacts on other receptors will consider those within the Works Area boundary, and immediately adjacent land. The relevant study areas for each of the effects confirmed to be scoped into the assessment will be set out in the ES and presented on a map to aid interpretation.
- 15.3.5 Effects on users of recreational routes and PRow will consider all such resources likely to be affected by alterations in distribution and flows. The types of resources considered include PRow themselves, National Cycle Network (NCN) routes and long-distance walking routes located within 1 km of the Works Area such as open land and beaches.
- 15.3.6 The study area for 'community severance' will be extended to include communities that may potentially be directly and indirectly affected by the Proposed Works, for example, through severance effects. These will include communities directly connected by the recreational routes and PRow.
- 15.3.7 The study area for 'private assets' (including residential properties, local business premises and development land) and effects on tourism (including visitor attractions) will consist of receptors within 1 km of the Proposed Works. This includes open land areas including beaches.

Potential Receptors

Initial Decommissioning Works

- 15.3.8 The following receptors will be considered during the Initial Decommissioning Works:

³⁰⁹ Ministry of Housing, Communities and Local Government. Indices of deprivation. 2019. (online) Available at: [English indices of deprivation 2019 - GOV.UK](#) (Accessed 01/12/2025)

³¹⁰ Office for National Statistics. Population projections 2022. 2025. (online). Available at: [Subnational population projections for England - Office for National Statistics](#) (Accessed 01/12/2025)

- Employment – receptors of employment creation are likely to be residents/employees within the relevant labour market catchment area;
- GVA creation – receptor of GVA creation is likely to be the local economy, e.g. economy of Folkstone and Hythe local authority area;
- Private assets (residential properties) – residential receptors are likely to be those residential properties near the Works Area, i.e. within 1km which have the potential to experience effects on their amenity;
- Private assets (business premises) – business premises receptors are likely to be those near the Works Area, i.e. within 1km which have the potential to be impacted by the works, including by traffic, severance or amenity effects;
- Private assets (development land) – development land receptors are likely to be those allocations and designations set out in local policy which lie near the Works Area, i.e. within 1km which have the potential to be impacted by the works, in terms of viability or timeline of delivery of housing or employment land;
- Tourism – tourism receptors are likely to be users of visitor attractions which lie near to the Works Area, i.e. within 1km of the Works Area which have the potential to experience effects on their amenity;
- PRoW – PRoW receptors are likely to be users of PRoW and recreational routes, within 1km of the Works Area (see **Figure 2-1**) who experience effects on the length, duration or enjoyment of their use of PRoW;
- Changing influx of workers – receptors of changing influx of workers are likely to be existing residents and/or users of local services such as primary healthcare, in addition to visitors and/or local tourism economy with regard to local accommodation which may accommodate workers in the area over extended periods of time; and
- Social cohesion – receptors of impacts on social cohesion, including users of community facilities and local social infrastructure such as primary healthcare.

Care and Maintenance

15.3.9 The following receptors will be considered during the Care and Maintenance phase:

- Employment – receptors of employment creation and the related impacts from the Proposed Works are likely to be residents/employees within the relevant labour market catchment area; and
- GVA creation – receptor of GVA creation is likely to be the local economy, e.g. economy of Folkstone and Hythe local authority area.

Final Site Clearance

15.3.10 The potential socio-economic receptors during the Final Site Clearance are the same as those identified during the Initial Decommissioning Works.

Summary of Existing Baseline

- 15.3.11 The Works Area is within the Walland & Denge Marsh ward and the Folkestone and Hythe local authority area. Data is provided for these geographies as well as wider comparator geographies of the South East region and England and Wales as a whole, in order to contextualise the data presented. Based on a review of the stated statistical sources, in relation to the local economy and labour market, the following paragraphs characterise the area surrounding the Proposed Works.

Population

- 15.3.12 **Table 15-3** shows that the population of Walland & Denge Marsh ward at the time of the latest Census (2021) was 7,869, of which 57.3% were of working age (aged between 16 and 64), 16.5% were aged 15 and below, and 26.2% were aged 65 and over³⁰⁴. The population of Folkestone and Hythe local authority area was 109,758, with a slightly higher proportion of residents than in Walland & Denge Marsh ward being of working age (58.4%) and aged 15 and below (16.6%), whereas Folkestone and Hythe has a slightly lower proportion of residents aged over 65 (25.0%).

Table 15-3: Population

Age of Population	Walland and Denge Marsh	Folkestone and Hythe	South East region	England and Wales
Total Population	7,869	109,758	9,278,063	59,597,546
Aged 16-64 (%)	57.3	58.4	62	62.9
Aged 0-15 (%)	16.5	16.6	18.6	18.5
Aged 65+ (%)	26.2	25.0	19.4	18.5

Source: Office for National Statistics (2022); Census. 2021.

Employment Industries

- 15.3.13 According to Business Register and Employment Survey data³⁰⁶, in 2023 the largest 'broad industrial groups' in terms of employment in the Walland & Denge Marsh ward were the 'mining, quarrying and utilities', 'manufacturing' and 'accommodation and food services' groups which contributed 24.0%, 12.0% and 12.0% of jobs respectively. This indicates the prominence of these industrial functions in the local area, when compared to their relative contribution to jobs in the Folkestone and Hythe area (2.2%, 5.6%, and 12.5% respectively), the South East region (1.2%, 6.0%, and 8.6% respectively) and across England and Wales as a whole (1.1%, 7.5%, and 7.9% respectively). A notable proportion of jobs in Walland & Denge Marsh were contributed to by the 'construction' (8.0%) and 'health' (7.0%) broad industrial groups.

Economic Activity

- 15.3.14 The economic activity rate of working age residents in **Table 15-4** shows that in the Folkestone and Hythe local authority area (84.2%) was slightly higher than recorded across the South East region (81.1%) and across England and Wales as a whole (78.7%) according to Annual Population Survey data³⁰⁸ from April 2024 to March 2025. However, the unemployment rate of working age individuals was notably higher in Folkestone and Hythe (6.0%) than both the South East region (3.3%) and across England and Wales as a whole (4.0%).

Table 15-4: Economic Activity and Unemployment

Economically active	Folkestone and Hythe	South East region	England and Wales
Economic Activity rate (%)	84.2	81.1	78.7
Unemployment rate (%)	6.0	3.3	4.0

Source: Office for National Statistics (2022); Census. 2021.

Qualifications

- 15.3.15 According to the Annual Population Survey (2024)³⁰⁷, a lower proportion of working age residents in the Folkestone and Hythe local authority area held RQF4+ (degree level qualifications), around 39.5%, compared to residents of the South East region, around 48.2%, and across England and Wales, around 46.6%. A very large proportion of working age residents had no qualification in Folkestone and Hythe, around 12.2%, compared to the recorded 5.5% in the South East region, and 6.7% across England and Wales as a whole. This is shown in **Table 15-5**.

Table 15-5: Qualifications

Qualification level	Folkestone and Hythe	South East region	England and Wales
RQF4+ (%)	39.5	48.2	46.6
No qualifications (RQF) (%)	12.2	5.5	6.7

Source: Office for National Statistics (2024); Annual Population Survey. 2023.

Occupation

- 15.3.16 Annual Population Survey data³⁰⁸ also shows that between April 2024 and March 2025 the occupational profile of those in employment indicates that in the Folkestone and Hythe local authority area the most prevalent occupations are 'professional occupations' which contribute 25.5% of jobs, and 'associate prof and tech occupations' which contribute 14.3% of jobs. In the South East region more widely, 'professional occupations' and 'associate prof and tech Occupations' similarly represent the two most prevalent categories reflecting 27.7% and 15.2% of jobs respectively.

Ethnicity

- 15.3.17 At the time of the Census 2021³⁰⁴, the ethnic group profile of Walland & Denge Marsh ward showed that of the resident population, 98.2% were recorded as being of 'White' ethnicity and 1.9% recorded as being of black and minority ethnic groups³¹¹. Within the Folkestone and Hythe local authority area, the latter corresponded to 7.4%, the South East region 13.7%, and England and Wales as a whole 18.3%. This is shown in **Table 15-6**.

³¹¹ Self-reported comprising Office for National Statistics categories 'Asian, Asian British or Asian Welsh', 'Black, Black British, Black Welsh, Caribbean or African', 'Mixed or Multiple ethnic groups', and 'Other ethnic group'.

Table 15-6: Ethnicity

Ethnicity group	Walland and Denge Marsh	Folkstone and Hythe	South East region	England and Wales
White (%)	98.2	92.6	86.3	81.7
Black and Minority Ethnic (%)	1.9	7.4	13.7	18.3

Source: Office for National Statistics (2022); Annual Population Survey. 2023.

General Health

- 15.3.18 **Table 15-7** presents data from the time of the Census 2021 which shows that the self-reported general health of the resident population indicated that the proportion who considered their health to be 'very good' or 'good' in Walland & Denge Marsh ward (74.9%) was lower than the equivalent rate in the South East region (84.0%) and England and Wales as a whole (82.0%). Likewise, those residents who considered their health to be 'very bad' or 'bad' in Walland & Denge Marsh ward (7.4%) was greater than recorded in the South East region (4.2%) and across England and Wales (5.2%).

Table 15-7: General Health

General Health	Walland and Denge Marsh	Folkstone and Hythe	South East region	England and Wales
Bad/Very bad (%)	74.9	78.2	84.0	82.0
Good/Very good (%)	7.4	6.5	4.2	5.2

Source: Office for National Statistics (2022); Census. 2021.

- 15.3.19 Indicators deemed relevant to likely health impacts of the Proposed Works for each area are further identified in **Chapter 11: Human Health**.

Deprivation

- 15.3.20 The English Indices of Multiple Deprivation dataset (2025)³¹², presents and ranks deprivation across England. Folkestone and Hythe local authority was ranked as the 66th most deprived local authority in England (out of 296, where 1st is most deprived). Accordingly, around 7.5% of Lower Super Output Areas (LSOAs)³¹³ in Folkestone and Hythe local authority were ranked amongst the 10% most deprived LSOAs nationally. Deprivation was also ranked across a number of different domains. The Folkestone and Hythe local authority area ranks relatively poorly, i.e. exhibits relatively high levels of deprivation, in the 'employment' (49th nationally), 'education' (68th nationally), and 'barriers to housing and services' (68th nationally) domains.

Local Facilities and Assets

- 15.3.21 The proximity of residential properties, business premises, community facilities, visitor attractions and development land has been investigated. There are a number of small settlements in proximity to the Works Area, including Dungeness (1km to the east), Lydd-on Sea (2km north-east), Lydd (4.9km to the north-west), and New Romney (7.5km to the north).

³¹² Ministry of Housing, Communities and Local Government. Indices of deprivation. 2025. (online). Available at: [English indices of deprivation 2025 - GOV.UK](https://www.gov.uk/government/statistics/english-indices-of-deprivation-2025) (Accessed 01/12/2025)

³¹³ Lower Super Output Areas (LSOAs) are small geographical units with broadly comparable resident populations used in the reporting of statistics.

Residential properties within 1km of the Works Area include those on Dungeness Road.

- 15.3.22 There are a number of small business premises within 1km of the Works Area, including restaurants and pubs. Additionally, there is a small cluster of holiday homes around Dungeness Road approximately 800m to the east of the works.
- 15.3.23 In terms of community facilities, there are none within 1km of the Works Area. The closest is Lydd Community Hall located 5.3km to the northwest.
- 15.3.24 Visitor attractions within 1km of the Works Area include; sections of the Dungeness Beach (to the east) and Denge Beach (to the west), which may be used as informal open space and recreational walking routes; Dungeness Bird Observatory, Dungeness Open Studios Art Gallery; and a Polish Fighter Pilots Memorial. The unique open landscape of the shingle, the fishing boats and scattered cottages also serves as an attraction for visitors of the area (see **Chapter 12: Landscape and Visual** for further information).
- 15.3.25 There is a network of PRow including publicly accessible footpaths and recreational routes which traverse the area surrounding the Works Area within 1km which include: Footpath 0162/HL 30, Footpath 0162/HL 4, Footpath 0162/HL 29, and Footpath 0162/HL 31 (**Figure 2-1**).
- 15.3.26 The extent of the Works Area relates to development allocations as set out in Kent Minerals and Waste Local Plan (2020), specifically mineral safeguarding in respect of storm beach gravel.

Summary of Future Baseline

- 15.3.27 It is inherently difficult to accurately predict baseline conditions over the long timescale anticipated for the Proposed Works, thus there is limited information available to characterise the study area over this period. The latest available data from ONS (2022)³¹⁰ provides population projections up to the year 2047. However, with respect to the local resident population projections suggest that by 2029, the resident population of Folkstone and Hythe will be 115,128 and by 2047 it will be 125,398, representing an increase over the period of 13.6% over the period. This represents a greater proportional increase than expected for the South East region (8.1%) and for England as a whole (7.5%). This is shown in **Table 15-8**. Across all geographies, it is expected that the highest proportional growth will be exhibited among the cohort aged over 65.

Table 15-8: Future Baseline: Population

Projected Year	Age Cohort	Folkstone and Hythe	South East region	England
2029	All ages	115,128	9,842,898	59,913,757
	Aged 16 to 64 (working age)	66,225	6,070,536	37,783,689
	Aged 65 and over	31,965	2,116,018	12,113,269
2047	All ages	125,398	10,636,045	64,388,886
	Aged 16 to 64 (working age)	70,122	6,387,635	39,864,012
	Aged 65 and over	39,325	2,630,698	14,728,772

Projected Year	Age Cohort	Folkstone and Hythe	South East region	England
Difference (2029-2047)	All ages	8.9%	8.1%	7.5%
	Aged 16 to 64 (working age)	5.9%	5.2%	5.5%
	Aged 65 and over	23.0%	24.3%	21.6%

Source: Office for National Statistics (2025); Population Projections. 2022.

15.4 Consultation

- 15.4.1 No specific consultation relevant to the Socio-economics assessment is proposed. Should comments be included within the Pre-application Opinion that require further discussion, these would be discussed with relevant parties during the preparation of the ES.

15.5 Scope for Mitigation

- 15.5.1 Mitigation measures will be included in the design (embedded mitigation measures) where practicable to help avoid, prevent or reduce effects on the receptors identified above.

15.6 Potential Effects

- 15.6.1 The following sections summarise the potential socio-economic impacts identified at the scoping stage. These have been informed by experience of other EIA projects, and by the advice provided in the ONR Technical Assessment Guide, which advises on the receptors to be considered in the socio-economic assessment for nuclear decommissioning projects.

Initial Decommissioning Works

Effects Scoped In

- 15.6.2 The following effects will be considered for the Initial Decommissioning Works:
- Employment – this could include new temporary employment opportunities or the continuation of employment at Dungeness B, both directly within the Works Area and indirectly in the supply chain, arising from the Proposed Works; and the possibility of training and apprenticeship opportunities. It is proposed to scope this into the assessment due to the scale and duration of the Initial Decommissioning Works.
 - GVA – this could include the gross value added through direct and indirect employment opportunities. It is proposed to scope this into the assessment due to the scale and duration of works.
 - Private assets – this could include effects on residential properties, business premises and development land during the Initial Decommissioning Works. It is proposed to scope this into the assessment due to the proximity of the Works Area.
 - Effects of tourism – this could include effects on visitor attractions and users. It is proposed to scope this into the assessment for the Initial

Decommissioning Works due to the proximity of the Works Area to such receptors.

- Effects on PRoW – this could include effects on users of footpaths, bridleways, byways, recreational routes and National Cycle Routes from disruption to or diversion of journeys. As there are a number of PRoW in proximity to the Works Area, and recreational walking opportunities along the beaches and open land, it is proposed to scope this into the assessment for the Initial Decommissioning Works.
- Impact of a changing influx of workers – this could include effects on existing residents and/or users of local services such as GP facilities, in addition to visitors and/or local tourism economy with regard to local accommodation which may accommodate workers in the area over extended periods of time. It is proposed to scope this into the assessment given the expected scale and duration of employment during the Initial Decommissioning Works.
- Social cohesion – this could include effects on community facilities and local social infrastructure such as primary healthcare. It is proposed to scope this into the assessment given the expected scale and duration of employment during the Initial Decommissioning Works.

Effects Scoped Out

15.6.3 The following effect will not be considered for the Initial Decommissioning Works:

- Public assets – It is proposed to scope this out of the assessment as there are no significant community facilities within 1km which have the potential to be impacted by the works.

Care and Maintenance

Effects Scoped Out

- Employment – this could include temporary or permanent employment opportunities, both directly within the Works Area and indirectly in the supply chain, arising from construction of the Project. It is proposed to scope this out of the assessment given the considerably reduced workforce when compared with the Initial Decommissioning Works.
- GVA – this could include the growth value added through direct and indirect employment opportunities. It is proposed to scope this out of the assessment given the considerably reduced workforce when compared with the Initial Decommissioning Works.
- Private assets – this could include effects on residential properties, business premises, and development land during the Care and Maintenance Phase. It is proposed to scope this out of the assessment as the works involved in this phase would be expected to have little impact on such receptors.
- Effects on tourism – this could include effects on visitor attractions and users. It is proposed to scope this out of the assessment as the works involved in the Care and Maintenance Phase once in progress would be expected to be associated with little impact on such receptors. Moreover,

the nuclear site licence boundary will be maintained and therefore no visitors will be able to access the Works Area.

- Effects on PRoW – this could include effects on users of footpaths, bridleways, byways, recreational routes and NCR from disruption to or diversion of journeys. It is proposed to scope this out of the assessments as the works involved in the Care and Maintenance Phase works would not directly impact on any PRoW or their users.
- Impact of a changing influx of workers - this could include effects on existing residents and/or users of local services such as GP facilities, in addition to visitors and/or local tourism economy with regard to local accommodation which may accommodate workers in the area over extended periods of time. It is proposed to scope this out of the assessment given the expected relatively low levels of employment associated with this Phase (namely a period of relative inactivity with continuous monitoring and surveillance, with periodic care and maintenance).
- Social cohesion – this could include effects on community facilities and local social infrastructure such as primary healthcare. It is proposed to scope this out of the assessment due to the expected relatively low levels of employment associated with this Phase (namely a period of relative inactivity with continuous monitoring and surveillance, with periodic care and maintenance).

Final Site Clearance

- 15.6.4 The potential significant effects during the Final Site Clearance are expected to be similar to those identified in the Initial Decommissioning Works. It is currently assumed that the effects identified for the Initial Decommissioning Works will be representative of effects during the Final Site Clearance Phase. The Final Site Clearance Phase will be discussed qualitatively, applying professional judgement.

15.7 Assessment Methodology

- 15.7.1 The proposed generic project-wide approach to the assessment methodology is set out in **Chapter 5: EIA Methodology**.
- 15.7.2 This section provides a summary of the assessment methodology.

Approach and Assessment Criteria

- 15.7.3 An assessment of potential impacts will be undertaken to determine the effect of the Proposed Works on the baseline socio-economic conditions. The methodology for assessing socio-economic impacts will follow standard EIA guidance and will comprise:
- An assessment of the likely scale, permanence and significance of effects associated with socio-economics; and
 - An assessment of the potential cumulative impacts with other schemes within the surrounding area.
- 15.7.4 The assessment of potential socio-economic impacts will use policy thresholds and professional judgment to assess the scale and nature of the

impacts of the Proposed Works against the baseline conditions. For socio-economics, there is no accepted definition of what constitutes a significant (or not significant) socio-economic effect. It is however recognised that effects should be categorised based on the relationship between the scale (or magnitude) of effect and the sensitivity (or value) of the affected resource or receptor.

15.7.5 As such, the socio-economics effects will be assessed on the basis of:

- Consideration of sensitivity to impact: specific values in terms of sensitivity are not attributed to socio-economic resources/receptors due to their diverse nature and scale, however the assessment takes account of the qualitative (rather than quantitative) 'sensitivity' of each receptor and, in particular, their ability to respond to change based on recent rates of change and turnover (if appropriate); and
- Magnitude/scale of impact: this entails consideration of the size of the impact on people or businesses in the context of the area in which effects will be experienced.

Sensitivity

15.7.6 The criteria for assessing levels of receptor sensitivity are defined in **Table 15-9**. These are based on professional judgment and have been applied to EIAs for Nationally Significant Infrastructure Projects.

Table 15-9: Classification of Receptor Sensitivity for Socio-Economics

Level of sensitivity	Description
High	There are limited/no comparable and accessible alternatives that exist within the relevant catchment area; and/or Receptors have limited ability to absorb the change.
Medium	There are limited comparable and accessible alternatives within the relevant catchment area; and/or Receptors have some ability to absorb the change.
Low	There are some comparable and accessible alternatives that exist within the relevant catchment area; and/or Receptors are able to relatively easily absorb the change.
Very low	There are many comparable accessible alternatives that exist within the relevant catchment area; and/or Receptors are able to relatively easily absorb the change.

Magnitude of Impact

15.7.7 The magnitude of the socio-economic impacts associated with the Proposed Works are assessed as being high, medium, low or very low. This is determined by:

- Extent of change – the absolute number of people affected and the size of area in which the impact would be experienced i.e. the level of change to baseline conditions including the proportion of the existing workforce;
- Scale of impact – the relative magnitude of each impact in its relevant market context (for example, the effects on local employment would be considered in the context of the overall size of the local labour market); and

- Duration of impact – more weight is given to long-term, permanent changes than to short-term, temporary ones. Temporary to short-term impacts are considered to be those associated with the construction works. Medium to long-term impacts are those associated with the Care and Maintenance Phase.

Significance of Effects

15.7.8 The assessment aims to be objective and quantifies effects as far as possible; however, some effects can only be evaluated on a qualitative basis. Effects are defined as follows:

- Beneficial classifications of effect: indicate an advantageous or beneficial effect on an area, which may be minor, moderate, or major in effect;
- Negligible classifications of effect: indicate imperceptible effects on an area;
- Adverse classifications of effect: indicate a disadvantageous or adverse effect on an area, which may be minor, moderate or major in effect; and
- No effect classifications: indicate there are no effects on an area.

15.7.9 Based on consideration of the above where an effect is assessed as being beneficial or adverse, the scale of the effect has been assigned using the below criteria:

- **Minor:** a small number of receptors are beneficially or adversely affected. The effect will make a small measurable positive or negative difference on receptors at the relevant area(s) of effect;
- **Moderate:** a noticeable number of receptors are beneficially or adversely affected. The effect will make a measurable positive or negative difference on receptors at the relevant area(s) of effect;
- **Major:** all or a large number of receptors are beneficially or adversely affected. The effect will make a measurable positive or negative difference on receptors at the relevant area(s) of effect; and
- **Negligible:** a very small number of receptors are beneficially or adversely affected. The effect will make an imperceptible positive or negative difference on receptors at the relevant area(s) of effect.

15.7.10 The method for identifying the significance of effects is shown in **Chapter 5: EIA Methodology**. Those effects which are found to be major will be deemed 'significant'. Those effects which are found to be moderate will be deemed 'significant' or 'not significant' based on specific scenarios and professional judgement. Those effects which are found to be minor will be considered 'not significant' although they may be a matter of local concern. Finally, those effects which are found to be negligible will be considered 'not significant' and are unlikely to be matters of local concern.

15.7.11 Duration of impact is also considered, with more weight given to permanent changes or reversible but long-term changes than to short-term temporary ones. For the purposes of this assessment, short term impacts are those which would last for one year or less, medium term impacts of one to four years and long-term impacts for five or more years.

Assumptions and Limitations

15.7.12 Mitigation measures will be included in the Proposed Works design where practicable, to avoid or reduce environmental effects. In addition, control and management measures will be implemented to minimise impacts on socio-economic receptors.

15.8 Summary of Potential Likely Significant Effects

15.8.1 **Table 15-10** provides a summary of the potential significant effects proposed to be considered in the socio-economics chapter of the ES. Please refer to **Section 15.6** where justification of the scope is provided.

Table 15-10: Summary of Elements to be Considered in the ES

Pathway	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
Employment	Scoped In	Scoped Out	Scoped In*
GVA	Scoped In	Scoped Out	Scoped In*
Effects on Private Assets	Scoped In	Scoped Out	Scoped In*
Effects of tourism	Scoped In	Scoped Out	Scoped In*
Effects on PRow	Scoped In	Scoped Out	Scoped In*
Effect of changing influx of workers	Scoped In	Scoped Out	Scoped In*
Social cohesion	Scoped In	Scoped Out	Scoped In*
Effects on Public assets	Scoped Out	Scoped Out	Scoped Out

* Applying professional judgement, qualitative assessments of the Care and Maintenance and Final Site Clearance phases will be undertaken

16. Soils and Geology

16.1 Introduction

- 16.1.1 This chapter sets out the proposed scope and methodology for the assessment of effects of the Proposed Works on soils and geology. This has been informed by a review of the environmental baseline conditions, along with the anticipated key issues likely to be associated with the Proposed Works.
- 16.1.2 This chapter should be read in conjunction with the description of the Proposed Works presented in **Chapter 2: The Decommissioning and Dismantling Process**. Potential effects on hydrogeological and hydrological setting are discussed in **Chapter 19: Water Environment and Flood Risk** of this scoping report.

16.2 Relevant Legislation, Policy and Guidance

Legislation

- 16.2.1 Legislation which is relevant to the assessment of effects on soils and geology is presented in **Table 16-1**.

Table 16-1: Legislation Relevant to Soils and Geology

Legislation	Legislation details
Environmental Liability Directive (2004/35/EC) ³¹⁴	Enforces claims against occupational activities which damage the environment. Its objective is to create " <i>a more uniform regime for the prevention and remediation of environmental damage</i> " across the EU.
The EU Water Framework Directive (2000/60/EC) (WFD) ³¹⁵	A fundamental requirement of the WFD is to attain Good Ecological Status, or Good Ecological Potential within each defined water body, by December 2027 at the latest and to ensure that any deterioration in status is prevented. The Directive requires Member States to put in place systems for managing their water environments based on natural river basin districts and underpinned by extensive environmental monitoring and scientific investigation called "river basin management".
The EU Groundwater Directive (2006/118/EC) (GWD) ³¹⁶	Directive 2006/60/EC sets out general provisions for the protection and conservation of groundwater. As provided for in Article 17 of that Directive, measures to prevent and control groundwater pollution should be adopted, including criteria for assessing good groundwater chemical status and criteria for the identification of

³¹⁴ The European Commission, Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage (2004).

³¹⁵ The European Commission, Water Framework Directive (WFD) 2000/60/EC: Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (2000).

³¹⁶ The European Commission, Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration (2006).

Legislation	Legislation details
	significant and sustained upward trends and for the definition of starting points for trend reversals.
The Environmental Quality Standards (EQS) Directive (2008/105/EC) ³¹⁷	Directive on environmental quality standards in the field of water policy.
The Environmental Protection Act (EPA) 1990 and Part IIA (the Contaminated Land Regime) ³¹⁸	The Environmental Protection Act 1990 (EPA) succeeded the Control of Pollution Act 1974 (COPA) and introduced new regulations for improved management systems relating to waste and pollution. The EPA establishes legal responsibilities for pollution control for land, air and water. In respect of waste, the EPA defines the fundamental structure and authority for waste management and control of emissions into the environment. The contaminated land regime under Part IIA of the Environmental Protection Act 1990 is one of the main policy measures used to deal with this legacy.
The Health and Safety at Work etc Act 1974 ³¹⁹	The Health and Safety at Work Act 1974 is the primary piece of legislation covering occupational health and safety in Great Britain. It sets out the general duties which: • employers have towards employees and members of the public. • employees have to themselves and to each other certain self-employed have towards themselves and others.
Environment Act 2021 ³²⁰	The Environment Act 2021 of the Parliament of the United Kingdom aims to improve air and water quality, protect wildlife, increase recycling and reduce plastic waste.
The Water Act 2003 ³²¹	The Water Act 2003 introduced a revision to the wording of the EPA, which requires that if a site is causing or could cause significant pollution of controlled waters, it may be determined as contaminated land. Once a site is determined to be contaminated land then remediation may be required to render significant pollutant linkages insignificant (i.e. the source-pathway-receptor relationships that are associated with significant harm to human health and/or significant pollution of controlled waters), subject to a test of reasonableness.
The Building Act 1984 and the Building Regulations 2010 (as amended) ³²²	The Building Act 1984 and in particular the associated Building Regulations 2010 (as amended) are key when considering structural and design aspects of a development in terms of the geotechnical properties of the ground. The Building Act 1984 requires that buildings are constructed so that ground movement caused by swelling, shrinkage, freezing, landslip or subsidence of the sub-soils will not impair the stability of any part of the building. Notably, the updated Building Regulations also

³¹⁷ The European Commission, EQS Directive 2008/105/EC of 16 December 2008 (2008).

³¹⁸ Parliament of the United Kingdom, Part IIA of the Environmental Protection Act 1990 (London, 1990).

³¹⁹ Parliament of the United Kingdom, Health and Safety at Work etc. Act 1974 (London, 1974).

³²⁰ Parliament of the United Kingdom, Environment Act 2021 (London, 2021).

³²¹ Parliament of the United Kingdom, Water Act 2003 (London, 2003).

³²² Parliament of the United Kingdom, The Building Regulations 2010 (as amended) (London, 2010).

Legislation	Legislation details
	control ground gas mitigation which is a particularly pertinent consideration when considering land contamination.
Environmental Damage (Prevention and Remediation) (England) Regulations 2015 ³²³	Requirement to ensure that the Proposed Works will not cause damage to ecosystems, Controlled Waters or land.
Environmental Permitting (England and Wales) Regulations 2016 ³²⁴	Streamlines the legislative system for industrial and waste installations into a single permitting structure for those activities which have the potential to cause harm to human health or the environment supporting implementation of the Water Framework Directive (WFD) (2006/60/EC).
The Construction Design Management Regulations 2015 ³²⁵ (CDM)	Covers the management of health, safety and welfare when carrying out construction projects. CDM 2015 replaced the Construction (Design and Management) Regulations 2007 (CDM 2007) from 6 April 2015, and from this date, the Approved Code of Practice which provided supporting guidance on CDM 2007 was withdrawn. CDM 2015 aims to improve health and safety in the industry by helping to: • sensibly plan the work so the risks involved are managed from start to finish. • have the right people for the right job at the right time. • cooperate and coordinate your work with others. • have the right information about the risks and how they are being managed. • communicate this information effectively to those who need to know. • consult and engage with workers about the risks and how they are being managed.
The Control of Asbestos Regulations 2012 ³²⁶ (CAR)	The Regulations came into force on 6 April 2012, updating and replacing the previous 2006 law, and they provide minimum standards for protecting employees from risks associated with exposure to asbestos. They contain new requirements for certain types of non-licensable work with asbestos on notification of work; designating areas where you are working with asbestos; medical surveillance and record keeping.
Hazardous Waste (England and Wales) (Amendment) Regulations 2005 (as amended) ³²⁷	Make provision for the controlled management of hazardous waste, which could include excavated soil waste, from the point of production to the final point of disposal or recovery.

³²³ Parliament of the United Kingdom, The Environmental Damage (Prevention and Remediation) (England) Regulations (London, 2015).

³²⁴ Parliament of the United Kingdom, The Environmental Permitting (England and Wales) Regulations 2016 (London, 2016).

³²⁵ Health and Safety Executive (HSE), The Construction (Design and Management) Regulations 2015 (2015).

³²⁶ Parliament of the United Kingdom, The Control of Asbestos Regulations 2012 (London, 2012).

³²⁷ Parliament of the United Kingdom, The Hazardous Waste (England and Wales) (Amendment) Regulations 2005 (London, 2005).

Legislation**Legislation details**

Anti-Pollution Works
Regulations 1999³²⁸

Supplement the Water Resources Act 1991 defining the contents that the anti-pollution works notice should contain, and the procedure to follow to appeal against the notice.

Policy

- 16.2.2 Policy relating to soils and geology and relevant to the assessment of effects of the Proposed Works is presented in **Table 16-2**.

Table 16-2: Policy Relevant to Soils and Geology

Policy	Policy details
National Planning Policy Framework (NPPF) (2025) ³²⁹	The NPPF states that a site needs to be suitable for its proposed use taking into account ground conditions and risks arising from land instability and contamination. As a minimum, following remediation, land should not be capable of meeting the definition of contaminated land under Part IIA of the Environmental Protection Act 1990.
Kent Minerals and Waste Local Plan 2024 to 2039 (KMWLP) ³³⁰	The KMWLP and the Kent Minerals Site Plan form part of the development plan for the purposes of determining planning applications. The KMWLP sets out the vision and strategy for waste management and mineral provision up until (and including) the year 2039. The plan contains a number of development management policies and is used for evaluating planning applications, in particular those related to the supply of minerals and management of waste. The Plan details locations in Kent which are suitable for quarrying essential minerals needed to support growth and the economy. Safeguarded waste sites are available in Figures 16A and 16B of the KMWLP.
KMWLP – Minerals Sites Plan 2013-30 ³³¹	The Minerals Sites Plan identifies the location of safeguarded mineral sites in Kent.

Guidance

- 16.2.3 Guidance which is relevant to the assessment of effects on soils and geology is presented in **Table 16-3**. Additional guidance may be drafted and become applicable during the EIA and this will be referred to as appropriate in the ES.

Table 16-3: Guidance Relevant to Soils and Geology

Guidance	Guidance details
Managing on-site stockpiling and use of high volumes of	Provides guidance and supports the development of strategies for managing the stockpiling and reuse of Recycled Concrete Material (RCM) on the UK's 17 earliest nuclear sites and is

³²⁸ Parliament of the United Kingdom, The Anti-Pollution Works Regulations 1999 (London, 1999).

³²⁹ National Planning Policy Framework [online]. Available at:

<https://www.gov.uk/government/publications/national-planning-policy-framework--2>.

³³⁰ Kent County Council, 2025; Kent Minerals and Waste Local Plan 2024-2039. (online). Available at:

https://www.kent.gov.uk/data/assets/pdf_file/0019/205507/Kent-minerals-and-waste-local-plan-2024-to-2039.pdf (Accessed 03/09/2025)

³³¹ Kent County Council, 2020; Kent Minerals and Waste Local Plan 2024-2039 – Minerals Site Plan. (online). Available at: https://www.kent.gov.uk/data/assets/pdf_file/0020/205508/Kent-Mineral-Sites-Plan.pdf (Accessed 03/09/2025)

Guidance	Guidance details
concrete-based demolition material ³³²	based on existing knowledge available from other industries and literature research.
Environment Agency's online guidance for the management of land contamination 'Land contamination: risk management' (LCRM) ³³³	Provides the technical framework for applying a risk management process when dealing with land impacted by contamination. The technical approach presented is designed to be applicable to a range of non-regulatory and regulatory contexts.
Investigation of Potentially Contaminated Sites – Code of Practice. BS10175: 2026 ³³⁴ and Code of practice for site investigations. BS5930:2015 + A1:2020 (2015) ³³⁵	Provides guidance and recommendations for the investigation of potentially contaminated sites.
Environment Agency Pollution Prevention for Business (2019) ³³⁶	Provide environmental good practice guidance for a range of activities including waste storage and construction.
Environment Agency Guidance: Oil Storage Regulations for Business (2020) ³³⁷	Provides guidance on how to store oil, design standards for tanks and containers, where to locate and how to protect them, as well as capacity of bunds and drip trays.
Guiding Principles for Land Contamination (2010) ³³⁸	Provides guidance for people who cause or are affected by land contamination.
National House Building Council (NHBC), Environment Agency report R&D66 'Guidance for the Safe Development of Housing on Land Affected by Contamination' (2008) ³³⁹	The guidance, whilst written to be relevant to housing development, is also generally applicable to other projects, where such sites are on land affected by contamination. It was designed to accord with the Model Procedures in Contaminated Land Report 11 (CLR11) and describes the processes and activities involved in hazard identification and assessment, risk estimation and evaluation and remediation (design, implementation and verification). CLR11 has been withdrawn and replaced by the Environment Agency LCRM guidance, 2021, however the approach to risk management remains consistent.
Regulatory Expectations for Successful Land Quality Management at Nuclear Licensed Sites ³⁴⁰	Sets out an overall objective for land quality management (LQM) on nuclear licensed sites in Great Britain and provides an overview of the regulators' expectations of nuclear site licensees and operators with respect to achieving the LQM objective. These high-level expectations have been produced to promote relevant good practice; importantly, they do not specify

³³² <https://www.gov.uk/government/publications/managing-on-site-stockpiling-and-use-of-high-volumes-of-concrete-based-demolition-material>

³³³ Gov.uk. Land contamination risk management (LCRM) [online]. Available at:

<https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm>.

³³⁴ BSI, 2026, Investigation of potentially contaminated sites – Code of practice. BS10175: 2026,

³³⁵ BSI, 2015, Code of practice for site investigations. BS5930:2015 + A1:2020.

³³⁶ Gov.uk. Pollution prevention for businesses [online]. Available at:

<https://www.gov.uk/guidance/pollution-prevention-for-businesses>.

³³⁷ Gov.uk. Oil storage regulations for businesses [online]. Available at:

<https://www.gov.uk/guidance/storing-oil-at-a-home-or-business>.

³³⁸ Gov.uk. Managing and reducing land contamination: guiding principles (GPLC) [online]. Available at: <https://www.gov.uk/government/publications/managing-and-reducing-land-contamination>.

³³⁹ NHBC and Environment Agency. Guidance for the Safe Development of Housing on Land Affected by Contamination. R&D Publication 66. 2008.

³⁴⁰ Office for Nuclear Regulation (ONR). Land quality management (LQM) [online]. Available at: <https://www.onr.org.uk/land-quality-management.htm>.

Guidance	Guidance details
	regulatory requirements, and are not legally binding on operators.
Framework for Assessing the Sustainability of Soil and Groundwater Remediation (CL:AIRE) (2010) ³⁴¹	Provides a framework for assessing the sustainability of remediation and informing the decision-making process where remediation measures are required.
Environmental Permitting Regulations (EPR) H5 Site Condition Report guidance (2013) ³⁴²	Sets out the requirement for site condition reporting during the lifespan of a permit issued under EPR 2016.
Definition of Waste Code of Practice (DoW CoP) (CL:AIRE, 2011) ³⁴³	The Code of Practice (CoP) sets out good practice for developers to use when: i) assessing on a site-specific basis whether excavated materials are classified as waste or not; and ii) determining on a site-specific basis when treated excavated waste can cease to be waste for a particular use.
CAR-SOIL: Control of Asbestos Regulations (CAR) 2012, Interpretation for Managing and Working with Asbestos in Soil and Construction and Demolition Materials (2016) ³⁴⁴	Provides interpretation and guidance to all involved in the management of asbestos in both soils and construction and demolition arising in accordance with CAR 2012.
Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009) ³⁴⁵	Provides guidance on how to protect soil resources from damage during the construction phase. The guidance aims to help developers and others manage soil sustainably and protect soil functions.
Management of radioactive waste from decommissioning of nuclear sites: Guidance on Requirements for Release from Radioactive Substances Regulation (RSR) (2018) ³⁴⁶	Guidance on the process of decommissioning and release of the site from RSR. The document highlights that after revocation, land once covered by the license subsequently becomes subject to the contaminated land regime. Effects from radioactive waste and emissions and considered in Chapter 20: Other Environmental Topics .
Design Manual for Roads and Bridges (DMRB), LA109 Geology and Soils (2019) ³⁴⁷	LA109 sets out the requirements for assessing and reporting the environmental effects of highway projects on geology and soils. Some aspects of the methodology have been used to define the

³⁴¹ CL:AIRE. A Framework for Assessing the Sustainability of Soil and Groundwater Remediation. Reading: CL:AIRE, 2010.

³⁴² Environment Agency, 2013; Environmental Permitting Regulations - Site condition report – guidance and templates.

³⁴³ Definition of Waste: Code of Practice [online]. Available at: <https://www.claire.co.uk/projects-and-initiatives/dow-cop#:~:text=Definition%20of%20Waste%3A%20Code%20of%20Practice&text=The%20DoW%20CoP%20enables%3A,of%20fixed%20soil%20treatment%20facilities.>

³⁴⁴ CL:AIRE. CAR-SOIL - Control of Asbestos Regulations 2012 - Interpretation for Managing and Working with Asbestos in Soil and construction and Demolition Materials - Industry Guidance. London: CL:AIRE. 2016

³⁴⁵ DEFRA. Code of practice for the sustainable use of soils on construction sites. London: DEFRA. 2009

³⁴⁶ SEPA, Environment Agency, Natural Resources Wales. Management of radioactive waste from decommissioning of nuclear sites: Guidance on Requirements for Release from Radioactive Substances Regulation. 2018

³⁴⁷ DMRB, LA109 Geology and Soils (2019)

Guidance	Guidance details
and LA104 Environmental Assessment and Monitoring (2020) ³⁴⁸	methodology presented for soils and geology in this chapter in the absence of more specific guidance on EIA for this topic area. LA104 sets out the requirements for environmental assessment of projects, including reporting and monitoring of significant adverse environmental effects.
BS 8576:2013, Guidance on investigations for ground gas. Permanent gases and Volatile Organic Compounds (VOC) ³⁴⁹	Provides guidance on the monitoring and sampling of ground gases, covering VOC and permanent gases such as carbon dioxide, methane and oxygen.
CIRIA C665, Assessing risks posed by hazardous ground gases to buildings, 2007 ³⁵⁰	The guidance consolidates good practice in investigation, the collection of relevant data and monitoring programmes in a risk-based approach to gas contaminated land. A stepwise approach to risk assessment is described.
CIRIA C741 4th Edition 'Environmental Good Practice On Site' 2015 ³⁵¹	Provides practical advice about managing construction on site to minimise environmental impacts.
CL:AIRE 'Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention' 2025 ³⁵²	This report presents initial technical guidance on the potential impact that intrusive ground improvement and piling techniques can have on the environment. It focuses, in particular, on the potential for pollution of groundwater.

16.3 Baseline Conditions

Data Gathering Methodology

16.3.1 The principal data sources used to inform current baseline conditions as presented in this section (beyond those identified in **Chapter 5: EIA Methodology**) comprise the following:

- Dungeness B Land Quality Tier 1 Preliminary Risk Assessment, 2022³⁵³; and
- Dungeness B Preliminary Qualitative Risk Assessment Update, 2024³⁵⁴
- British Geological Survey (BGS) GeoIndex³⁵⁵;

³⁴⁸ DMRB, LA104 Environmental Assessment and Monitoring (2020)

³⁴⁹ British Standards Institution. BS 8576:2013. Guidance on investigations for ground gas. Permanent gases and Volatile Organic Compounds (VOCs). London: BSI, 2013

³⁵⁰ Wilson, S, Oliver, S, Mallett, H, Hutchings, H, Card, G. Assessing risks posed by hazardous ground gases to buildings. C665. CIRIA 2007

³⁵¹ Charles, P, Edwards, P (eds). Environmental good practice on site guide (fourth edition). C741. CIRIA 2015

³⁵² CL:AIRE. Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention. 2025.

³⁵³ WSP Golder, 2022, "Land Quality - Tier 1 Preliminary Risk Assessment: Dungeness B Nuclear Power Station".

³⁵⁴ WSP Golder, 2024, "Land Quality - Preliminary Qualitative Risk Assessment Update: Dungeness B Nuclear Power Station".

³⁵⁵ British Geological Survey. GeoIndex. (Online) Available from: <https://mapapps2.bgs.ac.uk/geoindex/home.html> (Accessed October 2025).

- BGS geological maps and memoirs^{356,357};
- Soilscape for England (2015) published by the National Soil Resources Institute³⁵⁸;
- Groundsure Insights online data viewer³⁵⁹;
- Coal Authority Interactive Viewer mapping³⁶⁰;
- Publicly available aerial photographs from Historic England³⁶¹;

16.3.2 No surveys are proposed at this stage, however a walkover will be carried out as part of the Phase 1 desk study for Zones A, B and C of the Works Area prior to the completion of the ES.

Study Area

16.3.3 The 'Works Area' in this Chapter refers to Areas A, B and C only, as shown on **Figure 1.1**. The offshore areas (Area D) has been excluded as works in these areas do not involve breaking ground in the terrestrial environment. Effects in the marine environment are covered within **Chapter 8: Coastal Processes**.

Potential Receptors

16.3.4 Receptors with the potential to be affected by the Proposed Works comprise:

- Geology and geodiversity:
 - Geology and geologically designated sites.
- Soil resources;
- Human health receptors:
 - Current and future site users;
 - Current and future workers in the neighbouring commercial and industrial activities and residential receptors;
 - Construction and maintenance workers; and
 - Future maintenance staff during the Care and Maintenance phase.
- Controlled waters receptors:
 - Secondary A aquifer within the superficial tidal flat deposits;

³⁵⁶ British Geological Survey. Hastings and Dungeness. England and Wales Sheet 320/321. Solid and Drift Geology. 1980.

³⁵⁷ British Geological Survey. BGS Lexicon of Named Rock Units. (Online) Available from: <https://www.bgs.ac.uk/technologies/the-bgs-lexicon-of-named-rock-units/> (Accessed October 2025).

³⁵⁸ Cranfield University. Soilscales. (Online) Available from: <https://www.landis.org.uk/soilscales/> (Accessed October 2025).

³⁵⁹ Groundsure. Groundsure Insights Data Viewer. (Online) Available from: <https://insights.groundsure.io/data/groups> (December 2025)

³⁶⁰ The Coal Authority. The Coal Authority Interactive Map. (Online) Available from: <https://datamine-cauk.hub.arcgis.com/> (Accessed October 2025).

³⁶¹ Historic England. Aerial Photo Explorer. (Online) Available from: <https://historicengland.org.uk/images-books/archive/collections/aerial-photos/> (Accessed October 2025).

- Secondary (undifferentiated) aquifer within the Storm beach deposits;
- Groundwater and surface water abstractions; and
- The English Channel.
- Property receptors:
 - Current and future buildings/structures.
- Ecological sensitive receptors:
 - Ramsar Site, SAC, SPA, NNR and SSSI.

Zone of Influence

- 16.3.5 Typically, because soils, geological features and mineral safeguarding areas (MSA) are geographically discrete and not substantially influenced by changes to their surroundings, the effects from development/demolition and ground works on soils, geological features and MSAs tend to occur at the point where an activity (such as during demolition, construction or redevelopment) takes place. For example, this could include:
- Soil damage due to soil handling;
 - Breaking up of rock to facilitate its excavation'
 - Compaction of soil caused by vehicle/plant movements over the soil;
 - Permanent effects on soil such as excavation; and
 - Off-site disposal or sealing of soil (or a geological feature or MSA) by covering it in hard surfacing such as concrete or a building.
- 16.3.6 There may also be instances where specific activities during an activity (e.g., piling or dewatering) could lead to effects on soils, geological features or MSA away from the Works Area. For the assessment of effects on soils, geology (geodiversity) and MSA, the study area has been defined as the Works Area plus a Zone of Influence (Zoi) of 250m beyond the Works Area based on professional judgement. This is sufficient to allow sensitive soils, geological and MSA receptors adjacent to or close to the Works Area, which have the potential to be significantly affected by the Proposed Works, to be identified.
- 16.3.7 For land contamination receptors there is also a Zoi which extends beyond the Works Area, which is based upon the potential for contaminants to migrate off-site or to migrate onto the site from off-site sources. The potential for on/off-site contaminant migration depends on factors including the local topography, the geology, hydrogeology, hydrology, and the nature and scale of the identified sources of land contamination and the relevant site and surrounding land use characteristics. For the purposes of determining the local baseline conditions with respect to land contamination a study area that extends 250m from the Works Area will be adopted. This will be extended for hydrogeology to 1km from the Works Area to account for the potential for contaminated groundwater to migrate. Based on professional judgement, this is appropriate to assess any influence that potential contaminated land might have on the Proposed Works or local receptors.
- 16.3.8 The Cooling Water Inlet and Outlet are located offshore within the Works Area. This chapter does not cover benthic contaminated land or soils but

these are covered in **Chapter 8: Coastal Processes** up to the MHWS. This chapter does however describe offshore geology.

- 16.3.9 The study areas for the soils and geology topic are summarised in **Table 16-4**.

Table 16-4: Summary of soils and geology study areas.

Receptor Group	Study Area
Soils	250m
Geological features	250m
MSAs	250m
Current and future site users, property	250m
Property	250m
Ecological	1km
Controlled waters	1km

Summary of Existing Baseline

- 16.3.10 This section provides a summary of the current baseline data which will inform the requirements of the EIA process for soils, geology and contamination. The baseline conditions will be confirmed through reviewing additional data sources that are made available, where relevant for the EIA and subsequent reporting in the ES.

Geology

Made Ground and Superficial Deposits

- 16.3.11 The BGS Map Sheet 320/321 (Hastings and Dungeness, 1:50,000) and Geoindex indicate that the Works Area is mostly underlain by storm beach deposits which are superficial deposits, with Tidal flat deposits to the northwest. The BGS lexicon describes storm beach deposits as:

“Storm beach deposits comprise a low rounded ridge of coarse materials (gravels, cobbles and boulders) piled up by very powerful storm waves at the inland margin of a beach, above the level reached by normal spring tides.”

Bedrock Geology

- 16.3.12 The BGS Map Sheet 320/321 (Hastings and Dungeness, 1:50,000) and Geoindex indicate that the Works Area is mostly underlain the Hasting Beds Subgroup (Geoindex 1:50,000). The BGS lexicon describes the Hasting Beds Subgroup as:

“Ferruginous sandstones, siltstones and shales.”

- 16.3.13 The BGS lexicon states that the Hasting Beds Subgroup is between approximately 0m and 400m in thickness and is part of the Wealden Group (Geoindex 1:625,000). The BGS lexicon describes the Wealden Group as:

“Interbedded thick sandstones, siltstones, mudstones (“shales”), limestones and clay ironstones of predominantly non-marine facies. Divided into formations and members. For full details of lithologies see the definitions of the constituent parts.”

- 16.3.14 The BGS lexicon states that the Wealden Group can have a thickness up to 850m, thinning to a few metres in marginal areas.

Historical BGS Borehole Logs

- 16.3.15 The BGS borehole logs shown to be within the Works Area are all listed as 'confidential/restricted access'. As such BGS borehole logs from between approximately 450m and 700m to the west of the Works Area have been used to gain understanding of the local geology (TR01NE33 – 38 inclusive)³⁶². These BGS borehole records illustrate that the superficial Storm Beach Deposits range up to 18.3m thickness, comprising of fine to coarse gravel, sands and thin layers of dark grey clay. Due to the lack of accessible borehole data for the region, no data is currently available regarding the depth and thickness of the bedrock Hastings Beds Subgroup and greater Wealden Group which encompasses the Works Area.
- 16.3.16 The BGS borehole records reviewed indicate that shallow perched groundwater is present within the Storm Beach Deposits at depths of between 2.3m and 3.5m below ground level (bgl). There are no BGS borehole records near the Works Area which intersect bedrock groundwater.
- 16.3.17 The full stratigraphic sequence beneath the Works Area will be reviewed further and a comprehensive summary provided within the ES.

Geodiversity

- 16.3.18 The Dungeness cusplate foreland has been formed by longshore drift and is now characterised by shingle ridges and furrows. This cusplate foreland is part of the Dungeness, Romney Marsh and Rye Bay Site of Special Scientific Interest (SSSIs). According to MAGIC mapping, the majority of the Works Area is not included within a geological SSSIs. However Area C of the Works Area is within the Dungeness, Romney Marsh and Rye Bay SSSI, which also surrounds Areas A and B of the Works Area. As identified in **Chapter 18: Terrestrial Ecology**, the area immediately surrounding the Works Area is designated as a Special Area of Conservation (SAC), Special Protection Area (SPA), National Nature Reserve (NNR) and Ramsar site.
- 16.3.19 Further consultation will be undertaken with Folkestone and Hythe District Council and Kent County Council to establish if there are any designated Regionally Important Geological or Geomorphological Sites (RIGS) or Locally Important Geological Sites (LGS) present within the study area.

Soils

- 16.3.20 The Soilscape map for England describes the soils at the Works Area and in the 250m study area for soils as "*sand dune soils*". The main land cover of these soils is typically natural vegetation, and they can support habitats including sand dune vegetation ranging from pioneer dune systems through to low shrub. However, within the Works Area, the majority of these naturally occurring soils are likely to have been removed during the construction of Dungeness B as recorded within the habitat surveys presented in **Appendix 17A**.

³⁶² GeoIndex. (Online) Available from: <https://mapapps2.bgs.ac.uk/geoindex/home.html> (accessed December 2025)

16.3.21 Mapping by DEFRA (provisional agricultural land classification) indicates 'non-agricultural' land use around the Works Area.

Hydrogeology

16.3.22 The Environment Agency classifies the superficial tidal flat deposits as Secondary A and the coastline (the southern part of the Works Area) as a Secondary (undifferentiated) aquifer.

16.3.23 The Wealden Group is classified as a Secondary A aquifer.

16.3.24 Environment Agency definitions of each of the aquifer types is indicated below:

- Principal aquifer "*strategically important rock units that have high permeability and water storage capacity*".
- Secondary A aquifer "*comprise permeable layers that can support local water supplies and may form an important source of base flow to rivers*".
- Secondary (undifferentiated) aquifer "*where it is not possible to apply either a Secondary A or B definition because of the variable characteristics of the rock type*".
- Unproductive strata "*are largely unable to provide usable water supplies and are unlikely to have surface water and wetland ecosystems dependent on them*".

16.3.25 Review of MAGIC maps online indicates that the northern section of the Works Area is located within a Source Protection Zone (SPZ) for the protection of potable water supply abstraction, associated with four abstraction boreholes located approximately 115m north of the Works Area. This small section of the Works Area is within the SPZ 3 (Total Catchment). It is likely that the boreholes abstract from the Secondary A Wealden and Hastings Beds aquifer. There may be private groundwater abstractions present within the Study Area, but this is subject to further review and confirmation.

16.3.26 The aquifers in the Works Area have been given a medium to high vulnerability according to Groundwater Vulnerability Mapping.

Hydrology

16.3.27 There are a number of waterbodies within the Study Area, including:

- The English Channel is located immediately to the south of the Works Area. The Works Area extends into the English Channel associated with the existing cooling water intake and outfall;
- Long Pits. The Works Area extends into Long Pits, associated with the back-up cooling water infrastructure; and
- Burrows pit located to the north-west of the Works Area.

16.3.28 Information with regards to public/private surface water abstractions is unknown at this stage; further consultation will be required with the Environment Agency, Folkestone and Hythe District Council and Kent County Council.

Ecology

- 16.3.29 The relevant ecological designations are identified in **Chapter 13: Marine Ecology** and **Chapter 18: Terrestrial Ecology** and are not repeated herein.

Mining and Mineral Resources

- 16.3.30 The Coal Authority Interactive Viewer³⁶³ indicates that the Works Area and the wider area have not been used for coal mining purposes.
- 16.3.31 According to Kent Minerals and Waste Local Planning documentation³⁶⁴, historically sand and gravel deposits have been extracted in the Dungeness and Romney Marsh area (Storm Beach deposits). The permitted reserves have become depleted and are no longer a significant source of supply extracted.
- 16.3.32 The Kent County Council minerals and waste planning policy indicates that the Works Area is partially within an MSA, mainly related to the intake and outfall pipeline sections of Zone D the Works Area where no works would occur.

Land Contamination

Site History

- 16.3.33 Aerial imagery from 1940 indicates that the Works Area was undeveloped at that time. According to information available on the Applicants website, construction of Dungeness B officially began in 1966 with power generation beginning in 1983.

Landfill Sites

- 16.3.34 The Groundsure Insights online data viewer³⁶⁵ indicates that there are no historical or authorised landfill sites located within the Works Area and there are none located in the 250m study area.

Planning Records

- 16.3.35 Planning records from the last five years and in a 250m radius from the Works Area on the Local Authority website show several planning applications (related to the decommissioning of Dungeness A as well as activities at Dungeness B).

Summary of Contamination Risks

- 16.3.36 The history of the site as a nuclear power station highlights a potential for non-radiological land contamination to be present which may have resulted from the spillage, leakage and accumulation of hydrocarbons, process by-products, use of fire-fighting foams and wastes into soil and/or groundwater. It is noted that a diesel spill of approximately 200,000 litres occurred in 1998 as a result of corrosion. A second leak was also identified in 1998 and was considered to be a further 30,000 litres of diesel. These two events resulted

³⁶³ Mining Remediation Authority. Mining Remediation Authority Interactive Map. (Online) Available from: <https://datamine-cauk.hub.arcgis.com/> (Accessed December 2025).

³⁶⁴ Kent County Council. Kent Minerals and Waste Local Plan 2024-39. March 2025. (Accessed October 2025)

³⁶⁵ Groundsure. Groundsure Insights Data Viewer. (Online) Available from: <https://insights.groundsure.io/data/groups> (December 2025)

in a large scale diesel plume which trended to the north-east and south-west. More recently, in 2018, a small scale leak was identified (approximately 100 litres).

- 16.3.37 Hazardous materials would have been stored and processed within the Works Area during its operation. Asbestos is expected to have been used within the Works Area during the original construction and some residual impact from this, and the demolition/reconfiguration of buildings and infrastructure historically at the site, may be present in near surface soils. Extensive areas of Made Ground are expected to be present in the Works Area.
- 16.3.38 There are sensitive receptors located in the Works Area and in close proximity to the Works Area. This includes Dungeness, Romney Marsh and Rye Bay which is a Ramsar designated area, a SAC, a SPA and an SSSI. Groundwater is both a receptor and a pathway for contamination which may provide a link between any contamination at the Works Area and other controlled waters receptors, including the English Channel and the superficial and bedrock aquifers on-site. There are human receptors in the surrounding areas, predominantly employees that work at DNB.

Summary of Future Baseline

- 16.3.39 The future baseline assumes DNB would have finished generation and have been defueled. It assumes that no decommissioning and dismantling works would take place and the station would be maintained in accordance with nuclear site license conditions.
- 16.3.40 For the purposes of assessment, a reasonable 'worst case scenario' will be identified for each phase. It is anticipated that the assessment for the Care and Maintenance and Final Site Clearance phases will be high-level given the uncertainties owing to the long timescales.
- 16.3.41 A scenario of the absence of decommissioning and dismantling of the Works Area is unlikely given that decommissioning and dismantling is a statutory requirement.
- 16.3.42 The geology and hydrogeology are unlikely to be altered over time without a significant change of land use.
- 16.3.43 With respect to land contamination management, the relevant requirements are identified under Part IIA of the Environmental Protection Act and, for other future developments, the Town and Country Planning Act 1990³⁶⁶. Part IIA requires local authorities to identify potentially contaminated land in their area and ensure potential risks from historical contamination are assessed and mitigated accordingly.
- 16.3.44 Long-term changes in the future baseline which will be considered include climate change influencing rainfall runoff and recharge, changes to groundwater levels and the future hydrogeological flow regime.

³⁶⁶ (Parliament of the United Kingdom n.d.)

16.4 Consultation

16.4.1 No engagement has been undertaken to date with respect to the scope or assessment methodology for this chapter, however, the following statutory bodies will be consulted prior to completing the assessment in the ES:

- Environment Agency;
- Local Authorities;
- Local geology groups; and
- Natural England.

16.5 Scope for Mitigation

16.5.1 Where necessary, embedded mitigation and monitoring measures will be proposed to reduce soil and geology impacts and their effects at sensitive locations within and around the Works Area.

16.5.2 Embedded mitigation measures could include the following:

- Measures included within the Integrated Management System related to pollution prevention, emergency response and material and waste management; ; and
- Continuation of groundwater monitoring arrangements required under Licence Condition 34.

16.5.3 Additional mitigation may be identified through review of existing and during the preparation of conceptual site model for Areas A, B and C of the Works Area.

16.6 Potential Effects

16.6.1 The Proposed Works are separated into three distinct phases. The assessment will focus on the Initial Decommissioning Works.

16.6.2 For soils and geology, it is currently anticipated that the effects identified for the Initial Decommissioning Works would be representative of the Final Site Clearance phase due to the nature of the works required. The activities during the Care and Maintenance Phases are considerably reduced (to maintenance only) and therefore limits any potential effects and significant effects are not considered likely. Only the Final Site Clearance phase will be discussed qualitatively in the ES, applying professional judgement.

16.6.3 The focus of the assessment will be on Zone A, B and C of the Works Area. An assessment of potential effects on soils and geology associated with Zones D of the Works Areas is scoped out on the basis they would not include ground breaking activities within the terrestrial environment.

Initial Decommissioning Works

16.6.4 Activities during the Initial Decommissioning Works include the following:

- Construction of the waste management facilities;
- Changes to layout of the Works Area associated with the dismantling and construction activities noted above;

- Operation of the waste management facilities; and
- Construction of the Safestore structure.

Care and Maintenance

16.6.5 Activities during the Care and Maintenance Phase include the following:

- Maintenance works of retained assets within the Works Area.

Final Site Clearance

16.6.6 Activities during the Final Site Clearance include the following:

- Preparations for reactor dismantling;
- Reactor dismantling; and
- Site remediation.

Effects Scoped In

16.6.7 For each phase, consideration will be given to the following effects:

- Temporary and permanent damage, disturbance or removal of geology or geological features of interest;
- Potential impacts on groundwater and surface water from contamination;
- Potential impacts on human health and ecological receptors from contamination;
- Potential impacts on infrastructure from contamination and ground gas; and
- Potential impacts from remediation (if undertaken).

Effects Scoped out

16.6.8 The following effects are scoped out of further assessment:

- Potential effects on hydrogeological and hydrological setting – consideration is given to these effects within **Chapter 19: Water Environment and Flood Risk**.
- Potential impacts on workers involved in decommissioning and dismantling activities – it is considered that relevant health and safety legislation provides sufficient mitigation to ensure that significant effects on workers would not arise

16.7 Assessment Methodology

16.7.1 The proposed generic project-wide approach to the assessment methodology is set out in **Chapter 5: EIA Methodology**.

16.7.2 This section provides a summary of the Geology and Soils assessment methodology.

Scope of Assessment

Establishment of Baseline and Definition of Surveys

Areas A and B of the Works Area

- 16.7.3 A preliminary risk assessment for these areas of the Works Area was prepared by WSP Golder in 2022 and subsequently updated in 2024. It is proposed that the ES would utilise these existing resources which provide a conceptual site model (CSM) to inform the impact assessment.

Area C of the Works Area

- 16.7.4 The baseline description (that will be provided in the EIA for Geology and Soils) will be established through the completion of a Phase 1 desk study for the Area C of the Works Area. The Phase 1 assessment will be completed to identify and provide a qualitative risk assessment of potential contaminative land uses at, and surrounding, the Works Area, culminating in a preliminary CSM for the Area C of the Works Area. This desk-based assessment will identify the potential for land contamination and potential contaminant pathways to sensitive receptors and consider the mobilisation of contaminants associated with current and historical land use. A site walkover will be undertaken to identify current potential contamination sources as well as possible indicators of contamination.
- 16.7.5 The Phase 1 desk study report will review available historical reports relevant to the Geology and Soils topic that are made available.
- 16.7.6 The desk-based assessment and preliminary CSM will be used to assess data gaps and uncertainties and, if required, develop an initial scope for additional site investigation (if required) in order to quantitatively assess the levels of contamination across Area C of the Works Area. This tiered approach to assessment is consistent with the Environment Agency guidance LCRM.
- 16.7.7 An assessment of potential impacts on existing ground conditions will be undertaken as part of the EIA, including the potential for the Proposed Works (during the different phases) to result in land contamination, as defined in Part IIA of the Environmental Protection Act (1990).

Approach and Assessment Criteria

Sensitivity

- 16.7.8 The sensitivity of human health and geology receptors will be determined by reference to DMRB, LA109 Geology and Soils, Table 3.11. The sensitivity of controlled waters receptors (groundwater and surface waters) will be determined in general accordance with DMRB, LA104 Environmental assessment and monitoring, Table 3.2N. The DMRB guidance has been referred to for the Geology and Soils topic, as whilst this guidance is for road schemes, there is an absence of any other sensitivity guidance for this topic.
- 16.7.9 The sensitivity definitions are provided in **Table 16-5**. The sensitivities defined have been adapted to fit with the prescribed criteria in **Chapter 5: EIA Methodology** of this Scoping Report.

Table 16-5: Establishing the sensitivity of receptors for Geology and Soils

Sensitivity	Typical Descriptors
High	Geology and controlled waters: very high or high importance and rarity, international scale and very limited potential or substitution. Human health: very high or high sensitivity land use such as residential or allotments.
Medium	Geology and controlled waters: high or medium importance and rarity, national scale, and limited potential for substitution. Human health: high or medium sensitivity land use such as public open space.
Low	Geology and controlled waters: medium or low importance and rarity, regional scale, limited potential for substitution. Human health: medium or low sensitivity land use such as commercial or industrial.
Very low or negligible	Geology and controlled waters: negligible, very low or low importance and rarity, local scale. Human health: negligible, very low or low sensitivity land use such as highways and rail/undeveloped surplus land/no sensitive land use proposed.

Magnitude of Impact

- 16.7.10 The magnitude of impact of land contamination are assessed by comparing the difference in risk of each contaminant linkage at baseline identified in the CSM to those at the decommissioning and dismantling, and post-decommissioning and dismantling (post-remediation) stages of the Proposed Works phases. Where there is shown to be a decrease in contamination risk the Proposed Works would be assessed as having a beneficial effect on the environment in the long term.
- 16.7.11 If geological designations or mineral designations are present, the assessment of significance considers the sensitivity or importance of the asset/resource and the magnitude of potential impact that might occur.
- 16.7.12 The assessment of impacts to hydrogeology (groundwater) will be in terms of groundwater as a receptor to potential contamination or pollution. Groundwater in terms of its resource potential will be considered in **Chapter 19: Water Environment and Flood Risk**.

Significance of Effects

- 16.7.13 The classification of effects and the effect definitions are reported in **Chapter 5: EIA Methodology**. Moderate effects are considered to be potentially significant based on specific scenarios and professional judgement subject and major effects are considered to be significant. Minor and negligible effects are considered not significant.
- 16.7.14 Based on the assessment of the baseline conditions and the identification of any potential impacts, the EIA will make recommendations for mitigation measures. These may include the recommendation for an initial intrusive investigation (to address residual data gaps or better delineate identified potential contamination hotspots or plumes), quantitative risk assessment, remediation and validation. It will also make recommendations for possible mitigation measures to be employed by contractors, should any previously

unidentified contamination be encountered during the relevant phases of work.

16.8 Summary of Potential Likely Significant Effects

16.8.1 **Table 16-6** provides a summary of the proposed scope of the Geology and Soils chapter of the ES. Please refer to **Section 16.6** where justification of the scope is provided

Table 16-6: Elements Scoped In and Scoped Out for Geology and Soils

Potential Effect	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
Temporary and permanent damage, disturbance or removal of geology or geological features of interest	Scoped In	Scoped out	Scoped In*
Temporary and permanent mineral (MSA) severance or sterilisation.	Scoped out	Scoped out	Scoped out
Potential effects on groundwater and surface water from contamination.	Scoped In	Scoped out	Scoped In*
Potential effects on human health and ecological receptors from contamination.	Scoped In	Scoped out	Scoped In*
Potential effects on infrastructure from contamination and ground gas	Scoped In	Scoped out	Scoped In*
Potential effects from remediation (if undertaken).	Scoped In	Scoped out	Scoped In*
Potential effects on hydrogeological and hydrological setting.	Scoped Out (Please see Chapter 19: Water Environment and Flood Risk)		
Potential effects involved in decommissioning and dismantling activities	Scoped Out (these will be addressed by relevant Health & Safety legislation.		

* Applying professional judgement, qualitative assessments of the Final Site Clearance phase will be undertaken

17. Traffic and Transport

17.1 Introduction

- 17.1.1 This chapter sets out the proposed scope and methodology for the assessment of effects of the Proposed Works on Traffic and Transport. This has been informed by an overview of the environmental baseline conditions, and consideration of the anticipated pathways and receptors where likely significant effects could arise as a result of the Proposed Works.
- 17.1.2 This chapter should be read in conjunction with the description of the Proposed Works presented in **Chapter 2: The Decommissioning and Dismantling Process** of this scoping report, and the Transport Assessment, which will be submitted with the application.

17.2 Relevant Legislation, Policy and Guidance

Legislation

- 17.2.1 Legislation which is relevant to the assessment of effects on Traffic and Transport is presented in **Table 17-1**.

Table 17-1: Legislation relevant to Transport

Legislation	Legislation details
Energy Act 2013 ³⁶⁷	This act includes the protection against risk and security for transporting radioactive material by road, rail or inland waterway and how it is transported.
Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 ³⁶⁸	Transport of dangerous goods by road, rail and inland waterway in the UK must be in accordance with these regulations. There are specific regulations contained within this document for class 7 (radiological) goods.
The Waste (England and Wales) Regulations 2011 ³⁶⁹	These regulations require a carrier of controlled waste to be registered for the carriage of waste.

Policy

- 17.2.2 National and local policy relating to Traffic and Transport and relevant to the assessment of effects of the Proposed Works is presented in **Table 17-2**.

³⁶⁷ Energy Act 2013 (online). Available at: <https://www.legislation.gov.uk/id/ukpga/2013/32> (accessed 01/12/25)

³⁶⁸ The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations

³⁶⁹ Waste (England and Wales) Regulations 2011 (online). Available at: <https://www.legislation.gov.uk/uksi/2009/1348/> (accessed 01/12/25)

Table 17-2: Policy relevant to Transport

Policy	Policy details
NPPF ³⁷⁰	With particular reference to Paragraph 115 Part d, which states that any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree through a vision-led approach.
Kent County Council Local Transport Plan 2024 ³⁷¹	The strategy provides a medium-term high-level view of how the council will deliver their highways and transport responsibilities between 2024-2037. The strategy has four core priorities and ten policy outcomes.
Folkestone and Hythe Adopted Development Plan – Core Strategy Review (adopted March 2022) and Places and Policies Local Plan (adopted September 2020) ³⁷²	Section 13 of the Places and Policies Local Plan contains policies relating to transport, including Policy T4 which makes reference to parking for Heavy Goods Vehicles.
Folkestone and Hythe Adopted Development Plan – Kent Minerals and Waste Local Plan 2024-39 (adopted March 2025)	Policy CSW 17 Waste Management at the Dungeness Nuclear Licensed Sites makes reference to the need to consider the traffic and transport effects associated with the creation of waste management facilities within the Dungeness B NSL area.

Guidance

17.2.3 Guidance which is relevant to the assessment of effects on Traffic and Transport is presented in **Table 17-3**.

Table 17-3: Guidance relevant to Transport

Guidance	Guidance details
Travel Plans, Transport Assessments and Statements ³⁷³	Provides guidance on ways of assessing and mitigating the negative transport impacts of developments that generate significant amounts of movement, in order to promote sustainable development.

³⁷⁰ Ministry of Housing, Communities & Local Government, (2024), National Planning Policy Framework, (online). Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2> (accessed 01/12/25)

³⁷¹ Kent County Council, (2024), Local Transport Plan, (online) <https://www.kent.gov.uk/about-the-council/strategies-and-policies/service-specific-policies/roads-paths-and-transport-policies> (accessed 06/02/26)

³⁷² Folkestone & Hythe District Council, (2025), Adopted Development Plan (online). Available at: <https://www.folkestone-hythe.gov.uk/planning-policy/adopted-development-plan> (accessed 06/02/26)

³⁷³ Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government, (2014), Travel Plans, Transport Assessments and Statements, (online). Available at: <https://www.gov.uk/guidance/travel-plans-transport-assessments-and-statements> (accessed 01/12/25)

Guidance	Guidance details
ISEP Guidelines for the Environmental Assessment of Road Traffic ³⁷⁴	Guidance on examining the environmental impacts of developments in terms of traffic and transportation. This guidance has been used to outline the scope and methodology of the assessment.
Department for Transport (DfT) Circular 01/2022 ³⁷⁵	Guidance explaining how National Highways will engage with the planning system and fulfil its remit to be a partner for sustainable economic growth, whilst maintaining, managing and operating a safe and efficient strategic road network.
Future of Freight: A Long-Term Plan ³⁷⁶	Guidance that sets out the government's long-term vision for the UK freight sector. Includes five priority areas (National Freight Network (NFN), enabling transition to net zero, planning, people and skills, data and technology.
DMRB: LA103 Scoping for Environmental Assessment ³⁷⁷	Covers the requirements and procedures that should be followed when scoping a project in relation to motorway and all-purpose trunk roads. This scoping report allows a reasoned conclusion on the likely effects of a project on the environment in line with the requirements of the 2014/52/EU to be reached.
DMRB: LA104 Environmental Assessment Monitoring ³⁷⁸	Covers the requirements and procedures that should be followed when assessing, reporting and monitoring the environmental effects of projects in relation to motorway and all-purpose trunk roads, in line with the requirements of the EIA Directive 2014/52/EU.

17.3 Baseline Conditions

Proposed Data Gathering Methodology

- 17.3.1 To inform the assessment of the Proposed Works, information from several sources will be collected.
- 17.3.2 The principal data source used to inform the current baseline conditions presented in this section beyond those identified in **Chapter 5: EIA Methodology** comprise the following:

³⁷⁴ Institute of Environmental Management & Assessment, (2023), Guidelines for the Environmental Assessment of Road Traffic, Institute of Environmental Management & Assessment (now the Institute of Sustainability and Environmental Professionals (ISEP)). (online). Available at:

<https://www.iema.net/media/5mrmquib/iema-report-environmental-assessment-of-traffic-and-movement-rev07-july-2023.pdf> (accessed 01/12/25)

³⁷⁵ Department for Transport, (2022), Circular 01/2022, (online). Available at: (accessed 01/12/25)

³⁷⁶ Department for Transport, (2022), Future of Freight: A Long-Term Plan, (online). Available at: <https://www.gov.uk/government/publications/strategic-road-network-and-the-delivery-of-sustainable-development> (accessed 01/12/25)

³⁷⁷ National Highways, (2020), Design Manual for Roads and Bridges: LA103 Scoping for Environmental Assessment, Standards for Highways

³⁷⁸ National Highways, (2020), Design Manual for Roads and Bridges: LA104 Environmental Assessment Monitoring, Standards for Highways

- Personal Injury Accident (PIA) data for the most recent five-year period, obtained from Kent County Council Highways, will provide information on each collision including severity as well as factors which attributed to the collision; and
- Local travel information will be gathered from various sources including local bus operators.

17.3.3 Automatic Traffic Counts (ATC) will be undertaken at a number of locations in the vicinity of the Works Area to determine the baseline traffic conditions of the surrounding highway network. AADT flows will be derived from the ATC data to enable the baseline traffic flows to be established at the required assessment years. The extent of the traffic data and scope for any traffic surveys that may be required will be agreed with Kent County Council (KCC) and National Highways (as appropriate);

Study Area

17.3.4 ATCs will be undertaken at the locations set out in Paragraph 17.3.25 and shown in **Figure 17-1**. The basis for determining the locations of ATCs was guided by reviewing the existing established routes to Dungeness B from key surrounding locations such as the strategic road network.

Existing Baseline Conditions

17.3.5 Baseline conditions will be described in detail in the ES following the completion of surveys specific to the Proposed Works. However, for the purposes of this Scoping Report, the key aspects have been summarised below. The baseline conditions described in the ES will also provide an overview of the ongoing defueling operations at Dungeness B and the decommissioning works at Dungeness A.

Potential Receptors

17.3.6 Receptors with the potential to be affected by the Proposed Works comprise residents living near to the Works Area, e.g. the town of Lydd, and along key highway routes such as the A259 and A2070. These receptors may be subject to impacts associated with road traffic congestion due to an increased number of vehicle trips.

Local Road Network

17.3.7 The Power Station Access Road is a private single carriageway road running north to south for approximately 2.0km between Dungeness Road and the Dungeness A and B.

17.3.8 Dungeness Road is a single carriageway road running southeast to north-west for approximately 3.5km between the Power Station Access Road and the town of Lydd. At its north-western end, Dungeness Road joins a five-arm roundabout with Robin Hood Lane, Manor Road, Ness Road, and Harden Road.

17.3.9 Harden Road runs from the roundabout with Dungeness Road for around 600m along the north-eastern edge of Lydd. At its northern end, it joins the B2075 at a priority junction. Pedestrian footways are provided along Harden Road's western side and along sections of its eastern side.

- 17.3.10 The B2075 Romney Road is a single carriageway road running north for approximately 3.3km from the junction with Harden Road up to the A259 west of New Romney. The road has no footways.
- 17.3.11 The A259 heads north-west for approximately 5.2km from the B2075 to a roundabout with the A2070 in Brenzett. The road is single carriageway with no footways.
- 17.3.12 The A2070 is a single carriageway road running north from the roundabout with the A259 for approximately 14.3km to Park Farm Roundabout south of Ashford, where it meets the A2042. The road has no footways.
- 17.3.13 The A2070 Bad Munstereifel Road runs between the junction with the A2042 and M20 Junction 10A over approximately 2.9km. The road includes three signalised junctions with the following roads: Avocet Way, Waterbrook Avenue and the Boulevard and Barrey Road. The road is mostly two-lane dual carriageway, widening to include dedicated turning lanes as it approaches the signalised junctions. Footways and signalised pedestrian crossings are also provided near these junctions.

Buses

- 17.3.14 There are no bus stops directly serving the Dungeness B power station site. The nearest bus stop to the Works Area is the 'Power Station' bus stop on Dungeness Road, located approximately 2.0km from Dungeness B site security at the southern end of the power station access road.
- 17.3.15 The number 511 bus route, operated by Stagecoach, runs along Dungeness Road between Ashford and Lydd-on-Sea, passing the junction with Power Station Access Road and serving the Power Station bus stop. The service runs approximately every hour between 09:00 and 17:00, with additional morning services from Lydd Camp at 06:43 and 07:04 on Mondays to Fridays only.

Rail

- 17.3.16 There is a railway used for freight running to Dungeness from Appledore station in Kent. There is a railhead and offloading area just north of the junction between Dungeness Road and the Power Station Access Road which has been utilised to support operations at Dungeness B. The rail link is currently used exclusively for reactor fuel flask movements, bringing fuel to site during generation and removing fuel during defueling.

Cycling and Public Rights of Way

- 17.3.17 There are no formal National Cycle Network routes near the Works Area. Local roads are used by cyclists, though there are no dedicated cycle facilities (such as advisory lanes).
- 17.3.18 HL30 is a 3.2km public footpath running south-east from Boulderwall Farm through Dungeness National Nature Reserve to Dungeness Bird Observatory just north of the power station. The footpath intersects the Power Station Access Road with a kissing gate.
- 17.3.19 HL34 (1.3km) and HL22 (1.7km) are public footpaths running south from Battery Road at the northern end of Lydd-on-Sea to Dungeness Bird Observatory, following slightly different routes. HL31 is a 250m public

footpath between the old lighthouse and the entrance of the Dungeness Complex.

17.3.20 The Camber to Ramsgate section of the King Charles III England Coast Path runs southward through Lydd-on-Sea, then runs westward along the southern walls of the Dungeness Complex and north-west along Dengemarsh Road towards Lydd.

17.3.21 The location of these paths can be seen on **Figure 2-1**.

Surveys

17.3.22 ATCs will be undertaken during a 'neutral' month and will provide two-way daily traffic flows, classified by vehicle type, including HGVs. In line with TAG Unit M1.2³⁷⁹ neutral periods are defined as any day of the week, avoiding school holidays, bank holidays and the week before and after the Easter and Christmas holidays. Surveys may be undertaken outside of these months if the conditions being surveyed are representative.

17.3.23 The locations and timings of the surveys will be agreed with KCC, as the local highway authority, and National Highways.

17.3.24 The ATC locations that have been selected provide a basis for the analysis and incorporate local routes within the Study Area close to potential sensitive receptors and routes along local strategic links, to provide a robust baseline for assessment. These locations also correspond with the routes most existing site employees are perceived to take. They will be surveyed for one full week, 24 hours a day.

17.3.25 The ATC locations are outlined below and shown in **Figure 17-1**:

- ATC 1 – Dungeness Road, east of Lydd (between Power Station Access Road and roundabout with Harden Road);
- ATC 2 – Harden Road, Lydd (between roundabout with Dungeness Road and junction with B2075 Romney Road);
- ATC 3 – Robin Hood Lane, Lydd (south of roundabout with Dungeness Road/Harden Lane);
- ATC 4 – B2075 Romney Road, between Lydd and New Romney (between Harden Road and the A259);
- ATC 5 – A259, Old Romney (between the B2075 Romney Road and roundabout with the A2070);
- ATC 6 – A2070, between Brenzett and Hamstreet (between roundabout with the A259 and Finn Farm roundabout);
- ATC 7 – A2070, south of Ashford (between Finn Farm roundabout and Park Farm roundabout); and
- ATC 8 – A2070 Bad Munstereifel Road, south of Ashford (between Park Farm roundabout/junction with A2042 and M20 Junction 10A).

17.3.26 Additionally, Manual Classified Counts (MCC) are proposed. MCCs are a count of traffic on a particular road, or at a junction, which is usually

³⁷⁹ Department for Transport, (2024), Transport Analysis Guidance (TAG), Department for Transport.

undertaken by a team of enumerators, usually over a 12-hour period to classify traffic by vehicle type. MCCs are proposed at the following locations:

- MCC 1 – Dungeness Road/Power Station Access Road Priority Junction, east of Lydd;
- MCC 2 – Harden Road/Dungeness Road 5-arm Roundabout, Lydd; and
- MCC 3 – B2075 Romney Road/Harden Road Priority Junction, Lydd.

17.3.27 The Traffic and Transport Study Area will include the already established HGV route to the site as used by Dungeness A for decommissioning activities. This route is from M20 Junction 10A to the site via the A2070, A259, B2075, Harden Road, Dungeness Road and the Power Station Access Road. As a minimum, it is anticipated that the links stated above will be used by works vehicles to access the Works Area.

Future Baseline

17.3.28 The future traffic baseline for the Initial Decommissioning Works will be established by growing³⁸⁰ the 2026 ATC data to future years using the appropriate factors (based on the local MSOA) and using the industry standard software TEMPro. This will provide a robust estimate for this phase.

17.3.29 As the Care and Maintenance and Final Site Clearance Phases will occur a significant number of years into the future, it is not considered appropriate to grow current traffic over those periods given the uncertainties in future conditions. As a result, the appropriate future baseline years will be identified in the ES and only qualitative assessments will be undertaken for these periods.

17.3.30 For the Initial Decommissioning Works, a number of scenarios will be assessed using the information collated above. The scenarios considered appropriate for assessment are:

- Baseline;
- Peak Works Year³⁸¹ (TBC in ES) without the Proposed Works; and
- Peak Works Year (TBC in ES) with the Proposed Works.

17.3.31 The peak works year will be ascertained from the works programme once available and will consider both HGVs and staff worker trips associated with the Proposed Works.

17.3.32 A consideration of any committed and cumulative developments (including those identified in **Chapter 5: EIA Methodology**) within the area will also be included in the assessment.

17.3.33 Traffic associated with the different aspects of the Proposed Works and phases (split by vehicles/HGVs) will then be added to the network to form the future traffic levels. This will then be used to form the basis for assessment.

³⁸⁰ Term for projecting increases in background traffic volume.

³⁸¹ The year during Preparation for Care and Maintenance Phase where the most traffic will be required to undertake the Proposed Works.

17.4 Consultation

- 17.4.1 At the time of writing, initial engagement has been undertaken with KCC Highways with respect to the assessment methodology for this chapter. A request for pre-application scoping advice was issued by the Applicant in 2025, however, this has not yet been progressed further by KCC Highways. The Applicant will continue to engage with KCC Highways ahead of any proposed surveys.
- 17.4.2 Engagement will also be carried out with National Highways with respect to the assessment methodology.

17.5 Scope for Mitigation

- 17.5.1 Where necessary, embedded mitigation and monitoring measures will be proposed to reduce transport impacts at sensitive locations within and around the Works Area.
- 17.5.2 Embedded mitigation requirements will be determined based on an evaluation of the existing transport network, the estimated impact of the development proposals, and relevant planning policy.
- 17.5.3 Embedded mitigation measures, which could be implemented during decommissioning and dismantling works, could include the development of a Traffic Management Plan for dismantling deconstruction activities, which includes details on restrictions of HGV movements to certain routes, days of the week and times of the day; and

17.6 Potential Effects

- 17.6.1 Traffic generation assumptions for each phase of the development will be provided in the ES to inform the assessment and enable comparison against the future baseline.
- 17.6.2 For the Initial Decommissioning Works, indicative peak traffic flows have been estimated using comparator project data from Hinkley Point B and Hunterston B. At this stage, these are expected to comprise a reasonable worst case of up to c. 24 two-way HGV movements per day for scoping purposes. This assumption is the reasonable worst-case scenario due to the requirement for off-site disposal and import of fill for voids, materially increasing HGV movements, and will be refined as project-specific data becomes available. A sensitivity test may be included within the ES to illustrate potential reductions in HGV movements where on-site re-use and/or no import for void infill is adopted. There will also be a number of Light Vehicle trips to support the Proposed Works, however the quantity of these is yet to be confirmed.
- 17.6.3 During the Care and Maintenance Phase there would be negligible traffic associated with the Proposed Works. The only regular traffic movements would relate to security or inspections personnel, with visits for maintenance purposes as and when required.
- 17.6.4 It is anticipated that the number of HGV vehicle movements required during the peak year of the Final Site Clearance Phase would be less than the number required during the Initial Decommissioning Works.

- 17.6.5 The proposed route for HGVs to the Proposed Works from M20 Junction 10A is shown in **Figure 17-2**. Additional detail will be included within the Transport Assessment, which will be submitted with the application.

Potential Significant Effects

- 17.6.6 The three phases of the Proposed Works are detailed in **Chapter 2: The Decommissioning and Dismantling Process**. These are considered in terms of potential significant effects below.
- 17.6.7 Due to the timescales associated with the Proposed Works, a qualitative discussion will be provided in the ES to provide context on traffic and transport effects during the Care and Maintenance Phase and Final Site Clearance Phase. As noted above, the effects of the Care and Maintenance Phase will be a considerably lower than the other two phases. However, the assessment of effects during the Initial Decommissioning Works is considered to represent the likely worst-case effects within the Final Site Clearance Phase.

Initial Decommissioning Works

- 17.6.8 During the Initial Decommissioning Works, vehicles will be expected to use the local and strategic road network to access the Works Area.
- 17.6.9 The key consideration will be the number and percentage of HGVs using local roads in the baseline and the baseline with the Proposed Works.
- 17.6.10 Other aspects of this phase that may lead to a significant effect, include:
- Temporary increase in abnormal loads. Some large components may be removed for reuse or off-site processing via Abnormal Indivisible Loads (AILs). This is likely to be a very limited number and not expected to be commonplace throughout the decommissioning lifecycle; and
 - Increased risk of road traffic accidents caused by increases in traffic over a longer period.

Care and Maintenance Phase

- 17.6.11 During this phase the works will be relatively inactive with small numbers of staff coming to the Works Area for planned monitoring and surveillance.
- 17.6.12 The nature of the works during the Care and Maintenance phase will largely be to monitor and maintain the Safestore, any remaining waste management facilities and Area A of the Works Area in general.
- 17.6.13 It is not expected that the works required and traffic to and from the Works Area will result in any severe traffic impacts on the local or strategic highway network during this phase. Assumptions on the staff required to operate and maintain Area A of the Works Area and thus travelling to and from Area A of the Works Area will be provided in the ES.

Final Site Clearance

- 17.6.14 The Final Site Clearance Phase will involve site re-establishment with the construction of a Waste Management Centre in support of the subsequent dismantling and demolition of the Safestore (including the reactor and debris vaults) and ICILWS. Area A of the Works Area will be cleared and Dungeness B delicensed.

- 17.6.15 Assumptions on the baseline vehicle movements during this phase will be provided in the ES, however it is noted that this phase is approximately 25 to 75 years in the future and conditions, and traffic levels/usage of the road network etc. will be unknown. Based on this, a detailed assessment of this phase is difficult to undertake accurately and so will not be progressed. However, it is currently assumed that the effects identified for the Initial Decommissioning Works will be representative of the Final Site Clearance Phase.

17.7 Assessment Methodology

- 17.7.1 The proposed project-wide approach to the assessment methodology is set out in **Chapter 5: EIA Methodology**.
- 17.7.2 This section provides a summary of the Traffic and Transport assessment methodology.

Scope of Assessment

- 17.7.3 This section sets out the approach and assessment criteria to be used within the Traffic and Transport Chapter of the ES.

Sensitivity

- 17.7.4 The methodology for assessing the impact of the Proposed Works generated traffic will be based on that outlined in the ISEP guidelines. The general criteria for defining the importance or sensitivity of receptors are set out in **Table 17-4**.

Table 17-4: Traffic and Transport Receptor Sensitivity Criteria

Sensitivity	Description
High	Schools, colleges, playgrounds, hospitals, retirement homes, heavily congested junctions, residential properties very close to carriageway.
Medium	Congested junctions, shops/businesses, areas of heavy pedestrian/cycling use, areas of ecological/nature conservation, residential properties close to carriageway.
Low	Tourist/visitor sites, places of worship, residential areas set back from the highway with screening.
Very Low	Those people and places located away from the affected highway link.

- 17.7.5 The road link sensitivity will be based upon an average sensitivity of the whole link with a separate assessment of high/very high receptors. Some links will be split into more appropriate lengths, i.e. between two main junctions or villages. The sensitivity of the highway links will be identified in the ES.
- 17.7.6 Link sensitivity for road safety will be based on accident proportions on road types from the Cobalt 3 and Cobalt 4 tabs of the May 2024 Transport Analysis Guidance (TAG) Databook.

Magnitude of Impact

17.7.7 Key factors influencing the magnitude of an impact include:

- The physical or geographical scale of the impact, (note that this will be relative to the scale of the receptor or resource affected);
- The duration of the impact – whether it is short term, lasting for a few days or weeks, or long term, lasting for several years;
- The frequency of the impact – whether it will occur hourly, daily, monthly or whether it will be permanent, lasting for the duration of the development; and
- The reversibility of the effect - can it be reversed following completion of the Proposed Works.

17.7.8 The ISEP guidelines state that the magnitude of each impact should be determined as the predicted deviation from the baseline conditions. This will be completed for the Initial Decommissioning Works.

17.7.9 The two broad rules of thumb provided within the assessment relating to the geographical scope required are:

- Rule 1: include highway links where traffic flows will increase by more than 30% (or HGV flows increase by more than 30%); and
- Rule 2: include any other particularly sensitive areas where traffic flows have increased by 10% or more.

17.7.10 The ISEP guidelines sets out a number of criteria by which the magnitude of impact can be measured. These are outlined below. Many of the criteria do not provide specific thresholds by which such impacts can be measured, and as a result these impacts will be measured qualitatively where necessary.

Severance

17.7.11 Severance is defined in the ISEP guidelines as the “*perceived division that can occur with a community when it becomes separated by a major traffic artery*”. The term is used to describe a complex series of factors that separate people from places and other people. Severance may result from the difficulty of crossing a heavily trafficked road or a physical barrier created by the road itself. It can also relate to quite minor traffic flows if they impeded pedestrian access to essential facilities. ISEP guidelines suggest that a 30%, 60% and 90% increase in traffic flows will result in a low, medium, and high change in severance respectively (**Table 17-5**).

Pedestrian Delay

17.7.12 Pedestrian Delay is considered to be affected by the changes in volume, composition or speed of traffic, in terms of their respective impacts on the ability of pedestrians to crossroads. In general, increases in traffic levels and/or traffic speeds are likely to lead to greater increases in pedestrian delay.

Pedestrian and Cycle Amenity

17.7.13 Pedestrian and Cycle Amenity is broadly defined as “*the relative pleasantness of a journey and is considered to be affected by traffic flow, traffic composition and pavement width/separation from traffic*”. The

guidance suggests that a tentative threshold for judging the significance of changes in pedestrian and cycle amenity would be where the traffic flow is halved or doubled.

Fear and Intimidation

- 17.7.14 Fear and Intimidation is “*dependent on the volume of traffic, its HGV composition, and its proximity to people or the lack of protection caused by such factors as narrow pavement widths*”.

Accidents and Safety

- 17.7.15 A detailed assessment of Accidents and Safety will be carried out by examination of road traffic accident data for the most recent five-year period available. This analysis will be included in the Transport Assessment and undertaken to highlight if there are any existing safety issues on the local road network which may be exacerbated by the Proposed Works. The outcome of the assessment will be presented in the ES.

Driver Delay

- 17.7.16 The Driver Delay assessment approach set out in the ISEP guidelines states that delays are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system. The capacity of a road or a particular junction can be determined by establishing the ratio of flow to capacity (RFC). For this assessment, criteria from the ISEP guidelines will be used to assess the effects on traffic levels and driver delay, which states the need for assessment where changes in traffic flows exceed 30%.

Hazardous Loads/Large Loads

- 17.7.17 Relating to Hazardous Loads/Large Loads, the traffic assessment needs to estimate the number and composition of specialist loads which are subject to The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (as amended).

Criteria

- 17.7.18 Information provided in **Table 17-5** expands on the information from the paragraphs above and shows further details of the individual aspects of the assessment and the thresholds to be applied when defining impact magnitude.

Table 17-5: Impact Magnitude Criteria

Magnitude	Description	Criteria
High	HGV Works Traffic	High number of works vehicles using roads over a protracted period of time. More than a 40% increase for more than 6 months.
	Pedestrians/Cyclist Amenity	Limited or no facilities for pedestrians and cyclists with limited crossing facilities and low-quality linkages to the local facilities.
	Severance	Increase in total traffic flows of 90% and above (or increase in HGV flows over 10% based on the sensitivity of the receptors).

Magnitude	Description	Criteria
Medium	Accidents & Safety	All links estimated to experience increases in total traffic flows above 30 % or increases in HGV flows above 10 % are analysed further on a case-by-case basis.
	Pedestrian delay, also including fear and intimidation	There is a significant change in the number of HGVs on the network.
	Driver Delay	Change in total traffic or HGV flows over 90%.
	HGV Works Traffic	Moderate number of works vehicles using roads over a protracted time period. 16-39% increase for more than 6 months; or More than 40% increase for 3-6 months.
	Pedestrians/Cyclist Amenity	Few facilities for pedestrians and cyclists with limited crossing facilities and linkages to the local facilities.
	Severance	Increase in total traffic flows of 60-89% (or increase in HGV flows over 10% based on the sensitivity of the receptors).
	Accidents & Safety	All links estimated to experience increases in total traffic flows above 30 % or increases in HGV flows above 10 % are analysed further on a case-by-case basis.
Low	Pedestrian delay, also including fear and intimidation	There is a noticeable change in the number of HGVs on the network.
	Driver Delay	Change in total traffic or HGV flows of 60-89%.
	HGV Works Traffic	Small number of works vehicles using roads over a short period of time. 6-15% increase for more than 6 months; 31-39% for 3-6 months; or >40% increase for less than 3 months.
	Pedestrians/Cyclist Amenity	Facilities for pedestrians and cyclists with safe and convenient crossing facilities and good linkages to the local facilities.
	Severance	Increase in total traffic flows of 30-59% (or increase in HGV flows over 10% based on the sensitivity of the receptors).
	Accidents & Safety	All links estimated to experience increases in total traffic flows above 30 % or increases in HGV flows above 10 % are analysed further on a case-by-case basis.
	Pedestrian delay, also including fear and intimidation	There is a scarcely perceptible change in the number of HGVs on the network
Very Low	Driver Delay	Change in total traffic or HGV flows of 30-59%
	HGV Works Traffic	Occasional works vehicles using roads over a short period of time.

Magnitude	Description	Criteria
		Less than 5% Increase for more than 6 months; or Between 6-30% increase for 3- 6 months; or Between 31-40% for less than 3 months.
	Pedestrians/Cyclist Amenity	Dedicated facilities for pedestrians and cyclists with safe and convenient crossing facilities and good linkages to the local facilities.
	Severance	Increase in total traffic flows of 29% or under (or increase in HGV flows under 10%).
	Accidents & Safety	Increase in total traffic flows of 30 % or under (or increase in HGV flows under 10 %).
	Pedestrian delay, also including fear and intimidation	There is no perceptible change in the number of HGVs on the network
	Driver Delay	Change in total traffic or HGV flows of 29% or under
High – Very Low	Hazardous Loads	Assigned based on the nature of the load and number of trips and the result of the hazard and accident assessment.

Significance of Effects

17.7.19 The general approach adopted for evaluating the significance of effects considering the sensitivity of the receptor and the magnitude of impact is outlined in **Chapter 5: EIA Methodology**.

17.7.20 The traffic and transport effects will be classified as follows:

- ‘**Major**’ will be deemed ‘**significant**’;
- ‘**Moderate**’ can be ‘**significant**’ or ‘**not significant**’ based on specific scenarios and professional judgement;
- ‘**Minor**’ will be considered ‘**not significant**’; and
- ‘**Negligible**’ effects will be considered ‘**not significant**’.

17.7.21 The overarching significance matrix that will be used to classify effects is shown in **Table 5-1**. Effects can be either beneficial or adverse.

Table 17-6: Classification of Effect Matrix

Magnitude	Value and Sensitivity of Receptor			
	High	Medium	Low	Very Low
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Minor
Low	Moderate	Minor	Minor	Negligible
Very Low	Minor	Minor	Negligible	Negligible

17.7.22 The generic effect definitions are set out in **Chapter 5: EIA Methodology**.

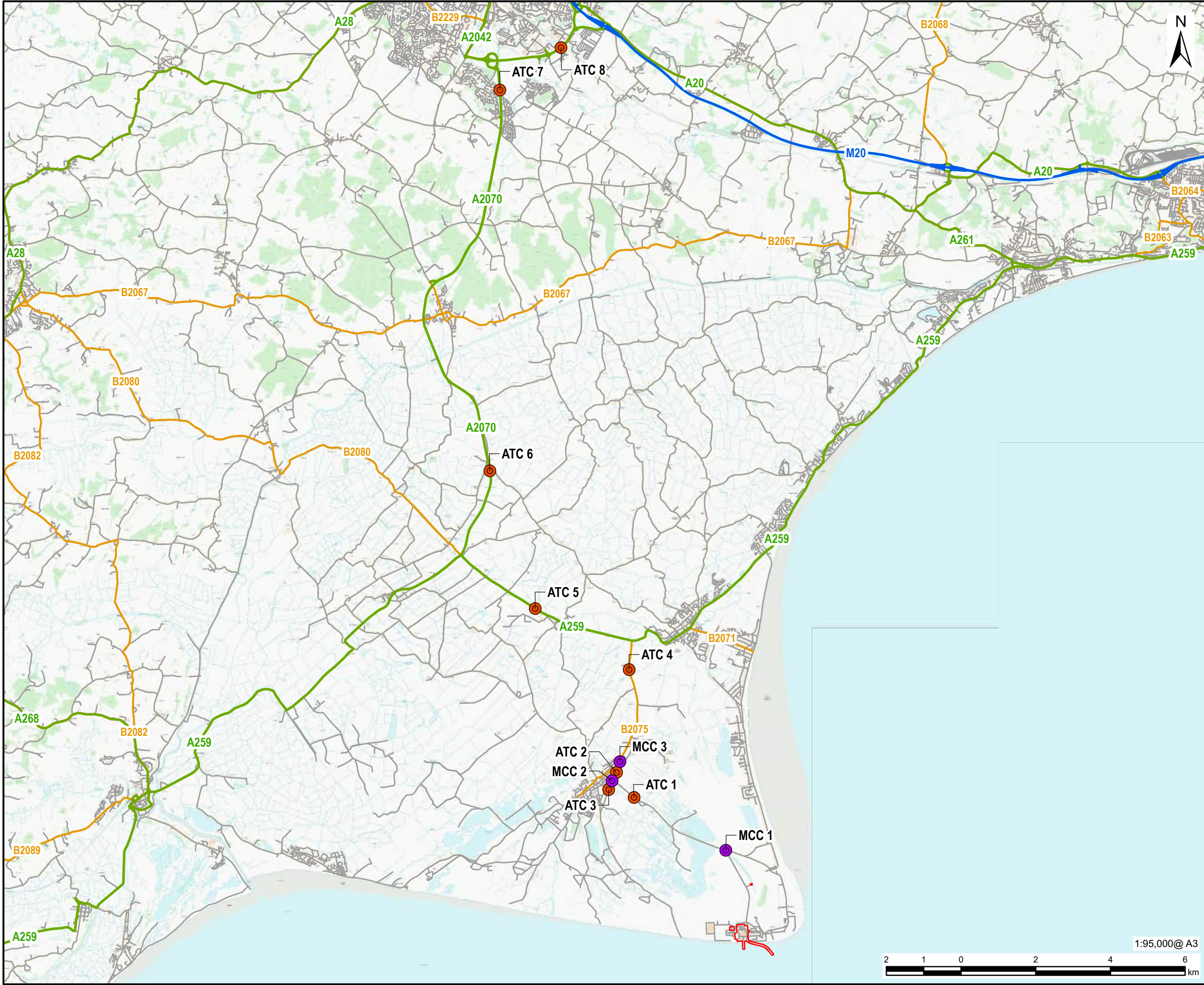
17.8 Summary of Potential Likely Significant Effects

17.8.1 A summary of the potential significant effects that will be considered within the ES are summarised in **Table 17-7**.

Table 17-7: Summary of Elements to be Considered in the ES

Pathway	Initial Decommissioning Works	Care and Maintenance Phase	Final Site Clearance
An increase in the number and percentage of HGVs using local roads	Scoped in	Scoped out	Scoped in*
Temporary increase in abnormal loads	Scoped in	Scoped out	Scoped in*
Increased risk of road traffic accidents caused by an increase in traffic for a longer period	Scoped in	Scoped out	Scoped in*
Temporary road closures, diversions and widening	Scoped out	Scoped out	Scoped out
Works traffic using temporary bell mouths and site entrances for access to the Works Area	Scoped out	Scoped out	Scoped out
Temporary closures of diversions of PRow and other public access routes	Scoped out	Scoped out	Scoped out

* Applying professional judgement, qualitative assessments of the Care and Maintenance and Final Site Clearance phases will be undertaken.



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LEGEND

- The Works Area
- Motorway
- A Road
- B Road
- Minor Road

Traffic Survey Locations

- Automatic Traffic Counter
- Manual Classified Count

NOT PROTECTIVELY MARKED

NOTES
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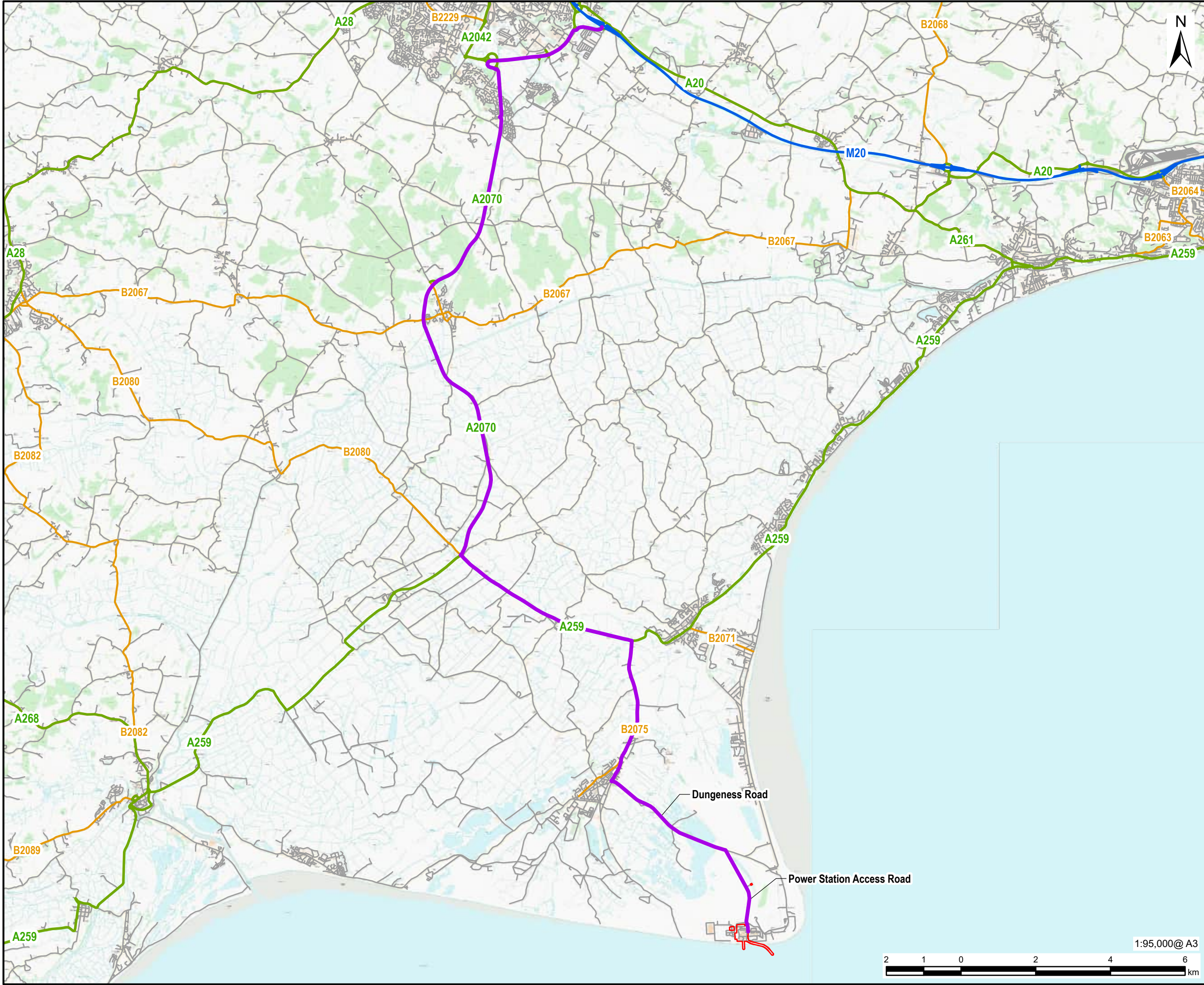
ISSUE PURPOSE
EIA Scoping Report

PROJECT NUMBER
60739933

FIGURE TITLE
Proposed Survey Locations

FIGURE NUMBER	REV
Figure 17-1	0

DOCUMENT NUMBER



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LEGEND

- The Works Area
- Motorway
- A Road
- B Road
- Minor Road
- HGV Route

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ISSUE PURPOSE

EIA Scoping Report

PROJECT NUMBER

60739933

FIGURE TITLE

Proposed HGV Route for Dungeness B
Decommissioning

FIGURE NUMBER

Figure 17-2

REV

0

DOCUMENT NUMBER

18. Terrestrial Ecology

18.1 Introduction

- 18.1.1 This chapter sets out the proposed scope and methodology for the assessment of effects of the Proposed Works on terrestrial ecology. This has been informed by a review of the environmental baseline conditions, along with the anticipated key issues likely to be associated with the terrestrial aspect of the Proposed Works.
- 18.1.2 For the purposes of this chapter, the terrestrial environment has been defined as the area above Mean High Water Springs (MHWS). It therefore encompasses onshore coastal habitats and species (including birds both onshore and offshore) and (where relevant) the freshwater environment. The area below MHWS is defined as the marine environment. Marine habitats and strictly marine species are beyond the scope of this chapter and are addressed in **Chapter 13: Marine Ecology** of this Scoping Report. Therefore, the following areas of the Works Area are relevant to this Chapter (as shown on **Figure 1-1**):
- **Area A** – the main area of the existing Dungeness B, comprising all land and associated infrastructure within the existing double security fence boundary and the adjacent car park;
 - **Area B** – the area associated with the B1 Hanger, an existing storage hanger, laydown area and conventional waste storage compound; and
 - **Area C** – the area associated with the existing back-up cooling water infrastructure at the Long Pits, an existing onshore waterbody.
- 18.1.3 The marine habitats and strictly marine species of Area D of the Works Area, the area associated with the existing cooling water infrastructure comprising the intake and outfall culverts located within the English Channel and foreshore is considered within **Chapter 13: Marine Ecology** of this Scoping Report. However, the offshore use of these habitats by birds is considered within this Chapter together with the terrestrial habitats within Area D of the Works Area, noting that the pipelines to the intake and outfall culverts are located below ground.
- 18.1.4 This chapter should be read in conjunction with the description of the Proposed Works presented in **Chapter 2: The Decommissioning and Dismantling Process** and the related assessments in **Chapter 6: Air Quality** and **Chapter 14: Noise and Vibration**. As noted above, marine ecological features of interest are considered within **Chapter 13: Marine Ecology** and will not be reported in the terrestrial ecology assessment.
- 18.1.5 A Preliminary HRA Screening Report has been prepared and is being submitted to Natural England to identify whether the Proposed Works, taken alone or with existing and known future plans or projects, are likely to affect a European designated site. This is included as **Appendix 18D**.

18.2 Relevant Legislation, Policy and Guidance

Legislation

18.2.1 Legislation which is relevant to the assessment of effects on terrestrial ecology is presented in **Table 18-1**.

Table 18-1: Legislation Relevant to Terrestrial Ecology

Legislation	Legislation details
Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 ³⁸²	This involved the transfer of functions from the European Commission to appropriate authorities in England and Wales. Several changes were made to the Habitats Regulations when they were amended in 2019, including the creation of a national site network within UK territory, which included sites already designated under the Nature Directives. The Regulations transpose the Habitats Directive (92/43/EEC) into UK legislation, including the designation and protection of European sites and the protection of European protected species.
The Countryside and Rights of Way Act 2000 ³⁸³	Amends the species provisions of the Wildlife and Countryside Act 1981 (as amended) to strengthen the legal protection for threatened species.
The Environment Act 2021 ³⁸⁴	Sets clear statutory targets for the recovery of the natural world in four priority areas: air quality, biodiversity, water and waste, and includes the introduction of Biodiversity Net Gain (BNG) where applicable.
Invasive Alien Species (Enforcement and Permitting) Order 2019 ³⁸⁵	Brings EU legislation into UK law, for the implementation of management measures for invasive alien species.
Natural Environment and Rural Communities (NERC) Act 2006 (as amended) ³⁸⁶	Lists habitats and species of principal importance (HOPI and SOPI) for the purpose of conservation of biodiversity and requires public authorities to consider what actions can be taken to further the general biodiversity objective or the conservation and enhancement of biodiversity.
The Protection of Badgers Act 1992 ³⁸⁷	Protects badgers and their setts.
The Wildlife and Countryside Act 1981 (as amended) ³⁸⁸	Includes provisions relating to nature conservation, including the mechanism to designate Sites of Special Scientific Interest, and is main legislation which provides for the protection of wild birds and certain other wild animals and plants. The Act also contains measures for preventing the establishment of non-native species, which may be detrimental to native wildlife.

³⁸² Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (online), Available at: <https://www.legislation.gov.uk/ukdsi/2019/9780111176573> (accessed 21/11/2025)

³⁸³ Countryside and Rights of Way Act 2000. London: HMSO.

³⁸⁴ The Environment Act (2021); London: HMSO.

³⁸⁵ Invasive Alien Species (Enforcement and Permitting) Order 2019. London: HMSO

³⁸⁶ Natural Environment and Rural Communities Act 2006 (as amended). London: HMSO.

³⁸⁷ The Protection of Badgers Act (1992). London: HMSO

³⁸⁸ Wildlife and Countryside Act 1981 (as amended). London: HMSO.

Policy

18.2.2 Policy relating to terrestrial ecology and relevant to the assessment of effects of the Proposed Works is presented in **Table 18-2**.

Table 18-2: Policy relevant to terrestrial ecology

Policy	Policy details
Folkestone and Hythe Core Strategy Review (March 2022) ³⁸⁹	The Folkestone and Hythe Core Strategy (reviewed 2022) sets out a framework to guide the future development in the District. It includes policies for managing development and infrastructure to meet the identified social, environmental, and economic challenges facing the area up to 2037, which will ensure that the Local Plan's vision is met. Of relevance to terrestrial ecology is Policy CSD4: Green Infrastructure of Natural Networks, Open Spaces and Recreation, which outlines requirements for improvements in green infrastructure in developments, protection of designated sites and species and the requirement for planning applications to be supported by ecological survey data, follow the mitigation hierarchy and where required include mitigation strategies and enhancement plans.
Folkestone and Hythe District Council Places and Policies Local Plan (2020) ³⁹⁰	The Local Plan and the Core Strategy Review sit along side each other and sets out district priorities for nature and the wider environment. Of relevance to terrestrial ecology are Policy NE2 Biodiversity. Policy NE2 protects sites of biodiversity interest, outlines how development adversely affecting protected species without appropriate safeguarding measures would not be supported and requires all new development to conserve and enhance the natural environment.
Kent and Medway Local Nature Recovery Strategy ³⁹¹	The Kent and Medway Local Nature Recovery Strategy (LNRS) sets out the county's priorities for nature recovery and the recommended actions to deliver these. It also identifies where in the county this action should be targeted to deliver the greatest outcomes for the county's habitats and species. Dungeness lies within the Romney Marches National Character Area. The strategy outlines ten ambitions for nature recovery in the county, with 53 detailed priorities and 141 priority species selected from a long list of 1,503 species considered to be rare, threatened or significant in the county. Of the 54 detailed priorities, the following are of relevance to the Proposed Works and its immediately surrounding habitats:

³⁸⁹ Folkestone and Hythe District Council (March 2022) Core Strategy Review

³⁹⁰ Folkestone and Hythe District Council. (2020). Places and Policies Local Plan. (online). Available at: <https://www.folkestone-hythe.gov.uk/planning-policy/adopted-development-plan> (Accessed: 03/11/2025).

³⁹¹ Kent County Council (2025) Kent and Medway Local Nature Recovery Strategy. (online). Available at: <https://www.makingspacefornaturekent.org.uk/local-nature-recovery-strategy-document-and-mapping/> (Accessed: 28/11/2025).

Policy	Policy details
	• Priority GL4: Retain, restore and extend the county's acid grassland and heathland habitat mosaics, to improve the species diversity that these habitats, with limited extent in Kent and Medway, support. • Priority CL7: Safeguard and restore vegetated shingle, ensuring there is no unavoidable loss and areas remain in, or are returned to, a favourable condition. Many of the priority species are known to be present on the Dungeness peninsula, which is identified within the Strategy as an area with a high density of priority species present. Of potential relevance to the Site and wider area are: • Amphibians: common toad <i>Bufo bufo</i> and great crested newt <i>Triturus cristatus</i>; • Invertebrates: four banded weevil wasp <i>Cerceris quadricincta</i>, long-spined ant <i>Temnothorax interruptus</i>, moss carder bee <i>Bombus muscorum</i>, the ant <i>Anthicus bimaculatus</i>, the beetle <i>Smicronyx coecus</i>, spangled button beetle <i>Omophron limbatum</i> and Sussex emerald moth <i>Thalera fimbrialis</i>; • Birds: oystercatcher <i>Haematopus ostralegus</i>, ringed plover <i>Charadrius hiaticula</i> and wheatear <i>Oenanthe oenanthe</i>; • Lichens: <i>Cladonia mitis</i> (with a focus on avoiding trampling and vehicle damage where present); • Mammals: Brown hare <i>Lepus europaeus</i>; and, • Plants: heath dog violet <i>Viola canina</i>.

Guidance

- 18.2.3 Guidance which is relevant to the assessment of effects on terrestrial ecology is presented in **Table 18-3**. Additional guidance may be released and may become applicable during the EIA and this will be referred to as appropriate in the ES.

Table 18-3: Guidance relevant to terrestrial ecology

Guidance	Guidance details
Chartered Institute for Ecology and Environmental Management (CIEEM) Guidelines for EcIA in the UK and Ireland Version 1.3 (2018) ³⁹²	The guidelines provide guidance on the process of identifying the value of ecological features, characterising impacts upon them and assessing whether these impacts are significant. The 'mitigation hierarchy' of avoidance, mitigation, compensation and enhancement underpin the CIEEM EcIA guidelines.
Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017) ³⁹³	Defines a common standard for Preliminary Ecological Appraisal.

³⁹² CIEEM. (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland. Version 1.3—Updated September 2024.

³⁹³ Chartered Institute of Ecology and Environmental Management (CIEEM), 2017; *Guidelines for Preliminary Ecological Appraisal*. Available from: <https://cieem.net/wp-content/uploads/2019/02/Guidelines-for-Preliminary-Ecological-Appraisal-Jan2018-1.pdf> (Accessed February 2023)

Guidance

Biodiversity: Code of practice for planning and development (BS 42020:2013) (BSI, 2013)³⁹⁴

Guidance details

Identifies good professional practice to ensure that at each stage of the planning process, biodiversity and issues that might affect the natural environment are taken into consideration.

18.3 Baseline Conditions

18.3.1 This section provides a summary of the current baseline conditions used to inform the scope for terrestrial ecology.

Data Gathering Method

18.3.2 The principal data source used to inform the current baseline conditions presented in this Section beyond those identified in **Chapter 5: EIA Methodology** comprise the following:

- Ecological records held by Kent and Medway Biological Records Centre³⁹⁵;
- Dungeness Land Management Annual Reviews (2015-2023)^{396 397 398 399 400 401 402 403 404}. It should be noted that at the time of writing the 2024 Dungeness Land Management Annual Review is not available, but this will be considered in the final Environmental Statement, together with any other Dungeness Land Management Annual Reviews available at that time;
- Designated sites condition assessments as available^{405 406};

³⁹⁴ British Standards Institute, 2013; Biodiversity: Code of practice for planning and development (BS 42020:2013)

³⁹⁵ Kent and Medway Biological Records Centre (2025) Report regarding Dungeness B, 04/06/2025

³⁹⁶ EDF Energy (2015) Dungeness Annual Land Management Review 2015

³⁹⁷ EDF Energy (2016) Dungeness Annual Land Management Review 2016

³⁹⁸ EDF Energy (2017) Dungeness Annual Land Management Review 2017

³⁹⁹ EDF Energy (2018) Dungeness Annual Land Management Review 2018

⁴⁰⁰ EDF Energy (2019) Dungeness Annual Land Management Review 2019

⁴⁰¹ EDF Energy (2020) Dungeness Annual Land Management Review 2020

⁴⁰² EDF Energy (2021) Dungeness Annual Land Management Review 2021

⁴⁰³ EDF Energy (2022) Dungeness Annual Land Management Review 2022

⁴⁰⁴ EDF Energy (2023) Dungeness Annual Land Management Review 2023

⁴⁰⁵ Natural England (2025) Conservation Advice for Protected Sites: Dungeness SAC, (online).

Available at:

<https://designatedsites.naturalengland.org.uk/ConservationAdvice.aspx?SiteCode=UK0013059&SiteName=Dungeness&SiteNameDisplay=Dungeness%20SAC&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&HasCA=1&NumMarineSeasonality=0&SiteNameDisplay=Dungeness%20SAC>.

(accessed 28/11/2025)

⁴⁰⁶ Natural England (2025) Conservation Advice for Protected Sites: Dungeness, Romney Marsh and Rye Bay SPA. (online). Available at:

<https://designatedsites.naturalengland.org.uk/ConservationAdvice.aspx?SiteCode=UK9012091&SiteName=Dungeness&SiteNameDisplay=Dungeness,%20Romney%20Marsh%20and%20Rye%20Bay%20SPA&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&HasCA=1&NumMarineSeasonality=13&SiteNameDisplay=Dungeness,%20Romney%20Marsh%20and%20Rye%20Bay%20SPA>

(accessed 28/11/2025)

- British Trust for Ornithology (BTO) Wetland Bird Survey (WeBS) data⁴⁰⁷; and,
- Kent Bat Migration Study⁴⁰⁸.

18.3.3 A suite of project specific baseline ecological surveys have been carried out in 2025 and further surveys will be conducted in advance of the assessment to be presented in the ES and as set out in paragraphs 18.3.11 to 18.3.27.

Study Area and Zone of Influence

18.3.4 The Zol for the Proposed Works is the area over which terrestrial ecology features may be affected by biophysical changes because of the Proposed Works and associated activities in line with the CIEEM guidelines. Therefore, the study area for baseline data gathering (shown on **Figure 18-1**) is defined on a precautionary basis to obtain sufficient data to determine the Zol for the purpose of the EcIA.

18.3.5 Identification of the Zol starts with an initial scoping of the potential sources of impact and the pathways for impacts on different ecological features. Pathways for impacts are how activities that constitute a project lead to environmental changes, which then have the potential to lead to effects on ecosystems, habitats and species. Consequently, the determination of the Zol for terrestrial ecology considers the land required for the Proposed Works and the potential for disturbance and emissions at each phase of the Proposed Works as described in **Chapter 2: The Decommissioning and Dismantling Process**.

18.3.6 Based on an initial review of potential impacts, the reasonable worst-case impact pathways from the Proposed Works are considered to be those relating to noise and visual disturbance on species and to impacts on terrestrial habitats and species from emissions to air and water. Noise and visual intrusion are specific concerns in relation to the qualifying interest features of statutory designated sites. In the worst case, these impacts are not likely to extend (be perceivable) beyond 5km from source. Regardless, Natural England has defined Impact Risk Zones (IRZ)⁴⁰⁹ to permit screening for and identification of relevant statutory designated sites, making it unnecessary to define an alternate approach. For purposes of Air Quality Impact Assessment of fugitive dust and traffic emissions from decommissioning activities the maximum ecological study area would usually be fixed at 250 m from source for all receptors. This reflects the study areas set in **Chapter 6: Air Quality**, which in turn reflects the most stringent

⁴⁰⁷ Wetland Bird Survey. (online). Available at: from <https://www.bto.org/our-science/projects/wetland-bird-survey> (accessed 03/12/2025)

⁴⁰⁸ BSG Ecology (2013) *Kent Bat Migration Research Baseline Report*. (online). Available at: https://www.bsg-ecology.com/wp-content/uploads/2015/01/Kent-Bat-Migration-Research-Baseline-Report_12122013.pdf (accessed 28/11/2025)

⁴⁰⁹ IRZs are a GIS tool developed by Natural England to make a rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts. The IRZs also cover the interest features and sensitivities of European sites. and "Compensation Sites" which have been secured as compensation for impacts on European/Ramsar site.

IAQM guidance⁴¹⁰ for the activities concerned. These prescribed distances are greater than the likely maximum extent of the potential impacts of the Proposed Works.

- 18.3.7 During ongoing iterative refinement of the design of the decommissioning process, consideration will be given to options which could avoid or minimise potential adverse effects. This iterative process usually reduces the Zol. However, if a major change in the proposed decommissioning process was proposed, which significantly changed or increased the potential impacts, the Zol would be reassessed. In these circumstances, the extent of the desk study area and field surveys would be updated and extended as appropriate and additional work would be undertaken to address any data gaps or uncertainties.

Desk Study

- 18.3.8 The desk study resources consulted, and the search areas applied are set out in **Table 18-4** and are considered suitable to meet the requirements for ecological impact assessment.
- 18.3.9 Consideration was given to the extensive existing background survey data available for Dungeness B and the surrounding area, including data held by the Dungeness Bird Observatory, discussions regarding the extensive knowledge held by the local site wardens and the information included within the Annual Land Management Reviews (which includes long term monitoring for species such as the Sussex emerald moth *Thalera fimbrialis*),. Consultation with Natural England was also used to develop the scope of terrestrial ecology surveys.
- 18.3.10 The provision of ecological information should be appropriate to the environmental risk associated with the Proposed Works and the location (BSI, 2013). Consequently, the desk study area selected, is greater than the maximum worst-case Zol of the Proposed Works (refer to **Appendix 18A** and **Section 18.6** of this chapter). The spatial extent is therefore greater than is expected to be required for the subsequent ecological impact assessment, but not so extensive in coverage that it is disproportionate to the potential for impacts from the Proposed Works.

Table 18-4: Desk Study Data Sources

Data source	Date obtained	Data obtained
Multi-Agency Geographic Information for the Countryside (MAGIC) website ⁴¹¹	05/06/2025	- International statutory designations within 10km of the Site - Other statutory designations within 3km of the Site - Ancient woodlands and notable habitats within 1 km. Information on habitats and habitat connections (based on aerial photography) relevant to interpretation of planning policy and assessment of potential.

⁴¹⁰ IAQM (2014). Guidance on the assessment of dust from demolition and construction. (online). Available at: <https://iaqm.co.uk/text/guidance/construction-dust-2014.pdf> (accessed 03/12/2025)

⁴¹¹ Department for Environment, Food and Rural Affairs (DEFRA) Multi-Agency Geographic Information for the Countryside. (online) Available at: <http://magic.defra.gov.uk/MagicMap.aspx> (accessed 07/11/2025)

Data source	Date obtained	Data obtained
Kent and Medway Biodiversity Information Centre ⁴¹²	04/06/2025	- Records of non-statutory designated sites within 3km - Records of protected/notable species within 3km - Bat records within 5km
Registers of National sites ^{413, 414, 415, 416, 417}	05/06/2025	Site descriptions and qualifying features or species present for National sites identified as part of the desk study.
Conservation Advice for National sites ^{418, 419}	28/11/2025	Natural England conservation advice for protected sites identified as part of the desk study.
EDF Dungeness Land Management Annual Reviews between 2015 and 2023 ⁴²⁰	N/A	- Records from monitoring visits for various habitats and species within the EDF Dungeness landholding. - At the time of writing the 2024 Dungeness Land Management Annual Review is not available but this will be considered in the final Environmental Statement, together with any other Dungeness Land Management Annual Reviews available at that time

⁴¹² Kent and Medway Biological Records Centre (2025) Report regarding Dungeness B, 04/06/2025

⁴¹³ Natural England (2014) Dungeness SAC Citation. (online). Available at:

<https://publications.naturalengland.org.uk/publication/5252874560864256> (accessed 03/12/2025)

⁴¹⁴ Natural England (2016) Register of European Sites: Register entry UK9012091 under Regulation 13 of The Conservation of Habitats and Species Regulations 2010, Dungeness, Rye Bay and Romney Marsh SPA. (online). Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/509225/dungeness-romney-rye-spa-documents.pdf (accessed 03/12/2025)

⁴¹⁵ Natural England (2016) Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat, Dungeness, Rye Bay and Romney Marsh Ramsar site. (online). Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/509228/dungeness-romney-rye-ramsar-documents.pdf (accessed 03/12/2025)

⁴¹⁶ Natural England (2006) Dungeness, Romney Marsh and Rye Bay SSSI Citation. (online) Available at: <https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/2000533.pdf> (accessed 03/12/2025)

⁴¹⁷ Natural England (2006) Designated Sites View: Dungeness NNR/(online). Available at:

<https://designatedsites.naturalengland.org.uk/SiteGeneralDetail.aspx?SiteCode=1007131&SiteName=dungeness&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=> (accessed 03/12/2025)

⁴¹⁸ Natural England (2025) Conservation Advice for Protected Sites: Dungeness SAC, (online) Available at:

<https://designatedsites.naturalengland.org.uk/ConservationAdvice.aspx?SiteCode=UK0013059&SiteName=Dungeness&SiteNameDisplay=Dungeness%20SAC&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&HasCA=1&NumMarineSeasonality=0&SiteNameDisplay=Dungeness%20SAC>. (accessed 28/11/2025)

⁴¹⁹ Natural England (2025) Conservation Advice for Protected Sites: Dungeness, Romney Marsh and Rye Bay SPA. (online). Available at:

<https://designatedsites.naturalengland.org.uk/ConservationAdvice.aspx?SiteCode=UK9012091&SiteName=Dungeness&SiteNameDisplay=Dungeness,%20Romney%20Marsh%20and%20Rye%20Bay%20SPA&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&HasCA=1&NumMarineSeasonality=13&SiteNameDisplay=Dungeness,%20Romney%20Marsh%20and%20Rye%20Bay%20SPA> (accessed 28/11/2025)

⁴²⁰ (2015) Dungeness Annual Land Management Review 2015, (2016) Dungeness Annual Land Management Review 2016, (2017) Dungeness Annual Land Management Review 2017, (2018) Dungeness Annual Land Management Review 2018, (2019) Dungeness Annual Land Management Review 2019, (2020) Dungeness Annual Land Management Review 2020, (2021) Dungeness Annual Land Management Review 2021, (2022) Dungeness Annual Land Management Review 2022 and (2023) Dungeness Annual Land Management Review 2023,

Data source	Date obtained	Data obtained
Romney Marsh Countryside Partnership Rangers and Dungeness Bird Observatory	N/A	Personal communications regarding understanding the ecology of the Dungeness Peninsula.
Kent Bat Migration Study ⁴²¹	03/11/2025	Summaries of bat records collected at Dungeness as part of the Kent Bat Migration Study.
British Trust for Ornithology (BTO) Wetland Bird Survey (WeBS) data ⁴²²	04/06/2025	Summary WeBS data obtained for the five-year period of 2019/20 to 2023/24 (the most recent data available), for the Dungeness and Rye Bay site (22302), including the five-year average data. Fourteen WeBS Sectors make up this site, which includes Dungeness Beach (22305).

Surveys

Scope

18.3.11 The scope of terrestrial ecology surveys was identified with reference to relevant good practice guidance^{423,424,425} The NPPF instructs that ecological surveys are required only where clearly justified and that ecological assessment should be proportionate to the nature and scale of the Proposed Works and the likely impact on biodiversity.

Habitats and Vegetation

18.3.12 A UK Habitat Classification (UKHab) survey was completed in June 2023 to classify the habitat present within Area A, Area B and Area C of the Works Area, the terrestrial areas of Area D of the Works Area and within a 50m buffer surrounding these (**Appendix 18B**). An updated UKHab survey and a National Vegetation Classification (NVC) survey, targeting areas supporting notable habitat types of Area A, Area B and Area C of the Works Area and 50m surrounding these will be completed during 2026 to update the results of the 2023 survey and identify and classify the vascular plant communities present. In addition, two surveys of non-vascular plants will be undertaken:

- A lichen survey will be completed of suitable habitats of Area A, Area B and Area C of the Works Area, the terrestrial habitats of Area D of the Works Area and a 50m buffer surrounding these in 2026 to identify and classify the lichen populations present and record their distribution; and

⁴²¹ BSG Ecology (2013) Kent Bat Migration Research Baseline Report. (online). Available at: https://www.bsg-ecology.com/wp-content/uploads/2015/01/Kent-Bat-Migration-Research-Baseline-Report_12122013.pdf (accessed 03/12/2025)

⁴²² Wetland Bird Survey: accessed 04/06/2025 from <https://www.bto.org/our-science/projects/wetland-bird-survey>

⁴²³ Chartered Institute of Ecology and Environmental Management (CIEEM) (2017). Guidelines for Preliminary Ecological Appraisal. Available from: <https://cieem.net/wp-content/uploads/2019/02/Guidelines-for-Preliminary-Ecological-Appraisal-Jan2018-1.pdf> (accessed 03/12/2025)

⁴²⁴ Department for Levelling Up, Housing and Communities, and Ministry of Housing, Communities & Local Government (2019). Planning Practice Guidance. Nature Environment. Available online from: <https://www.gov.uk/guidance/natural-environment> (accessed 03/12/2025).

⁴²⁵ Ministry of Housing, Communities and Local Government (2019). National Planning Policy Framework.

- A bryophyte survey will be completed of suitable habitats of Area A, Area B and Area C of the Works Area, the terrestrial habitats of Area D of the Works Area and a 50m buffer surrounding these in 2026 to identify and classify the bryophyte populations present and record the distribution of bryophyte communities.

Birds

- 18.3.13 A wintering bird walkover survey was completed between November 2022 to March 2023 of Area A and Area B of the Works Area and the terrestrial parts of Area D of the Works Area and the terrestrial habitats within a 500m buffer surrounding these, with additional viewpoints at Area C of the Works Area. The purpose of this survey was to supplement the existing detailed desk study data on birds.
- 18.3.14 Further detailed wintering bird surveys are ongoing over the period September 2025 to March 2026, following consultation with Natural England on the scope and method, as follows:
- One high tide count through the tide (three hours before high tide to three hours after high tide) completed once per month between September 2025 and March 2026, covering the beach area to the south of Dungeness B and 500 m to the east and west of Dungeness B (the beach south of Area A and Area B of the Works Area and including terrestrial habitats of Area D of the Works Area);
 - One low tide count through the tide (three hours before low tide to three hours after low tide) completed once per month between September 2025 and March 2026, covering the beach area to the south of Dungeness B and 500 m to the east and west of Dungeness B the beach south of Area A and Area B of the Works Area and including terrestrial habitats of Area D of the Works Area); and,
 - High tide walkover surveys once per month between September 2025 and March 2026 of Area A and Area B of the Works Area and the terrestrial parts of Area D of the Works Area and the terrestrial habitats within a 500m buffer surrounding these, with additional viewpoints at Area C of the Works Area.
- 18.3.15 The high tide counts, low tide counts and high tide walkover surveys will be repeated in September 2026 to March 2027, if determined to be required following analysis of the data collected during September 2025 to March 2026 and existing background data available from a range of sources.
- 18.3.16 Following consultation with Natural England, tern and gull foraging surveys were completed twice per month between May 2025 and August 2025 (**Appendix 18C**). These comprised high tide counts through the tide (three hours before high tide to three hours after high tide) to record terns and gulls foraging in the water column and were focused on the existing Dungeness B outfall and a location 500m to the west to provide coverage within 500m of Area A and Area B of the Works Area.
- 18.3.17 A passage and breeding bird survey Area A and Area B of the Works Area, the terrestrial habitats of Area D of the Works Area and 500m surrounding these and an additional view point at Area C of the Works Area is proposed for March 2026 to August 2026 to collect data on bird activity during the

breeding and passage seasons, and to supplement the detailed desk study data on birds.

- 18.3.18 Black redstart *Phoenicurus ochruros* surveys of Area A of the Works Area proposed for April 2026 to June 2026 to provide up to date breeding data on this specially protected species at Dungeness B.

Amphibians and Reptiles

- 18.3.19 Following consultation with Natural England, a great crested newt *Triturus cristatus* presence/likely absence survey, using the environmental DNA (eDNA) approach, was completed in May 2025, to determine the presence or likely absence of this species from the Long Pits water bodies, adjacent to Area C of the Works Area. An additional, out of season, eDNA survey of a water body located to the west of the Northern Approach Road will be completed in February 2026, reflecting the drying of this water body by March 2025 and Natural England's conservation advice for the Dungeness SAC which states that "*At Dungeness the eggs are laid singly on pond vegetation from as early as January onwards if weather conditions are mild. This is worth noting as standard guidance suggests egg laying in late March into April which is often too late for surveying to confirm breeding on Dungeness.*"
- 18.3.20 A reptile survey of suitable habitats will be carried out in spring 2026 to provide data on the distribution and indicative population size of reptile populations present within suitable habitats of Area A, Area B, Area C and Area D of the Works Area, and 50m surrounding these.

Mammals

- 18.3.21 A Preliminary Roost Assessment (PRA) was completed of structures within Area A and Area C of the Works Area in July 2023. An updated PRA will be completed in 2026, to determine the suitability of structures to support roosting bats and inform requirements for bat emergence surveys for Area A, Area B and Area C of the Works Area.
- 18.3.22 A nighttime bat walkover was completed in September 2025, comprising one transect within Area A of the Works Area and one transect covering habitats within Area B and Area C of the Works Area. This survey was supplemented by an automated bat detector survey, comprising deployment of four static bat detectors during September to October 2025 for a minimum of five nights. Further similar walkover visits and automated bat detector surveys will be carried out in spring and summer 2026.
- 18.3.23 A badger *Meles meles* walkover survey of Area A, Area B, Area C and terrestrial habitats of Area D of the Works Area and a 50m buffer surrounding these was completed in June 2023. This survey will be updated during 2026.
- 18.3.24 An otter *Lutra lutra*, Eurasian beaver *Castor fiber* and water vole *Arvicola amphibius* survey of Area C of the Works Area and 150m surrounding this was completed during September 2025. A second survey visit will be carried out in spring 2026.

Other Surveys

- 18.3.25 A terrestrial invertebrate scoping survey was completed in August 2023, which recorded that Area A and Area B of the Works Area comprises mainly

developed land with areas of low-quality habitat of limited extent for terrestrial invertebrates, and have only been in place since the construction of the power station and are heavily managed. Higher quality habitats for terrestrial invertebrates are present outside of these Works Areas and at Area C of the Works Area which have been previously well studied.

- 18.3.26 No further terrestrial ecological surveys are expected to be required given the extensive background data available for Dungeness B, as the area has been extremely well studied historically.

Other Protected or Notable Species

- 18.3.27 No further terrestrial ecological surveys are expected to be required for other species, such as hazel dormouse *Muscardinus avellanarius* and white clawed crayfish *Austropotamobius pallipes*, due to the absence of suitable habitat within the Works Area and Zol to support these species.

Study Area

- 18.3.28 The Study Area has been based on the greatest likely Zone of Influence (Zol) for the Proposed Works. The Zol represents the reasonable area over which terrestrial ecology features may be impacted by the Proposed Works and associated activities. The study area for the terrestrial ecology baseline has been defined on a precautionary basis to obtain sufficient data to determine the Zol for the ecological assessment.
- 18.3.29 For this terrestrial ecology scoping chapter, an initial 3km Study Area has been applied for protected species, habitats, non-statutory designated sites and nationally designated statutory sites. A 10km Study Area has been applied for internationally designated statutory sites. This is based on the greatest likely Zol for the Proposed Works for the terrestrial ecological features that may be impacted by the Proposed Works and associated activities.

Summary of Existing Baseline

- 18.3.30 Dungeness B Power Station is in a coastal setting on the South Kent Coast, bounded by the English Channel to the south, surrounded by Denge Beach to the northeast and Denge Marsh to the north and west.
- 18.3.31 This summary of the existing baseline focuses on terrestrial ecological receptors relevant to the Study Area, above MHWS.

Designated sites

- 18.3.32 There are six biodiversity designations of potential relevance to the Proposed Works. These designations and their interest features are summarised in **Table 18-5** and located on **Figure 18-1**. Refer to **Appendix 18A** for further information on these designations.

Table 18-5: Summary of the Designated Sites to be Considered in the ES

Designation	Reason for designation	Relationship to the Works Area
Nationally and internationally designated sites		
Dungeness Special Area of Conservation (SAC)	The UK's largest shingle structure. The site retains very large areas of intact parallel ridges with characteristic zonation of vegetation. The most diverse and extensive examples of stable vegetated shingle in Europe, including the best representation of scrub on shingle, notably prostrate forms of broom <i>Cytisus scoparius</i> and blackthorn <i>Prunus spinosa</i>. Thought to be unique in the UK, are small depressions formed within the shingle structure, supporting fen and open-water communities. The foreland has a very extensive and well-developed shoreline, albeit with sparse vegetation. The strandline community comprises Babington's orache <i>Atriplex glabriuscula</i>, which occurs mostly on the accreting eastern shoreline, although it is also present on the eroding southern shoreline. This extensive site also hosts a large great crested newt <i>Triturus cristatus</i> population in a range of natural and anthropogenic habitats. These include natural pools and those resulting from gravel extraction and other activities. Terrestrial habitat is provided by a range of open shingle vegetation with scrub in the vicinity of some of the water bodies. The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I: • Annual vegetation of drift lines. • Perennial vegetation of stony banks. (Coastal shingle vegetation outside the reach of waves). The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following species listed in Annex II: • Great crested newt.	Located at its closest point immediately adjacent to Area A and Area B of the Works Area. Area C of the Works Area is located within the SAC. The terrestrial part of Area D of the Works Area is located 56m from the SAC at its closest point. Impacts on the marine designated features are considered in Chapter 13 Marine Ecology in relation to Area D of the Works Area.
Dungeness Romney Marsh and Rye Bay Special Protection Area (SPA)	The SPA is a large area with a diverse coastal landscape comprising several habitats. The habitats exist because coastal processes have formed and continue to shape a barrier of extensive shingle beaches and sand dunes across an area of intertidal mud and sand flats. The site includes the largest and most diverse area of shingle beach in Britain, with low-lying hollows in the shingle providing nationally important saline lagoons, natural freshwater pits and basin fens. Rivers draining the Weald to the north were diverted by the barrier beaches, creating a sheltered saltmarsh and mudflat environment, which was gradually infilled by sedimentation, and then reclaimed on a piecemeal basis by man. Today, this area is still fringed by important intertidal habitats, and contains relict areas of saltmarsh, extensive grazing marshes and reedbeds. Human activities have further modified	Located at its closest point 50m from Area A of the Works Area and 340m from Area B of the Works Area. Area C of the Works Area is located immediately adjacent to the SPA. The terrestrial part of Area D of the Works Area is located

Designation	Reason for designation	Relationship to the Works Area
	the site, resulting in the creation of extensive areas of wetland habitat due to gravel extraction. As a whole, the site is important for breeding and wintering waterbirds, birds of prey, passage warblers and breeding seabirds. Annex 1 qualifying species (used regularly by 1% or more of the Great Britain populations of the following species listed in Annex I in any season) are: Bewick's swan <i>Cygnus columbianus bewickii</i>, bittern <i>Botaurus stellaris</i>, hen harrier <i>Circus cyaneus</i>, golden plover <i>Pluvialis apricaria</i>, ruff <i>Philomachus pugnax</i>, aquatic warbler <i>Acrocephalus paludicola</i>, marsh harrier <i>Circus aeruginosus</i>, avocet <i>Recurvirostra avosetta</i>, Mediterranean gull <i>Larus melanocephalus</i>, Sandwich tern <i>Sterna sandvicensis</i>, common tern <i>Sterna hirundo</i>, little tern <i>Sterna albibrons</i> and shoveler <i>Anas clypeata</i>.	immediately adjacent to the SPA.
Dungeness Romney Marsh and Rye Bay Ramsar	The Ramsar site (a Wetland of International Importance) is designated because: Under Criterion 1-it contains representative, rare, or unique examples of natural or near-natural wetland types: - Annual vegetation of drift lines and the coastal fringes of perennial vegetation of stony banks (Ramsar wetland type E – sand, shingle or pebble shores). - Natural shingle wetlands: saline lagoons (Ramsar wetland type J – coastal brackish/saline lagoons), freshwater pits (Ramsar wetland type K – coastal freshwater lagoons) and basin fens (Ramsar wetland type U – non-forested peatlands). Under Criterion 2 because it supports threatened ecological communities. These comprise a complex network of wetland habitats including saltmarsh, natural freshwater pits, fens, ponds, gravel pits, and grazing marsh and ditches supporting rich and diverse assemblages of bryophytes, vascular plants and invertebrates that are rare, threatened, listed as priority species in the UK Biodiversity Action Plan (BAP) or specially protected under the Wildlife and Countryside Act 1981 (as amended). Important areas for these assemblages include the gravel pits, ditches and shingle wetlands at Dungeness and Rye Harbour, the grazing marsh and ditches of Walland Marsh, Denge Marsh and Pett Level, ponds throughout the site, the Royal Military Canal, and the saltmarshes of the River Rother. - The bryophyte flora includes an assemblage of wetland thread-mosses <i>Bryum</i> species. These mosses are colonists of unshaded calcareous sand that must be persistently damp all year but not inundated by standing water. They occur on wet sand beside large freshwater gravel pits and small pools in Dungeness RSPB Reserve. - Foremost amongst the assemblage are the suites of species associated with grazing marsh and saltmarsh (including brackish ditches and wetlands associated with low-lying depressions within shingle areas). Saltmarshes and other brackish wetlands are particularly rich, with at least eight nationally scarce species, including the vulnerable sea barley <i>Hordeum marinum</i>, Borrer's saltmarsh-grass <i>Puccinellia fasciculata</i> and slender hare's-ear <i>Bupleurum tenuissimum</i>, and the near-threatened sea-heath <i>Frankenia laevis</i>. Grazing marshes support the nationally rare (and critically endangered) sharp-leaved pondweed <i>Potamogeton acutifolius</i> and at least six nationally scarce species, including the vulnerable divided sedge <i>Carex divisa</i>	Located at its closest point 450m from Area A of the Works Area and 700m from Area B of the Works Area. Area C of the Works Area is located within the Ramsar site. The terrestrial part of Area D of the Works Area is located 230m from the Ramsar site.

Designation**Reason for designation****Relationship to the Works
Area**

and rootless duckweed *Wolffia arrhiza*). The remaining species are chiefly associated with gravel pits and their margins, saline lagoons, shingle beaches and fens.

- The freshwater wetlands (with the exception of the deep, cold and largely sterile open waters of the main gravel pits) exhibit a number of similar characteristics. Shallow open water and emergent vegetation, largely comprising common reed *Phragmites australis* and reedmace *Typha latifolia*, supports a rich water beetle assemblage. Other noteworthy aspects of the invertebrate assemblage include a suite of reed beetles *Donacia*, snail-killing flies (Sciomyzidae) and soldierflies (*Stratiomyidae*) that are typical of coastal marshes. Much of this assemblage is found within the ditch systems. The saline and brackish gradients of the saltmarsh, saline lagoons, brackish ditches and damp brackish hollows in the shingle beaches also share many characteristics in terms of the habitats they provide for invertebrates.

The site further qualifies under Criterion 2 because it supports vulnerable, endangered or critically endangered species. In addition to the threatened ecological communities, the site is of international importance for nine individual wetland species:

- Greater water-parsnip *Sium latifolium* – an endangered Priority Species of wet ditches and tall-herb fens and swamps. The site supports several populations, chiefly in the northern areas of Walland Marsh.
- Warne's thread-moss *Bryum warneum* – a vulnerable Priority Species. A colonist on wet sand beside the margins of freshwater gravel pits in Dungeness RSPB Reserve.
- Water vole *Arvicola amphibius* – a Priority Species and is also listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). The Ramsar site contains the core of an extensive distribution of water voles dependent on the network of ditches that drain the grazing marsh and arable habitats of the Romney Marsh and Rye Bay area.
- Aquatic warbler – a globally vulnerable and declining Priority Species. Between 2004 and 2008 the Ramsar site supported an average of two aquatic warblers during autumn passage, which represents 6.1% of the GB passage population. Aquatic warblers occur on Pett Level, where they are recorded by bird ringers. This species is a rare autumn passage migrant with a passage population estimated at around ten individuals across Great Britain and has not been recorded around Dungeness for ten years.
- Great crested newt - a Priority Species that is listed in Schedule 5 to the Wildlife and Countryside Act 1981 (as amended) and Annex II to the EC Habitats Directive (92/43/EEC). The particular combination and distribution of aquatic and terrestrial habitats in the site provide exceptional breeding, foraging and hibernation conditions for great crested newts. The site contains three metapopulations; two in the Dungeness area and one at Romney Warren.
- Medicinal leech *Hirudo medicinalis* – a rare (Red Data Book category 3) species that is listed in Schedule 5 to the Wildlife and Countryside Act 1981 (as amended). Medicinal leech is found at a wide range of localities between Dungeness and Rye, and the site is a stronghold for the species in Great Britain. The range of

Designation	Reason for designation	Relationship to the Works Area
	shallow, well-vegetated waterbodies, including ponds, ditches and shallow areas in flooded gravel pits, provide ideal conditions for medicinal leeches. • A ground beetle <i>Omophron limbatum</i> – an endangered (Red Data Book category 1) species has been recorded from the margins of waterbodies at Dungeness and Rye Harbour and, except for recent records in Suffolk, is not known from any other site in Great Britain. • Marsh mallow moth <i>Hydraecia osseola hucherardi</i> – an endangered (provisional Red Data Book category 1) Priority Species, restricted to two main population centres: one on the River Medway south of Rochester, Kent; the other in and around Walland Marsh. The Walland Marsh population centre comprises three discrete colonies at Moneypenny Farm near Rye, Old Cheyne Court near Brookland, and Woodruff's Farm, Fairfield. Marsh mallow moth is associated with the nationally scarce marsh-mallow <i>Althaea officinalis</i>, which is the larval food plant. • De Folin's lagoon snail <i>Caecum amoricum</i> – listed in Schedule 5 to the Wildlife and Countryside Act 1981 (as amended). Until recently, its only known locality in the UK was the Fleet in Dorset. Now the species has been discovered at a further two locations, one of which is the saline lagoons at the seaward end of Lydd Ranges. The site qualifies under Criterion 5 because it regularly supports 20,000 or more waterbirds: In the non-breeding season, the site regularly supports 34,957 individual waterbirds (5 year peak mean 2002/3 – 2006/7). The site qualifies under Criterion 6 because it regularly supports 1% of the population of the Great Britain population of Mute swan <i>Cygnus olor</i> and shoveler in any season.	
Dungeness, Romney Marsh and Rye Bay Site of Special Scientific Interest (SSSI)	The SSSI is a nationally important site with a diverse range of biological and geological features, specifically the coastal geomorphology of Dungeness and Rye Harbour and the following nationally important habitats: saltmarsh, sand dunes, vegetated shingle, saline lagoons, standing waters, lowland ditch systems, and basin fens. These habitats and others within the site support the following nationally important species interests: • populations of four vascular plant species listed in Schedule 8 of the Wildlife and Countryside Act 1981 (as amended); • an assemblage of Schedule 8, nationally rare and nationally scarce vascular plants; • populations of the vulnerable Warne's thread-moss • populations of water vole; • an assemblage of breeding birds associated with shingle beaches and saltmarsh, lowland damp grasslands, lowland open waters and their margins, and scrub; • breeding numbers of 16 species of bird; • an assemblage of over 20,000 waterfowl in the non-breeding season; • wintering numbers of 17 species of bird and three species during passage periods;	Located adjacent to Area A of the Works Area. Part of Area B of the Works Area is located within the SSSI with the remainder located immediately adjacent to the SSSI. Area C of the Works Area is located within the SSSI.

Designation	Reason for designation	Relationship to the Works Area
	• metapopulations of great crested newts; • endemic species and subspecies of invertebrates; populations of two invertebrate species listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended); • populations of ten endangered, vulnerable and rare invertebrate species; • assemblages of invertebrates occurring on 'dry' coastal habitats; and • assemblages of wetland invertebrates.	The terrestrial part of Area D of the Works Area is located within the SSSI.
Dungeness National Nature Reserve (NNR)	The site is designated for its populations of breeding, wintering and passage birds and great crested newts, vascular plant assemblage with Wildlife and Countryside Act 1981 (as amended) Schedule 8 plants, invertebrate assemblage, coastal geomorphology, natural shingle wetlands, saline lagoons, standing waters and basin fens and vegetated shingle.	Area A of the Works Area at its closest point is located 110m from the NNR. Area B of the Works Area at its closest point is located 1745m from the NNR. Area C of the Works Area at its closest point is located 90m from the NNR. The terrestrial part of Area D of the Works Area is located 92m from the NNR at the closest point.
Locally designated sites		
Dungeness RSPB Reserve	The Dungeness RSPB reserve itself is set back from the sea, supporting a large extent of open shingle, freshwater pits, wet grassland and species-diverse wildflower meadows.	Area A of the Works Area at its closest point is located 1.6km from the RSPB Reserve. Area B of the Works Area at its closest point is located 600m from the RSPB Reserve.

Designation	Reason for designation	Relationship to the Works Area
		Area C of the Works Area at its closest point is located 225m from the RSPB Reserve.
		The terrestrial part of Area D of the Works Area is located 1088m from the RSPB Reserve at its closest point.

Habitats

- 18.3.33 A UK Habitat classification survey (UKHab) completed in 2023 found Area A of the Works Area to be dominated by u1b Developed land – sealed surface with industrial buildings (817) for the operational areas with small areas of u1c Artificial unvegetated - unsealed surface and g4 Modified grassland. Area B of the Works Area was dominated by u1b Developed land – sealed surface with industrial buildings (817) with a smaller area of s3b5 H1220 - Perennial vegetation on coastal shingle. The Survey Area around both Area A and Area B of the Works Area comprised, s3b5 H1220 - Perennial vegetation on coastal shingle, h3e - Gorse scrub and, g1a6 – Other lowland dry acid grassland with t2h Beach also present south of Area A of the Works Area.
- 18.3.34 Area C of the Works Area comprised u1b Developed land – sealed surface with industrial buildings (817), s3b5 H1220 - Perennial vegetation on coastal and r1c6 - H3110 Nutrient-poor shallow waters with aquatic vegetation on sand. The Survey Area around Area C of the Works Area comprised s3b5 H1220 - Perennial vegetation on coastal and r1c6 - H3110 Nutrient-poor shallow waters with aquatic vegetation on sand.
- 18.3.35 The terrestrial part of Area D of the Works Area comprised u1b Developed land – sealed surface with industrial buildings (817), s3b5 H1220 - Perennial vegetation on coastal and t2h Beach.
- 18.3.36 The UKHab classification s3b5 Perennial vegetation on coastal shingle is synonymous with the Annex I habitat 1220 – perennial vegetation of stony banks, for which the Dungeness SAC international statutory designated site is designated. Area C of the Works Area is located within the Dungeness SAC. Area A and Area B of the Works Area are located immediately adjacent to areas of this habitat that are within the Dungeness SAC. There are also small areas of this habitat located within Area A , Area B and the terrestrial part of Area D of the Works Area but which are outside of the SAC boundary. This habitat also represents a NERC S41 Habitat of Principal Importance and Kent Priority Habitat.
- 18.3.37 The UKHab classification g1a6 – Other lowland dry acid grassland - has formed within an area with current occasional use as laydown and a car park and does not represent a NERC S41 Habitat of Principal Importance.
- 18.3.38 The UKHab classification r1c6 - Nutrient-poor shallow waters with aquatic vegetation on sand is synonymous with the Annex I habitat 3110 – oligotrophic waters containing very few minerals of sandy plains *Littorelletalia uniflorae*. This habitat also represents a NERC S41 Habitat of Principal Importance habitat.
- 18.3.39 Given the habitats present, which include habitats of principal importance, detailed botanical surveys (National Vegetation Classification surveys) will be completed of the perennial vegetation on coastal shingle (s3b5; H1220) in May to June 2026, in addition to targeted surveys for lichens and bryophytes.

Protected and Notable Species

Badger

- 18.3.40 There are records of badger activity within 3km of the Works Area, with limited activity noted. While shingle habitat does not provide stable habitat for sett construction, setts could be dug beneath concrete bases within the Works Area. No evidence of badger was recorded within the Works Area and 30m buffer during the walkover completed in 2023.
- 18.3.41 As badger are a highly mobile species and readily dig new setts, badgers have been scoped in for updated survey in 2026.

Bats

- 18.3.42 There are records of six bat species within 5km of Area A, Area B and Area C of the Works Area: Nathusius' pipistrelle *Pipistrellus nathusii*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, Daubenton's bat *Myotis daubentonii*, whiskered bat *Myotis mystacinus*, and Kuhl's pipistrelle *Pipistrellus kuhlii*. The Kuhl's pipistrelle was recorded in 2021 and is not considered to be a resident species in the UK. There are no records of bat roosts within 5km of the Works Area.
- 18.3.43 The Preliminary Roost Appraisal completed in 2023 surveyed 215 buildings within Area A and Area C of the Works, of which five are considered to have Moderate suitability to support roosting bats and 18 Low suitability to support roosting bats, with all other buildings lacking suitable features. Some ancillary buildings have been or are in the process of being removed/dismantled and this will be reflected in the full assessment, with the Preliminary Roost Appraisal updated in 2026, with follow-on bat emergence surveys, in line with the recommendations of the current best practice guidelines⁴²⁶.
- 18.3.44 Area A and Area B of the Works Area are a highly lit environment generally comprising developed land suboptimal for foraging bats, although Area C of the Works Area comprises habitat that is optimal for foraging bats, without high levels of lighting and comprising vegetated habitats and the Long Pits water body in the immediate vicinity of Area C of the Works Area.
- 18.3.45 A nighttime bat walkover survey completed in September 2025 of Area A, Area B and Area C of the Works Area and a 50m buffer zone around these recorded a low number of common pipistrelle registrations only, within Area C of the Works Area associated with the Long Pits water body. No registrations of bats were made within or around the Dungeness B power station or associated buildings forming Area A and Area B of the Works Area. Further surveys are planned during 2026, as outlined.

Breeding, wintering, and passage birds

- 18.3.46 As detailed within **Table 18-5**, the Dungeness, Romney Marsh and Rye Bay SPA is designated for its wintering, breeding and passage bird interest, including Annex 1 qualifying species. Species listed on Annex 1 are those for which the UK Government takes special conservation measures including the designation of land as SPAs to ensure the survival and reproduction of

⁴²⁶ Collins, J. (ed) (2023) *Bat Surveys For Professional Ecologists: Good Practice Guidelines (4th edition)*. London: Bat Conservation Trust .

these species throughout their distributions. The Ramsar site qualifies regularly supports 20,000 or more waterbirds and because it regularly supports 1% of the Great Britain populations of Mute swan *Cygnus olor* and shoveler in any season.

- 18.3.47 The part of the Dungeness peninsula in the immediate vicinity of Dungeness B is well studied for its bird interest, with daily monitoring carried out by the Dungeness Bird Observatory, WeBs data which is available for sectors at Dungeness Beach (extending from the Dungeness Substation in the west to approximately 150m east of the Old Lighthouse) and Long Pits and extensive desk study records also available.
- 18.3.48 Based on desk study information available, 339 species of bird have been recorded within 3km of Area A, Area B and Area C of the Works Area although many of these species are scarce or rare visitors. Of these species, 63 are BoCC red list species, 102 are BoCC amber list species, 43 are Species of Principal Importance (NERC S41), 76 are Wildlife and Countryside Act 1981 (as amended) Schedule 1 species, and 72 are Birds Directive Annex 1 species. Within Area A of the Works Area the breeding species include Wildlife and Countryside Act 1981 (as amended) Schedule 1 listed peregrine falcon and black restart and nesting herring gull *Larus argentatus* and lesser black-backed gull *Larus fuscus* on buildings within Dungeness B.
- 18.3.49 The KMBRC data search returned records of the Wildlife and Countryside Act 1981 (as amended) Schedule 1 listed barn owl *Tyto alba* within 2km of the Works Area, most recently in 2023. However, as there are no suitable roosting habitats and limited suitable hunting habitats within the Zol, barn owl has been scoped out of further surveys.
- 18.3.50 The shingle and coastal habitats within the Zol, in addition to the buildings within Area A, Area B and Area C of the Works Area, provide suitable foraging, roosting, and nesting habitat for breeding and wintering birds. Therefore, breeding and wintering birds are scoped in for further surveys to be carried out in 2025 to 2026, with the requirement for surveys for wintering birds in 2026 to 2027 to be determined based on the survey results and agreement with Natural England.
- 18.3.51 Wintering walkover surveys completed in 2022 to 2023 recorded 45 bird species within the Survey Area, which extended 500m around Area A and Area B of the Works Area in addition to a vantage point at Area C of the Works Area. Of these, seven species are listed on the BoCC5 red list⁴²⁷ and 18 on the BoCC5 amber list. Four species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) were recorded, namely peregrine falcon, black redstart, Dartford warbler *Curruca undata* and Cetti's warbler *Cettia cetti*. Dartford warbler and peregrine are both listed on Annex 1 of the Birds Directive. Neither Dartford warbler or peregrine falcon are listed on the citation for the Dungeness, Romney Marsh and Rye Bay SPA.

⁴²⁷ Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. 2021. The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds 114: 723-747. (online). Available at: <https://britishbirds.co.uk/content/status-our-bird-populations>. (accessed 03/12/2025)

- 18.3.52 Further wintering bird surveys comprising monthly high tide walkovers and high and low tide counts of the Dungeness beach are being completed during winter 2025 to 2026. These surveys will be repeated during winter 2026 to 2027, unless otherwise agreed with Natural England. Breeding bird surveys, passage bird surveys and black redstart surveys will be completed in 2026 to provide detailed baseline information on the bird interest of the Works Area and surrounding area.
- 18.3.53 Tern surveys of the existing outfall from Dungeness B (vantage point 1) and a second survey point 500m to the west (vantage point 2), and 500m surrounding these survey points, with counts through the high tide window were completed monthly during May to August 2025. These surveys did not record any terns foraging at vantage point 1, with activity limited to common tern flying over the beach during the August survey only. At vantage point 2, one little tern was recorded feeding on two occasions and during the August survey between four and 35 common terns and between five and 20 Sandwich terns were recorded feeding during the majority of the counts. The results of the surveys are consistent with anecdotal evidence that tern feeding activity has substantially reduced to the south of the Works Area since generation ceased and the volume and temperature of the discharges reduced. No further surveys for terns are planned.

Great Crested Newt and Other Amphibians

- 18.3.54 The Dungeness SAC is in part designated for its population of great crested newt. The desk study returned records 1km of Area A, Area B and Area C of the Works Area, namely from water bodies within the RSPB reserve. The shingle habitat within the Zol provides suitable foraging and breeding habitat for great crested newt, therefore great crested newt have been scoped in for further surveys.
- 18.3.55 An eDNA survey of the Long Pits water body located immediately adjacent to Area C of the Works Area returned negative results for great crested newt DNA, indicating the likely absence of great crested newt from this water body. This result, alongside the high level of fish stocking and the absence of existing records, means that great crested newt are highly unlikely to be present in this water body.
- 18.3.56 An out-of-season eDNA survey in will be completed of a water body to the west of the Northern Approach Road, located 300m west Area C of the Works Area. This survey will be completed in February 2026 while water levels are sufficiently deep to collect water samples, due to this water body historically drying by March prior to the eDNA survey window (14 April to 30 June). As noted by Natural England in the Dungeness SAC citation, standard guidance suggests egg laying in late March into April which is often too late for surveying to confirm breeding on Dungeness. No other water bodies are present within 500m of Area A, Area B or Area C of the Works Area.
- 18.3.57 The desk study returned records of common toad *Bufo bufo* which are a Priority Species. There are also records of smooth newt *Lissotriton vulgaris*.

Reptiles

- 18.3.58 The Annual Land Management Reviews (2015-2023) contain records of slow-worm *Anguis fragilis*, grass snake *Natrix helvetica*, and common lizard *Zootoca vivipara*, most recently in 2023.

18.3.59 The data returned by the KMBRC data search contained four records of slowworm (most recently in 2024), 12 records of grass snake (most recently in 2023), and 34 records of common lizard (most recently in 2023).

18.3.60 Much of the open shingle habitat and low-lying vegetation mosaic habitat within the Zol, surrounding Area A, Area B and Area C of the Works Area, contains suitable foraging habitat, as well as both natural and artificial refugia for basking for these three reptile species. Therefore, reptiles are scoped in for further surveys.

Otter

18.3.61 There are no recent records of otter within the desk study data. However, there is a water body at Area C of the Works Area (Long Pits) that may be suitable for otter, and therefore otter is scoped in for further survey.

18.3.62 The first of two survey visits for otter completed in September 2025 did not record signs of otter. A second survey visit will be completed in spring 2026.

Eurasian Beaver

18.3.63 There are no recent records of Eurasian beaver within the desk study data. A water body at Area C of the Works Area (Long Pits) that is considered to be suboptimal to support Eurasian beaver due to the nature of the surrounding vegetation. While beaver are not yet known on the Dungeness peninsula, due to the expansion of the range of Eurasian beaver within Kent Eurasian beaver are scoped in for further survey alongside the otter surveys.

18.3.64 The first of two survey visits completed in September 2025 did not record any of Eurasian beaver. A second survey visit will be completed in spring 2026.

Water Vole

18.3.65 There are recent records of water vole within the desk study data, the closest being 1.5km west of the Works Area. Dungeness, Romney Marsh, and Rye Bay Ramsar site is designated in part for its population of water vole. As there is a water body at Area C of the Works Area (Long Pits), which may be suitable for water vole, they are scoped in for survey.

18.3.66 The first of two survey visits completed in September 2025 did not record signs of water vole. A second survey visit will be completed in spring 2026.

Terrestrial Invertebrates

18.3.67 The Dungeness, Romney Marsh and Rye Bay Ramsar site is designated in part under criteria 1 and 2 for the populations of terrestrial invertebrates it supports. Furthermore Dungeness SSSI, located adjacent to Area A and Area B of the Works Area, and encompassing Area C of the Works Area, is noted for supporting endemic species and subspecies of invertebrates; populations of two invertebrate species listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) (medicinal leech and the ground beetle *Omophron limbatum*); populations of ten endangered, vulnerable and rare invertebrate species; assemblages of invertebrates occurring on dry coastal habitats; and assemblages of wetland invertebrates.

18.3.68 Sussex emerald moth *Thalera fimbrialis*, a Wildlife and Countryside Act 1981 (as amended) Schedule 5 listed species with a limited UK distribution to

Sussex and Kent is known to be present immediately adjacent to Area A of the Works Area and this species is the target of positive land management to encourage its larval foodplants, with larvae counts conducted across EDF's Dungeness landholding annually which extends beyond Areas A to C of the Works Area.

- 18.3.69 The shingle and low-lying vegetation mosaic habitat within the Study Area is rare and unique, with diverse invertebrate communities, including some species restricted to these coastal shingle habitats. Therefore, terrestrial invertebrates are scoped in for further assessment, however, based on the terrestrial invertebrate scoping survey completed in 2023, habitats present within the Works Area and detailed species-specific survey information already available, including for Sussex emerald moth, no further targeted terrestrial invertebrate surveys are planned.

Notable Plants

- 18.3.70 The Dungeness, Romney Marsh and Rye Bay Ramsar site, and Dungeness SSSI and NNR are designated in part for the notable plant communities present.
- 18.3.71 The desk study returned records of 72 protected or otherwise notable plant species within 3km of the Site from the last 10 years, of which three (Jersey cudweed *Pseudognaphalium luteoalbum*, stinking hawk's-beard *Crepis foetida* and early spider orchid *Ophrys sphegodes*) are listed on Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). Jersey cudweed was formerly restricted to very few locations in the UK, with Dungeness considered to be one of the few native populations but is now a common ruderal species in some parts of Southeast England. Two species (red hemp nettle *Galeopsis angustifolia*, and grape-hyacinth *Muscari neglectum*) are NERC S41 listed species of Principal Importance and Priority Species listed within the Kent Biodiversity Strategy. All 72 species are either listed or additionally listed as otherwise notable through inclusion on one or more of the following: the red list, the Kent Red Data Book or listed as Nationally scarce or Nationally rare. Red hemp nettle populations are present within the wider Dungeness Estate, with positive management to promote the population of this critically endangered species. The desk study included records of red hemp nettle from 2023, immediately adjacent to Area A of the Works Area.
- 18.3.72 For some species, such as red hemp nettle, there is existing detailed survey data already available, however, NVC, lichen and bryophyte surveys in 2026 will provide further information on distributions in relation to the Works Area. Notable plants are scoped in for further survey and assessment.

Future Baseline

- 18.3.73 In the absence of the Proposed Works, the baseline during the anticipated duration of the Initial Decommissioning Works is likely to remain consistent with the current baseline. It is assumed that the qualifying interest features of the Dungeness designations would remain unchanged and at favourable nature conservation status. No significant changes in the baseline of the Works Area would be expected, given the dominance of hard landscaping. There are not anticipated to be significant changes in the baseline of the surrounding area given the wider landscape comprises the extensive shingle

habitat which is subject to either active management for flood defence purposes in the case of the shingle berm, or active management existing biodiversity interest features, including active management to maintain the existing biodiversity interest features. Given this, it is unlikely that additional protected species would colonise the Works Area, except for potentially roosting bats if new features suitable for roosting develop in existing buildings over time. In the absence of the Proposed Works, a single pair of peregrine would be likely to remain. Similarly, the breeding black redstart would be likely to remain and the breeding gull colony would also be expected to persist although there could be minor fluctuations in the colony size over time.

- 18.3.74 A similar future baseline would be expected at the time of the start of the Care and Maintenance Phase. In the absence of the Proposed Works, large shifts from the current baseline remain unlikely due to the dominance of hard landscaping within the Works Area and the nature of the habitat types and active management of the surrounding areas.
- 18.3.75 Over the longer term, it can be assumed that in the absence of the Proposed Works there would be a marked reduction in the frequency and magnitude of disturbance from human activities and an associated decrease in lighting. The baseline contribution from the defueling activities at Dungeness B would have been removed and further reductions would be anticipated as a consequence of the decommissioning and dismantling of the adjacent Dungeness A, which is also likely to be well advanced. These changes could benefit wildlife, encouraging increased usage and reliance on habitats in the vicinity of the Works Area e.g. increased use of intertidal habitats by birds. However, this wildlife could also be relatively more sensitive to noise and visual disturbance given there would be less day-to-day activity to promote habituation. This is unlikely to be an important consideration in relation to the Proposed Works. The recreational activities on the sea front, are likely to remain consistent with the baseline and would maintain sources of regular noise and visual disturbance, albeit of a non-industrial nature.
- 18.3.76 Over the duration of the Care and Maintenance Phase, in the absence of the Proposed Works, although it could be maintained areas of hardstanding and other hard surfaces could be partially colonised by vegetation. This could result in vegetation consistent with the Priority Habitat Open Mosaic Habitats on Previously Developed Land (OMH). This habitat is not likely to be a relevant constraint as it would not be particularly sensitive to the Proposed Works. During the Care and Maintenance Phase, the Works Area would remain secure but would only be subject to a low level of human activity, so it is possible that the black restart population and a gull colony could persist and potentially occupy a wider area. Other specifically protected nesting bird species could also occur e.g. little ringed plover *Charadrius dubius*. The Works Area could also be accessible to and colonised by other protected species, including roosting and foraging bats, reptiles, terrestrial invertebrates and notable plant species.
- 18.3.77 Possible changes in the patterns of species habitat usage and relative sensitivity to disturbance would need to be considered prior to commencement of Final Site Clearance so that methods and mitigation could be agreed with relevant regulators and stakeholders. However, the detailed assessment of the Dungeness designations that is required for the

Initial Decommissioning Works, including the Preliminary HRA Screening Report (**Appendix 18D**), is likely to be sufficiently robust and representative to understand and assess the future baseline at Final Site Clearance.

- 18.3.78 Climate and sea level change could occur over the duration of the Care and Maintenance Phase and the Final Site Clearance phases, and these environmental changes could alter the composition of habitats adjacent to the Works Area and consequently the usage of the habitats present by species. Changes in species distributions could also occur regardless of habitat changes. In this context, climate and sea level change require specific consideration.

18.4 Consultation

- 18.4.1 Consultation with Natural England has taken place on the scope of surveys and on the initial results from surveys. No engagement has, however, been carried out to date with respect to the assessment methods for this chapter.
- 18.4.2 Consultation will be undertaken with the relevant regulatory bodies before carrying out the assessment in the Environmental Statement (ES), to include the following statutory bodies:
- Kent County Council;
 - Folkestone and Hythe District Council;
 - The Environment Agency; and,
 - Natural England.

18.5 Scope for Mitigation

- 18.5.1 All relevant protected species legislation requirements would be implemented. Standard good practice measures, such as advanced winter vegetation (or nest site removal) in relation to birds, would be provided to ensure legislative compliance.
- 18.5.2 Measures to deliver compliance with industry good practice, such as to prevent surface and groundwater pollution, noise disturbance and fugitive dust management to avoid impacts on designated sites, habitats and notable plant species, would be implemented through the measures defined in an Environmental Management Plan. These measures are described further in the **Chapter 19: Water Environment and Flood Risk**, **Chapter 14: Noise and Vibration** and **Chapter 6: Air Quality** respectively.
- 18.5.3 Any additional lighting required would be designed so that excessive glare is minimised outside of the Works Area as far as reasonably practicable. It should be noted that the existing Works Area (with the exception of Long Pits) is currently permanently illuminated, so even if new lighting is required during decommissioning, light levels would be expected to be no worse than for the current situation. Although plant and buildings would be removed during the Initial Decommissioning Works, a net reduction in lighting levels is not anticipated during this phase relative to the current baseline as the main sources of lighting are associated with the security lighting.
- 18.5.4 Standard good practice measures would be adopted to prevent the spread of species currently subject to control within the EDF Estate (including red

valerian *Centranthus ruber*). These would be detailed within an Invasive Species Management Plan.

- 18.5.5 Where appropriate, updated ecological surveys would be completed prior to the onsite start of the Initial Decommissioning Works to inform any required protected species licence applications, or otherwise to determine/confirm appropriate mitigation requirements.

18.6 Potential Effects

- 18.6.1 The relevant terrestrial ecology features with the potential to be affected by each of the three phases of the Proposed Works (preparation for care and maintenance, care and maintenance, and final site clearance) are identified below.

Initial Decommissioning Works

Designated Sites

- 18.6.2 The internationally important qualifying bird interest features of the Dungeness, Romney Marsh and Rye Bay Ramsar and SPA may be subject to noise and visual disturbance during de-planting, dismantling and deconstruction of plant and buildings, the cooling water intake structure, the cooling water outfall structure, and construction of the Safestore and waste management facilities when using intertidal habitats and roost sites adjacent to the Works Area. There are no other pathways for impacts on the qualifying bird features of the Dungeness, Romney Marsh, and Rye Bay Ramsar and SPA. Further detail to support this statement is provided within the HRA Preliminary Likely Significant Effects Screening Report⁴²⁸. Marine habitats and strictly marine species are considered in **Chapter 13: Marine Ecology**.
- 18.6.3 The Initial Decommissioning Works would include the controlled dismantling of a number of structures within Area A of the Works Area. As described in **Chapter 6: Air Quality**, guidance indicates that application of appropriate mitigation during these works would ensure that residual dust effects on ecological receptors would be 'not significant'.
- 18.6.4 Emissions to air from vehicle movements could result in nutrient nitrogen deposition to Dungeness SAC and Dungeness, Romney Marsh, and Rye Bay Ramsar site, adversely impacting sensitive shingle habitats within this site. However, the HRA screens out likely significant effects based for the Initial Decommissioning Works on the number of predicted vehicle movements being average 24 Heavy Duty Vehicles (HDV) a day, and therefore below the Institute of Air Quality Management (IAQM)⁴²⁹ initial screening criteria of 200 Annual Average Daily Traffic HDV, including consideration of cumulative HDV movements which will be included within traffic data. Due to uncertainties in data for the Final Site Clearance phase, the HRA states that further assessment is required.

⁴²⁸ AECOM, 2025; Dungeness B Decommissioning – Habitat Regulations Assessment (HRA) Likely Significant Effects Screening Report

⁴²⁹ Institute of Air Quality Management (2020) A guide to the assessment of air quality impacts on designated nature conservation sites. (online). Available at: <https://iaqm.co.uk/text/guidance/air-quality-impacts-on-nature-sites-2020.pdf> (Accessed 03/12/2025)

- 18.6.5 There are limited areas of semi-natural, terrestrial habitats present within Area A and Area B of the Works Area, however this includes small areas of habitat s3b5 Annex I H1220 Perennial vegetation on coastal shingle,, synonymous with the Annex I habitat 1220 – Perennial vegetation of stony banks, albeit located outside of the SAC and of lower quality, however the resource as a whole, including this habitat in the surrounding area, is of International conservation value. Areas of g1c Other lowland dry acid grassland in the Survey Area but outside of the Works Area are considered to be of up to District nature conservation value.
- 18.6.6 Area C of the Works Area includes small areas of habitat s3b5 Annex I H1220 Perennial vegetation on coastal shingle, synonymous with the Annex I habitat 1220 – Perennial vegetation of stony banks located within the Dungeness SAC and r1c6 - Nutrient-poor shallow waters with aquatic vegetation on sand.
- 18.6.7 It is assumed that all habitats within the Works Area are likely to be removed during the Proposed Works.

Birds

- 18.6.8 It is likely that Area A of the Works Area would become at least temporarily unsuitable as a nest site for peregrine falcon (District nature conservation value) due to the enclosure of the reactor building (the current nest site) within the Safestore. If this species was present at the time of the Proposed Works, then there could also be potential for disturbance to an occupied nest site. Mitigation measures, such as seasonal avoidance or advanced removal of nesting platforms, may be needed to ensure legislative compliance. It is possible that nesting platforms could be attached to the Safestore structure to provide long-term mitigation in the subsequent phase.
- 18.6.9 Area A of the Works Area would become at least temporarily unsuitable as a nest site for black redstart (District nature conservation value) due to the loss of existing nest sites. Mitigation measures such as seasonal avoidance or advanced removal of nesting locations may be needed to ensure legislative compliance. As the Works Area will remain a secure area long-term, it is possible that it could be reoccupied in the subsequent phase.
- 18.6.10 Area A and Area B of the Works Area is expected to become at least temporarily unsuitable for use by gulls (breeding colony of district nature conservation value) for breeding due to loss of existing nest sites, and noise, visual and habitat disturbance during the Proposed Works. If impacts could occur, then mitigation measures such as seasonal avoidance or advanced removal of nesting locations may be needed to ensure legislative compliance. As Area A and Area B of the Works Area will remain a secure area long-term, it is possible that it could be reoccupied by gulls later once levels of human activity return to baseline levels in the subsequent phase (the colony is currently maintained within the context of an operational power station).
- 18.6.11 Similarly, other bird species nesting within Area A, Area B and Area C of the Works Area at the time of the Proposed Works may be subject to a loss of nesting sites, and birds utilising habitats within and in the vicinity of Area A, Area B and Area C of the Works Area at the time of the Proposed Works

may be discouraged from nesting by noise, visual and habitat disturbance (individual to small numbers of pairs, Local nature conservation value).

- 18.6.12 Birds utilising adjacent habitats for foraging and roosting adjacent to Area A, Area B and Area C of the Works Area at the time of the Proposed Works maybe subject to disturbance by noise and visual disturbance (up to international nature conservation value).

Bats

- 18.6.13 The limited opportunities for roosting bats within Area A, Area B and Area C of the Works Area would be removed during the Proposed Works. If roost loss is likely to occur, then mitigation measures, such as seasonal avoidance or obtaining a European Protected Species Mitigation Licence (EPSML) from Natural England, would be needed to ensure legislative compliance. As the Works Area would remain a secure area long-term, it is possible that bats could find new roosting opportunities within the Works Area in the subsequent phase.

Amphibians and Reptiles

- 18.6.14 The limited areas of habitat suitable for reptiles within Area A, Area B and Area C of the Works Area would be removed during the Proposed Works, including the working area at Area C of the Works Area where a population is known to be present. Mitigation such as localised translocation or displacement is likely to be required to ensure legislative compliance. As Area A, Area B and Area C of the Works Area would remain a secure area long-term, it is possible that reptile populations could colonise areas of suitable habitat if they develop within the Works Area in the subsequent phase.
- 18.6.15 Due to the distance from confirmed breeding ponds and the limited areas of habitat suitable for great crested newt within Area A and Area B of the Works Area, the removal of terrestrial habitats from these Areas during the Proposed Works is not considered likely to have a significant impact on the great crested newt population present.
- 18.6.16 Area C of the Works Area is located 300m from the water body west of the Approach Road that will be subject to great crested newt presence/likely absence survey during 2026. If this water body is confirmed to support great crested newt this will be within the distant zone (250m to 500m) from Area C of the Works Area and therefore the Proposed Works could have an impact on great crested newt. There are no other confirmed breeding ponds within 500m of Area C of the Works Area.

Terrestrial Mammals

- 18.6.17 The limited opportunities for foraging badger within Area A, Area B and Area C of the Works Area would be removed during the Proposed Works. No evidence of a badger sett has been recorded to date within Area A, Area B and Area C of the Works Area. If impacts to a sett are likely, then subject to their activity status mitigation measures would be needed to ensure legislative compliance.
- 18.6.18 There are no areas suitable for otter, Eurasian beaver and water vole other than the wetland habitats of the Long Pits, adjacent to Area C of the Works Area, although there is no evidence of these species at this location to date.

If additional surveys in 2026 confirm they are present, the Proposed Works could result in disturbance to these species or the damage of water vole burrows. If impacts are predicted to occur, then mitigation measures would be needed to ensure legislative compliance.

Invertebrate

- 18.6.19 The limited areas of habitat suitable for terrestrial invertebrates within Area A, Area B and Area C of the Works Area would be removed during the Proposed Works. Area A, Area B and Area C of Works Area are located adjacent to areas known to support populations of notable terrestrial invertebrates, including the Wildlife and Countryside Act 1981 (as amended) Schedule 5 listed Sussex emerald moth. If impacts are predicted to occur, then mitigation measures may be needed to ensure legislative compliance.

Notable Plants

- 18.6.20 The limited areas of habitat suitable for notable plants within Area A, Area B and Area C of the Works Area would be removed during the Proposed Works. If WCA Schedule 8 species, such as Jersey cudweed, are located in these areas in 2026, mitigation measures may be required to ensure legal compliance. Given Area A, Area B and Area C of the Works Area are located adjacent to habitats designated in part for the notable plant populations, these could also colonise undisturbed parts of the Works Area as this would remain a secure area long-term in the subsequent phase.

Invasive Non-Native Species

- 18.6.21 Invasive non-native species of plants that present a legal constraint may be identified in Area A, Area B and Area C of the Works Area. If found to be present, these species could be disturbed and spread to new locations during the Proposed Works, so mitigation, such as advanced works to remove these populations, would be needed to ensure legislative compliance.

Care and Maintenance

- 18.6.22 If suitable nesting opportunities are provided, peregrine and black redstart may continue to nest in the general vicinity of Area A of the Works Area, and the gulls could re-establish a breeding presence. Cetti's warbler and Dartford warbler are likely to use habitats which, if lost during the Initial Decommissioning Works, would quickly become re-established in the vicinity of the back-up cooling water infrastructure.
- 18.6.23 Over the long-term, although generally lit and in an exposed location reducing its suitability for bats, bat roosts may become established within Area A, Area B and Area C of the Works Area and reptiles, badger, notable plants and invasive non-native species of plant could also become established within Area A, Area B and Area C of the Works Area. These would remain a consideration when planning and implementing routine maintenance, and mitigation for this phase.
- 18.6.24 No other ecological receptors are considered relevant to this phase. The level of activity and human presence during the Care and Maintenance Phase would be limited and is not likely to exceed established baseline noise

and visual disturbance levels associated with the Nuclear Site Licence Boundary.

Final Site Clearance

- 18.6.25 Given the potential for substantive ecological change (see Future Baseline) to occur prior to this stage, it is difficult to predict the potential impacts. However, the qualifying bird interest features of the Dungeness, Romney Marsh, and Rye Bay SPA and Ramsar site are, as with the Initial Decommissioning Works, likely to be subject to noise and visual disturbance during the Final Site Clearance when birds use intertidal habitats and roost sites adjacent to Area A, Area B and Area C of the Works Area.
- 18.6.26 The potential for impacts of clearance during this phase on peregrine falcon, black redstart, gulls, Cetti's warbler, Dartford warbler, roosting bats, reptiles, terrestrial invertebrates, notable plants and invasive non-native plant species will depend on the extent to which they maintain or re-establish populations within Area A, Area B and Area C of the Works Area during the care and maintenance phase.

Receptors and Effects Scoped Out of the Assessment

- 18.6.27 The ecological features scoped out of the ES at this stage, in the absence of further survey data, due to the absence of suitable habitats, are:
- Hazel dormouse; and,
 - White clawed crayfish.
- 18.6.28 Further ecological features may be scoped out of the ES once additional or more detailed survey data has been collected in 2026. These features could include otter, Eurasian beaver and water vole, which have not been detected to date in the only suitable habitat available. Similarly, surveys to date have not detected great crested newt or roosting bats. A summary of the receptors and effects scoped out or likely to be scoped out of the assessment is in **Table 18-7**.

Table 18-6: Ecological Receptors Scoped Out or Potentially Scoped Out/Likely to be Scoped Out of the Assessment

Receptor	Status	Rationale
Hazel dormouse	Scoped out	No suitable habitat present
White clawed crayfish	Scoped out	No suitable habitat present
Otter	To be confirmed	Requires completion of surveys to confirm presence/likely absence
Eurasian beaver	To be confirmed	Requires completion of surveys to confirm presence/likely absence
Water vole	To be confirmed	Requires completion of surveys to confirm presence/likely absence
Great crested newt	To be confirmed	Requires completion of surveys to confirm presence/likely absence
Roosting bats	To be confirmed	Requires completion of surveys to confirm presence/likely absence

- 18.6.29 BNG assessment is not necessary to comply with the Environment Act 2021, as this does not apply to EIADR applications. Future planning applications

for decommissioning works or development in the Works Area such as the construction and operation of the waste processing facilities will be subject to a specific planning application which may include the need to consider BNG.

18.7 Assessment Methods

18.7.1 The proposed generic project-wide approach to the assessment methods is set out in **Chapter 5: EIA Methodology**. It is necessary to adapt this approach to address standard good practice requirements⁴³⁰ for biodiversity assessment.

18.7.2 This section provides a summary of the ecology assessment methods.

Approach and Assessment Criteria

18.7.3 The EclA will be carried out in accordance with good practice guidance issued by the Chartered Institute of Ecology and Environmental Management⁴³¹. The principal steps involved in the CIEEM approach can be summarised as:

- Relevant ecological features that are both present and likely to be affected by the Proposed Works are identified (as summarised earlier in this chapter) through a combination of targeted desk-based study and field survey;
- The changes or perturbations predicted to occur as a consequence of the Proposed Works (i.e. the potential impacts) in isolation or in combination with other activities, and which could potentially affect relevant ecological features, are identified and their nature described. In defining these, established best-practice, legislative requirements or other incorporated design measures to minimise or avoid impacts are also described and considered;
- The likely effects (beneficial or adverse) on relevant ecological features are then assessed, and where possible quantified;
- Measures to avoid or reduce any predicted significant effects, if possible, are then developed in conjunction with other elements of the design (including mitigation for other environmental disciplines). If necessary, measures to compensate for effects on ecological features are also included;
- Any residual effects of the Proposed Works are reported; and,
- Where relevant, any scope for ecological enhancement is also considered.

18.7.4 It is not necessary in the assessment to address all ecological features with potential to occur, and instead the focus should be on those that are

⁴³⁰ CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3*. Chartered Institute of Ecology and Environmental Management, Winchester. (Updated September 2024)

⁴³¹ Chartered Institute of Ecology and Environmental Management (CIEEM) (2017). Guidelines for Preliminary Ecological Appraisal. Available from: <https://cieem.net/wp-content/uploads/2019/02/Guidelines-for-Preliminary-Ecological-Appraisal-Jan2018-1.pdf> (accessed 03/12/2025).

relevant. CIEEM (2018) makes clear that is no need to “*carry out detailed assessment of ecological features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable*”. This does not mean that efforts should not be made to safeguard wider biodiversity, and requirements for this have been considered. National policy documents emphasise the need to achieve no net loss of biodiversity and enhancement of biodiversity.

Sensitivity

18.7.5 To support focussed EclA there is a need to determine the scale at which the relevant ecological features identified through the desk studies and field surveys are of value. Consistent with good practice⁴³², the value of each relevant ecological feature is defined with reference to the geographical level at which it matters. The frames of reference used for this assessment are therefore:

- International (typically this is within a European context, reflecting the general availability of good data to allow cross-comparison);
- National (Great Britain, but considering the potential for certain features to be more notable (of higher value) in an England context relative to Great Britain as a whole);
- Regional (Southeast England);
- County (Kent);
- District (Folkestone and Hythe);
- Local (features that do not meet criteria for valuation at a District or higher level, but that have sufficient value at the site level to merit retention or mitigation); and,
- Negligible (common and widespread features that have very low value at the level of the Works Area, and which do not require retention or mitigation at the relevant location to otherwise maintain a favourable nature conservation status, or to deliver wider relevant biodiversity objectives).

Magnitude of Impact

18.7.6 When describing potential impacts (and where relevant the resultant effects) within the EclA consideration will be given to the following characteristics likely to influence this:

- Beneficial/adverse - i.e. is the change likely to be in accordance with nature conservation objectives and policy;
- Beneficial (i.e. positive) - a change that improves the quality of the environment, or halts or slows an existing decline in quality e.g. increasing the extent of a habitat of conservation value;

⁴³² Chartered Institute of Ecology and Environmental Management (CIEEM) (2017). Guidelines for Preliminary Ecological Appraisal. (online). Available at: <https://cieem.net/wp-content/uploads/2019/02/Guidelines-for-Preliminary-Ecological-Appraisal-Jan2018-1.pdf> (Accessed 03/12/2025).

- Adverse (i.e. negative) - a change that reduces the quality of the environment e.g. destruction of habitat or increased noise disturbance;
- Magnitude - the size, amount or intensity of an impact - this is described on a quantitative basis where possible;
- Spatial extent - the spatial or geographical area or distance over which the impact/effect occurs;
- Duration - the time over which an impact is expected to last prior to recovery or replacement of the resource or feature. Consideration is given as to how this duration relates to relevant ecological characteristics such as a species' lifecycle. However, it is not always appropriate to report the duration of impacts in these terms. The duration of an effect may be longer than the duration of an activity or impact;
- Reversibility - i.e. whether the impact is temporary or permanent. A temporary impact is one from which recovery is possible or for which effective mitigation is both possible and enforceable. A permanent effect is one from which recovery is either not possible or cannot be achieved within a reasonable timescale (in the context of the feature being assessed); and,
- Timing and frequency - i.e. consideration of the point at which the impact occurs in relation to critical life-stages or seasons.

Significance of Effects

- 18.7.7 For each relevant ecological feature, only those characteristics relevant to understanding the effect and determining the significance will be described. The determination of the significance of effects will be made based on the predicted effect on the structure and function, or conservation status, of the relevant ecological features, as follows:
- Not significant - no effect on structure and function, or conservation status; and
 - Significant - structure and function, or conservation status is affected.
- 18.7.8 For significant effects (both adverse and beneficial), this will be qualified with reference to the geographic scale at which the effect is significant (e.g. an adverse effect significant at a National level).
- 18.7.9 While an effect can be significant at any geographic level, in EIA terms effects will usually be considered significant at County level or higher (moderate and major effects). Therefore, effects at the local or site levels (minor and negligible effects) would not usually be considered significant.
- 18.7.10 The CIEEM approach broadly accords with the EIA significance criteria described in **Chapter 5: EIA Methodology**. However, the matrix has not been used to classify effects as this would deviate from CIEEM guidance. To provide consistency of terminology in the final assessment, the definitions of effects used in CIEEM assessment are translated into the classification of effects scale in **Table 18-7** for consistency with **Chapter 5: EIA Methodology**

Table 18-7: Relating CIEEM effect terminology to the effects definitions Chapter 5: EIA Methodology

Effect	Description of effects (see Chapter 5: EIA Methodology)	Equivalent CIEEM effect classification
Major	Effects, both adverse and beneficial, which are likely to be important considerations at a National to Regional level because they contribute to achieving international/national/regional objectives, or which are likely to result in exceedance of statutory objectives and/or breaches of legislation.	Effect on structure/function or conservation status at Regional, National or International level.
Moderate	Effects that are likely to be important considerations at a Regional and Local level.	Effect on structure/function or conservation status at County level.
Minor	Effects that could be important considerations at a Local level.	Effect on structure/function or conservation status at Site or Local level.
Negligible	An effect that is likely to have a Negligible or neutral influence, irrespective of other effects.	No effect on structure/function or conservation status.

Assumptions and Limitations

18.7.11 No specific limitations have been identified for the available terrestrial ecology baseline data. The terrestrial ecology baseline data set for the Dungeness area and the vicinity of the works area is extensive and will be supplemented, where required, by further surveys to be carried out in 2026.

18.7.12 The following assumption has been made when writing this terrestrial ecology scoping report:

- At this stage, the formal terrestrial ecology surveys completed for the EcIA are limited, and the assessments presented are based predominantly on available desktop data. This approach is considered proportionate and appropriate for the current stage of the project. Further terrestrial ecology surveys are planned in 2026 and will be used to inform the EIA.

18.8 Summary of Potential Likely Significant Effects

18.8.1 **Table 18-8** provides the potential significant effects on terrestrial ecology and a summary of the features to be considered for each effect within the ES. Justification is provided in **Section 18.6**. This summary considers all ecological features of District or higher nature conservation value but excludes features of Local value. Whilst ecological features of Local nature conservation value may be of interest to stakeholders and merit protection or mitigation, potential impacts and effects would not usually be considered significant in EIA terms in line with the CIEEM guidance.

18.8.2 Where there are uncertainties about the future baseline, e.g. the likelihood of being able to retain the breeding pair of peregrine through the Care and Maintenance phase, the reasonable worst-case impacts and effects have

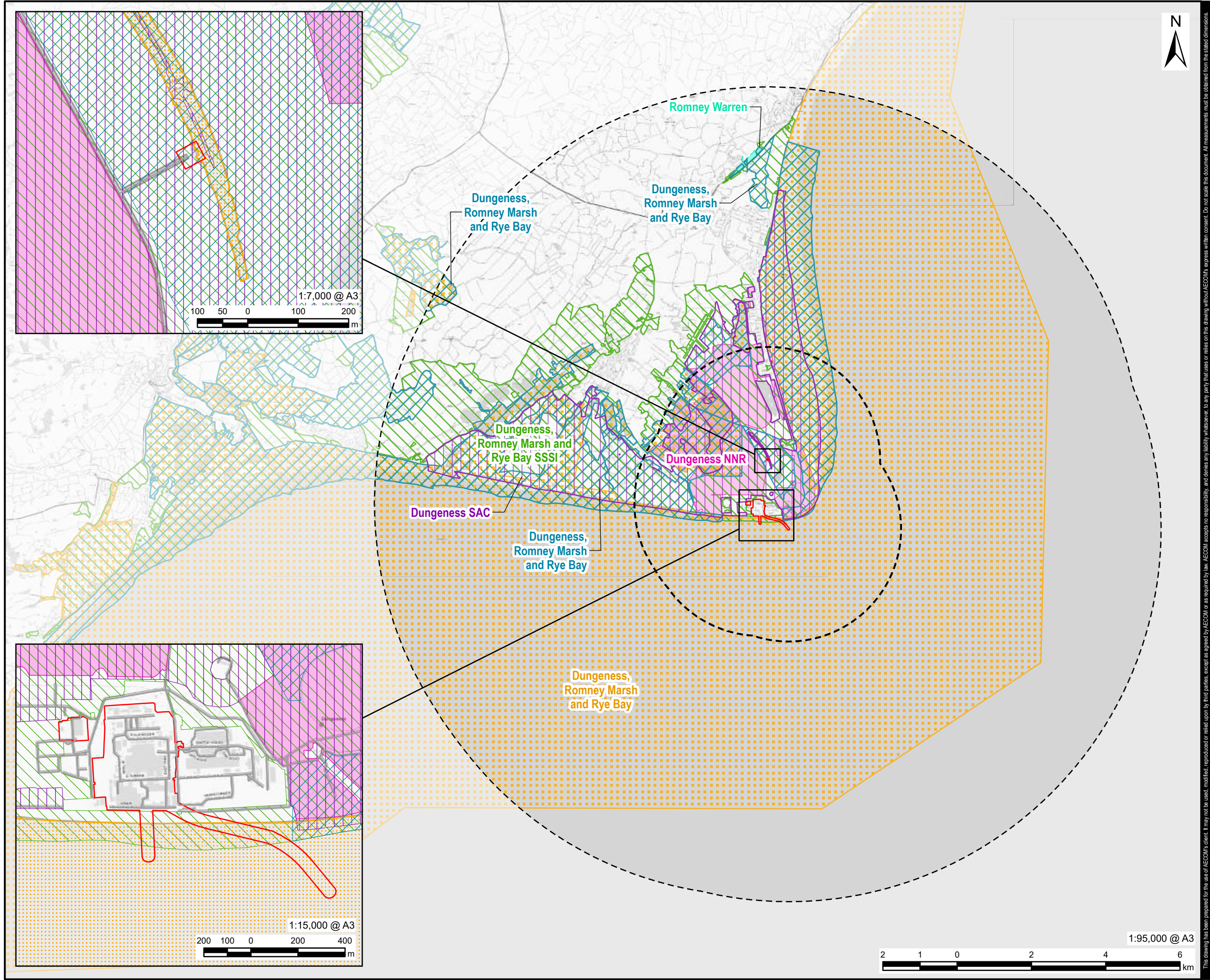
been assumed (loss during the Initial Decommissioning Works). This would be considered further within the ecology assessment.

- 18.8.3 Further, some of the ecological features in the ZOI benefit from legal protections (e.g. common species of bird when nesting) or have relevance to interpretation of planning policy (e.g. requirements for tree protection). These are important considerations, but in themselves do not indicate a potentially significant effect. These legal considerations and the need for appropriate mitigation would be fully addressed within the terrestrial ecology assessment, but they are not included within the summary of potential significant effects.

Table 18-8: Features to be Considered in the ES

Effect	Feature(s)
Initial Decommissioning Works	
Consequences for conservation status of designated sites qualifying bird species due to: • Temporary displacement from noise and visual disturbance from clearance and construction activities; • Temporary loss of access to bird foraging and roosting habitats due to noise, visual and habitat disturbance from clearance and construction activities; and • Degradation of bird foraging and roosting habitats as a result of clearance and construction activities.	Qualifying bird species of Dungeness, Romney Marsh and Rye Bay SPA and Ramsar designations (international nature conservation value), Dungeness NNR (national nature conservation value), and Dungeness, Romney Marsh, and Rye Bay SSSI (National nature conservation value)
Killing/injury, disturbance and/or potentially a permanent reduction in the availability of habitat (including breeding habitat) from clearance with adverse consequences for conservation status due to clearance or degradation of habitats.	• One breeding pair of peregrine falcons (District nature conservation value) • Breeding black redstart (District nature conservation value) • Gull breeding colony (District nature conservation value) • Roosting bats (up to District nature conservation value) • Reptiles (up to District nature conservation value) • Great crested newt (up to National nature conservation value) • Sussex emerald moth (National conservation value) • Terrestrial invertebrate assemblage (up to National conservation value) • Notable plants (up to National conservation value)
Degradation of bird foraging habitats as a result of emissions to water, with consequences for integrity/conservation status.	Qualifying bird species of Dungeness, Romney Marsh and Rye Bay SPA and Ramsar designations (International nature conservation value), Dungeness NNR (National nature conservation value), and Dungeness, Romney Marsh, and Rye Bay SSSI (National nature conservation value)
Loss of terrestrial habitats as a result of permanent land take	s3b5 Annex I H1220 Perennial vegetation of stony banks located outside of the SAC (up to International conservation value as part of the resource as a whole)
Degradation of terrestrial habitats and impacts to notable plant species as a result of emissions to air (e.g. dust and nitrogen deposition) with consequences for integrity/conservation status	Qualifying habitats of Dungeness SAC and Dungeness, Romney Marsh and Rye Bay SPA and Ramsar designations (International nature conservation value), Dungeness NNR (National nature conservation value), and Dungeness, Romney Marsh, and Rye Bay SSSI (National nature conservation value), Notable plants (up to National conservation value).
Care and Maintenance	

Effect	Feature(s)
No likely significant effects identified as the Care and Maintenance phase will not include activities that would lead to displacement or qualifying birds, loss of access or degradation to bird foraging or roosting habitats, killing, injury, disturbance or alterations to breeding habitat of protected species.	
Final Site Clearance	
Temporary displacement of qualifying bird species of the designated sites and temporary loss of access or degradation to bird foraging and roosting habitats due to noise and visual disturbance from clearance activities with consequences for conservation status.	Qualifying bird species of Dungeness, Romney Marsh and Rye Bay SPA and Ramsar designations (International nature conservation value), Dungeness NNR (National nature conservation value), and Dungeness, Romney Marsh, and Rye Bay SSSI (National nature conservation value)
Killing/injury, disturbance and/or potentially a permanent reduction in the availability of breeding habitat due to clearance of habitat with adverse consequences for conservation status of species that have colonised the Works Area.	• One breeding pair of peregrine falcons (District nature conservation value) • Breeding black redstart (District nature conservation value) • Gull breeding colony (District nature conservation value) • Roosting bats (up to District nature conservation value) • Reptiles (up to District nature conservation value) • Great crested newt (up to National nature conservation value) • Sussex emerald moth (National conservation value) • Terrestrial invertebrate assemblage (up to National conservation value) • Notable plants (up to National conservation value)
Degradation of bird foraging habitats as a result of emissions to water from dismantling of the main cooling water infrastructure, with consequences for integrity/conservation status.	Qualifying bird species of Dungeness, Romney Marsh and Rye Bay SPA and Ramsar designations (International nature conservation value), Dungeness NNR (National nature conservation value), and Dungeness, Romney Marsh, and Rye Bay SSSI (National nature conservation value)
Loss of terrestrial habitats and notable plant species as a result of permanent land take	• s3b5 Annex I H1220 Perennial vegetation of stony banks located outside of the SAC (up to International conservation value as part of the resource as a whole). • Notable plants (up to National conservation value).
Degradation of terrestrial habitats (including shingle habitats) as a result of vehicle emissions to air (e.g. dust and nitrogen deposition) with consequences for integrity/conservation status.	Qualifying habitats of Dungeness SAC and Dungeness, Romney Marsh and Rye Bay SPA and Ramsar designations (International nature conservation value), Dungeness NNR (National nature conservation value), and Dungeness, Romney Marsh, and Rye Bay SSSI (National nature conservation value)



AECOM

PROJECT

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Decommissioning

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LEGEND

- The Works Area
- The Works Area - 3km Buffer
- The Works Area - 10km Buffer
- Environmental Designations**
- Ramsar
- Special Protection Area
- Special Areas of Conservation
- Sites of Special Scientific Interest
- Local Nature Reserve
- National Nature Reserve

NOT PROTECTIVELY MARKED

NOTES

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ISSUE PURPOSE

EIA Scoping Report

PROJECT NUMBER

60739933

FIGURE TITLE

Statutory Sites

FIGURE NUMBER

Figure 18-1

REV

0

DOCUMENT NUMBER

19. Water Environment and Flood Risk

19.1 Introduction

- 19.1.1 This chapter sets out the proposed scope and methodology for the assessment of effects of the Proposed Works on the water environment and flood risk. This chapter has been informed by a review of environmental baseline conditions, along with the anticipated key issues likely to be associated with the Proposed Works.
- 19.1.2 The water environment includes watercourses, coastal waters, and groundwater. Consideration of impacts on water quality, water resources and hydromorphology, as well as flood risk will be included in the assessment.
- 19.1.3 This chapter should be read in conjunction with the description of the Proposed Works presented in **Chapter 2: The Decommissioning and Dismantling Process**. Other relevant topic chapters include:
- **Chapter 8: Coastal Processes;**
 - **Chapter 16: Soils and Geology;** and
 - **Chapter 20: Other Environmental Topics (Radiological Waste and Discharges).**

19.2 Relevant Legislation, Policy and Guidance

Legislation

- 19.2.1 Legislation which is relevant to the assessment of effects on water environment and flood risk to be presented in the Environmental Statement (ES) is presented in **Table 19-1**.

Table 19-1: Legislation Relevant to Water Environment and Flood Risk

Legislation	Legislation details
Environment Act 2021 ⁴³³	An Act to make provision regarding the targets, plans and policies for improving the natural environment including water resources, abstraction, sewage regulation, water quality and land drainage.
Flood and Water Management Act 2010 ⁴³⁴	This Act sets out clearer responsibilities and created new powers for Risk Management Authorities for different sources of flood risk with a focus on surface water flood risk. The Act established the role of Lead Local Flood Authorities (LLFA) and their requirement to prepare and put in place strategies for managing flood risk within their jurisdiction as well as maintaining the free flow of ordinary watercourses in their area (via amendments of the Land Drainage Act 1991). It also sets out the requirement for provision of a national flood and coastal erosion risk management strategy and additional requirements for reservoir safety.

⁴³³ Environment Act 2021 (online). Available at: [Environment Act 2021](#) (Accessed 02/12/2025)

⁴³⁴ Flood and Water Management Act 2010 (online). Available at: [Flood and Water Management Act 2010](#) (Accessed 02/12/2025)

Legislation	Legislation details
Water Resources Act (Amendment) (England and Wales) Regulations 2009 ⁴³⁵	Amends the Water Resources Act 1991 to implement the Water Framework Directive (WFD) (see below) to improve water quality within water bodies (diffuse pollution and hydromorphological elements).
Marine and Coastal Access Act 2009 ⁴³⁶	Introduces a revised system of marine management. Includes requirements for new development to obtain a Marine Licence from the Marine Management Organisation (MMO) for works below Mean High Water Spring Tide.
Environment Act 1995 ⁴³⁷	This Act provides for the establishment of a corporate body (known as the Environment Agency), makes provision for the control of pollution, the conservation of natural resources and the conservation or enhancement of the environment.
Water Resources Act 1991 ⁴³⁸	Regulates water resources, water quality and pollution and flood defences.
Land Drainage Act 1991 ⁴³⁹	Sets out the rights and responsibilities of authorities and landowners with respect to land drainage. The Act established the role of Internal Drainage Boards (IDB) and set powers for securing the maintenance of flow in ordinary watercourses.
Environmental Protection Act 1990 ⁴⁴⁰	This Act makes provision for the improved control of pollution arising from certain industrial and other processes; re-enacts the provisions of the Control of Pollution Act 1974 relating to waste on land; and amends the Radioactive Substances Act 1960.
The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 ⁴⁴¹	Implements the Water Framework Directive (WFD) (2000/60/EC) ⁴⁴² into law in England and Wales. These Regulations outline the obligation to classify water bodies by their ecological and chemical status and set targets to improve these statuses. It stipulates a need for comprehensive River Basin Management Planning Systems to protect and improve the ecological and chemical health of rivers, lakes, estuaries, coastal waters and groundwater. This is undertaken across administrative boundaries in natural river basin catchments.
The Environmental Permitting (England and Wales) Regulations 2016 ⁴⁴²	The Environmental Permitting Regulations 2016 consolidate pre-existing regulations involved in environmental permitting, including regimes covering waste management licensing, pollution prevention and control, landfill, waste incarceration, the operation of large combustion plants, water discharge consents, groundwater authorisations, radioactive substances, mining waste and batteries.
The Environmental Damage (Prevention and Remediation)	Regulations that oblige those who create environmental damage to not only cease damage, but also to identify and implement remedial measures.

⁴³⁵ Water Resources Act 1991 (Amendment) (England and Wales) Regulations 2009 (online). Available at: [The Water Resources Act 1991 \(Amendment\) \(England and Wales\) Regulations 2009](#) (Accessed 02/12/2025)

⁴³⁶ Marine and Coastal Access Act 2009 (online). Available at: [Marine and Coastal Access Act 2009](#) (Accessed 02/12/2025)

⁴³⁷ Environment Act 1995 (online). Available at: [Environment Act 1995](#) (Accessed 02/12/2025)

⁴³⁸ Water Resources Act 1991 (online). Available at: [Water Resources Act 1991](#) (Accessed 02/12/2025)

⁴³⁹ Land Drainage Act 1991 (online). Available at: [Land Drainage Act 1991](#) (Accessed 02/12/2025)

⁴⁴⁰ Environmental Protection Act 1990 (online). Available at: [Environmental Protection Act 1990](#) (Accessed 02/12/2025)

⁴⁴¹ The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (online). Available at: [The Water Environment \(Water Framework Directive\) \(England and Wales\) Regulations 2017](#) (Accessed 02/12/2025)

⁴⁴² European Commission, (2000), Water Framework Directive (online). Available at: [Directive - 2000/60 - EN - Water Framework Directive - EUR-Lex](#) (Accessed 02/12/2025)

Legislation	Legislation details
(England) ⁴⁴³ Regulations 2015 ⁴⁴⁴	
The Bathing Water Regulations 2013 ⁴⁴⁵	Places responsibility on the Environment Agency and Natural Resources Wales to monitor designated bathing waters and inform local authorities regarding the results.
Flood Risk (England and Wales) Regulations 2009 ⁴⁴⁶	Places responsibility on the Environment Agency and LLFAs for preparing preliminary flood risk assessments, flood risk maps and flood risk management plans.
The Control of Pollution (Oil Storage) (England) Regulations 2001 ⁴⁴⁷	Sets out the requirements for the storage of oil in quantities over 200 litres, which is relevant to any development that may involve the storage of oil during construction or operation. It thereby feeds into the development of mitigation measures.
The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015 ⁴⁴⁸	Includes directions for classification of surface water and groundwater bodies for which new developments must consider as part of any WFD assessment.

Policy

19.2.2 National and local planning policy relating to the water environment and flood risk is presented in **Table 19-2**.

Table 19-2: Policy Relevant to Water Environment and Flood Risk

Policy	Policy details
National Planning Policy Framework 2024 (NPPF) ⁴⁴⁹	The NPPF dictates what development is suitable within each Flood Zone based upon vulnerability and risk and when a Flood Risk Assessment (FRA) is required.
Folkestone and Hythe Local Plan ⁴⁵⁰	Policy CC3 Sustainable Drainage Systems (SuDS). This local policy outlines requirements for development with regard to SuDS, including management of surface water close to its source, prioritising ecosystem services and multifunctional surface water management features, ensuring no discharge for rainfall up to 5 mm, with appropriate treatment for run-off.

⁴⁴³ The Environmental (England and Wales) Permitting Regulations 2016 (online). Available at: [The Environmental Permitting \(England and Wales\) Regulations 2016](#) (Accessed 02/12/2025)

⁴⁴⁴ Environmental Damage (Prevention and Remediation) Regulations 2015 (online). Available at: <https://www.legislation.gov.uk/uksi/2015/810/contents/made> (Accessed 02/12/2025)

⁴⁴⁵ The Bathing Water Regulations 2013 (online). Available at: <https://www.legislation.gov.uk/uksi/2013/1675/contents> (Accessed 02/12/2025)

⁴⁴⁶ The Flood Risk Regulations 2009 (online). Available at: <https://www.legislation.gov.uk/uksi/2009/3042/contents/made> (Accessed 02/12/2025)

⁴⁴⁷ The Control of Pollution (Oil Storage) (England) Regulations 2001 (online). Available at: <https://www.legislation.gov.uk/uksi/2001/2954/contents> (Accessed 02/12/2025)

⁴⁴⁸ The Water Framework Directive (WFD) (Standards and Classification) Directions (England and Wales) 2015 (online). Available at: https://www.legislation.gov.uk/uksi/2015/1623/pdfs/ukxi0d_20151623_en_auto.pdf (Accessed 02/12/2025)

⁴⁴⁹ Department for Levelling Up, Housing and Communities (DLUHC) (2024). The National Planning Policy Framework. (online), Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2> (Accessed 02/12/2025)

⁴⁵⁰ Folkestone & Hythe District Council (2018) Places and Policies Local Plan. Available at: <https://www.folkestone-hythe.gov.uk/downloads/download/128/local-plan> (Accessed 02/12/2025)

Policy**Policy details**

Developments should also align with Kent County Council's Drainage Policy and enhance nearby water bodies' hydromorphology and biodiversity. Additionally, hard surfaces should be permeable, and systems must be resilient to climate change impacts.

Guidance

- 19.2.3 Other strategic policy documents and guidance relevant to the assessment of effects on the water environment and flood risk is presented in **Table 19-3**.

Table 19-3: Guidance Relevant to the Water Environment and Flood Risk**Guidance****Guidance details**

NPPF: Planning practice guidance (PPG) – Flood Risk and Coastal Change (2022) ⁴⁵¹	Guidance on how to account for and consider the risk of flooding and coastal change as part of environmental assessment.
Flood Risk Assessments: Climate Change Allowances ⁴⁵²	Guidance for preparing FRAs with respect to making appropriate allowances for climate change in flood risk. Outlines climate change allowances for predicting peak river discharge changes, peak precipitation intensity, sea level rise, offshore wind speeds and extreme wave height.
Design Manual for Roads and Bridges (DMRB) (2020) Revision 1 - LA 113 – Road drainage and the water environment ⁴⁵³	Describes the requirements for the assessment and management of the impacts that road projects can have on the water environment, including flood risk. Whilst this guidance is primarily intended for the assessment of highway schemes, it has been used herein to inform the assessment of the Proposed Works as LA 113 represents the most robust and nationally accepted criteria for the determination of potential effects on the water environment.
South East River Basin Management Plan ⁴⁵⁴	Describes the challenges that threaten the water environment and how these challenges can be managed in the South East River Basin District. This guidance has been used to inform the water environment baseline.
Shepway District Council (Note Shepway DC changed its name to Folkestone and Hythe Council on 1 April 2018) Strategic Flood Risk Assessment (SFRA) ⁴⁵⁵	SFRAs identify where there are opportunities to reduce the impacts and causes of flooding and any land that may be required for flood risk management features. The Shepway District Council SFRA outlines the risk of flooding across Dungeness from all sources, now and in the future, considering the impact of climate change. This SFRA has been considered during the definition of baseline conditions.

⁴⁵¹ DLUCH (2022), Flood Risk and Coastal Change (online), Available at: [Flood risk and coastal change - GOV.UK](#) (Accessed 02/12/2025)

⁴⁵² Environment Agency (2022), Flood Risk Assessments: climate change allowances (online). Available at: [Flood risk assessments: climate change allowances - GOV.UK](#) (Accessed 02/12/2025)

⁴⁵³ Highways England, (2020), DMRB LA 113 – Road Drainage and the water environment, Standards for Highways, Available at: [02e8dce4-f853-4f27-8ea4-a83c57343c12](#) (Accessed 02/12/2025)

⁴⁵⁴ Environment Agency (2022) South East River Basin Management Plan (online). Available at: <https://www.gov.uk/guidance/south-east-river-basin-district-river-basin-management-plan-updated-2022> (Accessed 02/12/2025)

⁴⁵⁵ Folkestone and Hythe District Council (2015) SFRA Shepway District Council (online). Available at: <https://www.folkestone-hythe.gov.uk/downloads/download/102/strategic-flood-risk-assessments> (Accessed 02/12/2025)

19.3 Baseline Conditions

Data Gathering Methodology

19.3.1 The principal data sources used to inform current baseline conditions as presented in this section (beyond those identified in **Chapter 5: EIA Methodology**) comprise the following:

- British Geological Survey (BGS) Geoindex website⁴⁵⁶;
- BGS Geology Viewer; BGS Geology Viewer⁴⁵⁷;
- Department for Environment, Food and Rural Affairs (DEFRA) Hydrology Data Explorer website⁴⁵⁸;
- Environment Agency Public Registers website – Environmental Permitting Regulations – Discharges to water and groundwater⁴⁵⁹;
- Environment Agency Catchment Data Explorer website⁴⁶⁰;
- Environment Agency Water Quality Archive⁴⁶¹;
- Environment Agency Online Interactive Maps:
 - Flood map for planning (rivers and sea)⁴⁶²;
 - Risk of flooding from surface water;
 - Risk of flooding from reservoirs; and
 - Flood warning areas and risk⁴⁶³.
- Statutory Main River Map⁴⁶⁴;
- Internal Drainage Board Map⁴⁶⁵;
- Multi Agency Geographical Information for the Countryside (MAGIC) map website⁴⁶⁶;

⁴⁵⁶ British Geological Survey (n.d.) Geology of Britain viewer (online). Available at: <https://www.bgs.ac.uk/map-viewers/geology-of-britain-viewer/>. (Accessed 02/12/2025)

⁴⁵⁷ British Geological Survey (n.d.) Geology Viewer BETA (online). Available at: <https://geologyviewer.bgs.ac.uk/> (Accessed 02/12/2025)

⁴⁵⁸ Department for Environment Food & rural Affairs (n.d.) Hydrology Data Explorer (online). Available at: <https://environment.data.gov.uk/hydrology/explore> (Accessed 02/12/2025)

⁴⁵⁹ Environment Agency (n.d.) Public Registers Website- Environmental Permitting- Discharges to Water and Groundwater (online). Available at: <https://environment.data.gov.uk/public-register/view/search-water-discharge-consents> (Accessed 02/12/2025)

⁴⁶⁰ Environment Agency Catchment Data Explorer (n.d.) (online). Available at: <https://environment.data.gov.uk/catchment-planning> (Accessed 02/12/2025)

⁴⁶¹ Environment Agency Water Quality Archive (n.d.) (online). Available at: <https://environment.data.gov.uk/water-quality/view/landing> (Accessed 02/12/2025)

⁴⁶² Environment Agency (2019) Flood map for planning (online). Available at: <https://flood-map-forplanning.service.gov.uk> (Accessed 02/12/2025)

⁴⁶³ Environment Agency (2019) Check long term flood risk (online). Available at: <https://check-long-term-flood-risk.service.gov.uk/map> (Accessed 02/12/2025)

⁴⁶⁴ Environment Agency (n.d.) Statutory Main River Map (online). Available at: <https://www.arcgis.com/apps/webappviewer/index.html?id=17cd53dfc524433980cc333726a56386> (Accessed 02/12/2025)

⁴⁶⁵ Association of Drainage Boards (n.d.) Internal Drainage Boards Map (online). Available at: <https://www.ada.org.uk/idb-map/> (Accessed 02/12/2025)

⁴⁶⁶ Defra (n.d.) Magic Map Application (online). Available at: <https://magic.defra.gov.uk/magicmap.aspx>. (Accessed 02/12/2025)

- Meteorological Office website, UK Climate Averages⁴⁶⁷;
- National Soil Resources Institute Soilscales (1:250,000) website⁴⁶⁸;
- National Library of Scotland Historical Imagery⁴⁶⁹;
- OSM Landuse Landcover maps⁴⁷⁰; and
- United Kingdom Topographic Map⁴⁷¹.

19.3.2 A project specific walkover survey was undertaken on 13 November 2025 to inform the preparation of the water environment baseline as detailed herein (refer to Paragraph 19.3.7).

Study Area

19.3.3 At this stage the Study Area for the water environment and flood risk is defined as the Works Area plus a Zone of Influence (Zol) of 1km to account for the potential for pollution impacts to groundwater and surface water to propagate downstream. The Study Area includes the back-up cooling water system which extends approximately 1 km north of Dungeness B to the long pits and is due to be dismantled.

19.3.4 The water environment and flood risk Study Area is presented in **Figure 19-1**. As the assessment progresses, the Study Area will be kept under review, especially as coastal water quality impacts may propagate on tidal currents. The Study Area will be confirmed in the ES.

Potential Receptors

Water Quality

19.3.5 Regarding water quality, receptors with the potential to be affected by the Proposed Works are:

- Sussex East Water Body (WFD Coastal Water Body GB640704540002);
- Kent South Water Body (WFD Coastal Water Body GB640704540001);
- Long Pit (WFD Water Body GB30745064);
- Kent Romney Marsh Water Body (WFD Groundwater Body GB40702G503900);
- Secondary A aquifer within superficial deposits (Storm Beach Deposits);
- Secondary A aquifer within bedrock (Hastings Beds Subgroup); and
- Groundwater and surface water abstractions present within 1km of the Works Area (to be confirmed - consultation required with the

⁴⁶⁷ Meteorological Office (n.d.) UK Climate Averages (online). Available at:

<https://www.metoffice.gov.uk/research/climate/maps-and-data/uk-climate-averages> (Accessed 02/12/2025)

⁴⁶⁸ Cranfield University (n.d.) Land Information System Soilscales (1:250,000). (online). Available at:

<https://www.landis.org.uk/soilscales/> (Accessed 02/12/2025)

⁴⁶⁹ National Library of Scotland (n.d.) Historic Imagery (online). Available at: <https://maps.nls.uk/geo/explore/side-by-side/swipe/#zoom=14.0&lat=53.2312&lon=-3.0841&layers=6&right=ESRIWorld> (Accessed 02/12/2025)

⁴⁷⁰ OSM Land Use Land Cover (n.d.) Online maps. Available at: <https://osmlanduse.org/#5/4.30995/51.49072/0/> (Accessed 02/12/2025)

⁴⁷¹ United Kingdom topographic map (n.d.) (online). Available at: <https://en-gb.topographic-map.com/map-cgt/United-Kingdom/> (Accessed 02/12/2025)

Environment Agency and local authorities to confirm any changes to details of all licenses and Private Water Supplies).

Flood Risk

19.3.6 Receptors with the potential to be affected by flood risk due to the Proposed Works comprise:

- The Works Area itself: on-site infrastructure such as compounds, equipment and Works Area, and personnel working within the Proposed Works; and
- Off-site property, people and infrastructure within a 1km buffer of the Works Area (**Figure 19-5**) where there is potential for the Proposed Works to alter flooding mechanisms such as flood flow conveyance routes. These may include roads, businesses, housing and other land use types defined as essential infrastructure, highly vulnerable or more vulnerable by the NPPF, adjacent to Dungeness B.

Surveys

19.3.7 A site walkover survey was carried out on 13 November 2025 to identify and characterise any water features within the Works Area and make general observations of the setting of relevant existing infrastructure components such as intake/outfall structures.

Summary of Existing Baseline

Topography and Climate

19.3.8 This section sets out the topography and climate for the Study Area (as shown in **Figure 19-1**).

19.3.9 The topography across the Works Area and the wider Study Area is relatively flat and consistent throughout, being below 10 m above ordnance datum (AOD). The cooling water intake and outfalls structures are located below 0m AOD and remain submerged in the English Channel. The intake lies approximately 600m east of the outfalls. The Proposed Works are located wholly within Dungeness on the coastal fringe of the English Channel.

19.3.10 The Study Area is located within a sparse, generally natural coastal landscape which is dominated by Dungeness A and Dungeness B. Additionally, the Dungeness Bird Observatory is located within the Study Area, located approximately 300m north-east of the Works Area. The small Dungeness Village is located approximately 550m east of the Works Area.

19.3.11 Based on the Meteorological Office website⁴⁶⁷, the nearest rainfall station is 'Dungeness' (National Grid Reference: TR 08134 16817) which is located within the Works Area. Using data from this weather station for the period 1991 to 2020, it is estimated that the Study Area experiences approximately 714mm of rainfall per year, which is well below the UK average. This rainfall data is relevant to the whole Study Area and is illustrated in **Plate 19-1**.

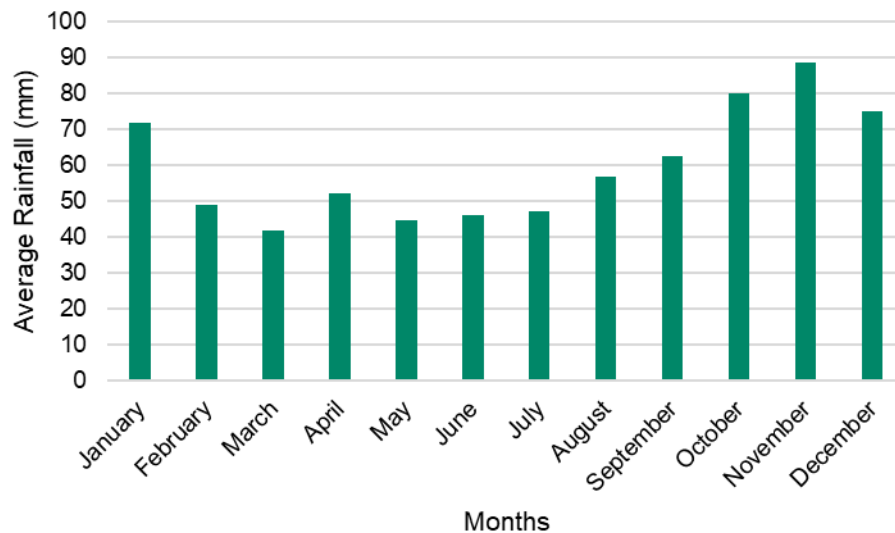


Plate 19-1: Average Rainfall Data for Dungeness (from 1991 to 2020)⁴⁶⁷

19.3.12 Incident rainfall data is also available from the 'Denge Beach Station' located in Dungeness (NGR: TR 06867 20108)⁴⁶⁷. **Plate 19-2** displays daily total rainfall data from 2020 to 2025.

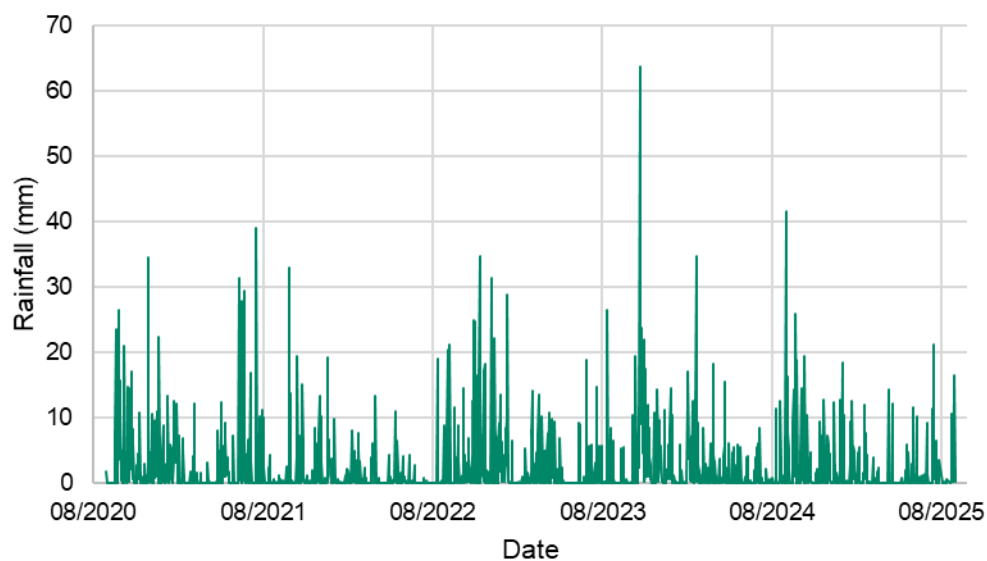


Plate 19-2: Daily Total Rainfall Time Series from 2020 to 2025 from Denge Beach⁴⁶⁷

Surface and Coastal Water Features

19.3.13 The following surface water catchments and coastal water features are located within the Study Area (see **Figure 19-1**), and are described in the sections below:

- Dengmarsh Sewer;
- Long Pit;
- Sussex East; and
- Kent South.

Dengemarsh Sewer

19.3.14 The Works Area is located within the South East River Basin District in the Rother Management Catchment and the Romney Marsh South Operation Catchment. Dungeness B lies outside of any WFD river water body catchment. However, the Study Area falls within the Dengemarsh Sewer Water Body catchment (ID: GB107040013450) and parts of the Works Area fall within it. The channel itself is located approximately 250m west of the Study Area, whilst there are no likely flow paths between the Works Area and watercourse.

19.3.15 **Table 19-4:** summarises the classifications for the various WFD elements for Dengemarsh Sewer. There are no river flow stations or river level stations along the Dengemarsh Sewer or in the Study Area of the Proposed Works⁴⁵⁸. Due to the lack of hydrological links to the site, the Dengemarsh Sewer will be scoped out of the water environment assessment.

Table 19-4: WFD Classifications for Dengemarsh Sewer⁴⁶⁰

Classification Item	2019	2022
Ecological	Moderate	Moderate
Biological quality elements	Good	Good
Invertebrates	Good	Good
Macrophytes and Phytobenthos Combined	High	High
Macrophytes Sub Element	High	High
Physico-chemical quality elements	Moderate	Moderate
Ammonia (Phys-Chem)	High	High
Dissolved oxygen	Moderate	Moderate
Phosphate	Moderate	Moderate
Temperature	High	High
pH	High	High
Hydromorphological Supporting Elements	Not high	Not high
Hydrological Regime	Does not support good	Does not support good
Supporting elements (Surface Water)	Moderate	Moderate
Mitigation Measures Assessment	Moderate or less	Moderate or less
Chemical		Does not require assessment
Priority hazardous substances		Does not require assessment
Benzo(a)pyrene	Good	
Dioxins and dioxin-like compounds	Good	
Heptachlor and cis-Heptachlor epoxide	Good	
Hexabromocyclododecane (HBCDD)	Good	
Hexachlorobenzene	Good	
Hexachlorobutadiene	Good	
Mercury and Its Compounds		
Perfluorooctane sulphonate (PFOS)	Good	
Polybrominated diphenyl ethers (PBDE)		
Priority substances	Good	Does not require assessment
Cypermethrin (Priority)	Good	

Classification Item	2019	2022
Fluoranthene	Good	
Other Pollutants	Does not require assessment	Does not require assessment

Long Pit

- 19.3.16 Long Pit (ID: GB30745064) is a WFD designated lake water body which lies wholly within the Study Area, at its north-eastern extent. It has a mean depth of approximately 1m and a surface area of approximately 0.062km². A summary of Long Pit's WFD classifications is given in **Table 19-5**. The extent of Long Pit is shown in **Figure 19-1**.
- 19.3.17 A back-up water cooling system for Dungeness B is located on the bank of Long Pit with an intake in the water body. This system was only ever routinely tested on an annual basis and was not used in an emergency. The pumps have been isolated and the abstraction permit surrendered. This infrastructure is due to be dismantled as part of the Proposed Works details of the method for this process are currently under development.
- 19.3.18 There are no natural flow paths between the Main Site and Long Pit, though they are hydrologically linked via the cooling water system infrastructure. Long Pit appears to have no inflow or outflow streams.
- 19.3.19 Recreational coarse fishing is organised by the Lydd Angling Club on the long pits outside of the closed cyprinid breeding period of 15th March - 15th June each year⁴⁷².

Table 19-5 WFD Classifications for Long Pit⁴⁶⁰

Classification Item	2019	2022
Ecological	Moderate	
Supporting elements (Surface Water)	Moderate	
Expert Judgement	Moderate	
Mitigation Measures Assessment	Good	
Chemical	Fail	Does not require assessment
Priority hazardous substances	Fail	Does not require assessment
Benzo(a)pyrene	Good	
Dioxins and dioxin-like compounds	Good	
Heptachlor and cis-Heptachlor epoxide	Good	
Hexabromocyclododecane (HBCDD)	Good	
Hexachlorobenzene	Good	
Hexachlorobutadiene	Good	
Mercury and Its Compounds	Fail	
Perfluorooctane sulphonate (PFOS)	Good	
Polybrominated diphenyl ethers (PBDE)	Fail	
Priority substances	Good	Does not require assessment
Fluoranthene	Good	

⁴⁷² Lydd Angling Club (n.d.) Waters. (online). Available at: <https://www.lyddanglingclub.com/waters.html> (accessed 02/12/2025)

Classification Item	2019	2022
Other Pollutants	Does not require assessment	Does not require assessment

Sussex East (coastal)

- 19.3.20 The southern section of the Study Area lies within the Sussex East (coastal) Water Body (ID: GB640704540002). It has a moderate ecological status, but also has a chemical status of fail due to the presence of mercury and its compounds as well as polybrominated diphenyl ethers (PBDE).
- 19.3.21 A summary of the Sussex East Water Body classification for the various WFD elements is presented in **Table 19-6**. The extent of the Sussex East water body is shown on **Figure 19-1**.

Table 19-6: WFD Classifications for Sussex East Water Body⁴⁶⁰

Classification Item	2019	2022
Ecological	Moderate	
Biological quality elements	Good	
Invertebrates	Good	
Imposex	Good	
Physico-chemical quality elements	High	
Dissolved oxygen	High	
Supporting elements (Surface Water)	Moderate	
Mitigation Measures Assessment	Moderate or less	
Specific pollutants	High	
Iron	High	
Chemical	Fail	Does not require assessment
Priority hazardous substances	Fail	Does not require assessment
Benzo(a)pyrene	Good	
Cadmium and Its Compounds	Good	
Dioxins and dioxin-like compounds	Good	
Heptachlor and cis-Heptachlor epoxide	Good	
Hexabromocyclododecane (HBCDD)	Good	
Hexachlorobenzene	Good	
Hexachlorobutadiene	Good	
Mercury and Its Compounds	Fail	
Perfluorooctane sulphonate (PFOS)	Good	
Polybrominated diphenyl ethers (PBDE)	Fail	
Priority substances	Good	Does not require assessment
Fluoranthene	Good	
Lead and Its Compounds	Good	
Other Pollutants	Does not require assessment	Does not require assessment

Kent South (coastal)

- 19.3.22 The south-eastern section of the Study Area lies within the Kent South (coastal) Water Body (ID: GB640704540001). The water body has a moderate ecological status, but has a chemical status of fail due to the presence of mercury and its compounds as well as PBDE. A summary of the

Kent South Water Body classification for the various WFD elements is presented in **Table 19-7**. The extent of the Kent South Water Body is shown on **Figure 19-1**.

Table 19-7: WFD Classifications for Kent South Water Body⁴⁶⁰

Classification Item	2019	2022
Ecological	Moderate	Moderate
Biological quality elements	Good	Good
Invertebrates	Good	Good
Imposex	Good	Good
Infaunal Quality Index	Good	Good
Macroalgae	Good	Good
Rocky Shore Macroalgae	Good	Good
Phytoplankton	Good	Good
Physico-chemical quality elements	Good	Good
Dissolved Inorganic Nitrogen	Good	Good
Dissolved oxygen	High	High
Supporting elements (Surface Water)	Moderate	Moderate
Mitigation Measures Assessment	Moderate or less	Moderate or less
Specific pollutants	High	High
Arsenic	High	High
Chromium (VI)	High	High
Copper	High	High
Iron	High	High
Un-ionised ammonia	High	High
Zinc	High	High
Chemical	Fail	Does not require assessment
Priority hazardous substances	Fail	Does not require assessment
Benzo(a)pyrene	Good	
Benzo(b)fluoranthene	Good	
Benzo(g-h-i)perylene	Good	
Benzo(k)fluoranthene	Good	
Cadmium and Its Compounds	Good	
Dioxins and dioxin-like compounds	Good	
Heptachlor and cis-Heptachlor epoxide	Good	
Hexabromocyclododecane (HBCDD)	Good	
Hexachlorobenzene	Good	
Hexachlorobutadiene	Good	
Mercury and Its Compounds	Fail	
Nonylphenol	Good	
Perfluorooctane sulphonate (PFOS)	Good	
Polybrominated diphenyl ethers (PBDE)	Fail	
Tributyltin Compounds	Good	
Priority substances	Good	Does not require assessment
Fluoranthene	Good	
Lead and Its Compounds	Good	
Nickel and Its Compounds	Good	

Classification Item	2019	2022
Octylphenol	Good	
Trichloromethane	Good	
Other Pollutants	Does not require assessment	Does not require assessment

Water Quality and Hydrology

19.3.23 This section sets out the baseline water quality monitoring data that is publicly available relating to the Study Area.

19.3.24 Baseline water quality is accessible via the Environment Agency's Water Quality Archive website⁴⁶¹. There are four water quality monitoring sites within the Study Area, whilst there is one monitoring station (Burrows Pit) situated 100m beyond the Study Area - these are detailed within **Table 19-8**. Further analysis of the monitoring data will be undertaken to support the impact assessment to be reported in the ES.

Table 19-8: Summary of Water Quality Monitoring Sites in the Vicinity of the Proposed Works

Water Body	Sampling Point	ID	Proximity to Study Area	Summary
Long Pit	Long Pit	SO-E0004661	North side of Long Pit, at National Grid Reference (NGR) NGR TR 07969 18877	76 samples taken between 2005 and 2025, 37 determinands in total, including physico-chemical, bacteria, organics and metals.
The English Channel (Sussex East Coastal Water Body ID: GB640704540002)	Dungeness B Cooling Water Outlet	SO-E0000106	South of Dungeness B, at NGR TR 08200 16500	273 samples taken between 2000 and 2025, 19 determinands in total. In the past 5 years only temperature, grease and chlorine has been surveyed.
Inflow to Dungeness B	Dungeness B Cooling Water Intake	SO-E0017012	South of Dungeness B, at NGR TR 08180 16740	266 samples taken between 2000 and 2025, only temperature taken.
The English Channel (Sussex East Coastal Water Body ID: GB640704540002)	Dungeness A Sewage Treatment Works	SO-E0017057	South of Dungeness B, at NGR TR 08302 16440	225 samples taken between 2000 and 2025, 16 determinands in total. In the past 5 years only biochemical oxygen demand

Water Body	Sampling Point	ID	Proximity to Study Area	Summary
				and suspended solids have been surveyed.
Burrows Pit	Burrows Pit	SO-E0004737	Approx. 100m north-west of the Study Area, at NGR TR 06900 18300	54 samples taken between 2007 and 2025, 19 determinands in total, including physico-chemical and organic compounds.

19.3.25 According to the Hydrology Data Explorer⁴⁵⁸ there are no flow gauges or river level gauges within 5km of the Proposed Works.

Ecology Potential and Protected Areas

19.3.26 Five internationally to nationally protected ecological sites lie within the Study Area⁴⁶⁶ - these are summarised in **Table 19-9**: which also indicates if the site is of hydrological importance or if there a flow path between Works Area and the Study Area. Potential effects on these sites are considered within **Chapter 17: Terrestrial Ecology**.

Table 19-9: Protected Areas within the Study Area

Site Name	Designation type (Site ID)	Approx. NGR and Location relative to Project	Main Habitat and/or Reason for Designation	Is the site of hydrological importance or is there a flow path between Site and Protected Site?
Dungeness	Special Area of Conservation (SAC)	TR 07586 17492, within the Study Area	Annual vegetation of drift lines, perennial vegetation of stony banks and great crested newt (GCN).	No - although the presence of GCN indicates some sensitivity to aquatic habitats, the SAC does not include waterbodies in its designation .
Dungeness, Romney Marsh and Rye Bay SSSI	Site of Special Scientific Interest (SSSI)	TR 07586 17492, within the Study Area	Fen, marsh and swamp – lowland, inshore sublittoral sediment, standing open water and canals, significant number of water dependent species.	Yes - Long Pit is associated with this SSSI.
Dungeness	National Nature Reserve (NNR)	TR 07586 17492, within the Study Area	GCN, natural shingle wetlands: saline lagoons, standing waters and basin fens.	No - although saline lagoons and standing waters are of concern, all waterbodies covered by this NNR lie outside of the Study Area, no clear flow paths to NNR.

Site Name	Designation type (Site ID)	Approx. NGR and Location relative to Project	Main Habitat and/or Reason for Designation	Is the site of hydrological importance or is there a flow path between Site and Protected Site?
Dungeness, Romney Marsh and Rye Bay	Ramsar	TR 07586 17492, within the Study Area	Natural shingle wetlands, water vole, <i>arvicola amphibius</i> , waterbird assemblage – wintering, wetland bryophyte assemblage, wetland invertebrate assemblage, wetland plant assemblage.	Yes - Long Pit is associated with this Ramsar site.
Dungeness, Romney Marsh and Rye Bay	Special Protection Area (SPA)	TR 07586 17492, within the Study Area	Waterbird assemblage	Yes - both Long Pit and a section of English Channel are associated with the SPA.

19.3.27 There are no chalk rivers or nutrient neutrality catchments within the Study Area⁴⁶⁶.

19.3.28 Presence of relevant aquatic/semi-aquatic (e.g. water vole, otter, newts) protected species are relevant to the overall importance of a surface water feature. The importance of surface water receptors will be confirmed in the ES. At this stage, it is understood from surveys undertaken to date that there are no Great Crested Newt or otter within Long Pit.

Sediment Quality

19.3.29 **Chapter 2: The Decommissioning and Dismantling Process** identifies the Marine Works - these include the installation of an alternative active effluent discharge line (AAEDL) and an alternative treated sewage discharge line (ATSDL). Both discharge lines would be installed within the existing outfall structure to minimise impact to the seabed and discharges would be remain consistent within the current conditions and limitations of the relevant environmental permits. Additionally, the existing intake structure would be capped within the terrestrial environment. The existing marine infrastructure would not be dismantled during the Proposed Works.

19.3.30 Currently it is not possible to identify any sediment quality studies completed in the Study Area. As such, there is a requirement to investigate sediment quality further for the impact assessment of coastal processes. Project specific marine surveys will include a walkover (intertidal) and subtidal grab samples to provide useful contextual information.

19.3.31 Long Pit water body also contains underwater infrastructure. At the time of writing this Scoping Report a decision has not been reached as to whether these structures are to be dismantled as part of the Proposed Works. Should works be required to the underwater infrastructure then sediment sampling would be required.

Water Resources

Drinking water

- 19.3.32 There are no Drinking Water Safeguard Zones, Drinking Water Protection Zones, designated bathing or shellfish waters, or Nitrate Vulnerable Zones within the Study Area⁴⁶⁶.
- 19.3.33 The Proposed Works lie in the Rother Abstraction Licensing Strategy area which states that in the Dungeness area, additional consumptive abstraction resource is available less than 30% of the time⁴⁷³.

Discharges and abstractions

- 19.3.34 The Environment Agency has consented discharges for water (permit: EPR/P1288/K/87) and radioactive substances (permit: EPR/SB3035DF) at Dungeness B in accordance with appropriate Environmental Permits. Abstraction for the operation of Dungeness B back up cooling water was covered by BZ/9499, this licence has since been surrendered. Further data and reviews of available abstraction licences and conventional discharge permits will be obtained and undertaken during the assessment stage, with details being presented in the ES.
- 19.3.35 No information has been obtained at this stage regarding third party licensed abstractions to/from the surface water environment. This data will be requested from the Environment Agency in support of the assessment. Furthermore, a request will be submitted to Folkestone and Hythe District Council for any information they hold on any local Private Water Supplies (i.e. not licenced by the Environment Agency). Any third-party licensed abstractions will be reported in the ES.
- 19.3.36 Information on consented discharges has been obtained from the Environment Agency⁴⁵⁹. Beyond the discharge for Dungeness B itself, there are no consented discharges within the Works Area, however, there are three additional consented discharges located within the wider Study Area as summarised in **Table 19-10**.

Table 19-10: Consented Discharges in the Study Area

Permit Number	Long Name	National Grid Reference	Start Date	Discharge Type	Receiving Water
EPRMB3696WD	Royal Navy Shore Signalling Station (RNSSS) Cottages and Royal Society Protection of Birds (RSPB) Centre	TR0847517217	19/08/19	Domestic property (multiple) (including farm houses)	Groundwater
P00231	Dungeness 'A' Site	TR0834516445	24/11/21	Sewage and trade combined	English Channel

⁴⁷³ Environment Agency (2013) Rother Abstraction Licensing Strategy.

Permit Number	Long Name	National Grid Reference	Start Date	Discharge Type	Receiving Water
					(Sussex East)
P10724	Denge Water Treatment Works	TR0834016440	01/06/12	Trade	English Channel (Sussex East)
D01505	Dungeness 'B' Power Station	TR0816016400	12/03/18	Trade	English Channel (Sussex East)

Groundwater

Superficial and Bedrock Geology

- 19.3.37 The bedrock and superficial geology of the Works Area is identified by the BGS online mapping⁴⁵⁶. The bedrock comprises Hastings Beds Subgroup (Lower Cretaceous Period) which comprises a sequence of sandstone, siltstone and mudstone. The Wealden Group underlies this, comprising of siltstone and mudstone.
- 19.3.38 As shown on **Figure 19-3**, the bedrock is overlain by superficial Storm Beach Deposits of gravel, silt and clay (Quaternary Period). These superficial deposits are primarily from supratidal origins, reflecting the historic influence of the coastal environment. Tidal Flat Deposits are mapped in the wider area, but not within the Works Area.

Hydrogeology

- 19.3.39 According to the MAGIC mapping website⁴⁶⁶ both the superficial Storm Beach Deposits and Hastings Beds Subgroup are designated as Secondary A aquifers. Tidal Flat Deposits are considered unproductive.
- 19.3.40 The following BGS borehole records have been used to gain understanding of the local geology of the Works Area:
- TR01NE35;
 - TR01NE34;
 - TR01NE33;
 - TR01NE36;
 - TR01NE37; and
 - TR01NE38.
- 19.3.41 These BGS borehole records illustrate that the superficial Storm Beach Deposits range up to 18.3m thickness, comprising of fine to coarse gravel, sands and thin layers of dark grey clay. Due to the lack of accessible borehole data for the region, no data is currently available regarding the depth and thickness of the bedrock Hastings Beds Subgroup and greater Wealden Group which encompasses the Works Area.
- 19.3.42 The BGS borehole records reviewed indicate that shallow perched groundwater is present within the Storm Beach Deposits at depths of between 2.3m and 3.5m below ground level (bgl). There are no BGS borehole records near the Works Area which intersect bedrock groundwater.

19.3.43 Review of MAGIC maps online⁴⁶⁶ indicates that the northern section of the Works Area is located within a Source Protection Zone (SPZ) for the protection of potable water supply abstraction, associated with four abstraction boreholes located approximately 115m north of the Works Area. This small section of the Works Area is within the SPZ 3 (Total Catchment) and SPZ 2 (Outer Protection Zone). It is likely that the boreholes abstract from the Secondary A Wealden and Hastings Beds aquifer. There may be private groundwater abstractions present within the Study Area, but this is subject to further review and confirmation.

19.3.44 The groundwater vulnerability at the Works Area is classified as medium to high.

WFD Groundwater Bodies

19.3.45 The groundwater body at the Works Area is the Kent Romney Marsh Water Body (WFD ID: GB40702G503900)⁴⁷⁴. In 2019, the Environment Agency classified the water body as poor due to the chemical status element of the groundwater. For further details refer to **Appendix 19A - WFD Screening and Scoping Assessment**.

Surface Water Drainage

19.3.46 The existing drainage system is expected to be left in-situ and maintained as necessary throughout the Proposed Works with adaption where necessary.

Flood Risk

19.3.47 This section is supported by the Following Figures:

- **Figure 19-4: Environment Agency: Flood Zones and Spatial Flood Defences;**
- **Figure 19-5-1: Rivers and Sea Defended and Undefended Flood Extents: River 1 in 100, Sea 1 in 200;**
- **Figure 19-5-2: Rivers and Sea Defended and Undefended Flood Extents: River 1 in 1000, Sea 1 in 1000;**
- **Figure 19-6-1: Risk of Flooding from Surface Water;** and
- **Figure 19-6-2: Risk of Flooding from Surface Water including Climate Change (2040 to 2060).**

Tidal/Fluvial

Sources

19.3.48 The main sources of flood risk to the Works Area is the Dengemarsh Sewer which is located approximately 250m west of the Study Area and the English Channel which is partly within the Works Area (Area D) and borders the shoreline to the immediate south of the Study Area (Area A).

⁴⁷⁴ Environment Agency (2025), Kent Romney Marsh Water Body Catchment Data Explorer. (online). Available at: <https://environment.data.gov.uk/catchment-planning/WaterBody/GB40702G503900> (Accessed 02/12/2025)

19.3.49 The predicted flood risk from fluvial and tidal sources are shown on the Environment Agency's Flood Map for Planning⁴⁶² which outlines three main zones of risk as follows:

- Flood Zone 1 'low probability of flooding': This zone comprises land assessed as having a less than 0.1% (1 in 1,000) annual probability of river or sea flooding;
- Flood Zone 2 'medium probability of flooding': This zone comprises land assessed as having between a 0.1% and 1% (1 in 100 to 1 in 1,000) annual probability of river flooding, or between a 0.5% and 0.1% (1 in 200 to 1 in 1,000) annual probability sea flooding; and
- Flood Zone 3a 'high probability of flooding': This zone comprises land assessed as having a 1% (1 in 100) or greater annual probability of river flooding, or a 0.5% (1 in 200) or greater annual probability of flooding from the sea.

19.3.50 There is also Flood Zone 3b 'functional floodplain' which is not distinguished separately from Flood Zone 3a on the Flood Map for Planning⁴⁶², but is a sub-part of Flood Zone 3 - this zone comprises of land having greater than 3.3% annual probability of flooding, with existing flood risk management features and structures operating effectively, or land that is designed to flood (such as a flood attenuation scheme), even if it would only flood in more extreme events (such as 0.1% annual probability of flooding).

19.3.51 From a review of the Environment Agency's Flood Map for Planning⁴⁶², the majority of the Works Area is located within Flood Zone 1, see **Figure 19-4**. Southern regions of the Works Area along the shoreline are located within Flood Zone 3. The Kent Minerals and Waste Local Plan⁴⁷⁵ states that the coastal area around Dungeness is shown to be within Flood Zone 3b, therefore southern parts of the Works Area are likely located within the functional floodplain.

19.3.52 The Environment Agency's Flood Map for Planning does not specify whether the flood risks arise from tidal or fluvial sources and instead shows a combined risk from both sources. However, as Area A of the Works Area is adjacent to the shoreline, Area D of the Works Area is within the English Channel, and considering that the closest Main River (Dengemarsh Sewer) is approximately 250m west of the Study Area and over 2km west of the Works Area, the main source of flood risk is considered likely to be due to tidal sources.

19.3.53 As the Works Area is located partially within Flood Zone 3, an Exception Test is required demonstrating that the Works Area would be safe for its lifetime, considering the effects of climate change.

Flood Defences

19.3.54 Flood defence infrastructure is present at Dungeness B. Key features include the following:

⁴⁷⁵ Kent County Council (2025). Kent Minerals and Waste Local Plan 2024-39. (online). Available at: https://www.kent.gov.uk/_data/assets/pdf_file/0016/200158/Kent-minerals-and-waste-local-plan-2024-to-2039.pdf (Accessed 02/12/2025)

- An extensive shingle berm exists on the beach to the south of the site and south of Dungeness A Power Station. The berm is maintained by EDF using imported shingle. The berm must be maintained annually using shingle to replace material carried from the berm to the east by long shore drift. The purpose of the berm is to limit sea water overtopping and limit wave action on the flood wall (described below). Generally shingle used to maintain the berm is sourced by recycling shingle from the beach to the east of the power stations from an existing borrow pit. The existence of the berm and recycling operations have dated back to the construction of Dungeness A Power Station in the 1960s.
- Rock armour has been installed on the northern side of the shingle berm (between the power station and the berm). Up to 10,000 tonnes of rock armour was installed in 2014 to enhance the resilience of the existing shingle berm.
- Flood wall and foundations: The site's perimeter flood wall is designed to withstand a 1 in 10,000 year flooding event and has a lifespan of 100 years. It is designed to withstand overtopping of the shingle berm/rock armour. The wall foundations are excavated to 600mm deep in shingle areas. Reinforced concrete base dimensions vary (typically 2m wide x 0.6m deep), with adjustments for ground dips and hardstanding areas. The wall is at least 7.2m Ordnance Datum Newlyn (ODN) around the operational site and is 7.7m ODN on the south side of the site. To allow access to the site industry standard personnel and vehicle flood gates are available in the wall. An impermeable ground-level apron has been installed along the toe of the flood wall. This feature is required due to the highly permeable underlying soils and is designed to prevent floodwater from bypassing the wall, reduce uplift pressures, and limit subsurface flow beneath the wall during flood events.
- Access and services: Industry-standard flood gates allow site access, requiring closure before floodwater reaches the site. Underground services crossing the barrier have been sealed to prevent water ingress to site.

19.3.55 The presence of the defences, residual life and crest height will need to be confirmed as part of the FRA scope as this will influence the residual risk and overtopping risk from tidal flooding.

19.3.56 According to the Environment Agency's AIMS Spatial Flood Defences dataset⁴⁷⁶, there are flood defences all around the coast of Dungeness and along part of the Dengemarsh Sewer. These existing flood defences are located within the area extending from Jury's Gap to Dungeness B and require 'urgent improvement'. A historic clay embankment provides some protection from the sea, however, progressive erosion of the shingle beach in front of the embankment has exposed the embankment to wave action increasing the risk of a breach in the coastal flood defences.

⁴⁷⁶ AIMS Spatial Flood Defences (inc. standardised attributes) (online) Available at <https://environment.data.gov.uk/dataset/8e5be50f-d465-11e4-ba9a-f0def148f590> (Accessed 03/12/2025)

19.3.57 While the Environment Agency's Flood Map for Planning⁴⁶² does not account for flood defences, there is an available dataset showing defended flood risk extents for rivers and sea in the present day⁴⁷⁷. Interestingly, this outline suggests an increased flood risk within the Works Area. This is potentially due to the fact that coastal defences to the south-west of the Works Area have a 25-year standard of protection where in some cases, seawater may overtop the defences and then be unable to drain back to the sea, increasing flood risk beyond the flood defence extents. However, this dataset does not account for the shingle berm, rock armour or perimeter flood defence wall and flood apron at the Study Area and therefore is representative of the flooding that could occur in the unlikely event of a flood defence breach.

Surface Water

19.3.58 Surface water flooding, also known as pluvial flooding, occurs when heavy rainfall overwhelms drainage systems or the rate of infiltration, causing water to accumulate on the surface and flow over land.

19.3.59 From a review of the Environment Agency's Long Term Flood Risk Map⁴⁶³, the Works Area is located in an area at risk of surface water flooding, see **Figure 19-4**. Across the Works Area there are isolated areas of low, medium and high chance of surface water flooding associated with low-lying spots in topography. High chance means a chance of flooding of greater than 3.3% each year. Medium chance means a chance of flooding of between 1% and 3.3% each year, whilst a low chance means a chance of flooding of between 0.1% and 1% each year.

Groundwater

19.3.60 Groundwater flooding occurs when water levels below the ground rise to the surface, often after prolonged rainfall or seasonal changes. This can happen in areas where the ground contains permeable rock or porous substrate that allows water to soak in and travel through, like chalk or sand and gravel.

19.3.61 The Works Area is situated on bedrock comprising of sandstone, siltstone and mudstone. The superficial deposits comprise of gravel, silt and clay. This highly permeable geology indicates medium risk of groundwater flooding.

19.3.62 BGS Borehole Viewer⁴⁵⁷ provides borehole records approximately 300m north of the Works Area indicate that groundwater was struck at a minimum of 1.9m bgl. In addition, the SFRA⁴⁵⁵ states there are no records of historical groundwater flooding.

Artificial Sources

19.3.63 From a review of the Environment Agency's Long Term Flood Risk Map⁴⁶³, the Works Area is not located in an area expected to flood from reservoirs when river levels are normal, or when there is also flooding from rivers. The closest area of risk is located over 10km north-west of the Works Area.

⁴⁷⁷ Environment Agency Rivers and Sea Defended and Undefended Flood Risk Extents- present day (2025). (online) Available at: <https://environment.data.gov.uk/defra/bb486190-bb9c-4eb0-a4b2-c9bd63ca86ec/details> (Accessed 02/12/2025)

Sewers

- 19.3.64 The SFRA⁴⁵⁵ states that there have been no previous incidents of flooding from sewers within 1km of Dungeness Nuclear Waste Treatment and Storage at Dungeness (and hence none in the Works Area).

Summary of Future Baseline

Surface Water

- 19.3.65 Three WFD surface and coastal water body catchments have been identified as potential receptors during the Proposed Works. Dengemarsh Sewer Water Body has an overall objective of maintaining Moderate Ecological Potential, while the Sussex East and Kent South coastal water bodies have an objective of achieving Good Status by 2027. Additionally, Long Pit water body, has the objective of achieving Good Ecological and Supporting Elements (Surface Water) Status by 2027.
- 19.3.66 It is likely that through the action of new legislative requirements and ever more stringent planning policy and regulation, that the health of the water environment will improve post-2027. There are, however, significant challenges such as adapting to a changing climate and pressures of population growth that could have a retarding impact. It is also difficult to forecast these changes with any certainty, especially over the next century.
- 19.3.67 Nonetheless, the methodology for determining receptor importance presented in **Section 19.5** is largely based on the presence or absence of various attributes (e.g. Drinking Water Protected Area, designated nature conservation site or WFD designation) and flow (i.e. the size of the watercourse). The application of these criteria is therefore not sensitive to more subtle changes or improvements in water quality as may be experienced over time. Thus, no significant changes to current baseline conditions are predicted for the future baseline (for Phases 2 and 3) in the absence of the Proposed Works, as the principal reasons for differences in water body importance are unlikely to change.

Groundwater

- 19.3.68 The Kent Romney Marsh WFD has an overall objective of achieving Good Status by 2040. The importance level of the groundwater feature is based on SPZs, abstractions, and the Principal or other status of the aquifer. Thus, an increase in WFD designation to Good would not change the importance attributed to the groundwater feature at this stage.
- 19.3.69 No significant changes to current baseline groundwater conditions are predicted for the future baseline for the same reasons as outlined above for surface water.

Flood Risk

- 19.3.70 Climate change information related to future changes in flood risk is based on UK Climate Change Projections 2018 (UKCP18)⁴⁷⁸ as summarised in the latest Environment Agency guidance for Flood Risk Assessment: climate change allowances. This provides allowances for increases in rainfall

⁴⁷⁸ Met Office. UK Climate Projection 2018 (online). Available at: <https://www.metoffice.gov.uk/research/approach/collaboration/ukcp> (Accessed 02/12/2025)

intensity and sea level rise which are most relevant to the flood sources scoped into the impact assessment.

Fluvial/Tidal

- 19.3.71 The Environment Agency's Flood Map for Planning⁴⁶² includes the Flood Zones plus climate change data which shows how the combined extent of Flood Zones 2 and 3 could increase with climate change over the next century, ignoring the benefits of any existing flood defences. The Study Area falls within an area marked on the Flood Map for Planning as 'Climate Change Data Unavailable'. However, adjacent areas surrounding the area are shown to experience an increase in flood extent under the 2070–2125 climate change scenario. It is, therefore, reasonable to assume that the Works Area may also be subject to an increased level of flood risk in the future, particularly from tidal sources.

Surface Water

- 19.3.72 The effect of climate change is likely to result in peak rainfall intensity increasing, therefore increasing surface water flood risk. The Environment Agency's Long Term Flood Risk Map⁴⁶³ includes a yearly chance of surface water flooding between 2040 and 2060, considering climate change. The map shows that flooding extents increase across the Works Area when taking into account climate change, however, within the increased extent of surface water flooding, flood depths generally do not exceed 0.2m. Flooding on South Turbine Hall Road have a 'medium' chance (between 1% and 3.3% chance each year) of flooding up to 0.9m, however, this extent is localised to the road and likely due to an isolated area of lower elevation.

19.4 Consultation

- 19.4.1 Key water environment data sets will be requested from relevant statutory bodies, including flood models from the Environment Agency.
- 19.4.2 Additionally, the following statutory bodies will be consulted as part of the assessment process and during production of the FRA and WFD assessment:
- Kent County Council (LLFA);
 - Folkestone and Hythe District Council;
 - Environment Agency; and
 - Affinity Water.

19.5 Scope for Mitigation

- 19.5.1 Where necessary, embedded mitigation, standard mitigation and monitoring measures will be proposed to reduce water environment impacts at sensitive locations within and around the Works Area.
- 19.5.2 Embedded mitigation measures could include the following:
- Avoiding direct physical impacts to water features and implementing buffer strips between any works and receptors.
 - Implementing appropriate surface water, process and foul drainage systems, including management and maintenance in perpetuity for the life-time of the Proposed Works.
- 19.5.3 Regular surface water and groundwater quality monitoring would be undertaken be that by visual inspection or testing using hand-held probes or by a laboratory.

- 19.5.4 Compliance with good practice construction approaches and relevant guidance during the Proposed Works are anticipated to be incorporated into an Environmental Management Plan. These measures include:
- Drainage and sediment management to control the quantity and quality of runoff from Works Area or mobilisation of sediment during marine works; and
 - Appropriate siting of materials and temporary compounds to avoid them being stored in areas known to experience surface water flooding, as to avoid altering flow paths and storage potential.
- 19.5.5 Long term surface water runoff from the Works Area may also need to be controlled via Sustainable Drainage Systems (SuDS) to increase the amount of storage of surface water which can be controlled on site prior to discharge to sewers. This approach could prevent an increase in surface water flood risk to the Works Area and to off-site receptors due to climate change.
- 19.5.6 Flood defence overtopping and breach risk may need to be managed through siting and design of the new buildings and infrastructure to prevent creation of new flood pathways or diversion of flood flows.

19.6 Potential Effects

Potential Significant Effects

- 19.6.1 The Proposed Works are separated into three distinct phases. The assessment will focus on the Initial Decommissioning Works, but will consider the remaining phases at a high level, noting the level of available information.
- 19.6.2 For water quality, it is currently anticipated that the effects identified for the Initial Decommissioning Works would be representative of the Care and Maintenance and Final Site Clearance phase due to the nature of the works required. These phases will be discussed qualitatively in the ES, applying professional judgement.
- 19.6.3 Impacts associated with the water environment are also considered in other assessments as outlined below. The identified effects will not be considered as part of the water environment and FRA:
- **Chapter 8: Coastal Processes** – contains information on the proposed assessments of marine sediment and morphology of the beach and seabed.
 - **Chapter 16: Soils and Geology** – contains information on the proposed assessment of impacts to controlled waters from contaminated land issues.
 - **Chapter 20: Other Environmental Topics** (Radioactive Wastes and Discharges) - contains information on the existing regulatory controls related to radioactive waste and discharges to evidence why further assessment as part of the EIA is not required.

Initial Decommissioning Works

19.6.4 The relevant water environment impact pathways during the Initial Decommissioning Works include the following:

- Activities associated with the dismantling of buildings, plant and the back-up cooling water infrastructure at Long Pit;
- Activities associated with the construction of the waste management facilities;
- Changes to layout of the Works Area associated with the dismantling and construction activities noted above;
- Operation of the waste management facilities;
- Marine works to install the Alternative Active Effluent Discharge Line (AAEDL), Alternative Treated Sewage Discharge Line (ATSDL), new surface water discharge arrangement and cap existing infrastructure; and
- Discharges through the AAEDL, ATDSL and new surface water discharge arrangement.

19.6.5 As a result of these pathways, the following impacts on water quality may occur include:

- Contamination from suspended solids or other chemicals contaminants that may find their way into runoff from the Works Area, infiltrate to the ground and reach groundwater or be accidentally spilt directly into surface water bodies when there are works within or adjacent to them;
- As described in **Section 19.3**, the Proposed Works are due to leave marine infrastructure in place and to cap the existing intake in the English Channel. As the intake is capped, the cooling water system would be switched off. This would reduce the dilution of trade effluents prior to discharge. However, an ABPmer report⁴⁷⁹ concludes that due to dispersion characteristics, infrequent discharges, small effluent volumes and short discharge durations, the environmental risks to the marine environment are likely to be negligible;
- Possible impacts to the marine environment from the installation of new discharge lines. The AAEDL and ATSDL would be installed within the existing outfall structures. Discharges through these lines during the Proposed Works would be within limits of the existing environmental permits;
- Morphology of surface water bodies could be impacted by works adjacent to them, particularly of Long Pit due to the dismantling of the cooling water system along the bank of the lake. Aside from the Long Pit, there is no need for any fluvial geomorphological assessments due to a lack of fluvial environments hydrologically linked to the Works Area; and
- The risk of pollution from chemical spillages or fire on the Works Area.

⁴⁷⁹ ABPmer (n.d.) Environmental compliance assessments for Dungeness B. (online). Available at: <https://www.abpmer.co.uk/experience/environmental-compliance-assessments-for-dungeness-b/> (Accessed 02/12/2025)

19.6.6 The following impacts associated with flood risk may occur:

- An increased risk of surface water flooding due to the alteration of the Works Area layout and topography leading to waters not being captured by the existing drainage network and changes in runoff leaving the Works Area; and
- Overtopping or breach of existing flood defences leading to increased coastal flood risk to the Works Area or the Proposed Works altering flood flow conveyance routes for third party property or land in the event of overtopping or breach.

19.6.7 In addition, during initial dismantling and decommissioning works, other wastewater in redundant pipes, tanks and pools may need to be disposed of. This waste water will be considered by **Chapter 16: Soils and Geology** and **Chapter 20: Other Environmental Topics (Radiological Waste and Discharges)** and not in the water environment assessment.

Care and Maintenance

19.6.8 The relevant water environment impact pathways during the Care and Maintenance Phase include the following:

- Construction of the Safestore structure;
- Maintenance works of retained assets within the Works Area;
- Discharge associated with the AAEDL and ATDSL; and
- An increase in surface water flood risk, groundwater flood risk and coastal flood risk (via overtopping and breach risk) associated with climate change.

19.6.9 As a result of these pathways, the following impacts on water quality may occur and which will be assessed qualitatively in the ES, including:

- Contamination from suspended solids or other chemical contaminants that may find their way into runoff from the Works Area, infiltrate to the ground and reach groundwater or be accidentally spilt directly into surface water bodies when there are works within or adjacent to them; and
- The risk of pollution from chemical spillages or fire on the Works Area.

19.6.10 Discharges associated with the AAEDL and ATSDL would be within limits of the existing environmental permits.

19.6.11 The potential flood risk impacts associated with the Care and Maintenance Phase would be as described for the Initial Decommissioning Works.

Final Site Clearance

19.6.12 The relevant water environment impact pathways during the Final Site Clearance comprise:

- Preparations for and reactor dismantling;
- Changes to the layout of the Works Area associated with the preparation for and dismantling activities noted above;

- Discharge associated with the AAEDL and ATDSL;
- An increase in surface water flood risk, groundwater flood risk and coastal flood risk (via overtopping and breach risk) associated with climate change; and
- The presence of the reinstated Works Area on completion of the Proposed Works.

19.6.13 Potential significant effects upon the water environment due to presence of personnel and active dismantling and construction works would be similar to those during Initial Decommissioning Works.

19.6.14 Potential flood risk impacts during the Final Site Clearance phase would be similar to Initial Decommissioning Works and Care and Maintenance phase. However, the resultant layout changes from completion of the Proposed Works (such as dismantling the reactor and Safestore structure) may increase flood risk to the Works Area and off-site receptors, infrastructure and property through alteration of surface water flow pathways and due to changes in flood flow conveyance as a result of coastal defence overtopping or defence breach.

19.7 Assessment Methodology

Approach and Assessment Criteria

- 19.7.1 The proposed generic project-wide approach to the impact assessment methodology is set out in **Chapter 5: EIA Methodology**. This section describes the methodology proposed for the assessment of effects on the water environment and flood risk as a result of the Proposed Works, including the criteria for the determination of the importance of the receptor and the magnitude of change from baseline conditions.
- 19.7.2 Potential impacts due to the Proposed Works on the water environment and flood risk will be assessed by:
- Considering the existing (baseline) status of the water environment within the Works Area and the 1km Study Area with respect to flood risk, surface water features and groundwater, following the source-pathway-receptor approach (see section below);
 - Identifying potential impacts of the Proposed Works on the water environment and flood risk during the proposed phases, as well as potential cumulative effects;
 - Proposing suitable mitigation measures to be incorporated into the Proposed Works to offset potential adverse impacts (i.e. embedded mitigation and good practice construction approaches); and
 - Reviewing any residual impacts and presenting additional mitigation measures to limit impacts, where applicable.

Source-Pathway-Receptor Approach

- 19.7.3 The water environment and flood risk impact assessment will be based on a source-pathway-receptor model. For an impact to exist, the following is required:

- An impact source (such as the release of polluting chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or the loss or damage to all or part of a water body);
- A receptor that is sensitive to that impact (e.g. water features and the services they support); and
- A pathway by which the two are linked.

19.7.4 The first stage in applying the source-pathway-receptor model is to identify the causes or 'sources' of potential impact from a development. The impact sources will be identified through a review of the details of the Proposed Works, including the size and nature, potential works methodologies and timescales. This will build on the discussion presented in **Section 19.6**.

19.7.5 The next step is to undertake a review of the potential receptors, that is, the water environment receptors that have the potential to be affected by the Proposed Works. Water features including their attributes will be identified through desk study and site surveys, building on the baseline information provided in **Section 19.3**.

19.7.6 The last stage of the model is, therefore, to determine if there is a viable exposure pathway or a 'mechanism' linking the impact source to the receptor. This will be undertaken in the context of local conditions relative to the water receptors within the Study Area, such as topography, geology, climatic conditions and the nature of the impact (e.g. the mobility of a liquid pollutant or the proximity to works that may physically impact a water body).

19.7.7 To support the assessment of effects on the water environment, some sub-topic specific assessments will be undertaken. These are described in more detail in the following sections.

Sub-topic Specific Assessments

Water Quality and Resource Assessment

19.7.8 Additional baseline data will be gathered to augment that already reported in **Section 19.3**. Relevant water resource data will be requested from the Environment Agency to supplement the publicly available online data sources described in **Section 19.3**. Further site surveys may be required as details of the Proposed Works develop and through consultation with stakeholders.

19.7.9 At this stage, water quality data for water features that may be affected will be drawn from existing Environment Agency monitoring, as well as any permit compliance monitoring for existing operations at the Site. The importance of water features will be determined from a holistic review of water body features and does not rely on water quality due to the principle that no controlled water may be polluted. In general, water quality impacts will be based on a qualitative risk assessment basis that does not require input of raw background water quality data. However, it is recognised that for some impact pathways (i.e. changed or new discharges of treated process water, effluent or foul wastewater) may require a quantitative assessment, and this may need to be informed by additional site-specific data collection. This is considered further below.

- 19.7.10 A qualitative assessment of potential effects on surface water quality from temporary, construction works associated with Phases 1 and 3 of the Proposed Works will be undertaken. This will consider the risk to surface water features resulting from the dismantling and decommissioning works using the source-pathway-receptor approach. Where there is a risk of pollution, mitigation measures will be described with reference to best practice guidance (e.g. Guidance on Pollution Prevention Notes and Construction Industry Research and Information Association (CIRIA) guidance⁴⁸⁰.
- 19.7.11 The appropriateness of the surface water drainage measures from roofs, roads and surfaces where chemical contamination is low, in terms of providing adequate treatment of diffuse pollutants, will be assessed with reference to the Simple Index Assessment method described in the SuDS Manual⁴⁸¹. The Simple Index Approach follows three steps:
- **Step 1** – Determine suitable pollution hazard indices for the land use(s);
 - **Step 2** – Select SuDS with a total pollution mitigation index that equals or exceeds the pollution hazard index (for three key types of pollutants: total suspended solids, heavy metals and hydrocarbons). Only 50% efficiency should be applied to second, third etc. treatment train components; and
 - **Step 3** – If the discharge is to a water body protected for drinking water, consider a more precautionary approach.
- 19.7.12 The SuDS Manual⁴⁸¹ only provides a limited number of land use types and so those selected will be the most suitable for the components of the Proposed Works, based on professional judgement. Where more than one pollution hazard category applies to a component of the Proposed Works, the worst pollution hazard will be selected.
- 19.7.13 For changes to existing or new treated process water, effluent or foul wastewater discharges, it may be necessary to undertake more detailed, quantitative assessments of potential impacts on the water environment. At this stage there is limited information on what these discharges may be, and how they are similar or different to existing arrangements. Certainly, the need for the abstraction and discharge of large volumes of water for cooling may no longer be required following cessation of power generation at the Site. Initially, existing and proposed discharges will be reviewed and compared in terms of volumes, rates and characterisation. The Environment Agency (and potentially other stakeholders) will then be consulted to determine what, if any, more detailed analysis is required, and if modelling is needed, what the scope of that would be including any additional monitoring.

⁴⁸⁰ CIRIA (2025) CIRIA Guidance. (online). Available at: https://www.ciria.org/ci/Civil_infrastructure/CIRIA_guidance.aspx?hkey=fb8cb8fe-61e1-4aca-9a39-27b451e8b4af (Accessed 02/12/2025)

⁴⁸¹ CIRIA (2015) The SuDS Manual (C753F). (online). Available at: <https://www.ciria.org/ItemDetail?iProductCode=C753F&Category=FREEPUBS> (Accessed 02/12/2025)

Hydromorphology

- 19.7.14 Due to the potential impacts upon the Long Pit regarding the dismantling of the back-up cooling water system, a hydromorphology assessment will be undertaken. Currently, the detailed methods for dismantling of this structure are in development, and thus potential impacts on the lake bed remain scoped in.
- 19.7.15 There is no need for any fluvial geomorphological assessments due to a lack of fluvial environments hydrologically linked to the Works Area. Additionally, as no marine infrastructure is planned to be dismantled and all coastal processes will be assessed in **Chapter 8: Coastal Processes**, the water environment assessment will not consider these aspects.

Water Framework Directive Assessment

- 19.7.16 Due to the potential for impacts upon WFD designated water bodies, initially a WFD Screening and Scoping Assessment has been undertaken in keeping with Planning Inspectorate Advice on the Water Framework Directive⁴⁴¹ and also taking into account the Environment Agency Clearing the Waters for All guidance⁴⁸².
- 19.7.17 This initial assessment has been undertaken and is included as **Appendix 19A: Water Framework Directive (WFD) Screening and Scoping Assessment**. This concludes that the Sussex East Coastal Water Body and the Long Pit Water Body are to be scoped in for assessment, whilst all other water bodies in the vicinity of the Proposed Works will be scoped out of the assessment. This is due to the modification of existing outfalls in the Sussex East Water Body and the dismantling of the cooling water system on the bank of Long Pit.
- 19.7.18 Further impact assessment and appraisal of compliance with the objectives of relevant water bodies under the WFD as implemented by the Water Environment (WFD) Regulations 2017⁴⁴¹ will be undertaken at subsequent stages of assessment and reported in the ES when further information on the Proposed Works are available. This will include an examination of the potential impacts of the Proposed Works on relevant WFD hydromorphological, biological and physio-chemical parameters of potentially affected water bodies, including consideration of adjacent water bodies and Protected Areas as defined in the Regulations. It will be informed by surveys and assessments to be undertaken as part of the assessment of surface and groundwater quality impacts, but also those that are relevant and described in **Chapter 8: Coastal Processes**, **Chapter 13: Marine Ecology** and **Chapter 16: Soils and Geology**, noting that these may not all be defined at this stage.

Surface Water Drainage Strategy

- 19.7.19 The existing surface water drainage network carries run-off from roadways, buildings, car parks and miscellaneous drainage airings from plant sources. The network consists of concrete drainpipes encircling the north, east and west ends of Dungeness B and coverage at the point of outfall to the south.

⁴⁸² Environment Agency (2023) Water Framework Directive assessment: estuarine and coastal waters. (online) Available at: <https://www.gov.uk/guidance/water-framework-directive-assessment-estuarine-and-coastal-waters> (Accessed 02/12/2025)

The surface water passes through the Surface Water Pumphouse where it is discharged via the outfall.

- 19.7.20 The existing foul drainage network carries collected drainage from various sources at Dungeness B to the Dungeness A Sewage Treatment Plan.
- 19.7.21 An Oil Separator is located adjacent to the Surface Water Pumphouse manages run off from all open transformer pens and accepts flows from within the main station buildings, the Oil Separator connections to the Surface Water Pumphouse.
- 19.7.22 It is anticipated that the existing surface water discharge arrangements will be retained throughout the Initial Decommissioning Works and operated under the current water discharge activity permit (EPR/P1288/K/87). Following the completion of the Initial Decommissioning Works a proportionate assessment of future requirements will be undertaken for subsequent phases. If modifications or a new discharge arrangement are needed, these would be regulated under the Environmental Permitting Regulations, via a variation to the existing permit or a new permit application, as appropriate

Flood Risk Assessment

- 19.7.23 An FRA will be prepared for the Proposed Works which will include a review of the current and future flood risk to the Study Area from all sources (including surface water, groundwater, tidal and fluvial sources and residual flood risks) in keeping with NPPF guidance⁴⁴⁹ which will inform the Proposed Works and set out any proposed mitigation requirements.
- 19.7.24 The NPPF dictates what development is suitable within each Flood Zone based upon the level of vulnerability of the development, as categorised in Annex 3: Flood risk vulnerability classification. The Proposed Works comprises the construction of on-site waste processing facilities and associated discharge infrastructure to support the decommissioning of the existing nuclear power station. In accordance with NPPF Annex 3, The Proposed Works within Area A of the Works Area could be considered Essential Infrastructure for the purposes of flood risk vulnerability assessment, however certain works would fall within other vulnerability classification. Further information on this will be provided in the ES.
- 19.7.25 The construction of Essential Infrastructure is acceptable in Flood Zones 1 and 2, while an Exception Test is required for development in Flood Zones 3a and 3b. For More vulnerable development, construction is acceptable in Flood Zones 1 and 2, while an Exception Test is required for development in Flood Zone 3a and is not permitted in Flood Zone 3b. As well as fluvial and tidal flooding, it is also necessary to consider flood risk from all other sources, including surface water, groundwater, Ordinary Watercourses, artificial drainage systems and infrastructure failure.
- 19.7.26 If above ground development is to take place within areas at risk of flooding (e.g. within Flood Zones 2 and 3), there may be a requirement for floodplain compensation or definition of specific mitigation measures to ensure no detrimental effect to flooding potential within or from the Proposed Works. At this stage this is considered unlikely taking into account the scale of the Proposed Works, their phased nature to remove buildings and structures and

the temporary nature of the buildings that would be constructed. Nonetheless, this will be considered further at the ES stage.

Nutrient Neutrality

19.7.27 Folkestone and Hythe District Council is the local planning authority which covers the Proposed Works and the wider Study Area. The council has significant portions of land within which nutrient neutrality has to be demonstrated in order to allow certain development to proceed due to the unfavourable status of designated habitats site within the area. However, as identified in **Section 19.3**, the Natural England Nutrient Neutrality Catchments (England) viewer⁴⁸³ confirms that the Study Area does not fall within the area affected by nutrient neutrality, and on this basis this aspect can be scoped out of the assessment.

Determining the Significance of Effects

19.7.28 The assessment of the likely significant effects on the water environment associated with the Proposed Works will be qualitative.

19.7.29 The significance of effects will be determined using the principles of the guidance and criteria set out in the Design Manual for Roads and Bridges (DMRB) LA 113 Road Drainage and the Water Environment⁴⁵³, adapted to take account of hydromorphology. This methodology can be applied to all development types and represents the most robust and nationally accepted criteria for the determination of potential effects on the water environment.

19.7.30 The criteria that will be used to determine water environment receptor importance are presented in **Table 19-11**.

19.7.31 In accordance with the stages of the methodology, there are three stages to the assessment of effects on water environment and flood risk as follows:

- A level of importance (low to very high) is assigned to the water resource receptors in accordance with **Table 19-11**, based on a combination of attributes (such as water supply, biodiversity, recreation) and on flood risk receptors based on the vulnerability of the receptor to flooding (i.e. as shown in **Table 19-11**, essential infrastructure are of very high importance, whilst water compatible development are of low importance);
- The magnitude of potential and residual impacts due to the Proposed Works (classed as negligible, minor, moderate or major adverse/beneficial) will be determined based on the criteria listed in **Table 19-12** using the assessor's knowledge of the Proposed Works. Embedded or standard mitigation measures will be considered in the initial assessment. The magnitude of impact will be determined considering the likelihood of the impact occurring. The likelihood of an impact occurring is based on a scale of certain, likely or unlikely. Likelihood will be considered in the case of water resources only, as likelihood is inherently included within the flood risk assessment; and

⁴⁸³ Natural England (2024) Nutrient Neutrality Catchments (England). (online). Available at: <https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::nutrient-neutrality-catchments-england/explore?location=51.438681%2C-0.552021%2C7.46> (Accessed 02/12/2025)

- Using the importance of the resource and the magnitude of the impact (for both potential and residual impacts) enables an assessment of the overall significance of the effect on the receptor using the matrix as presented in **Table 19-13**. The significance of each identified effect (both potential and residual) will be classed as very large, large, moderate, slight or neutral and either beneficial or adverse.

Table 19-11: Criteria to determine water environment receptor importance (adapted from DMRB LA 113⁴⁵³)

Importance	General Criteria	Surface Water	Groundwater	Hydromorphology ⁴⁸⁴	Flood Risk
Very High	The receptor has little or no ability to absorb change without fundamentally altering its present character, is of very high environmental value, or of international importance.	Watercourse having a WFD classification as shown in a River Basin Management Plan (RBMP) and Q95 $\geq$ 1.0 m ³ /s. Site protected/designated under UK habitat legislation (SAC, SPA, SSSI, Water Protection Zones, Ramsar site). Species protected by UK legislation. Critical social or economic uses (e.g. public water supply and navigation).	Source Protection Zone (SPZ) 1. Principal aquifer providing a regionally important resource and/or supporting a site protected under UK legislation. Groundwater locally supports GWDTE. Water abstraction: >1,000 m ³ /day.	Unmodified, near to or pristine conditions, with well-developed and diverse geomorphic forms and processes characteristic of river and lake type.	Essential Infrastructure or highly vulnerable development.
High	The receptor has low ability to absorb change without fundamentally altering its present character, is of high environmental value, or of national importance.	Watercourse having a WFD classification as shown in a RBMP and Q95 < 1.0 m ³ /s; Species protected under UK habitat legislation. Critical social or economic uses (e.g. water supply and navigation). Important social or economic uses such as water supply, navigation or mineral extraction.	Principal Aquifer providing locally important source supporting river ecosystem; SPZ 2; Groundwater supports GWDTE; Water abstraction: 500-1,000m ³ /day.	Conforms closely to natural, unaltered state and will often exhibit well-developed and diverse geomorphic forms and processes characteristic of river and lake type. Deviates from natural conditions due to direct and/or indirect channel, floodplain, bank modifications and/or catchment development pressures.	More vulnerable development.

⁴⁸⁴ Based on the water body 'Reach Conservation Status' presently being adopted for a major infrastructure project (and developed originally by Atkins) and developed from Environment Agency conservation status guidance (Environment Agency, 1998a; 1998b as LA113⁴⁵³ does not provide any criteria for morphology.

Importance	General Criteria	Surface Water	Groundwater	Hydromorphology ⁴⁸⁴	Flood Risk
Medium	The receptor has moderate capacity to absorb change without significantly altering its present character, has some environmental value or is of regional importance.	Watercourses not having a WFD classification shown in a RBMP and Q95 >0.001m ³ /s. May be designated as a local wildlife site and support a small/limited population of protected species. Limited social or economic uses.	Secondary Aquifer providing water for agricultural or industrial use with limited connection to surface water SPZ 3. Water abstraction: 50-499 m ³ /day.	Shows signs of previous alteration and/or minor flow/water level regulation but still retains some natural features or may be recovering towards conditions indicative of the higher category.	Less vulnerable development.
Low	The receptor is tolerant of change without detriment to its character, is low environmental value, or local importance.	Watercourses not having a WFD classification shown in a RBMP and Q95 <0.001m ³ /s. Low aquatic fauna and flora biodiversity and no protected species. Minimal economic or social uses.	Generally Unproductive strata. Water abstraction: <50m ³ /day.	Substantially modified by past land use, previous engineering works or flow/water level regulation. Watercourses likely to possess an artificial cross-section (e.g. trapezoidal) and will probably be deficient in bedforms and bankside vegetation. Watercourses may also be realigned or channelized with hard bank protection or culverted and enclosed. May be significantly impounded or abstracted for water resources use. Could be impacted by navigation, with associated high degree of flow regulation and bank protection, and probable strategic need for maintenance dredging. Artificial and	Water compatible development.

Importance	General Criteria	Surface Water	Groundwater	Hydromorphology ⁴⁸⁴	Flood Risk
				minor drains and ditches will fall into this category.	
Negligible	The receptor is resistant to change and is of little environmental value.	Not applicable.	Not applicable.	Not applicable.	Not applicable.

Table 19-12: Magnitude of Impact Criteria for the Water Environment (adapted from DMRB LA 113⁴⁵³)

Magnitude of Impact	Description
Major Adverse	Results in a loss of attribute and/or quality and integrity of the attribute.
Moderate Adverse	Results in impact on integrity of attribute, or loss of part of attribute.
Minor Adverse	Results in some measurable change in attribute's quality or vulnerability.
Negligible	Results in impact on attribute, but of insufficient magnitude to affect the use or integrity.
Minor Beneficial	Results in some beneficial impact on attribute or a reduced risk of negative impact occurring.
Moderate Beneficial	Results in moderate improvement of attribute quality.
Major Beneficial	Creation of new attribute or major improvement of attribute quality.
No change	No loss or alteration of characteristic, features of elements; no observable impact in either direction.

19.7.32 Options for mitigation will be considered and secured where possible to avoid, minimise and reduce adverse impacts, particularly where potential significant effects are identified. Following the definition of residual effects, the need for additional mitigation measures will be considered and resultant effects reported.

19.7.33 Effects that are moderate or major are considered significant in planning terms (i.e. the shaded cells in **Table 19-13**).

Table 19-13: Matrix for assessment of water environment effect significance (DMRB LA 104⁴⁸⁵)

Importance of Receptor (Table 19-11)	Magnitude of Impact (Table 19-12)				
	Major	Moderate	Minor	Negligible	No Change
Very High	Very Large	Large or Very Large	Moderate or Large	Slight	Neutral
High	Large or Very Large	Moderate or Large	Slight or Moderate	Slight	Neutral
Medium	Moderate or Large	Moderate	Slight	Neutral or Slight	Neutral
Low	Slight or Moderate	Slight	Neutral or Slight	Neutral or Slight	Neutral
Very Low	Slight	Neutral or Slight	Neutral or Slight	Neutral	Neutral

19.7.34 The following effect significance categories will be used:

⁴⁸⁵ National Highways (2020) Design Manual for Roads and Bridges (DMRB) LA104 Environmental Assessment and Monitoring. (online). Available at: <https://www.standardsforhighways.co.uk/search/0f6e0b6a-d08e-4673-8691-cab564d4a60a> (Accessed 02/12/2025)

- **Beneficial:** A beneficial/positive effect on the quality of a water resources receptor; or
- **Adverse:** A detrimental/negative effect on the quality of a water resources receptor.

19.7.35 At spatial level, 'local' effects are those affecting the Site and neighbouring receptors, while effects upon receptors beyond the vicinity of the Site are considered at a 'regional' level. Effects which affect different parts of the country, or England as a whole, are considered being at a 'national' level.

Assumptions and Limitations

19.7.36 Considering the information available at this stage, a precautionary approach to scoping has been undertaken. Detailed, quantitative assessments (e.g. modelling) may be required, and these may need to be informed by additional site survey and monitoring. The need for any detailed studies will be kept under review as further information on the Proposed Works becomes available.

19.7.37 At this stage, the proposed assessment will be based on the collation and evaluation of existing Site data and readily available documentation provided by the Environment Agency, BGS, historical reports for the Works Area and immediate surroundings, and other data sources made available. However, the need for site-specific surveys and monitoring will be kept under review and further information about the Proposed Works becomes available.

19.7.38 Due to the change in land use in the Works Area, there would be surface water pathways that are, as of yet, unknown. Assumptions on future surface water flow paths may need to be made where data on existing drainage pathways are not available.

19.7.39 As the phases of the Proposed Works are estimated to last over a century, climate change is anticipated to alter sea levels and rainfall patterns of the area to an unknown degree. Current climate change projections based on published guidance will be used, however, climate change uncertainty means these outcomes could change in the future.

19.7.40 In line with the Shoreline Management Plan⁴⁸⁶ policy position, the assessment will assume that flood defences protecting the Works Area and surrounding area will be maintained in line with the appropriate climate change projections. However, the risk of overtopping or breach risk will be considered in the FRA.

19.7.41 Hydraulic modelling data may be requested by the Environment Agency to understand fluvial and tidal flood risk to the Dungeness Decommissioning Project. Where this is not available, hydraulic modelling may need to be undertaken as part of the FRA. This requirement will be discussed and agreed with the Environment Agency and Kent County Council as applicable.

19.7.42 The FRA will be based on desktop surveys and latest decommissioning site layouts in line with best practice. Where available, topographical data will be

⁴⁸⁶ Environment Agency Shoreline Management Plan (2025). (online). Available at: <https://www.gov.uk/guidance/shoreline-management-plans> (Accessed 02/12/2025)

used to support the FRA. In the absence of topographical data, LiDAR data will be used to inform the FRA.

- 19.7.43 At this stage, up to date data on third party licenced or unlicenced (private water supply) water abstractions has not been obtained. Data will be requested from statutory bodies and reviewed during the assessment and any additional water resource receptors considered. Where there are PWS, further site-specific data collection may be required through surveys or supply questionnaires.

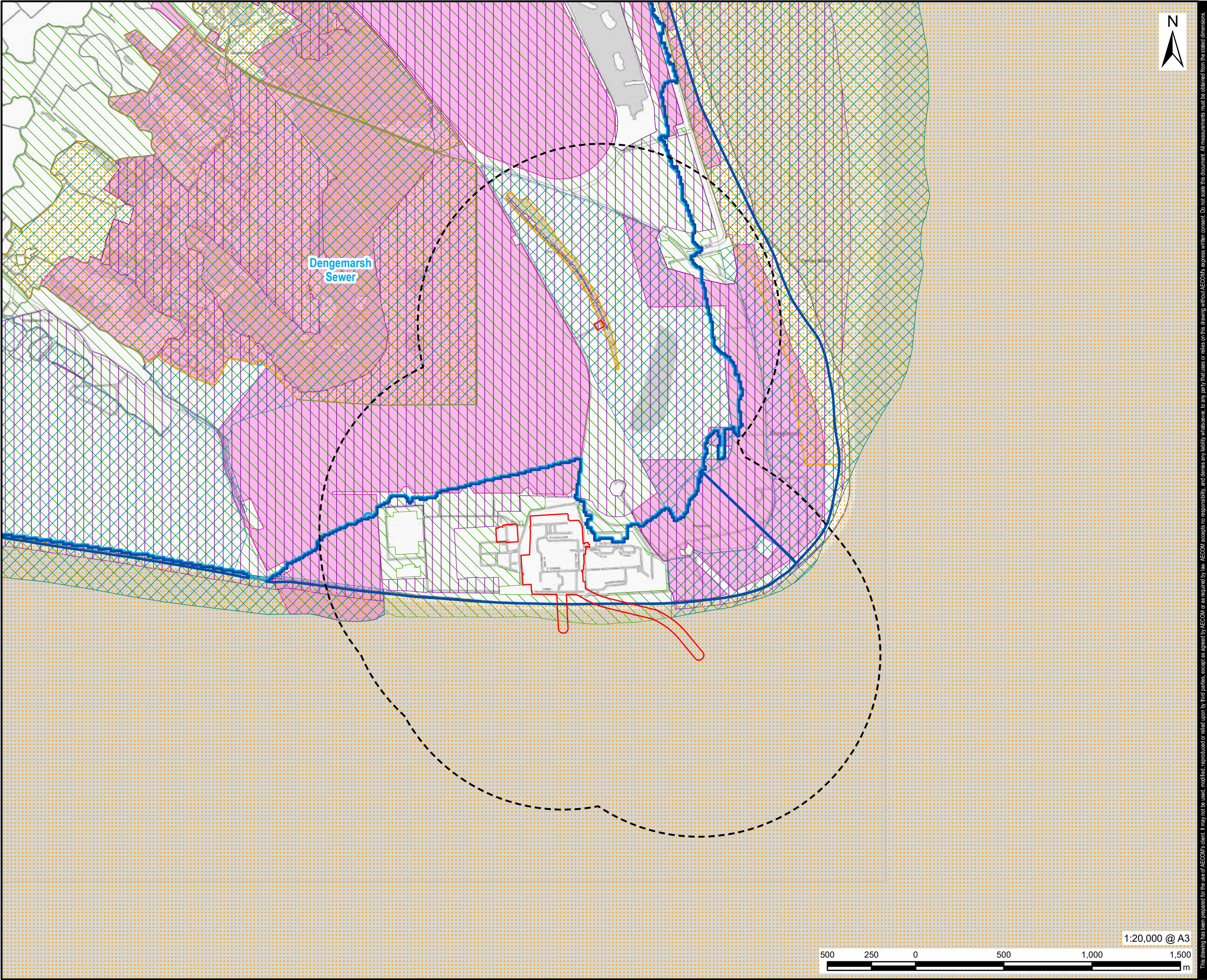
19.8 Summary of Potential Likely Significant Effects

- 19.8.1 **Table 15-10** provides a summary of the potential significant effects proposed to be considered in the water environment and flood risk chapter of the ES. Please refer to **Section 19.6** where justification of the scope is provided.

Table 19-14: Summary of Elements to be Considered in the ES

Pathway	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
An increased risk of surface water flooding due to the alteration of the site layout and topography	Scoped in	Scoped in*	Scoped in*
Overtopping or breach of existing flood defences leading to increased coastal flood risk to the Works Area or the Proposed Works	Scoped in	Scoped in*	Scoped in*
Contamination from suspended solids or other chemicals contaminants	Scoped in	Scoped in*	Scoped in*
Possible impacts to the marine environment from the installation of new discharge lines	Scoped in	Scoped out	Scoped out
Possible impact from effluent discharges	Scoped in	Scoped in*	Scoped in*
Morphology of surface water bodies could be impacted by works adjacent (Long Pits)	Scoped in	Scoped out	Scoped out
The risk of pollution from chemical spillages or fire	Scoped in	Scoped in*	Scoped in*

* Applying professional judgement, qualitative assessments will be undertaken.



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PROJECT

Dungeness B Nuclear Decommissioning

CLIENT

EDF Energy Nuclear Generation Limited

CONSULTANT

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LEGEND

The Works Area

The Works Area - 1km Buffer

Water Framework Directive (WFD) Catchment

River Catchment

Coastal Catchment

Environmental Constraints

Ramsar

Special Protection Area

Special Areas of Conservation

Sites of Special Scientific Interest

Local Nature Reserve

National Nature Reserve

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NOTES

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ISSUE PURPOSE

EIA Scoping Report

PROJECT NUMBER

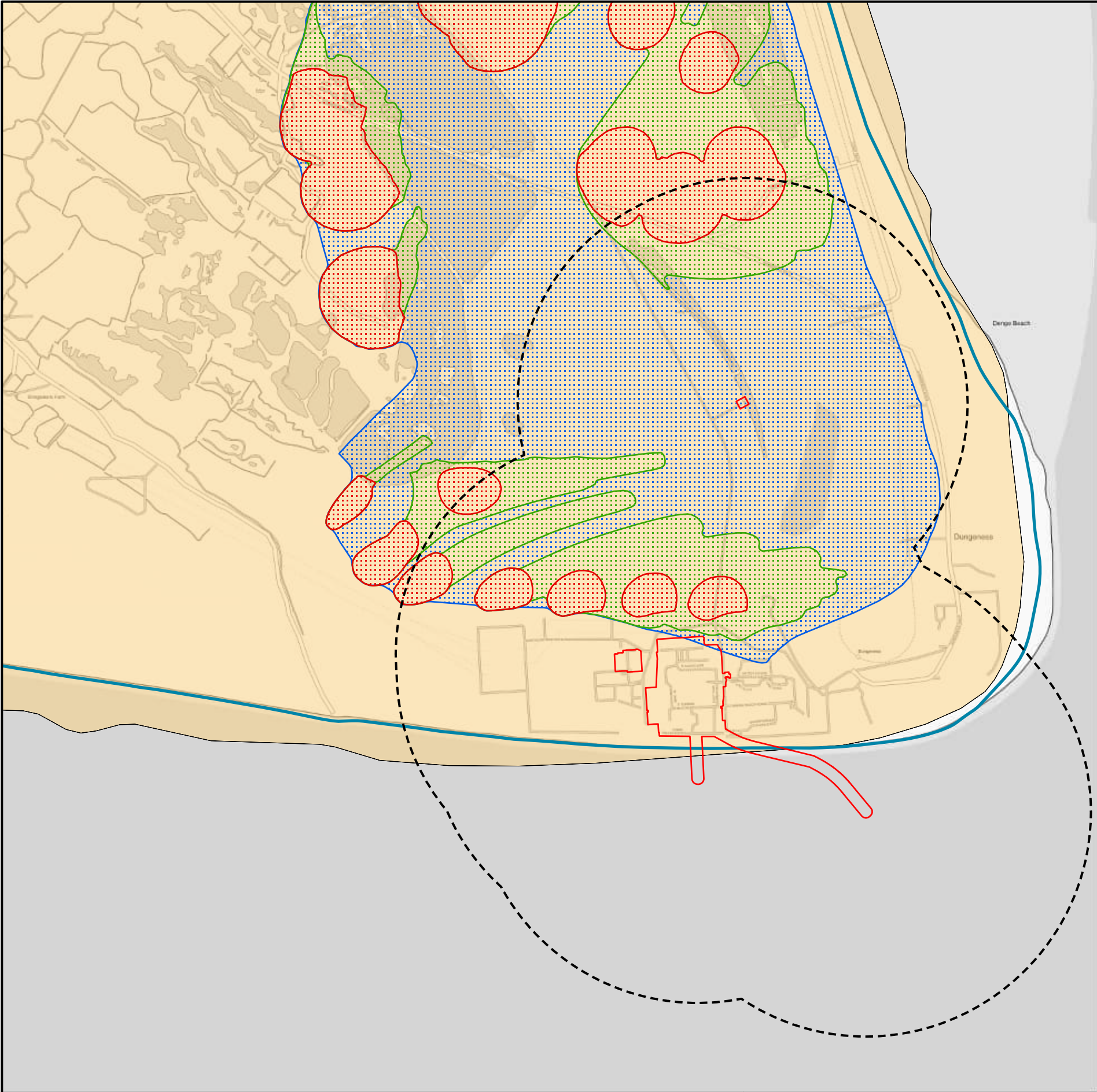
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FIGURE TITLE

Surface Water Receptors and their Attributes

FIGURE NUMBER	REV
Figure 19-1	0

DOCUMENT NUMBER



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PROJECT

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Decommissioning

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LEGEND

- The Works Area
- The Works Area - 1km Buffer
- Groundwater Body Catchment
- Bedrock Geology**
 - Wealden Group - Sandstone and Siltstone, Interbedded
- Source Protection Zone**
 - Zone I - Inner Protection Zone
 - Zone II - Outer Protection Zone
 - Zone III - Total Catchment

NOT PROTECTIVELY MARKED

NOTES

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ISSUE PURPOSE

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60739933

FIGURE TITLE

Groundwater Features and their
attributes

FIGURE NUMBER

Figure 19-2

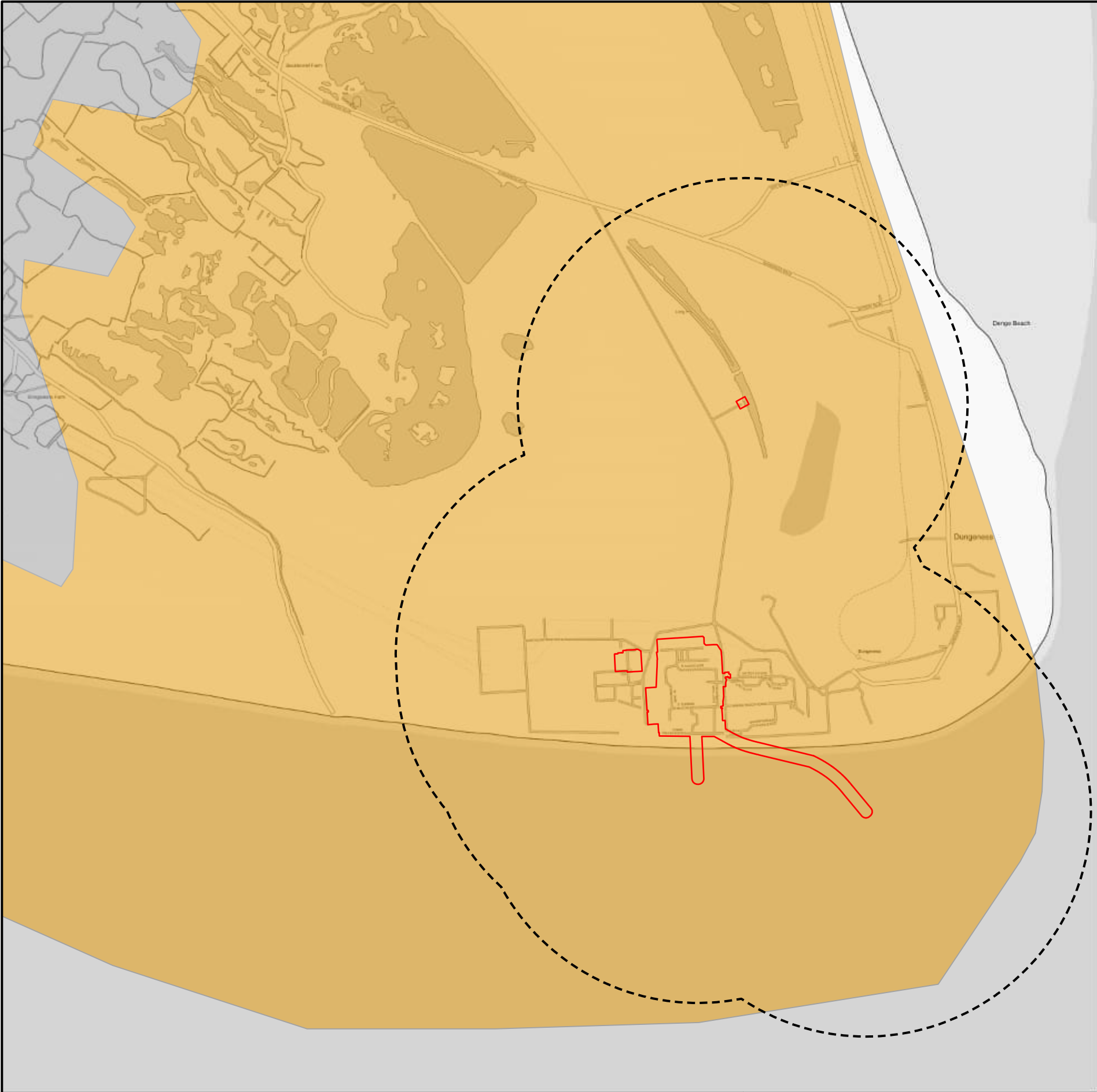
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LEGEND

- The Works Area
- The Works Area - 1km Buffer
- Superficial Geology**
- Alluvium
- Raised Marine Deposits (Undifferentiated)

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ISSUE PURPOSE

EIA Scoping Report

PROJECT NUMBER

60739933

FIGURE TITLE

Superficial Geology

FIGURE NUMBER

Figure 19-3

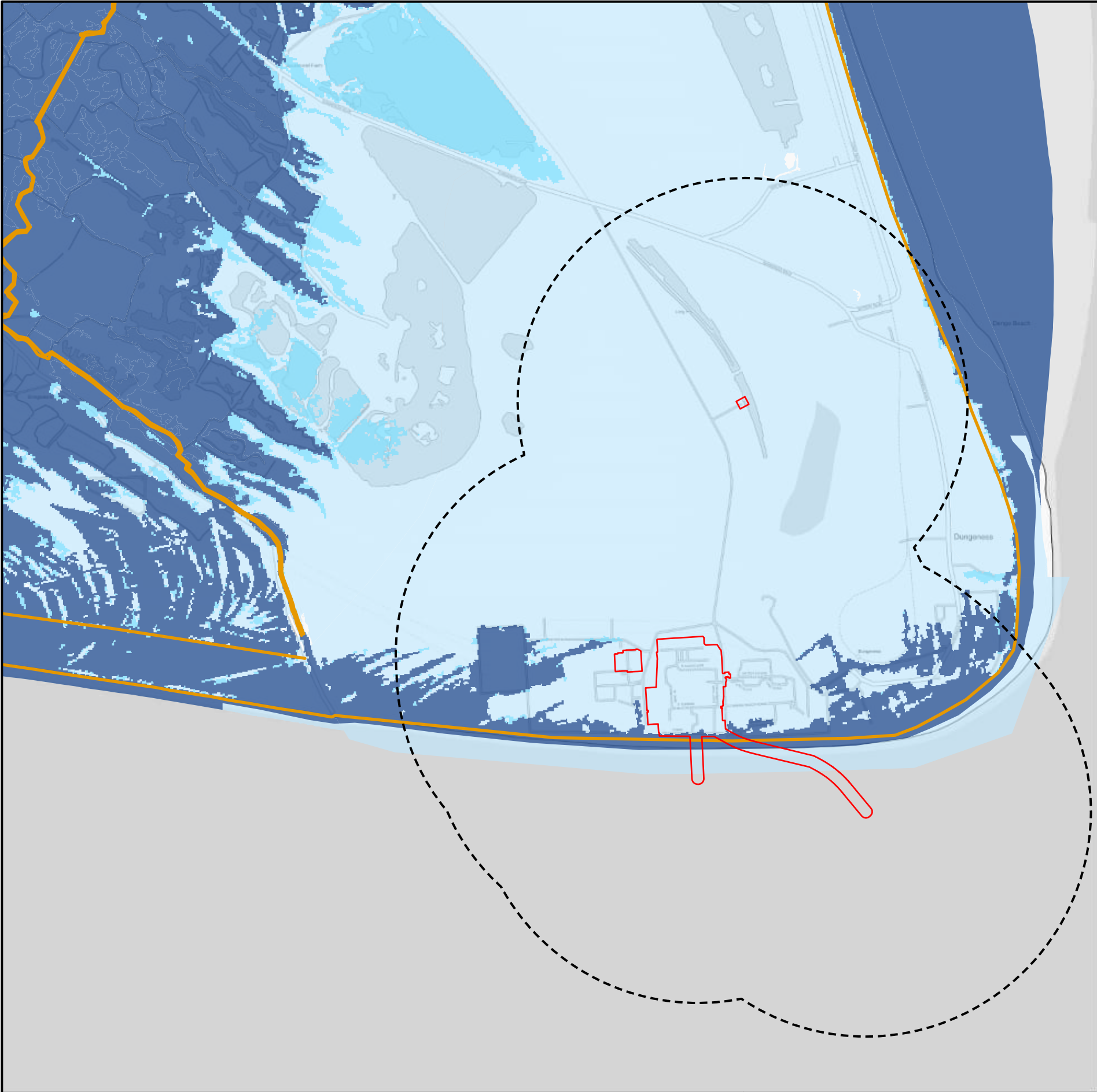
REV

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DOCUMENT NUMBER

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AECOM

PROJECT

Dungeness B Nuclear
Decommissioning

CLIENT

EDF Energy Nuclear
Generation Limited

CONSULTANT

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LEGEND

- The Works Area
- The Works Area - 1km Buffer
- Spatial Flood Defence
- Flood Map for Planning - Flood Zones**
- Flood Zone 2
- Flood Zone 3
- Flood Zones plus Climate Change (CCP1)

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PROJECT NUMBER

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FIGURE TITLE

Environment Agency: Flood Zones and
Spatial Flood Defences

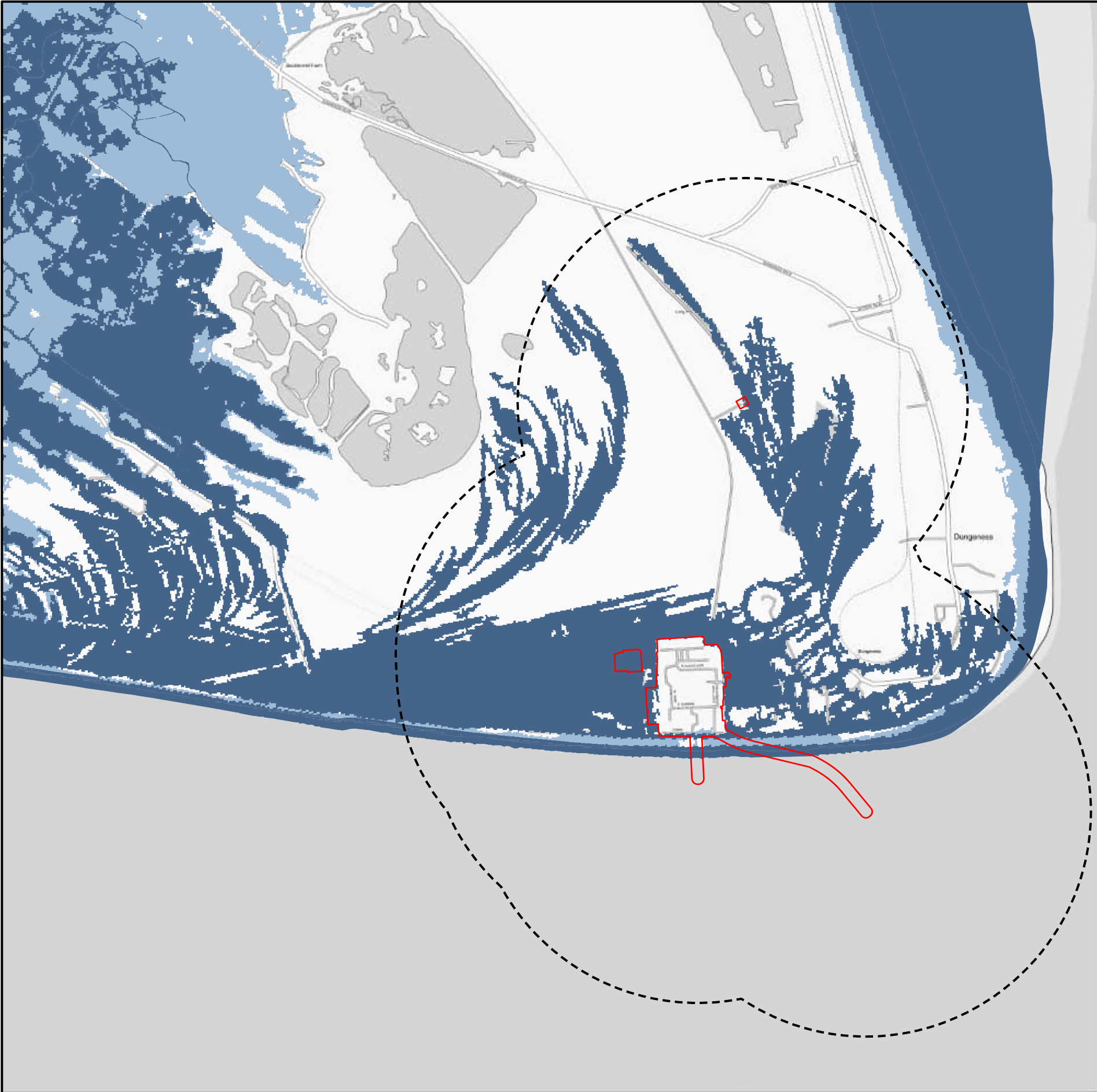
FIGURE NUMBER

Figure 19-4

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DOCUMENT NUMBER



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LEGEND

- The Works Area
- The Works Area - 1km Buffer
- Rivers 1 in 100 and Sea 1 in 200
Defended Extent
- Rivers 1 in 100 and Sea 1 in 200
Undefended Extent

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PROJECT NUMBER

60739933

FIGURE TITLE

Rivers and Sea Defended and Undefended
Flood Extents: River 1 in 100, Sea 1 in 200

FIGURE NUMBER

Figure 19-5-1

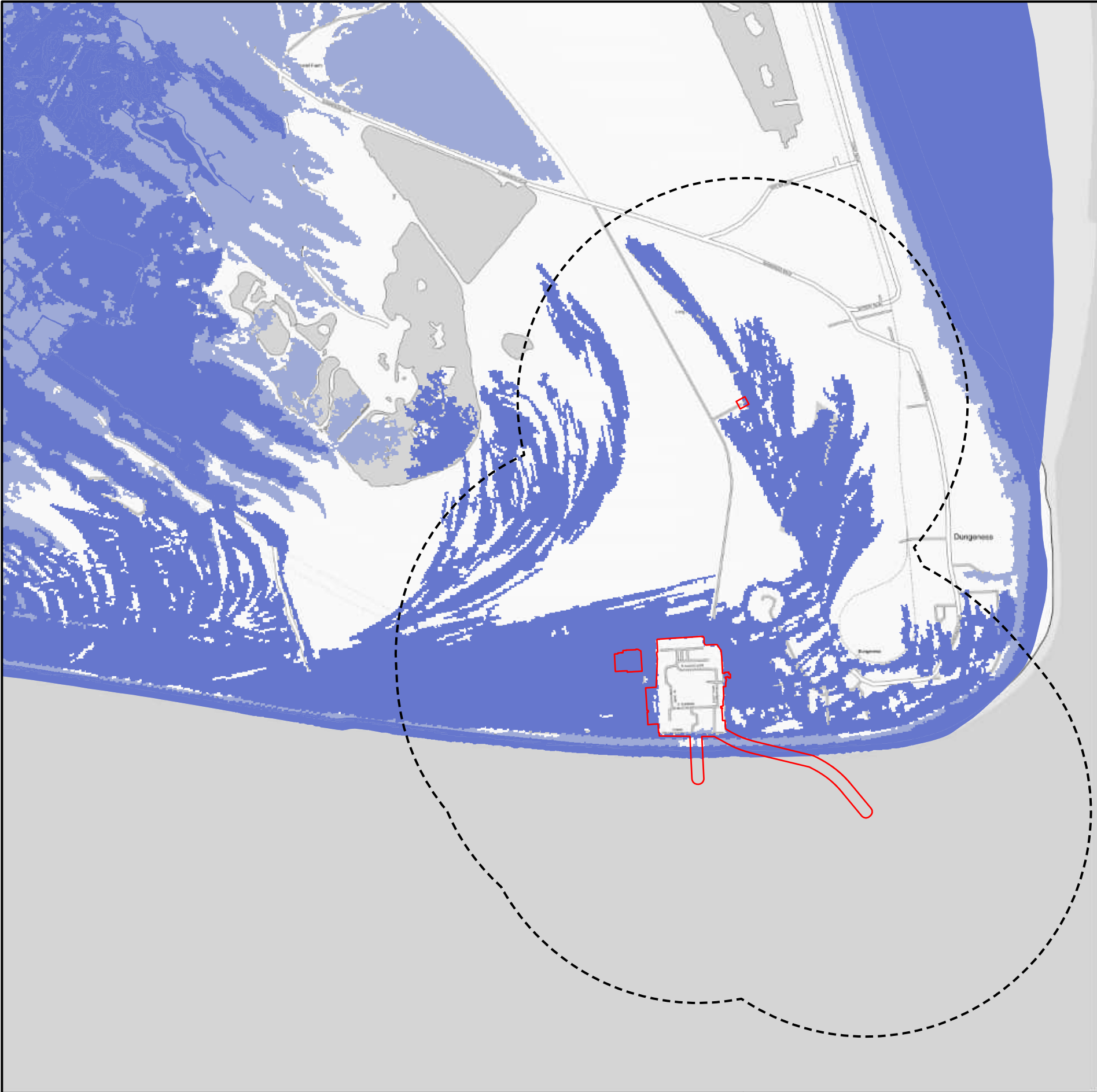
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DOCUMENT NUMBER

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LEGEND

- The Works Area
- The Works Area - 1km Buffer
- Rivers 1 in 1000 and Sea 1 in 1000
Defended Extent
- Rivers 1 in 1000 and Sea 1 in 1000
Undefended Extent

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ISSUE PURPOSE

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PROJECT NUMBER

60739933

FIGURE TITLE

Rivers and Sea Defended and Undefended
Flood Extents: River 1 in 1000, Sea 1 in 1000

FIGURE NUMBER

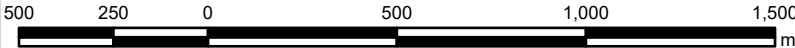
Figure 19-5-2

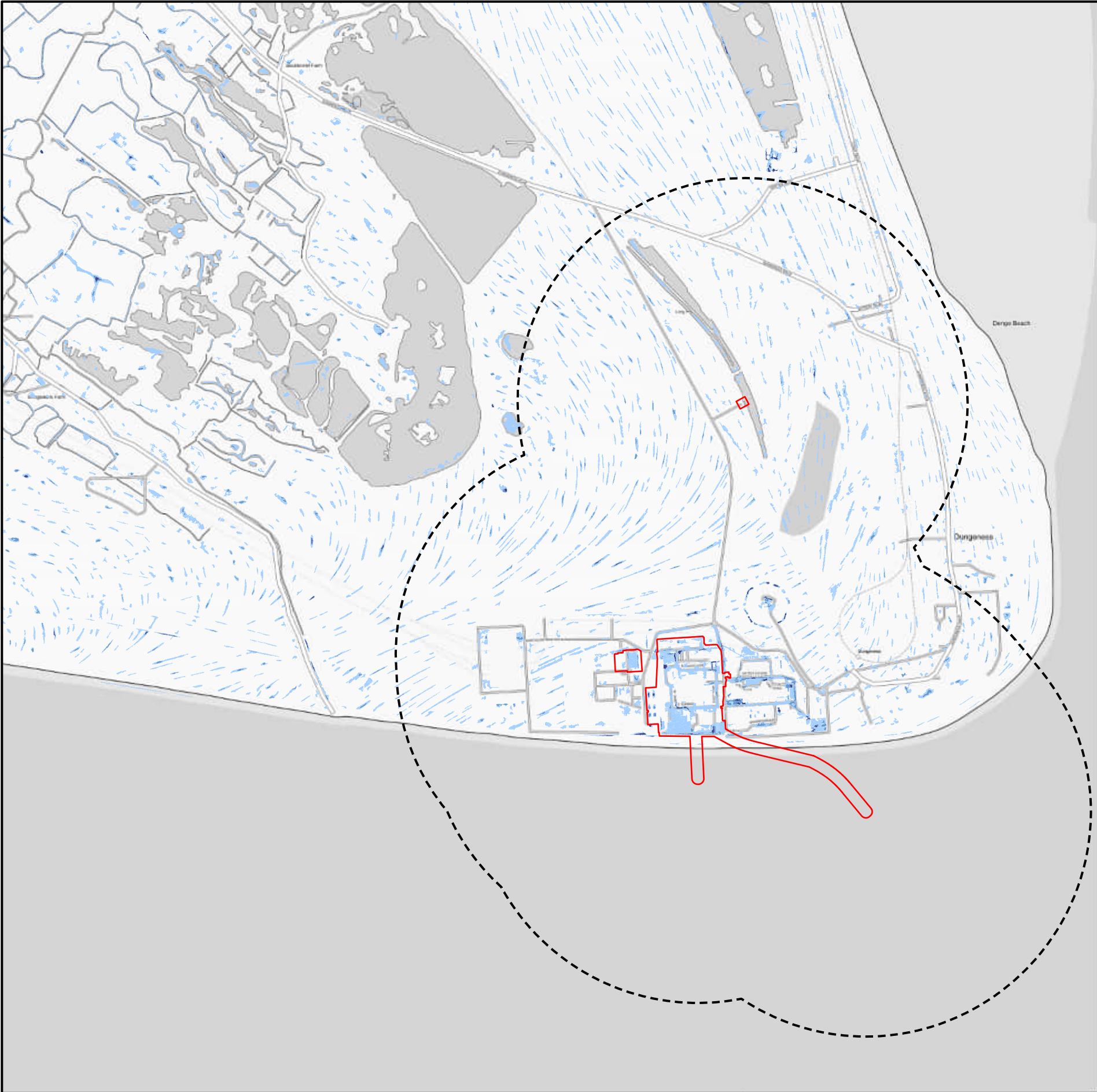
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PROJECT

Dungeness B Nuclear
Decommissioning

CLIENT

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Generation Limited

CONSULTANT

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LEGEND

- The Works Area
- The Works Area - 1km Buffer
- Risk of Flooding from Surface Water**
- Flood Likelihood Category**
- High
- Medium
- Low

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ISSUE PURPOSE

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PROJECT NUMBER

60739933

FIGURE TITLE

Risk of Flooding from Surface Water

FIGURE NUMBER

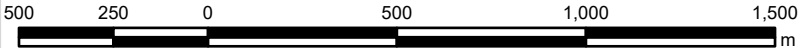
Figure 19-6-1

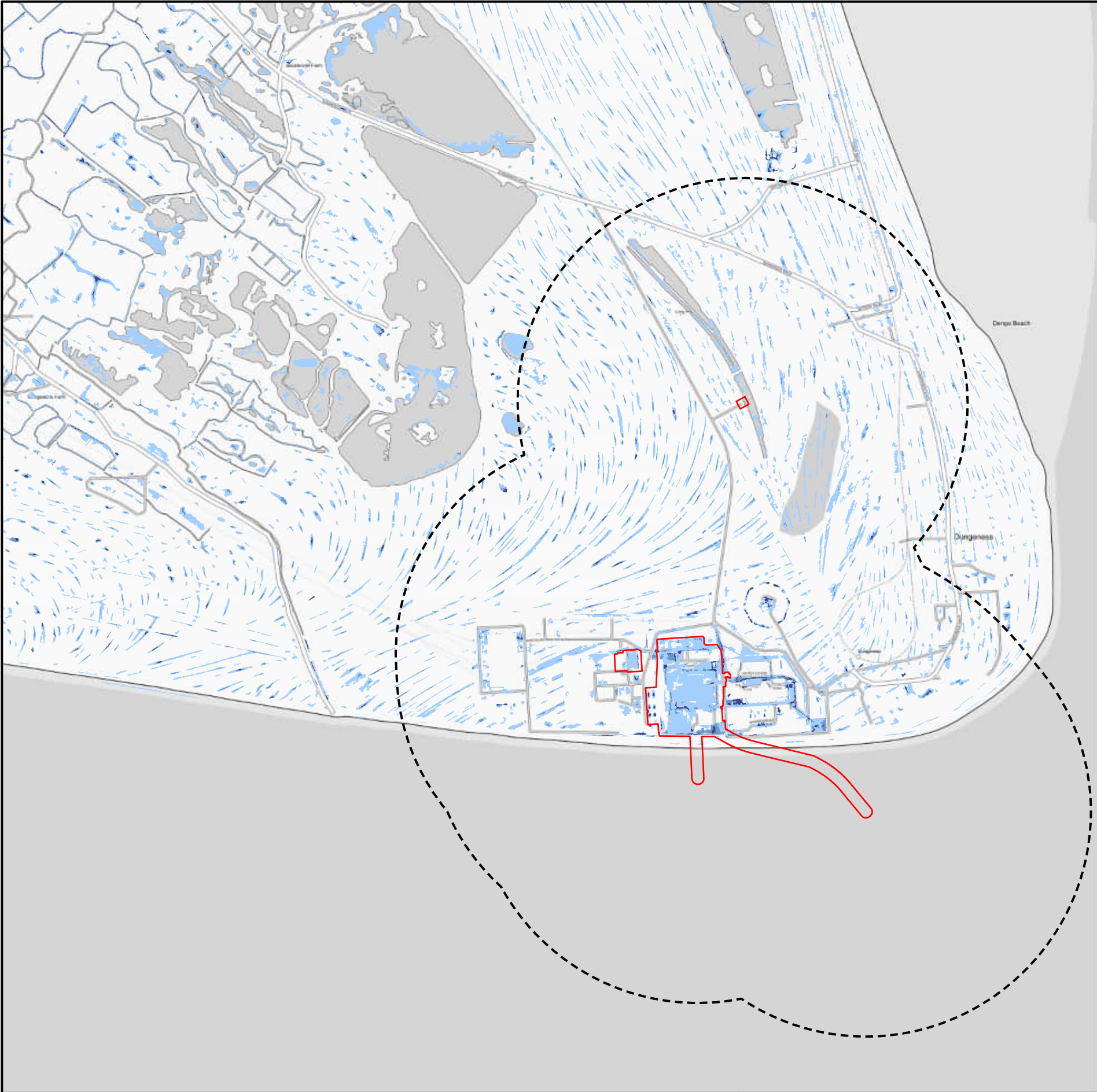
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LEGEND

- The Works Area
- The Works Area - 1km Buffer

Risk of Flooding from Surface Water -
Climate Change 1

Flood Likelihood Category

- High
- Medium
- Low

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ISSUE PURPOSE

EIA Scoping Report

PROJECT NUMBER

60739933

FIGURE TITLE

Risk of Flooding from Surface Water
including Climate Change (2040 to 2060)

FIGURE NUMBER

Figure 19-6-2

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20. Other Environmental Topics

20.1 Introduction

- 20.1.1 This chapter provides an overview of other environmental topics that have been considered within the EIA Scoping process and have been scoped out of the EIA. Justification is provided within each of the following sub-sections.

20.2 Maritime Heritage

Introduction

- 20.2.1 This section provides a summary of the consideration of Maritime Heritage in the context of the Proposed Works
- 20.2.2 As described in **Chapter 2: The Dismantling and Decommissioning Process**, works would be undertaken within the English Channel to modify the exiting outfall infrastructure to install the AAEDL, and the ATSDL, although there would be no new permanent structures fixed to the seabed. There is the potential that the Marine Works could impact upon maritime heritage.
- 20.2.3 A review of the baseline conditions has been undertaken to consider to the potential for maritime archaeological resources to be present within the Works Area. This baseline study has been reviewed against the current understanding of the Marine Works to determine the potential impacts.

Data Sources

- 20.2.4 The principal data sources used to inform the current baseline conditions presented in this section comprise the following:
- NHLE for designated heritage assets⁴⁸⁷;
 - KHER for non-designated heritage assets⁴⁸⁸;
 - The Admiralty Marine Data Portal⁴⁸⁹; and
 - The CITiZAN Marine Heritage Dataset⁴⁹⁰.

Baseline

- 20.2.5 For the purposes of the baseline, the Study Area is considered to comprise the Works Area below the MHWS and a 3km Study Area. The assets

⁴⁸⁷ Historic England (2025). National Heritage List for England. (online). Available at: <https://historicengland.org.uk/listing/the-list/> (accessed 21/11/2025).

⁴⁸⁸ Kent County Council (2025). Kent Historic Environment Records.

⁴⁸⁹ UK Hydrographic Office. The Admiralty Marine Data Portal. (online). Available at: <https://datahub.admiralty.co.uk/portal/apps/sites/#!/marine-data-portal> (accessed 21/11/2025)

⁴⁹⁰ UK Government. The CITiZAN Marine Heritage Dataset. (online). Available at: <https://www.data.gov.uk/dataset/12fbef6f-4b28-4be2-b641-fd5f3c9412ce/citizan-the-coastal-and-intertidal-zone-archaeological-network> (accessed 21/11/2025)

identified in the Study Area are shown on **Figure 20-1**⁴⁹¹ and summarised in **Appendix 20A**.

Designated Maritime Heritage Assets

- 20.2.6 There are no Protected Wrecks or Designated maritime archaeological assets located within 3km of the Works Area, including the remains of any aircraft, that are currently designated under the PWA 1973⁴⁹², the PMRA 1986⁴⁹³ or the AMAA 1979⁴⁹⁴.

Non-Designated Maritime Heritage Assets

- 20.2.7 There are 196 maritime heritage assets located within 3km of the Works Area, all of which are the locations of shipwrecks dating to between the prehistoric and modern periods.
- 20.2.8 There are no known sunken aviation archaeological assets within the study area.

Prehistoric (up to AD43)

- 20.2.9 A single non-designated asset dating to the prehistoric period has been recorded within the 3km Study Area. An unidentified prehistoric shipwreck or submerged features (**TR 01NE 248**) has been recorded approximately 2.8km west of the Works Area.

Roman (AD43-410)

- 20.2.10 No shipwrecks or heritage assets have been identified within the Study Area that date to the Roman period.

Medieval (410-1540)

- 20.2.11 Two shipwrecks dating to the medieval period have been recorded within the 3km Study Area. The remains of a cargo vessel, dating to 1279, have been recorded approximately 2.3km north-east of the Works Area (**TR 01NE 264**) and the remains of a Spanish cargo vessel (**TR 01 NE 250**) which became stranded on the beach, located approximately 1.1km east of the Works Area.

Post-Medieval (1540-1900)

- 20.2.12 A total of 180 maritime shipwrecks have been recorded within the 3km Study Area. The closest of these shipwrecks are the remains of the Gwendoline (**TR01 NE 169**), located approximately 500m west of the Works Area. The shipwreck comprises the partially disintegrating remains of the Gwendoline, that are visible on vertical and oblique aerial photographs of 1941 as a structure between Dungeness and the Dengemarsh Gut Shafts.

⁴⁹¹ Assets such as TR01 NE6 (St Lawrence's Battery 1798) and TR01 NE225 (The site of Dungeness lighthouse, as it stood from 1635 to c.1790. Erected by William Lamplough) are shown 'in the sea' on **Figures 10-1** and **10-2**, however these locations are those held by HER and are presumed to not be accurate as they are terrestrial heritage assets.

⁴⁹² HM Government. 1973. Protection of Wrecks Act (PWA) 1973. Available online at: <https://www.legislation.gov.uk/ukpga/1973/33/enacted>

⁴⁹³ HM Government. 1986. The Protection of Military Remains Act. Available online at: <https://www.legislation.gov.uk/ukpga/1986/35/contents>

⁴⁹⁴ HM Government (1979) Ancient Monuments and Areas Act 1979 (as amended). Available online at: www.legislation.gov.uk/ukpga/1979/46

- 20.2.13 Located approximately 1km west of the Works Area are the shipwreck remains of a single vessel of unknown date (**TR 01 NE 166**).
- 20.2.14 A spread of nine maritime shipwreck assets are located between 2.5km and 3km to the east and south-east of the Works Area, these include unknown shipwrecks (**TR 11 NW 9**), (**TR 11 NW 7**), (**TR 11 NW 6**), (**TR 01 SE 8**), (**TR 01 SE 7**), (**TR 01 SE 6**), (**TR 11 SW 4**) and (**TR 01 SE 5**). The shipwrecked remains of the Milbanke (**TR 11 NW 11**) have also been recorded approximately 2km south-east of the Works Area.
- 20.2.15 A total of 165 shipwrecks dating to the post-medieval period have been identified approximately 1.5km east of the Works Area, these are predominantly 19th century merchant vessels and include English vessels such as The Garland (**TR 01 NE 75**) and the Norfolk Hero (**TR 01 NE 83**), French vessels such as the Le Bon St Joseph (**TR 01 NE 117**) and Dutch ship Mary Galley (**TR 01 NE 161**) and the German ship Louise Emile (**TR 01 NE 37**).
- 20.2.16 Two shipwrecks dating to the 18th century, the English vessel, The Hope (**TR 01 NE 15**), and the Spanish vessel St Antonio Depadua (**TR 01 NE 160**), are both located approximately 2.3km north-east of the Works Area.

Modern (1900-Present)

- 20.2.17 Two shipwrecks dating to the 20th century are recorded approximately 1km west of the Works Area, including the Latvian warship Alice, which was rammed and sunk by a German ship in 1928 (**TR 01 NE 168**) and the Roseburn (**TR 01 NE 167**), which was sunk during World War II.
- 20.2.18 A further nine 20th century shipwrecks are recorded approximately 1.5km east of the Works Area, and include the Antje (**TR 01 NE 144**), the Salybia (**TR 01 NE 151**), the Perseverance (**TR 01 NE 151**), the Industry (**TR 01 NE 153**), the Marinette (**TR 01 NE 154**), the Marcia (**TR 01 NE 155**), the Gazelle, (**TR 01 NE 156**), the Alice (**TR 01 NE 157**) and the Charente (**TR 01 NE 158**).

Consideration of the Proposed Works

- 20.2.19 The Marine Works would alter the existing infrastructure within the marine environment to provide an AAEDL and provide an ATSDL. No new excavation will be undertaken and there will be no new permanent structures fixed to the sea bed. The plant list for undertaking the Marine Works is expected to include one JUB, one barge, one tug and one safety boat with temporary seabed anchors.
- 20.2.20 The area of temporary disturbance associated with the presence of this infrastructure would be small and limited to the footprint of the anchors, anchor chains and JUB legs used to stabilise the barge when undertaking the Marine Works. The temporary disturbance would be limited to areas in close proximity to the existing outfall structure which are likely to have been previously impacted by the initial construction and ongoing maintenance of the existing infrastructure. It is therefore anticipated that there will be no impacts to known maritime heritage assets or to previously unrecorded maritime heritage assets during the Marine Works.

- 20.2.21 The Environmental Management Plan will identify the requirements for a Protocol for Archaeological Discovery (PAD)⁴⁹⁵ setting out the approach to the reporting and subsequent treatment of unexpected archaeological discoveries will be in place during the Marine Works. This PAD would ensure that unforeseen maritime archaeological remains are identified and appropriately recorded if they are encountered. Prior to undertaking the works, consultation will be undertaken with Historic England to agree the final mitigation measures to be included in the PAD.

Conclusion

- 20.2.22 The Proposed Works are not expected to result in: (i) any impacts to known maritime heritage, with the nearest maritime heritage asset located 500m west of the Works Area, and (ii) given, likely previous disturbance in the same area, are also unlikely to result in impacts to previously unrecorded maritime heritage assets. Considering both factors, Maritime Heritage can be robustly scoped out of the EIA.

20.3 Shipping and Navigation

Introduction

- 20.3.1 This section provides a summary of the consideration of Shipping and Navigation in the context of the Proposed Works.
- 20.3.2 As described in **Chapter 2: The Dismantling and Decommissioning Process**, works would be undertaken within the English Channel to modify the exiting outfall infrastructure to install the AAEDL, the ASTDL and Surface Water Discharge.
- 20.3.3 A Navigational Risk Assessment would be undertaken prior to the commencement of the marine works as part of the Marine Licence Application to consider the risks relevant to the Marine Works and to identify suitable mitigation to ensure the identified risks would be ALARP. In the context of the EIA and where navigation effects are reduced to ALARP, they are not considered significant. It is therefore not necessary to include a standalone assessment of Shipping and Navigation within the EIA. This section provides a high level overview of the existing baseline conditions and identifies the activities that will form part of the Navigational Risk Assessment.

Baseline Conditions

- 20.3.4 The Dover Strait Marine Traffic Zone is a Traffic Separation Scheme (TSS) established to manage heavy traffic in the proximity of Dungeness and is located around 7km offshore from the Works Area. However, smaller coastal vessels, recreational craft and fishing vessels may pass closer to the shoreline and may anchor nearby within the Inshore Traffic Zone.

⁴⁹⁵ Crown Estates. 2014. Protocol for Archaeological Discoveries: Offshore Renewables Projects. (online). Available at:

https://www.wessexarch.co.uk/sites/default/files/field_file/2_Protocol%20For%20Archaeological%20Discoveries.pdf

- 20.3.5 All maritime activities and safety in the Works Area fall under the jurisdiction of the national MCA. Mariners should consult official Admiralty charts and the MCA Marine Guidance Notes (MGN) for up-to-date and detailed information before navigating in the area.

Further Studies to be Undertaken as part of a Navigational Risk Assessment

- 20.3.6 A desktop study along with engagement with the main stakeholders will be undertaken as part of the Navigational Risk Assessment to establish the baseline navigational activities in proximity to the Works Area and assess any subsequent hazards posed by the Marine Works to maritime operations.
- 20.3.7 The desktop study would commence with data collection and review of available data for the area in the vicinity of the Works Area. This will include the following:
- Review of current navigational conditions (identification of key navigational features from Admiralty Charts 536 'Beachy Head to Dungeness and 5607 'Dungeness to South Foreland', existing aids to navigation, review relevant Notice to Mariners and to check whether a Vessel Traffic Service (VTS) is applicable);
 - Review of current vessel traffic in the proximity of the Works Area (including types of vessels, routes and frequency);
 - Review historical maritime incidents (from the Marine Accident Investigation Branch (MAIB) Incident Data and Royal National Lifeboat Institution (RNLI) Incident Data); and
 - Consultation with key stakeholders.

Stakeholder Consultation

- 20.3.8 Consultation with key maritime stakeholders relevant to the Works Area will be undertaken as part of the Navigational Risk Assessment to be completed prior to the commencement of the marine works to inform an up to date understanding of navigation in the area, record any concerns/potential impact and agree on the identified hazards and their evaluation and proposed mitigation measures.
- 20.3.9 Organisations that will be consulted include, but not limited to, the following:
- MCA;
 - MMO;
 - Trinity House; and
 - Royal Yachting Association (RYA).

Navigational Risk Assessment Methodology

- 20.3.10 The Navigational Risk Assessment will be undertaken in accordance with relevant legislation and guidance from the International Maritime Organization at the time of its preparation.
- 20.3.11 The Navigational Risk Assessment will follow structured process for identification and analysis of hazards and scenarios with scoring of risk,

before taking action to reduce intolerable risk to ALARP and to a level that is acceptable to stakeholders.

20.3.12 The assessment methodology will follow the steps below:

- Stage 1 - identification of hazards:
 - Listing of potential marine hazard scenarios, hazard descriptions and outcomes.
- Stage 2 - risk analysis/assessment:
 - Determination of frequency and consequence for each hazard scenario.
- Stage 3 - risk mitigation and control measures:
 - Consideration of existing (embedded) mitigation measures, which either reduce the outcome frequency or control the severity or both; Potential risk controls, which are not currently in place, but could be used to further reduce or eliminate risk.

Consideration of the Proposed Works

20.3.13 The potential impact pathways associated with marine navigation are considered to include:

- Third-party to project vessel collision;
- Deviation from established and identified vessel routes; and
- Interaction with vessel anchors and anchoring activity

20.3.14 Impacts on navigation features during the Proposed Works are likely to include:

- Damage to works/vessels (barges) or other vessels (fishing/leisure) in the event of collision or allision of passing vessels with the Works vessels (barges) or towage operations, mooring/anchoring breakout, tug failure, severe weather, poor manoeuvring;
- Injury to persons due to vessel collision or allision, bad weather, mechanical failure, fire/explosion aboard marine works vessel, construction/decommissioning works risks;
- Obstruction to navigation, increased collision risk due to displacement of vessel routes away from the Work Area; and
- Insufficient navigational aids.

20.3.15 High level mitigation measures, defined within the Navigational Risk Assessment, could include:

- Operation guidelines and Local Notice to Mariners;
- Additional navigational aids;
- Tug control;
- Compulsory pilotage, VTS;
- RAMS by the Contractor; and

- Emergency procedures onboard vessels.

Conclusion

20.3.16 Given the limited scale of the Marine Works and the proximity of these works to the coastline, it is considered that following the completion of the Navigational Risk Assessment, all risks would be managed to be ALARP. No further assessment of Shipping and Navigation is therefore proposed within the EIA.

20.4 Radioactive Waste and Discharges

Introduction

- 20.4.1 Radioactive waste is subject to additional regulatory requirements in addition to those that apply to conventional waste (see **Chapter 7: Conventional Waste and Materials**). As identified in **Chapter 2: The Decommissioning and Dismantling Process** all radioactive waste from Dungeness B will be managed safely and prepared for off-site treatment or disposal in the proposed waste management facilities.
- 20.4.2 Radioactive wastes are created at Dungeness B as part of normal operation. The types of solid radioactive waste arising include Lower Activity Waste, comprising Very Low Level Waste (VLLW) and Low Level Waste (LLW), and ILW, which is also known as HAW. There are also controlled discharges of gaseous and liquid radioactive substances to air and the sea.
- 20.4.3 Disposal of these radioactive wastes and discharges are controlled through an environmental permit (EPR/SB3035DF) issued by the Environment Agency under the Environmental Permitting Regulations 2016⁴⁹⁶. This environmental permit includes limits and conditions relating to the volume and activity of radioactive wastes to ensure that impacts are As Low As Reasonably Achievable (ALARA), meaning they have been deemed tolerable and acceptable and would prevent significant effects.
- 20.4.4 Whilst overall solid radioactive waste arisings would increase during the Proposed Works, permitted discharges of radioactive substances to air and water are expected to decrease relative to the operational phase and defueling conditions as baseline, reflecting cessation of fission reaction within the reactors, nuclear fuel removal and radioactive decay of residual inventories. Any required update to the existing permit would apply the existing management practices and would be supported by the assessment required under the Environmental Permitting Regulations 2016.
- 20.4.5 In addition, as set out in **Chapter 4: Legislation and Policy Context**, the control of exposure to radiation is also regulated by the Ionising Radiation

⁴⁹⁶ Environmental Permitting Regulations 2016. (online). Available at: <https://www.legislation.gov.uk/uksi/2016/1154/contents> (accessed 21/11/2025)

Regulations 2017⁴⁹⁷ and through compliance with the Nuclear Site Licence granted under the Nuclear Installations Act 1965⁴⁹⁸.

Consideration of the Proposed Works

20.4.6 The guidance on decommissioning of nuclear sites and release from regulation⁴⁹⁹ identifies “*what operators must do in order to achieve release from radioactive substances regulation*” and requires operators to produce and maintain:

- Waste Management Plan to:
 - Demonstrate radioactive waste management is optimised;
 - Identify proposed disposal routes over the lifetime of the Proposed Works; and
 - Demonstrate integrated planning for the management of both radioactive and conventional waste.
- Site-Wide Environmental Safety Case to:
 - Demonstrate that the health of members of the public and the integrity of the environment will be adequately protected.

20.4.7 The guidance specifies that “*Operators must apply for, and be granted, authorisation under the permit before making any form of radioactive waste disposal.*” This requirement applies specifically to on-site disposals, where waste remains within the licensed site boundary. It also clarifies that an updated Waste Management Plan and a Site-Wide Environmental Safety Case are necessary to obtain authorisation from the regulator. For Dungeness B, no on-site disposal activities are currently planned.

20.4.8 Dungeness B already has a Waste Management Plan and Site-Wide Environmental Safety Case, which will be updated as decommissioning plans are developed further and will demonstrate how activities associated with the management and disposal of radioactive waste and discharges would not result in significant effects.

Conclusion

20.4.9 Given that (i) these emissions are controlled through an environmental permit and (ii) that well-established controls exist within EDF and the Nuclear Restoration Services to manage potential radiological effects, these effects are scoped out of the EIA. The EIA will consider inter-related effects such as traffic movements associated with radioactive waste management.

⁴⁹⁷ Ionising Radiation Regulations 2017. (online). Available at:

<https://www.legislation.gov.uk/uksi/2017/1075/contents> (accessed 21/11/2025)

⁴⁹⁸ Nuclear Installations Act 1965. (online). Available at: <https://www.legislation.gov.uk/ukpga/1965/57> (accessed 21/11/2025)

⁴⁹⁹ Environment Agency, Natural Resources Wales, and the Scottish Environment Protection Agency (2018). Management of radioactive waste from decommissioning of nuclear sites: Guidance on Requirements for Release from Radioactive Substances Regulation. (online). Available at: <https://www.gov.uk/government/publications/decommissioning-of-nuclear-sites-and-release-from-regulation/decommissioning-of-nuclear-sites-and-release-from-regulation> (accessed 21/11/2025)

20.5 Major Accidents and Disasters

Introduction

- 20.5.1 The ISEP guidance document ‘Major Accidents and Disasters in EIA: A Primer’⁵⁰⁰ indicates that a major accidents and disasters assessment should identify the likely significant adverse environmental effects associated with the vulnerability of the Scheme to:
- ‘Accidents’ - an occurrence resulting from uncontrolled activities during construction, operation, and maintenance, and decommissioning (e.g. a major emission, fire or explosion); and
 - ‘Disasters’ - naturally occurring and man-made/external events, such as extreme weather events, ground related hazard events (e.g. subsidence, landslide, earthquake), and acts of terrorism.
- 20.5.2 Other terms often used in major accidents and disasters assessments include:
- ‘Hazards’ - non-malicious events, including natural disasters, industrial accidents and industrial action which may cause harm; and
 - ‘Threats’ – malicious attacks which may cause harm.
- 20.5.3 The purpose of addressing Major Accidents and Disasters (MA&D) within an EIA is therefore to identify, assess, and mitigate the risks associated with MA&D risk events relevant to the Proposed Works that could cause serious harm to people, property and the environment.
- 20.5.4 The ISEP Primer notes that the MA&D assessment should identify the embedded mitigation and response strategies required to demonstrate management of risks to be ALARP. Mitigation that can be considered to demonstrate ALARP include:
- Measures that are in place to control baseline risks (i.e. existing control measures);
 - Measures secured through compliance with legislation;
 - Measures that have been identified through the design of the Proposed Works; and
 - Measures to control risks during the Proposed Works.
- 20.5.5 It is generally considered that where risks are mitigated to be ALARP, they are not considered to be significant.

Baseline Conditions

Environmental Sensitive Receptors

- 20.5.6 As MA&D encapsulates a wide range of potential consequences, the resources and receptors identified within the other sections of this EIA

⁵⁰⁰ ISEP, Major Accidents and Disasters in EIA: An ISEP Primer (2020). (online). Available at: https://www.isepglobal.org/media/brbdeibt/j27374_iema_major_accidents_disasters_final-1.pdf (accessed 28/11/2025)

Scoping Report are relevant in the context of MA&D and are not repeated herein:

- **Chapter 8: Coastal Processes;**
- **Chapter 10: Historic Environment;**
- **Chapter 11: Human Health;**
- **Chapter 12: Landscape and Visual;**
- **Chapter 13: Marine Ecology;**
- **Chapter 16: Soils and Geology;**
- **Chapter 18: Terrestrial Ecology; and**
- **Chapter 19: Water Environment and Flood Risk.**

Relevant Existing Hazards and Threats

20.5.7 The UK National Risk Register⁵⁰¹, along with the Kent Community Risk Register⁵⁰², provide national and regional context in relation to risks and their management. These risk registers have been reviewed to identify existing hazards and threats (including natural hazards, major accident hazard sources, and other risks) that may be relevant to the Proposed Works, the Works Area and the surrounding area, or could potentially be exacerbated by the presence of the Proposed Works.

20.5.8 Other nearby facilities and operations within 5 km of the Works Area have been reviewed to identify the potential for off-site MA&D hazards and threats. The follow off-site sources have been identified:

- The decommissioning works being undertaken at Dungeness A;
- The Dungeness Substation, west of the Works Area;
- Lydd Airport, is operated by London Ashford Airport Limited and is licenced for the private charter flights (with restriction on aircraft size) and flying instruction. The Aviation Safety Network records aviation incidents to have occurred at Lydd as recently as September 2023⁵⁰³; and
- Lydd military firing range is located to the west of the Works Area and are used for military training.

Existing Regulatory Controls

20.5.9 A comprehensive regulatory regime is in place at Dungeness B under which the activities will be managed. This regulatory regime includes:

⁵⁰¹ Cabinet Office, National Risk Register 2025 (2025), (online). Available at: <https://www.gov.uk/government/publications/national-risk-register-2025> (accessed 28/11/2025)

⁵⁰² Kent and Medway Prepared, Community Risk Register, (online). Available at: <https://www.kentprepared.org.uk/community-risk-register> (accessed 28/11/2025)

⁵⁰³ Aviation Safeguard Network (online). Available at: <https://aviation-safety.net/asndb/country/G/67> (accessed 28/11/2025)

- The Health and Safety and Work Act 1974⁵⁰⁴, and other related legislation (such as the Construction (Design and Management) (CDM) Regulations 2015⁵⁰⁵), which provides protection to workers;
- The Nuclear Installations Act 1965 (as amended)⁵⁰⁶, under which a NSL was granted at Dungeness B. The NSL includes 36 licence conditions that Dungeness B must operate in accordance with. Nuclear Site Licence Condition 11 requires appropriate emergency plans and arrangements to be established and agreed with the local authority, for the range of accidents and incidents that could occur;
- The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009⁵⁰⁷, controlling the movement of dangerous goods;
- Air Navigation Order 2016⁵⁰⁸, and supporting guidance (CAP 1096⁵⁰⁹) which detail guidance to crane users on the crane notification process and lighting and marking requirements applicable to cranes.
- The Nuclear Security Regulations 2003⁵¹⁰, which requires “*Civil licensed nuclear sites and approved carriers of nuclear material are also required to protect sites and material against acts of theft and sabotage in accordance with Nuclear Site Security Plans (NSSPs) and Transport Security Statements (TSS) approved by ONR*”⁵¹¹; and
- The Radiation (Emergency Preparedness and Public Information) Regulations 2019⁵¹², which set out the requirements for emergency preparedness and response in relation to premises which work with ionising radiation.

20.5.10 Whilst the above is not intended to represent an exhaustive list of the regulation of the nuclear industry, it demonstrates that controls already exist to ensure that the likelihood of a radiological accident occurring is extremely low. In addition, the regulatory framework requires that any credible radiological hazards are designed and managed such that the potential consequences of an accidental release are minimised to levels that would not give rise to significant environmental effects. Taken together, these

⁵⁰⁴ The Health and Safety and Work Act 1974 (online). Available at:

<https://www.legislation.gov.uk/ukpga/1974/37/contents> (accessed 28/11/2025)

⁵⁰⁵ CDM Regulations 2015 (online). Available at: <https://www.legislation.gov.uk/uksi/2015/51/contents> (accessed 28/11/2025)

⁵⁰⁶ The Nuclear Installations Act 1965 (online). Available at:

<https://www.legislation.gov.uk/uksi/2009/1348/contents> (accessed 18/11/2025)

⁵⁰⁷ The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (online). Available at:

<https://www.legislation.gov.uk/uksi/2016/765/contents> (accessed 28/11/2025).

⁵⁰⁹ Civil Aviation Authority, CAP 1096 (online). Available at: <https://www.caa.co.uk/our-work/publications/documents/content/cap1096/> (accessed 28/11/2025)

⁵¹⁰ The Nuclear Security Regulations 2003 (online). Available at:

<https://www.legislation.gov.uk/uksi/2003/403/contents/made> (accessed 28/11/2025)

⁵¹¹ Cabinet Office, Nuclear Industries Security Regulations 2003 (2014), (online). Available at:

https://assets.publishing.service.gov.uk/media/5a7e24baed915d74e6224624/Nuclear_Industries_Security_Regulations.pdf (accessed 28/11/2025)

⁵¹² The Radiation (Emergency Preparedness and Public Information) Regulations 2019 (online).

Available at: <https://www.legislation.gov.uk/uksi/2019/703/contents> (accessed 28/11/2025)

controls provide assurance that no significant effects on any receptors are anticipated.

20.5.11 Whilst it is acknowledged that legislation is likely to be updated over the full duration of the Proposed Works, it can be assumed that future revisions or additional legislation would be in general accordance with the current approach, such that mitigation of MA&D to ALARP remains a valid EIA assumption.

20.5.12 In accordance with the ONR's Guidance on the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations, the Environmental Management Plan will be submitted to ONR on an annual basis to provide assurance that, as appropriate, relevant updates would be captured as required throughout the Proposed Works.

Control of Major Accident Hazards (COMAH) Regulations 2015

20.5.13 Dungeness B is currently a COMAH establishment. Once defueling is complete and all COMAH-qualifying substances are removed, the site will no longer fall under the COMAH Regulations. COMAH substances including but not limited to bulk hydrocarbons, hydrogen and hydrazine are planned to be removed before the Proposed Works begin, resulting in a substantial reduction in the Dungeness B's major accident hazard inventory and overall risk profile and registration under COMAH will not be required for the Proposed Works.

20.5.14 The wider nuclear regulatory framework (as outlined in Paragraph 20.5.9), supported by the Integrated Management System, provides proportionate arrangements for emergency preparedness and response that reflect this reduced hazard environment.

Safety Case

20.5.15 In accordance with the Nuclear Site Licence, a safety case relevant to the current status of the station, must be provided to and approved by ONR to demonstrate how people and the environment will be protected from any radiological hazard.

20.5.16 The existing safety case reflects the status of Dungeness B in a post operational state, during defueling. A Post-Defueling Safety Case will be prepared and submitted to ONR, at the appropriate time, to reflect the change in operations as well as the risks present.

20.5.17 The safety case is considered a mitigation within this assessment for all MA&D hazards and threats and is not repeated in **Table 20-1**.

Assessment Methodology

20.5.18 The ISEP Primer states that the MA&D hazard or threat can be scoped out of the EIA, if the assessment can demonstrate:

"...there is no source-pathway-receptor linkage of a hazard that could trigger a major accident and/or disaster or potential for the scheme to lead to a significant environmental effect; or

all possible major accidents and/or disasters are adequately covered elsewhere in the assessment or covered by existing design measures or compliance with legislation and best practice.”

20.5.19 However, if the above criteria cannot be satisfied, then the MA&D hazard or threat should be scoped in.

20.5.20 The following staged process has been followed to consider MA&D relevant to the Proposed Works:

- Stage 1: Identification of risk events:
 - All MA&D risk events have been collated into an Environmental Risk Assessment.
- Stage 2: Screening of risk events:
 - Each risk event has been reviewed to determine whether a ‘source-pathway-receptor’ linkage exists to any of the identified environmental receptors; and
 - For each risk event with a linkage pathway, the reasonably foreseeable ‘worst-case’ environmental consequence (i.e. the likely significant effect) has been identified.
- Stage 3: Identification of mitigation:
 - Mitigation measures that are either embedded within design, required for compliance with legislation, other regulatory regimes, or represent standard practice, and eliminate or reduce the risk of risk event occurring have been identified; and
 - Following the consideration of whether any further mitigation is required, the likelihood of the risk event occurring has been determined based on the probability criteria.
- Stage 4: Consideration of ALARP:
 - Following the consideration of all mitigation proposed, commentary has been included on whether the risk has been mitigated to be ALARP.

20.5.21 **Table 20-1** presents the Environmental Risk Assessment that has been undertaken for the Proposed Works.

Table 20-1: Environmental Risk Assessment

Risk Event	Source	Pathway	Receptor	Reasonable worst consequence if event did occur	Mitigation	Mitigated to ALARP
Flooding from sea, rivers, surface water, groundwater and sewers.	Extreme weather event	Flood event. Surface water flooding. Flash flooding.	Nearby sensitive environmental receptors.	Serious harm to sensitive environmental receptors.	Comprehensive infrastructure is in place at Dungeness B to prevent flooding from the sea. Key features include:	Yes
			Population in surrounding residential areas.	Evacuation from homes and/or the area.	An extensive shingle berm on the beach to the south of the site/Dungeness A. The berm is maintained by EDF using imported shingle. The purpose of the berm is to limit sea water overtopping and limit wave action on the flood wall (described below).	
			Key infrastructure.	Human injury and health impacts.	Rock armour has been installed on the northern side of the shingle berm (between the power station and the berm). Up to 10,000 tonnes of rock armour was installed in 2014 to enhance the resilience of the existing shingle berm.	
			Workers, including temporary workers or visitors, within the Works Area.		Flood wall and foundations: The site's perimeter flood wall is designed to withstand a 1 in 10,000 year flooding event and has a lifespan of 100 years. It is designed to withstand overtopping of the shingle berm/rock armour. The wall foundations are excavated to 600mm deep in shingle areas. Reinforced concrete base dimensions vary (typically 2m wide x 0.6m deep), with adjustments for ground dips and hardstanding areas. The wall is at least 7.2m ODN around the operational site and is 7.7m ODN on the south side of the site. To allow access to the site industry standard personnel and vehicle flood gates are available in the wall. An impermeable ground-level apron has been installed along the toe of the flood wall. This feature is required due to the highly permeable underlying soils and is designed to prevent floodwater from bypassing the wall, reduce uplift pressures, and limit subsurface flow beneath the wall during flood events.	
			Proposed Works.		The existing surface water drainage system at Dungeness B provides a comprehensive suite of measures commensurate with the requirements of a nuclear licensed site. These include engineered conveyance routes, attenuation features, controlled discharge points, and a structured maintenance regime. The system's design and maintenance arrangements implemented through the Integrated Management System provides the resilience and reliability to ensure the site is not at risk of flooding or to cause flooding to an off-site receptor. A Flood Risk Assessment (FRA) will be submitted with the EIADR application. This will inform the Proposed Works and set out any proposed mitigation requirements in relation to surface water, groundwater, tidal and fluvial sources and residual flood risks.	
Storms	Extreme weather event	Movement of debris and loose construction equipment.	Workers, including temporary workers or visitors, within the Works Area.	Human injury and health impacts.	The Integrated Management System sets out clear procedures for the monitoring of adverse weather conditions that in turn may affect the Proposed Works. Where weather conditions present an unsafe environment, work would be suspended until it is safe to proceed. In addition, Nuclear Site Licence Condition 11 requires the implementation of robust emergency arrangements, and these are defined within the Integrated Management System to ensure the provision of trained first aiders and proportionate emergency response capabilities for the activities being undertaken.	Yes
			Proposed Works.	Damage to infrastructure.		
			Key infrastructure.		Mitigation measures also include the requirement for contractors to develop and implement a safe system of work, setting out how health and safety risks, including those covered under the Health and Safety at Work Act, will be managed. This includes the identification, assessment, and reduction of risks in accordance with current legal requirements and industry best practice. Extremes of temperature and other climatic risks will be explicitly considered within the relevant task-based risk assessments to ensure that suitable controls are in place prior to work commencing.	
Droughts	Extreme weather event	Ground shrinkage.	Proposed Works.	Damage to infrastructure.		Yes

Risk Event	Source	Pathway	Receptor	Reasonable worst consequence if event did occur	Mitigation	Mitigated to ALARP
Heatwaves	Extreme weather event	Impact on the ability of the workers	Workers, including temporary workers or visitors, within the Works Area.	Human injury and health impacts		Yes
Low temperatures and heavy snow (extreme cold weather resulting in snow and ice)	Low temperatures and heavy snow	Snow and ice causing a construction traffic accident or other construction accident.	Workers, including temporary workers or visitors, within the Works Area. Proposed Works	Human injury and health impacts Damage to infrastructure		Yes
Wildfires	Wildfire caused by drought, heatwaves or lightning strike spreading to construction machinery, fuel storage, other buildings and the surrounding environment.	Dry conditions due to drought and/or heatwave enabling a fire to spread to construction machinery and other machinery and buildings Fire spreading from construction machinery to surrounding environment and infrastructure	Workers, including temporary workers or visitors, within the Works Area. Nearby sensitive environmental receptors. Key infrastructure. Proposed Works	Human injury and health impacts Damage to property and infrastructure. Serious harm to sensitive environmental receptors.	Fire safety risks at the Works Area will be managed in compliance with CDM Regulations 2015 and relevant good industry practice. NSL Condition 11 also includes requirements for emergency response.	Yes
Ground or structural collapse	Failure of structure or geotechnical solution	Building Collapse	Workers, including temporary workers or visitors, within the Works Area. Nearby sensitive environmental and residential receptors. Key infrastructure. Proposed Works	Human injury and health impacts Damage to property and infrastructure. Serious harm to sensitive environmental receptors.	New waste facility built infrastucture (where required) would be designed in accordance with the Building Regulations 2010, relevant British Standards and Eurocodes, and ONR civil engineering expectations, ensuring robust resistance to credible ground movement and loading. Residual risk of structural or ground-related failure is extremely low and ALARP. Existing retained plant, equipment and structures that may affect safety will be maintained and controlled in accordance with the Nuclear Site Licence conditions and relevant UK demolition and decommissioning standards (including BS 6187:2011 Code of practice for full and partial demolition). Dismantling will follow established nuclear-industry procedures, ensuring safe sequencing, structural stability and hazard management throughout.	Yes

Risk Event	Source	Pathway	Receptor	Reasonable worst consequence if event did occur	Mitigation	Mitigated to ALARP
Radiological accidents within the Works Area	Radiological wastes	Activities as part of the Proposed Works	Workers, including temporary workers or visitors, within the Works Area.	Human injury and health impacts	A comprehensive regulatory regime is in place under which the activities will be managed (see paragraph 20.5.9 above). The Nuclear Licensing regime ensures that the likelihood of a radiological accident occurring is sufficiently low and to ALARP requirements such that it is considered it will also ensure that there will be no significant effects to any receptors.	Yes
			Nearby sensitive environmental and residential receptors.	Damage to property and infrastructure. Serious harm to sensitive environmental receptors.		
Radiological accidents in transport	Radiological wastes	Activities as part of the Proposed Works	Workers, including temporary workers or visitors, within the Works Area.	Human injury and health impacts		Yes
			Nearby sensitive environmental and residential receptors.	Damage to property and infrastructure. Serious harm to sensitive environmental receptors.		
Fire/explosion (including from unexploded ordnance (UXO) or utility strike)	Fire/Explosions	Fire on-site during construction Disturbance of UXO during construction leading to explosion	Workers, including temporary workers or visitors, within the Works Area.	Human injury and health impacts	Fire safety is managed through established Integrated Management System procedures that set out the controls required to prevent, detect, and respond to fire hazards across all stages of work. These include formal fire-risk assessments; controls on ignition sources and hot-work through a permit-to-work system; housekeeping and waste-management requirements to limit fuel sources; and maintenance of fire-detection, alarm, and suppression systems in accordance with relevant British Standards. Competent personnel, site-wide emergency arrangements, and routine inspections are embedded within the Integrated Management System to ensure that fire precautions remain effective, and that any emerging risks are identified and addressed promptly.	Yes
			Adjacent sensitive environmental receptors and human receptors in surrounding residential areas. Key infrastructure. Proposed Works	Serious harm to sensitive environmental receptors. Damage to property and infrastructure	Excavation activities are managed under existing Integrated Management System procedures for safe systems of work, including controlled excavation methods, supervision, and defined hold-points, ensuring that risks associated with striking buried services are effectively managed. Buried services surveys are undertaken prior to breaking ground within the Proposed Works areas as part of the permit-to-work process for excavation. Any response required on site would be covered by the emergency arrangements and the implementation of a safe system of work which would be produced by the contractor(s) to set out how health and safety matters are managed, risks are identified and reduced in accordance with the current best practices and legal requirements. Excavation activities within the scope of the Proposed Works are restricted to areas of made ground associatedwith the construction of the original power station. The risk of encountering UXO is considered low. If deemed relevant by further assessment within Chapter 16: Soils and Geology , the Environmental Management Plan will outline the procedure required if a UXO is found during construction.	

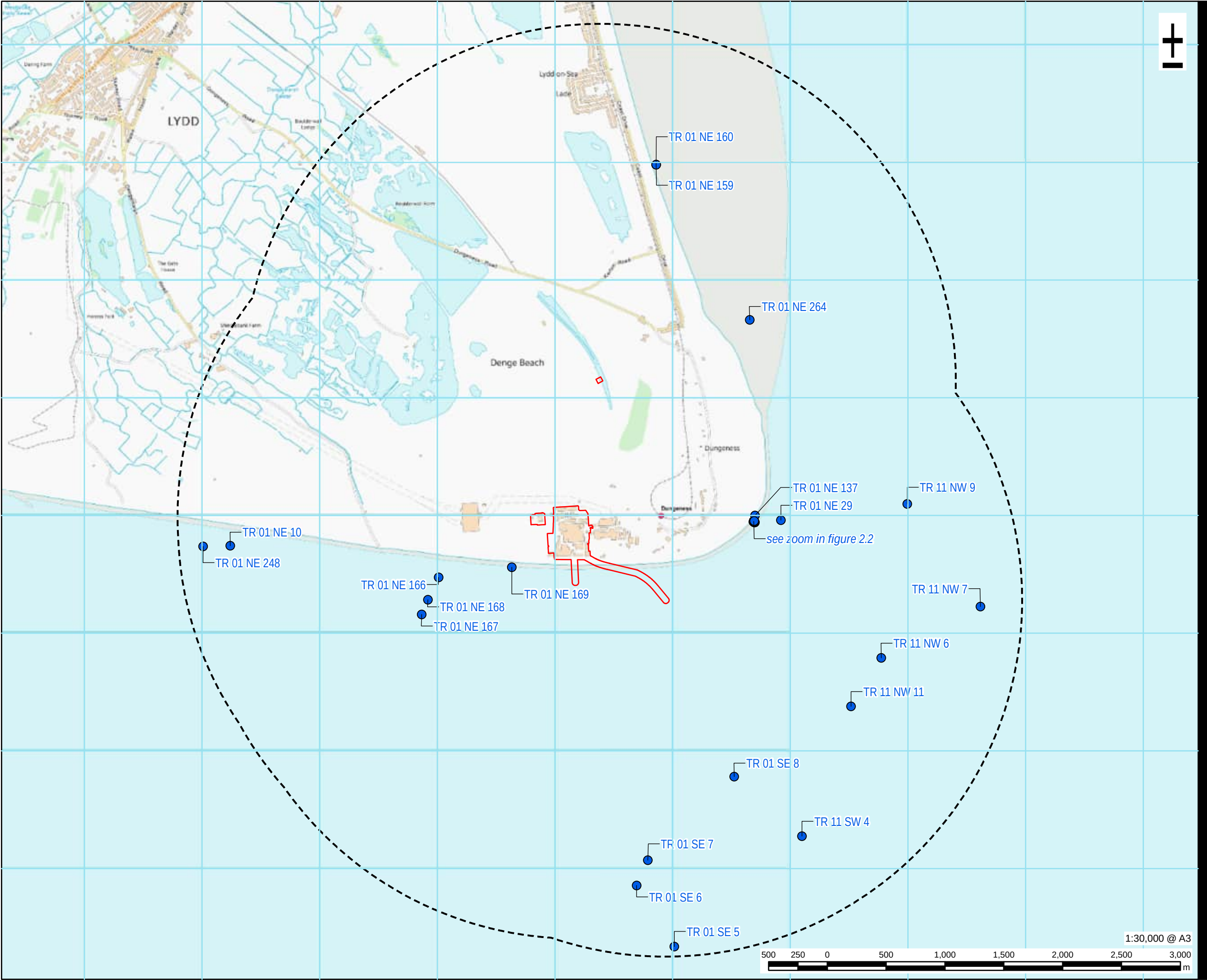
Risk Event	Source	Pathway	Receptor	Reasonable worst consequence if event did occur	Mitigation	Mitigated to ALARP
Pollution Incident	Flash flooding Surface water flooding Fuel spillage Accidental release of chemicals Ground Contamination	Pollution event (caused by construction related fuel spillage or movement of contaminated ground) in hydrologically connected watercourse caused by flooding. Pollution event related to release of ground contaminants migrating due to construction work e.g. via runoff. Direct damage to surrounding environment by fuel spillage.	Workers onsite as well as the adjacent population in surrounding residential areas. Adjacent sensitive environmental receptors and human receptors in surrounding residential areas.	Human injury and health impacts Serious harm to sensitive environmental receptors.	COMAH-qualifying substances with the potential to cause a Major Accident to the Environment (MATTE) have been removed from site or are held at significantly reduced inventories that remain below COMAH thresholds. As a result, the Proposed Works do not pose a credible MATTE-level environmental hazard. The Integrated Management System establishes established controls for the safe storage and handling of oils and chemicals, including requirements for secondary containment (e.g., bunding), spill prevention measures, routine inspection, and prompt incident reporting. These arrangements ensure that pollution risks arising from loss of containment are effectively mitigated and remain ALARP. The Integrated Management System sets out measures for the monitoring of adverse weather conditions and emergency response arrangements.	Yes
Aviation Incident	Aircraft operating from Lydd Airport	Presence of fixed crane to undertake dismantling works	Workers onsite as well as the adjacent population in surrounding residential areas. Adjacent sensitive environmental receptors and human receptors in surrounding residential areas. Key infrastructure	Human injury and health impacts Serious harm to sensitive environmental receptors Damage to infrastructure.	The Environmental Management Plan will include the provisions outlined within CAP1096 on the notification of the Civil Aviation Authority in relation to the requirement for appropriate lighting.	Yes
Impairment, interruption or severance of existing utilities (electricity, gas, water and telecommunications).	Accidental strike of a live service connection	Groundworks could cause an accidental strike of a live service connection (e.g. sewer, water main, high-pressure gas main) by construction machinery	Workers, including temporary workers or visitors, within the Works Area. Key infrastructure	Human injury and health impacts Serious harm to sensitive environmental receptors Serious contamination of non-human receptors. Damage to infrastructure	The Integrated Management System includes measures for the protection of existing utilities to be established, such as surveys, inspection pits and clearly demarcated clearances.	Yes

Risk Event	Source	Pathway	Receptor	Reasonable worst consequence if event did occur	Mitigation	Mitigated to ALARP
Outbreak of Disease including animal health- notifiable disease, emerging infectious disease and pandemic influenza.	During construction an Influenza type disease (pandemic) outbreak could occur.	Influenza type disease (pandemic) outbreak could spread amongst the workers, including temporary workers or visitors, on the Site	Workers onsite as well as the adjacent population in surrounding residential areas.	Human injury and health impacts	No Project-specific mitigation is identified. National and regional guidelines would be enforced on site as appropriate.	Yes
Severe Meteorology	Electrical storm	Impact on the ability of the construction workers of the Proposed Development to work.	Workers onsite	Human injury and health impacts	There is considered to be no pathway for the baseline risk for these natural hazards to be increased. Whilst the presence of construction workers would introduce new receptor, a significant space weather event may cause people on the ground to receive an unusual radiation dose, however it would be far too small to produce an observable health effect.	Yes
Earthquakes	Earthquake	No pathway exists to exacerbate the baseline risk Structural failure is considered under 'Ground or Structural Collapse' Radiological consequences are considered under 'Radiological accidents within the Works Area'	As there is no pathway, there cannot be a receptor.	None identified as source-pathway receptor linkage is not present.	There is considered to be no pathway for the baseline risk for these natural hazards to be increased.	N/A
Volcanic Eruptions	Volcanic eruption	No pathway exists to exacerbate the baseline risk	As there is no pathway, there cannot be a receptor.	None identified as source-pathway receptor linkage is not present.	There is considered to be no pathway for the baseline risk for these natural hazards to be increased.	N/A

Risk Event	Source	Pathway	Receptor	Reasonable worst consequence if event did occur	Mitigation	Mitigated to ALARP
Road Traffic Accident on the wider traffic network	Transport accident involving construction vehicles	Collision between construction vehicles and/or non-site related vehicles	Road users of the surrounding network.	Human injury and health impacts	An assessment of the increased risk of road traffic accidents will be provided as part of Chapter 17: Traffic and Transport . Procedures to address any highway incidents or vehicle breakdown of construction traffic couldbe a requirement of the Traffic Management Plan.	Yes
Railway Incident	Use of the existing railhead.	Use of railhead for logistics	Existing rail infrastructure	Human injury and health impacts	If the existing railhead is to be used as part of the Proposed Works, an appropriate operational procedure would be put in place and, where relevant, a training programme would be developed for operatives.	Yes
			Users of the railway	Damage to infrastructure	The works would only be undertaken by skilled and trained operatives.	
Navigational Risk	Boating Incident as a result of the presence of construction works and machinery within the English channel.	Works to provide the AAEDL that could introduce a temporary navigational risks	Recreation or commercial vessels within the Works Area	Human injury and health impacts	A Navigational Risk Assessment would be prepared prior to the commencement of the Marine Works to identify appropriate controls for the works in the marine environment. This would be prepared in consultation with the Maritime and Coastguard Agency, Marine Management Organisation, Trinity House and the Royal Yachting Association.	Yes
			Sensitive environmental receptors	Damage to infrastructure and property Serious contamination of sensitive environmental receptors.		
Cyber Security	Hacker Security breach of site	No pathway exists to exacerbate the baseline risk	As there is no pathway, there cannot be a receptor.	None identified as source-pathway receptor linkage is not present.	Regulatory mechanisms and existing site processes will ensure that there are no significant pathways. In compliance with the conditions of the NSL, information security arrangements will be established and adequate arrangements implemented for safe operation. A periodic and systematic review and reassessment of the safety case would be undertaken.	N/A

Conclusion

20.5.22 **Table 20-1** demonstrates that, given the existing regulatory regime and following the implementation of measures to be included in the Environmental Management Plan, all identified MA&D risks are ALARP.



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PROJECT

Dungeness B Nuclear
Decommissioning

CLIENT

EDF Energy Nuclear
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LEGEND

- The Works Area
- 3km Study Area
- Non-Designated Maritime Heritage Assets**
 - Maritime Monument

NOT PROTECTIVELY MARKED

NOTES

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ISSUE PURPOSE

EIA Scoping Report

PROJECT NUMBER

60739933

FIGURE TITLE

Non-Designated Maritime Heritage
Assets

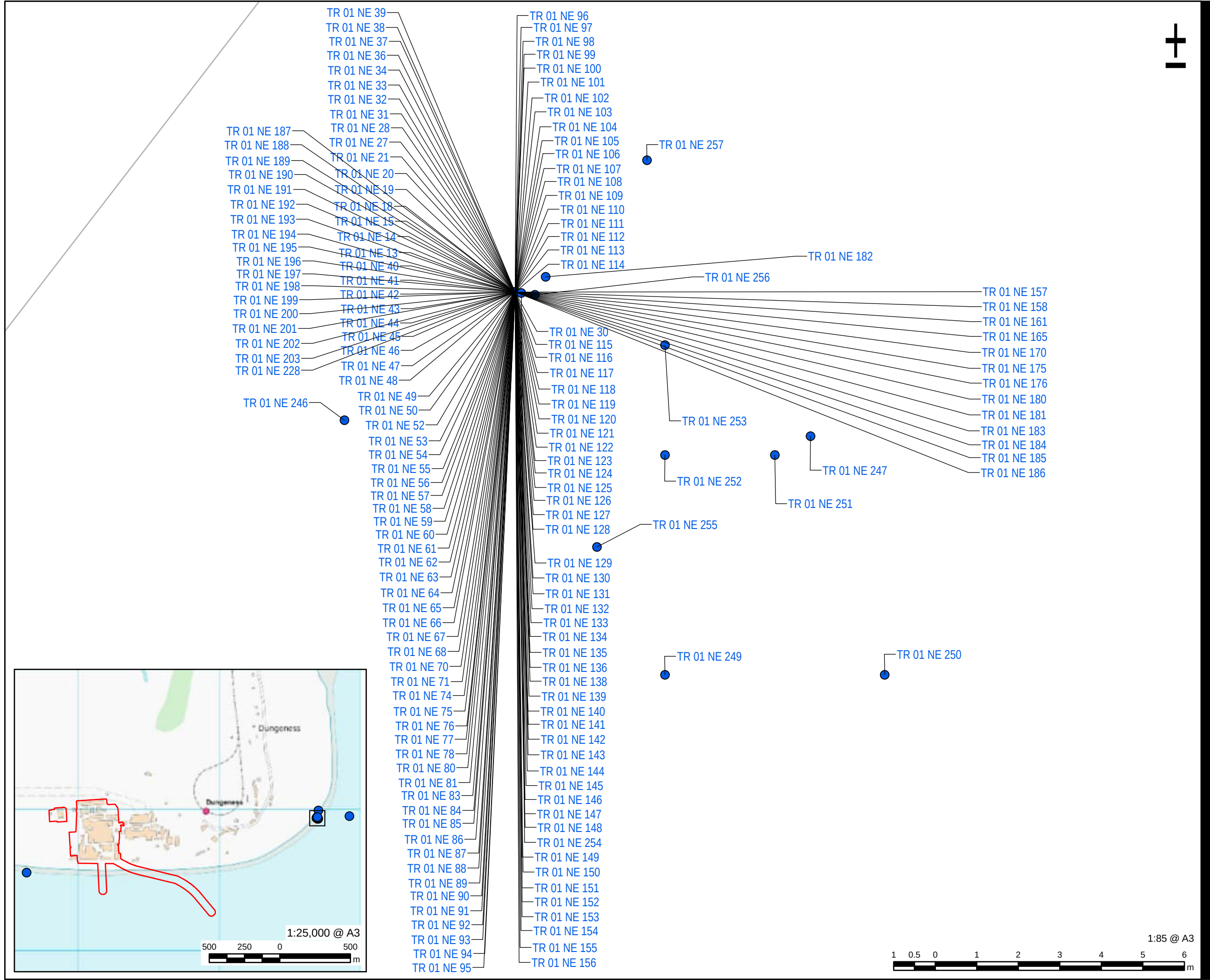
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Figure 20-1-1

REV

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DOCUMENT NUMBER



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ISSUE PURPOSE

EIA Scoping Report

PROJECT NUMBER

60739933

FIGURE TITLE

Non-Designated Maritime Heritage
Assets - Zoom In

FIGURE NUMBER

Figure 20-1-2

REV

0

DOCUMENT NUMBER

21. Structure of the Environmental Statement

- 21.1.1 The ES will consist of three volumes and a Non-Technical Summary (NTS). This section provides a summary of each document that will form the ES.
- 21.1.2 **ES Volume 1: Main Report** - this will form the main body of the ES, detailing the results of the environmental assessment, likely significant effects arising from the Proposed Works, and the proposed mitigation measures. The ES is divided into a number of background and technical chapters, each being supported with figures and tabular information.
- 21.1.3 ES Volume 1 will consider the environmental effects associated with a number of identified topics, which may receive significant environmental effects. Each topic will be assigned a separate technical chapter in the ES as follows:
- Chapter 6: Air Quality;
 - Chapter 7: Conventional Wastes and Materials;
 - Chapter 8: Coastal Processes;
 - Chapter 9: Climate Change;
 - Chapter 10: Historic Environment;
 - Chapter 11: Human Health;
 - Chapter 12: Landscape and Visual;
 - Chapter 13: Marine Ecology;
 - Chapter 14: Noise and Vibration;
 - Chapter 15: Socio-economics;
 - Chapter 16: Soils and Geology;
 - Chapter 17: Traffic and Transport;
 - Chapter 18: Terrestrial Ecology; and
 - Chapter 19: Water Environment and Flood Risk.
- 21.1.4 In addition, to the above the chapters outlined below will be provided as part of the ES;
- Chapter 1: Introduction;
 - Chapter 2: Consideration of Alternatives;
 - Chapter 3: The Decommissioning and Dismantling Works;
 - Chapter 4: Legislation and Policy Context;
 - Chapter 5: EIA Methodology;
 - Chapter 20: Other Environmental Topics;
 - Chapter 21: Effect Interactions and Cumulative Effects Assessment; and

- Chapter 22: Summary of Effects.

21.1.5 **ES Volume 2: Figures** – A set of figures to accompany ES Volume 1.

21.1.6 **ES Volume 3: Technical Appendices** – A complete set of appendices will be provided for reference. These comprise of background data, technical reports, tables, figures and surveys which support the assessments in ES Volume 1.

21.1.7 **ES NTS** – The NTS will be presented in a separate document and provides a concise description of the Proposed Works, the considered alternatives, baseline, assessment methodology, potential environmental effects and mitigation measures. The NTS will be designed to provide information on the Proposed Works in an accessible format which can be understood by a wide audience.

22. Summary and Conclusions

22.1 Summary Scope of the EIA

- 22.1.1 **Table 22-1** provides a summary of the proposed scope of the EIA to be reported in the Environmental Statement. As considered within the technical assessments within **Chapters 6 to 20** of this EIA Scoping Report, **Table 22-1** highlights where there is the potential for significant effects associated with the Proposed Works which will be taken forward for detailed assessment – the table also details those receptors/effects which are scoped out from further assessment due to the likely absence of significant effects.
- 22.1.2 Aspects that are proposed to be scoped out of the EIA are highlighted grey in **Table 22-1**.

Table 22-1: EIA Scoping Report Summary

Aspect	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
Air Quality			
<i>Construction Dust – Impacts of soiling associated with dust generated during the dismantling and construction activities on nearby land use amenity and nature conservation sites</i>	Scoped in	Scoped out Any emissions to air during the Care and Maintenance Phase would be negligible during this period of relative inactivity. The Works Area would be maintained to allow further radioactive decay of materials within the Safestore. Works in this phase would consist of monitoring and maintenance, therefore no significant effects are expected during that time.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Traffic Emissions - Potential changes in the levels of road traffic emissions, caused by exhaust emissions from works traffic on the local road network, and the potential impact on nearby human health sensitive receptors and nature conservation sites</i>	Scoped in		Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Point source emissions</i>	Scoped out Combustion emission sources used during the defueling process may be partly replaced on a temporary basis by lower capacity package supplies while there is a lower demand during the Proposed Works, but any temporary package supply would be expected to have a substantially lower capacity (and, hence, lower emissions) than the current installed capacity of combustion plant.		
<i>Radionuclides</i>	Scoped out The regulation for, and impact of, radioactive discharges on the environment and human health is undertaken through a permitting regime under the Environmental Permitting Regulations. These discharges and their impacts are assessed in detail during the process for applying for a permit (or a variation) and are regulated by the Environment Agency through routine regulatory interactions (see Chapter 4: Legislation and Policy Context). Given this, the impact of atmospheric radioactive discharges on the environment and human health is scoped out of the air quality assessment.		

Aspect	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
Conventional Wastes and Materials			
<i>Changes in available landfill void capacity - reduction of landfill capacity and the unsustainable use or loss of resources to landfill that results in the temporary or permanent degradation of the natural environment</i>	Scoped in	Scoped out Due to the nature of this phase and the relative inactivity, this phase is scoped out of the assessment.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Changes in the availability of materials</i>	Scoped out Forecast effects (using professional judgement) are considered negligible given the scale and nature of the Proposed Works and the national and regional availability of materials such as concrete, aggregate, asphalt and steel (i.e. would not be more than 5% of national or regional material consumption).		
<i>Waste arising from extraction, processing and manufacture of construction components and products</i>	Scoped out Assumed that these products and materials would be developed in a manufacturing environment with their own waste management plans, facilities and supply chain, which are potentially in different regions of the UK or the world and therefore outside of the geographical scope of this assessment. Such matters cannot be accurately predicted and assessed as they relate to procurement decisions that cannot be assured.		
<i>Other environmental impacts associated with the management of waste from the Proposed Works (on and off-site)</i>	Scoped out Other environmental and human health impacts associated with the management of materials and waste from the Proposed Works (e.g. on water resources, health, air quality, noise or traffic) resulting from the generation, handling, on-site temporary storage or off-site transport of materials and waste will be addressed separately in the ES within the relevant technical chapters.		
<i>Changes to allocated/safeguarded mineral site(s)</i>	Scoped out There are no allocated mineral sites within the Works Area.		
<i>Changes to allocated/safeguarded waste site(s)</i>	Scoped out There are no allocated waste sites within the Works Area. There are no authorised or historic landfills, permitted waste sites or waste site applications within the Works Area.		

Aspect	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
Coastal Processes			
Increased suspended sediment concentration in the water column.	Scoped in	Scoped out No coastal or marine works would be undertaken during this phase.	Scoped out No coastal or marine works would be undertaken during this phase.
Changes to Seabed Morphology – Discharge flow from the outfall pipes could cause scouring of the seabed around the outfall, altering its morphology	Scoped in		
Release of sediment-bound contaminants into the water column	Scoped in		
Changes to seabed morphology – temporary disturbance of sediments	Scoped out Effects from temporary disturbance of sediments from barges and the use of anchors upon seabed morphology would be negligible (not significant).		
Changes to beach morphology	Scoped out There is no proposed change to the existing infrastructure in the coastal setting, therefore there would be no change to current baseline conditions, including to sediment transport patterns that influence beach morphology.		
Climate Change			
Lifecycle Greenhouse Gas (GHG) Impact Assessment	Scoped in	Scoped in Applying professional judgement, qualitative assessments will be undertaken.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
Climate Change Resilience Assessment (CCRA)	Scoped in		

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	The CCRA will consider the following climate impacts: • Extreme weather events (including wildfires and droughts); • Changes in temperature; • Changes in precipitation; • Fluvial flooding; • Surface flooding; • Groundwater flooding; and • Change to the baseline wind conditions.		
<i>In-combination Climate Change Impact (ICCI) Assessment</i>	Scoped in The ICCI assessment will consider the following climate parameters: • Extreme weather events (including wildfires and droughts); • Changes in temperature; • Changes in precipitation; and • Change to the baseline wind conditions.		
Historic Environment			
<i>Change to the setting of designated and non-designated heritage assets</i>	Scoped in	Scoped in	Scoped in
<i>Direct effects on archaeology</i>	Scoped in* To be confirmed following the completion of a Desk-Based Assessment.	Scoped out Significant effects are not anticipated during this period of relative inactivity due to an absence of new ground disturbance.	Scoped in* To be confirmed following the completion of a Desk-Based Assessment.
Human Health			
<i>Physical activity</i>	Scoped out There are not expected to be any behavioural change effects relating to physical activity which are not already covered under other determinants of health below.		
<i>Risk taking behaviour</i>	Scoped out		

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	There are not expected to be any behavioural change effects on the local population as a result of the Proposed Works. Issues such as addictions and communicable diseases are not considered to be relevant.		
<i>Diet and nutrition</i>	Scoped out Given the nature of the Proposed Works, there are no anticipated direct effects on the local population relating to diet and nutrition which should be assessed under this determinant.		
<i>Housing</i>	Scoped out The Proposed Works would not include provision of housing, loss of housing or are likely to lead to displacement of housing.		
<i>Relocation</i>	Scoped out Given the nature of the Proposed Works and the Works Area, the Proposed Works are not anticipated to require any relocation of residents, businesses or other stakeholders.		
<i>Open space, leisure and play</i>	Scoped in	Scoped out Given the nature of the Care and Maintenance Phase, no open space and recreational facilities effects are anticipated.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Transport modes, access and connections</i>	Scoped in	Scoped out Given the nature of the Care and Maintenance Phase, no effects on transport modes, access and connections within the study area are anticipated.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Community safety</i>	Scoped out Given the nature and scale of the Proposed Works, which would be primarily undertaken within the secure power station site, the Proposed Works are not anticipated to impact upon community safety.		

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<i>Social participation, interaction and support – includes impacts on local people's sense of wellbeing and social cohesion</i>	Scoped in	Scoped out Given the nature of the Care and Maintenance Phase, no effects on social participation, interaction and support within the study area are anticipated.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Community identity, culture, resilience and influence</i>	Scoped in	Scoped in Applying professional judgement, qualitative assessments will be undertaken.	
<i>Impacts on education and training</i>	Scoped in	Scoped out The workforce required for the Care and Maintenance Phase is expected to be minimal, and there would therefore be little opportunity for education or training opportunities.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Impacts on employment and income</i>	Scoped in	Scoped out The workforce required for the Care and Maintenance Phase is expected to be minimal with little overall effect on employment or income.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Climate change mitigation and adaption - impact to human health through altering pollutant emissions that drive climate change</i>	Scoped in	Scoped out Given the nature of the Care and Maintenance Phase, no effects on climate change mitigation and adaption within the study area are anticipated.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.

Aspect	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
<i>Air quality - impact to human health through changes in air quality</i>	Scoped in	Scoped out Given the nature of the Care and Maintenance Phase, no effects on air quality within the study area are anticipated.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Water quality - contamination of water resources through transmission through surface and/or groundwater, including flooding</i>	Scoped in	Scoped out Given the nature of the Care and Maintenance Phase, no effects on water quality within the study area are anticipated.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Land quality – impact on human health through work in and around potential areas of contamination</i>	Scoped in	Scoped out Given the nature of the Care and Maintenance Phase, no effects on land quality within the study area are anticipated.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Impact to human health through noise effects</i>	Scoped in	Scoped out Given the nature of the Care and Maintenance Phase, no effect on noise within the study area during this phase.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Vibration</i>	Scoped out Vibration has been scoped out of the EIA due to the likely absence of significant effect – it follows that there would not be any relevant effects on human health within the study area during the Proposed Works.		
<i>Radiation</i>	Scoped out Radiological effects related to the Proposed Works will be covered outside of the ES in line with relevant licenses and regulations.		

Aspect	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
<i>Built environment</i>	Scoped out The Proposed Works are located in a rural area and are therefore not anticipated to impact the built environment during the Initial Decommissioning Works and Final Site Clearance. Given the nature of the Care and Maintenance Phase, no effects on the built environment within the study area are anticipated.		
<i>Health and social care services - indirect impacts relating to an incoming workforce and transport severance</i>	Scoped in	Scoped out Given the nature of the Care and Maintenance Phase, no effects on health and social care services within the study area are anticipated.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Landscape and visual - affecting the scenic beauty of nearby landscapes and viewpoints could in turn adversely affect sense of place and other amenity benefits, potentially leading to adverse mental health effects</i>	Scoped in	Scoped in Applying professional judgement, qualitative assessments will be undertaken.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Wider societal infrastructure and resources</i>	Scoped out Given the nature and scale of the Proposed Works, no impacts upon wider societal infrastructure and resources are anticipated.		
Landscape and Visual			
<i>Loss of landscape elements and/or change in landscape character</i>	Scoped in	Scoped in Applying professional judgement, qualitative assessments will be undertaken.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Change in Seascape character</i>	Scoped out Given the nature and scale of the Proposed Works, no significant adverse effects on seascape character are anticipated. The Final Site clearance would result in the final removal of all infrastructure within Area A of the Works Area which could have a beneficial impact on seascape.		

Aspect	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
<i>Change in visual amenity</i>	Scoped in	Scoped in Applying professional judgement, qualitative assessments will be undertaken.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
Marine Ecology			
<i>Temporary physical disturbance to subtidal benthic habitats and species - Marine Works would require the temporary use of anchors on the seabed to maintain position of barges and the placement of Jack-up Barge (JUB) legs</i>	Scoped in	Scoped Out No further marine works, other than routine maintenance, are proposed within the Care and Maintenance phase.	Scoped Out No further marine works, other than routine maintenance, are proposed within the Final Site Clearance phase.
<i>Temporary increase in SSC sediment deposition from potential anchoring of vessels leading to contaminant mobilisation turbidity and smothering effects on subtidal habitats and species</i>	Scoped in		
<i>Airborne noise and visual disturbance to seals</i>	Scoped in		
<i>Underwater noise effects on fish and marine mammals</i>	Scoped in		
<i>Collision risk between marine works vessels and marine mammals</i>	Scoped in		
<i>Direct loss and physical disturbance to benthic habitats and species during construction within the ZOI</i>	Scoped out The Marine Works would use the existing outfall infrastructure. New piping would be placed inside the existing infrastructure and therefore there would be no placement of new permanent hard structures on the seabed which are not already in place. As a result, permanent direct habitat loss is not expected to occur.		

Aspect	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
<i>Indirect effects to marine ecology from changes in existing thermal and chemical outputs from effluent discharge during operation</i>	Scoped out These discharges and their impacts are assessed in detail during the process of applying for a permit (or a variation) and are regulated by the Environment Agency through routine regulatory interactions.	Scoped Out No further marine works, other than routine maintenance, are proposed within the Care and Maintenance phase.	Scoped Out No further marine works, other than routine maintenance, are proposed within the Final Site Clearance phase.
<i>Introduction and spread of Invasive Non-Native Species (INNS)</i>	Scoped out The Marine Works would not involve the placement of any new materials which would be exposed to the marine environment for a prolonged period of time, which any INNS could colonise. The risk of introduction and spread of INNS is considered highly unlikely.		
<i>Indirect effects to marine ecology from hydromorphology changes (i.e. changes to water flow or sediment movement and processes) within the Zol</i>	Scoped out The Marine Works would not include the placement of any permanent new structures on the seabed. Temporary anchor chains and JUB legs would introduce temporary disturbance. No changes to the current hydromorphological baseline are expected.		

Aspect	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
<i>Physical disturbance and potential mortality to marine ecology from entrainment and impingement within the cooling water abstraction infrastructure during operation</i>	Scoped out The existing intake infrastructure would be sealed within the terrestrial portion of the Works Area, with the marine section remaining in situ. Therefore, the risk of potential entrainment and impingement would be avoided.	Scoped Out No further marine works, other than routine maintenance, are proposed within the Care and Maintenance phase.	Scoped Out No further marine works, other than routine maintenance, are proposed within the Final Site Clearance phase.
<i>Barriers to migration</i>	Scoped out Given (i) the location of the Marine Works, i.e. a maximum of approximately 160m offshore from the Dungeness coastline; (ii) the short-term duration of the Marine Works in the marine environment; and (iii) the limited potential pathways for impact, there is considered that there would be no barrier to migratory fish and marine mammal migration.		
<i>Indirect effects to marine ecology from changes in water quality, including accidental spills and leaks from vessels</i>	Scoped out The Marine Works would only require a small number of vessels/barges. With the adoption of embedded mitigation measures and best practice, it is considered that there would		

Aspect	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
	be a negligible risk to water quality in the marine environment.		
Noise			
Noise – impact pathways to be assessed: dismantling of buildings and plant and construction of the waste management facilities; transport movements to and from the Works Area; and operation of the waste management facilities	Scoped in	Scoped out Noise assessment has been scoped out associated with a period of relative inactivity.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
Vibration	Scoped out Due to the distance between the Proposed Works and the nearest identified receptors (at least 340m from the Works Area) and based on the criteria provided in BS 5228-;2009+A1:2014, no significant vibration effects (i.e. those typically associated with a medium or high magnitude impact) are expected. Therefore, further assessment of vibration impacts on human receptors will be scoped out of the EIA. Vibration from traffic on the highway network will also be scoped out of the EIA as DMRB LA 111 identifies that an assessment of road traffic vibration is not required for any project on the basis that a maintained road surface will be free from irregularities.		
Socio-economics			
Employment opportunities	Scoped in	Scoped out There are expected to be relatively low levels of employment associated with the Care and Maintenance Phase (a period of relative inactivity with continuous monitoring and surveillance, with periodic care and maintenance).	Scoped in Applying professional judgement, qualitative assessments will be undertaken.

Aspect	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
<i>GVA - This could include the gross value added through direct and indirect employment opportunities</i>	Scoped in	Scoped out The Care and Maintenance Phase is expected to have little impact on these receptors.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Effects on private assets - This could include effects on residential properties, business premises and development land</i>	Scoped in		Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Effects of tourism - This could include effects on visitor attractions and users.</i>	Scoped in	Scoped out The Care and Maintenance Phase once in progress would have little impact on these receptors. Moreover, the nuclear site licence boundary would be maintained and therefore no visitors would be able to access the Works Area.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Effects on PROW - This could include effects on users of footpaths, bridleways, byways, recreational routes and National Cycle Routes from disruption to or diversion of journeys</i>	Scoped in	Scoped out The Care and Maintenance Phase works would not directly impact on any PROW or their users.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Effect of changing influx workers - This could include effects on existing residents and/or users of local services such as GP facilities, in addition to visitors and/or local tourism economy with regard to local accommodation which may accommodate workers in the area over extended periods of time</i>	Scoped in	Scoped out There are expected to be relatively low levels of employment associated with the Care and Maintenance Phase (a period of relative inactivity	Scoped in Applying professional judgement, qualitative assessments will be undertaken.

Aspect	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
		with continuous monitoring and surveillance, with periodic care and maintenance).	
<i>Social cohesion - This could include effects on community facilities and local social infrastructure such as primary healthcare</i>	Scoped in	Scoped out There are expected to be relatively low levels of employment associated with the Care and Maintenance Phase (a period of relative inactivity with continuous monitoring and surveillance, with periodic care and maintenance).	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Effects on public assets</i>	Scoped out Scope out as there are no significant community facilities within 1km of the Proposed Works which have the potential to be impacted.		
Soils and Geology			
<i>Temporary and permanent damage, disturbance or removal of geology or geological features of interest</i>	Scoped in	Scoped out No works that would impact upon soils and geology would take place during the Care and Maintenance phase.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Temporary and permanent mineral (MSA) severance or sterilisation.</i>	Scoped out		Scoped out
<i>Potential effects on groundwater and surface water from contamination.</i>	Scoped in		Scoped in Applying professional judgement, qualitative assessments will be undertaken.

Aspect	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
Potential effects on human health and ecological receptors from contamination.	Scoped in		Scoped in Applying professional judgement, qualitative assessments will be undertaken.
Potential effects on infrastructure from contamination and ground gas	Scoped in		Scoped in Applying professional judgement, qualitative assessments will be undertaken.
Potential effects from remediation (if undertaken).	Scoped in		Scoped in Applying professional judgement, qualitative assessments will be undertaken.
Potential effects on hydrogeological and hydrological setting.	Scoped out Potential effects on hydrogeological and hydrological setting are addressed in Chapter 19: Water Environment and Flood Risk.		
Potential effects involved in decommissioning and dismantling activities	Scoped out Potential effects involved in decommissioning and dismantling activities will be addressed through adherence to relevant health and safety legislation.		
Traffic and Transport			
An increase in the number and percentage of HGVs using local roads	Scoped in	Scoped out During this period of relative inactivity, small numbers of staff would visit the Works Area for planned monitoring and surveillance.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
Increased risk of road traffic accidents caused by a large increase in traffic for a longer period	Scoped in		Scoped in Applying professional judgement, qualitative

Aspect	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
<i>Temporary increase in abnormal loads</i>	Scoped in	It is not expected that the works required and traffic to and from the Works Area would result in any significant traffic effects on the local or strategic highway network.	assessments will be undertaken.
<i>Temporary road closures, diversions and widening</i>	Scoped out There would be no temporary road closures or diversions during the Initial Decommissioning Works.		Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Works traffic using temporary bell mouths and site entrances for access to the Works Area</i>	Scoped out There would no new junctions or accesses created during the Initial Decommissioning Works.		Scoped out There would be no temporary road closures or diversions during the Final Site Clearance.
<i>Temporary closures or diversions of PRow and other public access routes</i>	Scoped out There would be no temporary closures or diversions of PRow and other public access routes during the Initial Decommissioning Works.		Scoped out There would be no temporary closures or diversions of PRow and other public access routes during the Final Site Clearance.
Terrestrial Ecology			
<i>Temporary displacement of qualifying birds and temporary loss of access or degradation to bird foraging and roosting habitats with consequences for conservation status</i>	Scoped in	Scoped out No likely significant effects identified during this period of relative inactivity.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.

Aspect	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
<i>Killing/injury, disturbance and/or potentially a permanent reduction in the availability of breeding habitat with adverse consequences for conservation status</i>	Scoped in		Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Degradation of bird foraging habitats as a result of emissions to water, with consequences for integrity/conservation status</i>	Scoped in		Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Loss of terrestrial habitats as a result of permanent land take</i>	Scoped in		Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Degradation of terrestrial habitats as a result of emissions to air with consequences for integrity/conservation status</i>	Scoped in		Scoped in Applying professional judgement, qualitative assessments will be undertaken.
Water Environment and Flood Risk			
<i>An increased risk of surface water flooding due to the alteration of the site layout and topography</i>	Scoped in	Scoped in Applying professional judgement, qualitative assessments will be undertaken.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Overtopping or breach of existing flood defences leading to increased coastal flood risk to the Works Area or the Proposed Works</i>	Scoped in	Scoped in Applying professional judgement, qualitative assessments will be undertaken.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.

Aspect	Initial Decommissioning Works	Care and Maintenance	Final Site Clearance
<i>Contamination from suspended solids or other chemicals contaminants</i>	Scoped in	Scoped in Applying professional judgement, qualitative assessments will be undertaken.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Possible impacts to the marine environment from the installation of new discharge lines</i>	Scoped in	Scoped out No marine works would take place during the Care and Maintenance phase.	Scoped out No marine works would take place during the Final Site Clearance phase.
<i>Possible impact from effluent discharges</i>	Scoped in	Scoped in Applying professional judgement, qualitative assessments will be undertaken.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
<i>Morphology of surface water bodies could be impacted by works adjacent (Long Pits)</i>	Scoped in	Scoped out No works that would impact upon the morphology of surface water bodies would take place during the Care and Maintenance phase.	Scoped out No works that would impact upon the morphology of surface water bodies would take place during the Final Site Clearance phase.
<i>The risk of pollution from chemical spillages or fire</i>	Scoped in	Scoped in Applying professional judgement, qualitative assessments will be undertaken.	Scoped in Applying professional judgement, qualitative assessments will be undertaken.
Maritime Heritage			
<i>Impacts upon maritime heritage</i>	Scoped out The Proposed Works are not expected to result in: (i) any impacts to known maritime heritage, with the nearest maritime heritage asset located approximately 500m west of the Works Area, and (ii) given the likely previous disturbance in the area, impacts to		

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	previously unrecorded maritime heritage assets are unlikely. Considering both factors, maritime heritage will be scoped out of the EIA.		
Shipping and Navigation			
Impacts upon shipping and navigation	Scoped out Following the completion of the Navigational Risk Assessment prior to the commencement of the Marine Works, all shipping and navigation risks would be managed to be ALARP. No further assessment of shipping and navigation is therefore proposed within the EIA.		
Radioactive Waste and Discharges			
Radioactive waste and discharges	Scoped out The preparation of the Waste Management Plan and Site-Wide environmental safety case for the Proposed Works will demonstrate how activities associated with the management and disposal of radioactive waste and discharges would not result in significant effects. Such aspects will therefore be scoped out of the EIA.		
Major Accidents and Disasters			
Major accidents and disasters	Scoped out All identified major accidents and disasters risks would be managed to be ALARP. On this basis, accidents and disasters will be scoped out of the EIA.		

