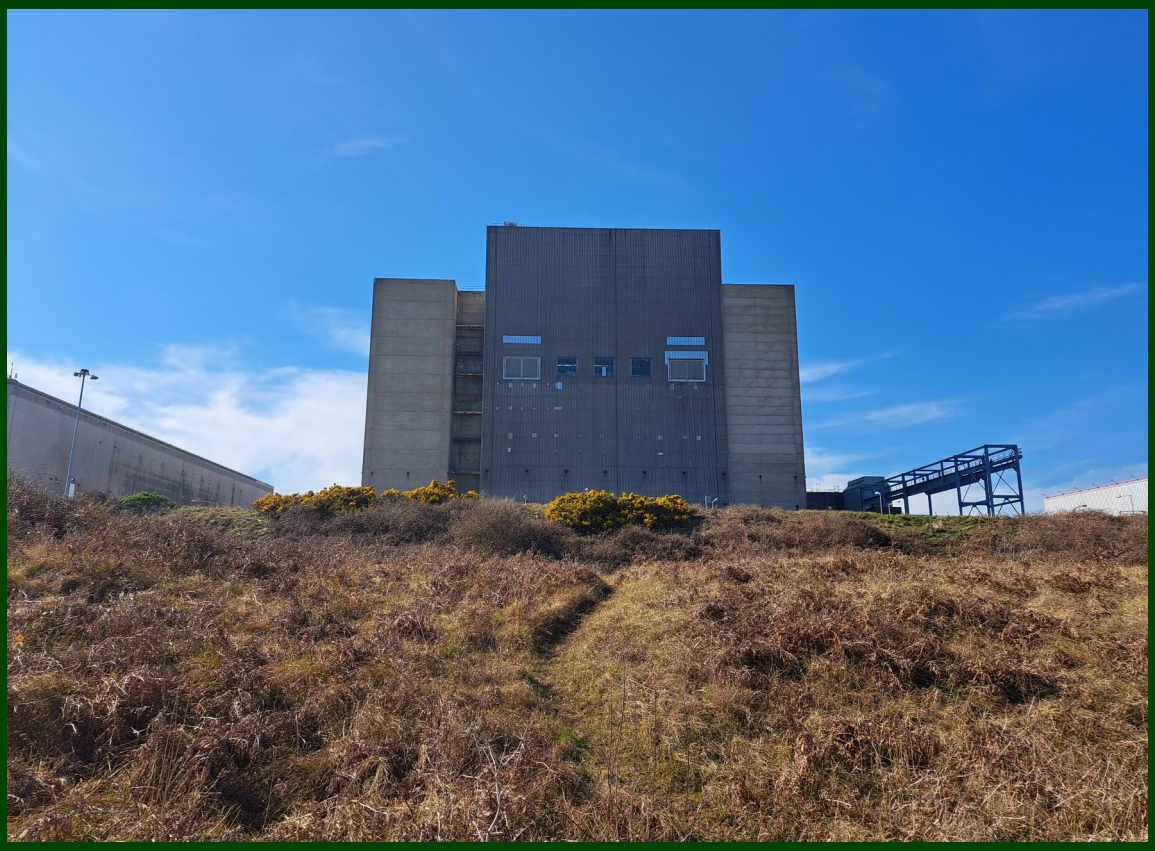
NRS
Nuclear Restoration Services

Nuclear Restoration Services

Sizewell A Site

Environmental Management Plan

2025/2026



Executive Summary

In September 2005, Nuclear Restoration Services (previously known as Magnox Electric Ltd) applied for a consent to decommission Sizewell A Site under the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999, as amended.

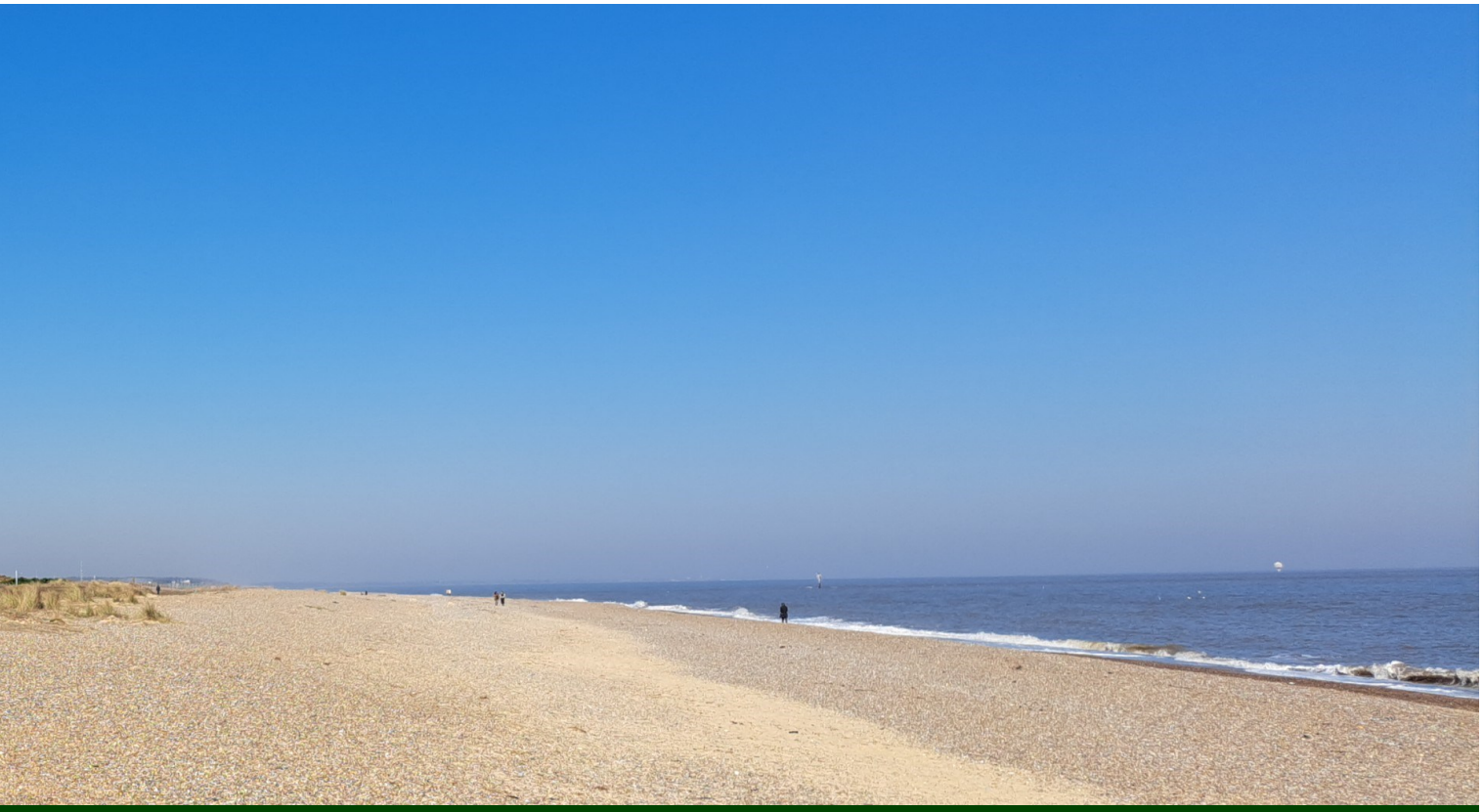
The consent was granted by the Health and Safety Executive (HSE) (now Office For Nuclear Regulation (ONR)) in May 2006. There are six conditions attached to the consent, most of which relate to the preparation and maintenance of an Environmental Management Plan. This details the ongoing mitigation measures to prevent, reduce, and, if possible, offset any significant adverse environmental effects of the decommissioning work.

This document is the twentieth issue of the Sizewell A Environmental Management Plan and provides an update on the activities undertaken in the last twelve months in addition to details of the agreed mitigation measures. This document will be re-issued annually as agreed with the ONR.

As Site Director for Sizewell A, I look forward to another year of successful decommissioning and on behalf of Nuclear Restoration Services, I give my ongoing commitment to minimising any adverse effect on the environment as a consequence of our decommissioning operations.

Alan Walker, Site Director, Sizewell A

May 2025



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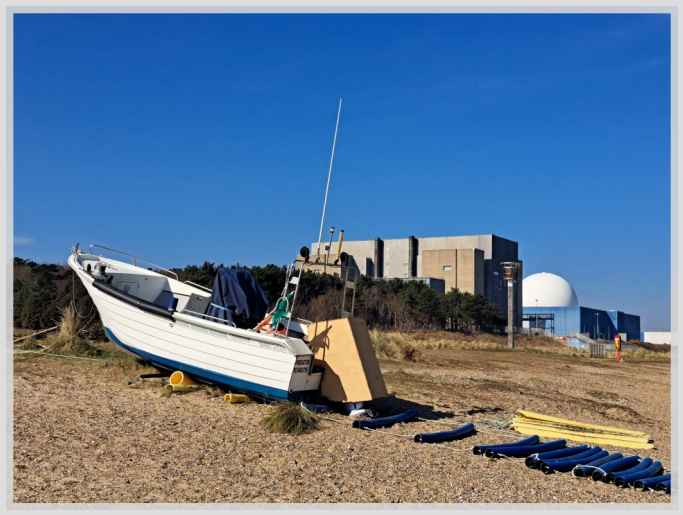
Published in the United Kingdom by Sizewell A Site, Suffolk, IP16 4UE.

1. Introduction

Sizewell A Nuclear Site (hereafter Sizewell A) ceased generation of electricity on 31 December 2006. The Site has now, in line with government policy, entered a period of decommissioning. During this time the plant and buildings associated with electricity generation are being systematically removed. Prior to the commencement of this work Nuclear Restoration Services (hereafter NRS), the licensee of the Site, was legally required to gain consent to carry out the decommissioning project from the Health and Safety Executive (HSE) (now Office for Nuclear Regulation (ONR)). The organisation undertook a rebranding in April 2024 with the name of the organisation changing from Magnox Limited to Nuclear Restoration Services. The change of name represents the organisation's new future missions strategy.

Figure 1. **View of Site from the South-East**



Following a period of extensive public consultation the HSE granted consent in May 2006, subject to certain conditions (listed in full in Appendix A). Condition 2 requires the licensee to prepare an Environmental Management Plan (EMP) which shall:

- list the mitigation measures that are already identified in the Environmental Statement and evidence submitted (to the HSE) to verify information in the Environmental Statement;
- list the options to implement work activities where mitigation measures may be required but where selection of an option will only be possible in the future; and
- list the work activities where mitigation may be required but where assessments to identify mitigation measures will only be possible in the future.

It is a requirement of the conditions attached to the consent to describe the effectiveness of the mitigation measures over time. This EMP is therefore a living document that will be periodically reviewed and revised throughout the decommissioning project. The EMP will be reissued annually as agreed with the ONR.

Other supporting information which may be of interest to the public, but not directly required by the consent conditions, is located in Appendices B, C, and D (e.g. Stakeholder Management, and Decommissioning Methods).

A detailed decision report was prepared by the HSE (now ONR) in 2006. This describes the content of the conditions attached to the consent, the main reasons and considerations for the decision. Copies of this document are available from:

Office for Nuclear Regulation
Building 4 Redgrave Court
Merton Road
Bootle
Merseyside
L20 7HS

Tel: 0203 028 0505

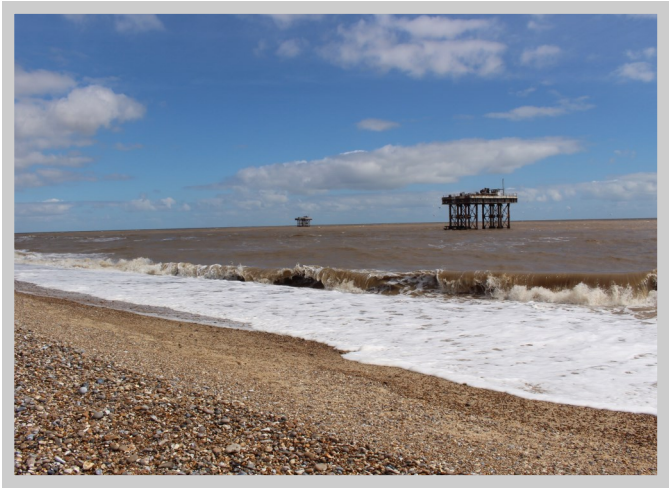
Email: EIA.Team@onr.gov.uk

Or via the internet from:
http://www.onr.org.uk

Any queries relating to decommissioning activities at Sizewell A or requests for copies of this EMP should be addressed to:

Site Director
Sizewell A Site
Nr Leiston
Suffolk
IP16 4UE

Figure 2. **Cooling Water Towers**



2. Scope of the Environmental Management Plan

Geographical Scope

The EMP provides a means of ensuring appropriate environmental monitoring is undertaken during the works and that amendments to the mitigations are identified and implemented as necessary.

The project area at Sizewell is the extent contained within the Nuclear Licensed Site covering an area of approximately 9 hectares; the area consists of a number of both temporary and permanent structures in the form of brick buildings and prefabricated buildings, as well as a road network. In addition to this, the project area includes the two Off-shore Structures which mark the cooling water inlet and outlet points.

Duration

The decommissioning project at Sizewell A is divided into three phases. The Environmental Statement (ES) refers to the phrases of Care & Maintenance Preparations (C&MP), Care & Maintenance (C&M), and Final Site Clearance (FSC). The Care and Maintenance phrase terminology has now been superseded by the Nuclear Decommissioning Authority to Initial Decommissioning Works (IDW), Deferral (DEF) and Reactor Dismantling and Site Clearance (RDC).

NRS decommissioning strategies are currently being reviewed and updated. However, these have not been finalised and therefore this EMP follows the previous strategy. This is discussed further in section 6. NRS continues to undertake fundamental reviews of its approach to decommissioning; any impact of this on the Sizewell A Site will be included in future issues of this document.

The mitigation measures listed in section 4.1 of this EMP are similarly divided into the three phases.

Mitigation measures may change in the future in light of experience and developing technologies. The impacts of the later phases of work have been documented in the original Environmental Statement, but due to the difficulty in predicting the nature of environmental and regulatory regimes over long periods, more confidence should be attached to the assessment relating to the earlier stages of the project. Where mitigation measures are still to be identified, developed in more detail, or require changes, these will be described in subsequent issues of the EMP together with the reasons for any changes made.

Topics

Beneficial or adverse environmental impacts are divided into 9 topic areas within the Environmental Statement as are the mitigation measures described in this EMP (see Figure 4).

In addition to the mitigation measures, a brief description of the Sizewell A Site and its surroundings is presented in this EMP together with an overview of the types of operations that will be carried out during the Initial Decommissioning Works phase. Further details for all phases of the decommissioning project at Sizewell A are presented in the Environmental Statement.

Figure 3. **Summary of the Main Decommissioning Phases**

- **Initial Decommissioning Works (IDW) (formerly known as Care and Maintenance Preparations).** During this phase all of the radioactive and non-radioactive plant and buildings on the Site (other than the Reactor Building, Ponds Complex and Security Lodge) are dismantled. Intermediate Level radioactive Waste (ILW) is retrieved from current storage locations as appropriate, processed and then placed into purpose-built storage. Upon completion of Initial Decommissioning Works, the Site will have been put into a passively safe state where the need for human intervention to maintain acceptable conditions is minimised, i.e. the Deferral period.

- **Deferral (DEF) (formerly known as Care and Maintenance)** is the second phase which could potentially last for some decades, during which no significant dismantling will be carried out. The Site will continue to be managed, monitored and maintained to ensure that it remains in a passively safe and secure state. The Site will continue to be the subject of a nuclear site licence during this period.

- **Reactor Dismantling and Site Clearance (RDC) (formerly known as Final Site Clearance)** is the final phase of decommissioning, which is expected to last about 10 years. It involves the dismantling of the remaining structures on the Site, including the reactors, the clearance of any residual radioactivity to the applicable standards and the de-licensing of the Site so that it can be made available for alternative use, as appropriate.

Figure 4. **Environmental Assessment Topics**

- **Air Quality and Dust.**
- **Archaeology and Cultural Heritage.**
- **Ecology.**
- **Geology, Hydrogeology and Soils.**
- **Landscape and Visual.**
- **Noise and Vibration.**
- **Socio-Economic.**
- **Surface Waters.**
- **Traffic and Transport.**

3. The Site and Surrounding Area

Site Description

The Reactor Building comprises two reactors of the gas-cooled magnox type[1]. Each reactor pressure vessel is spherical, made from steel and is situated within a large concrete bioshield. Contained within each pressure vessel are the graphite core and a range of monitoring and control equipment. During Operation, the reactors were cooled using carbon dioxide. Each reactor has four boilers, all of which are external to the bioshield, which converted water to steam in order to drive the turbines located inside the Turbine Hall. Cooling of the steam to return it to water was achieved by passing seawater through condensing units located in the basement of the Turbine Hall beneath the turbines. The cooling water intake and outfall structures are located off-shore and were connected to the Turbine Hall by means of large underground tunnels.

Other buildings and plant associated with the operation of the Site included the Cooling Water Pumphouse, the National Grid Substation (now demolished), Workshop, Stores and Offices.

Surrounding Landscape

Sizewell A is located on the Suffolk Coast, just north of Sizewell Village, at an elevation of approximately 9.45m Above Ordinance Datum (AOD). EDF's Sizewell B Station adjoins the Site to the north. EDF's build area for the new Sizewell C Station is situated to the north of the Sizewell B Station. Facilitating infrastructure works for the new station has intensified in the local area over the last 12 months and will continue with the local landscape changing with planned works. The coastal area is relatively low-lying which remains below the 30m AOD contour, with the exception of marginally elevated ground to the west and north-west. This gently undulating landform combined with existing trees and hedgerows tends to screen most inland views of both the A and B Sites in all but the closest viewpoints, with some notable exceptions just north of Leiston.

Transport Infrastructure

The main vehicular access route to Sizewell A from the national highway network is by way of the A12 which runs to the west of the Site. The most appropriate route for HGV traffic travelling from the A12 is via the B1122 from Yoxford to Lover's Lane and then onwards on the C228 to the Site Access Road. There is a limited bus service to Sizewell Village, otherwise the nearest bus services are at Leiston. There is no rail access close to the Site; the nearest station for passenger services is at Saxmundham some 5.5 miles (9km) away. There is a specific facility for cyclists and pedestrians which connects the Site to Leiston; this is in the form of a shared path alongside the C228. In general, the proportion of staff walking or cycling to work is very low.

Local Watercourses

The main surface water feature in proximity to the Site is the coastal water of the North Sea adjacent to the easterly edge of the nuclear licenced site boundary. There are several other freshwater features within 2km of the Site including the Sizewell Belts (a network of drainage ditches) to the immediate west, and a small pond near Sizewell B Off-Site Facilities. The Site sits within a rainwater catchment area of approximately 8km^2. The catchment area drains to the Sizewell Belts, which in turn discharges north via the Leiston Brook (artificial channel) into the Minsmere River, and then to the North Sea via a sluice gate 2km to the north of Site. Land to the south of the Site is in a separate catchment which drains to the Hundred River, approximately 2.2km away.

Geology and Hydrogeology

An area of made ground directly underlies Sizewell A, previous surface deposits having likely been removed or reworked during the Site's construction. However, there are other loosely compacted deposits (drift) within the locality. An area of peat is located to the west of the Site within the low-lying wetland area called the Sizewell Belts. To the north of the Site and beyond Sizewell B and Sizewell C is an area of marine tidal flat mud extending northwards to the Minsmere River and Minsmere Levels area. This is part of the Minsmere-Walberswick Heaths and Marshes Site of Special Scientific Interest (SSSI)/Special Area of Conservation (SAC) and Minsmere-Walberswick Special Protection Area (SPA)/Ramsar Site. At a distance of between 200 and 1,000 meters away from the Site to the north, south and west, glaciofluvial drift deposits become more dominant. Isolated pockets of glacial clay (till), the so-called Lowestoft Till, are also present.

Below the made ground of the Site are sandy deposits belonging to the Crag Group of Plio-Pleistocene age. Beneath approximately 60m of Crag is the Harwich Formation consisting of silty sandstone with volcanic ash layers and mudstones. The Crag and the Harwich strata are classed as minor aquifers.

Sensitivity of the Receiving Environment

The nearest settlements within a 10km radius of the Site are Sizewell Village, Leiston, Aldeburgh, Saxmundham, Snape and Yoxford.

Sizewell A lies within the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB) which has been designated by Natural England. A narrow coastal strip of the Suffolk Coast within the AONB in the vicinity of Sizewell has been defined by Natural England as Heritage Coast. Three Special Landscape Areas (SLA) are located to the west of the AONB, namely the Blythe, Minsmere and Hundred SLAs.

The following sites of nature conservation interest are located within the Sizewell vicinity:

- Minsmere-Walberswick Heaths and Marshes Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI).
- Minsmere-Walberswick Special Protection Area (SPA) and Ramsar Site.
- Sizewell Marshes SSSI.
- Off-Shore Structures used by Kittiwakes etc. for roosting and breeding - County Wildlife Site (CWS).
- Sandlings SPA.
- Leiston-Aldeburgh SSSI.
- Westleton Heath National Nature Reserve (NNR).
- Walberswick (Suffolk Coast) NNR.
- Dunwich Heath Nature Reserve.
- Alde-Ore SPA, RAMSAR and SAC.
- North Warren RSPB Reserve.
- Outer Thames SPA.
- Suffolk Shingle Beaches CWS.
- Leiston Common CWS.

There are no Scheduled Monuments on the Site, the nearest is Leiston Abbey and moat. There are no listed buildings or designated geological sites of conservation value or Regionally Important Geological Sites (RIGS) within 2km of the Site.

[1] The term 'magnox' refers to the first generation of gas-cooled nuclear reactors used for electricity generation. It is derived from the cladding material (magnesium non-oxidising alloy) that surrounds each individual uranium metal fuel element.

4. Mitigation Measures

4.1 Mitigation measures that have been identified

Introduction

There are no significant changes to the mitigation measures that were submitted in the Environmental Statement and reported in previous issues of the Environmental Management Plan.

Sizewell A Site will notify the ONR of any significant change to a mitigation measure no less than 30 days before the change is made, or within such shorter time as the ONR may agree.

The following tables list the mitigation measures for each phase of the decommissioning project at Sizewell A.

Initial Decommissioning Works Phase

Mitigation measures already identified (Condition 3a)

Topic	Nature of impact	Mitigation Measures Proposed
Air Quality and Dust	Dust emissions (from on Site), increase in Site dust emissions due to construction, demolition and waste/materials handling operations etc. which could impact on residential and industrial receptors.	As appropriate: • Use of the Building Research Establishment, Guidance on the Control of Dust from Construction and Demolition Activities (2003). • On Site roads to be regularly cleaned of mud/dust deposits, including the use of recirculating water wheel washers and road cleaners as appropriate; and sheeting of vehicles carrying potentially dusty loads. • Minimisation of unnecessary material and waste handling as far as practicable. • Use of water sprays for external demolition activities as appropriate. • Use of water sprays during outside infill operations. • Avoidance of vehicular use on unsurfaced (soft) ground where possible and limits on vehicle speeds on such surfaces where it cannot be avoided. • Use of water sprays during particularly windy or dry conditions. • Use of water sprays to maintain damp surfaces during dry and windy weather (e.g. soil stockpiles, demolition rubble); or sheeting or seeding of surfaces of stockpiles of soil or other dusty materials. • Sheeting or seeding of surfaces and/or use of wind fences as appropriate. • Covering of containers and/or use of wind fences as appropriate.
	Dust emissions due to any use of explosives.	Such activities will not be carried out under particularly dry or windy conditions, and local residents, Sizewell B and Sizewell C will be informed in advance.
	Increase in dust at residential properties along traffic routes due to soiled vehicles or vehicles carrying dusty loads.	As appropriate: • Sheeting of lorries carrying dusty loads. • Provision of wheel washing for heavy goods vehicles on leaving Site.
Archaeology and Cultural Heritage	No significant adverse environmental impacts identified arising from decommissioning activities.	

Initial Decommissioning Works Phase

Mitigation measures already identified (Condition 3a) - continued

Topic	Nature of impact	Mitigation Measures Proposed
Ecology	Loss of nest sites for Black Redstarts.	Provision of additional, appropriately designed nest boxes prior to the commencement of works (boxes have been deployed on site and were successfully used in 2024).
	Loss of foraging habitat for Black Redstarts.	Minimisation of habitat loss, where reasonably practicable. At any one time parts of the Site will provide potentially suitable foraging habitat for Black Redstarts.
	Incidental mortality/ noise (including explosions) and visual disturbance of Black Redstarts.	Employee awareness program and experienced individual tasked with identifying active nest sites.
	Loss of nesting habitat for Kittiwakes.	Provision of additional nesting sites for Kittiwakes at the Lowestoft colony.
	Incidental mortality of Reptiles.	Reptile proof fencing to be used to prevent reptiles from moving into working areas. Reptile proof fencing should be installed prior to works commencing, allowing a period of time for reptiles to move out of the working area.
Geology, Hydrogeology and Soils	Inadvertent or uncontrolled disturbance or spreading of existing contaminated soils, including movement by windblown dust, entrainment in runoff, attachment to vehicles and/or inappropriate soil handling operations.	• Desk studies and Site investigation, if necessary, before works commence in order to determine the presence or absence of contamination, so that appropriate working practices can be adopted from the outset. • Controlled access to or from known or potentially contaminated working areas as appropriate. • Use of recirculating wheel washers on lorries leaving Site as appropriate. • See also measures under 'Inadvertent contamination of soils and/or groundwater arising from temporary storage of contaminated soils, wastes or materials'. • See also control measures under 'Air Quality and Dust'.
	Mobilisation of existing contamination by direct rainwater infiltration due to changes in ground coverage.	Investigation of contaminated soils prior to removal of hard-standings or buildings/foundations (possibly by desk study alone if appropriate), with prior remediation if necessary.
	Mobilisation of existing contamination by direct rainwater infiltration due to the creation of temporary open excavations.	• Desk studies and Site investigation, if necessary, before works commence in order to determine the presence or absence of contamination, so that appropriate working practices can be adopted from the outset. • Excavation dewatering, if necessary, with monitoring and appropriate management/disposal of any waters arising. • Tenting of exposed areas or excavations, if necessary.
	The potential contamination of ground and groundwater due to contaminated water entering those external drains that run to soakaways.	See mitigation measures required to prevent contamination of soils and/or groundwater; and spills and leaks.

Initial Decommissioning Works Phase

Mitigation measures already identified (Condition 3a) - continued

Topic	Nature of impact	Mitigation Measures Proposed
Geology, Hydrogeology and Soils	Creation of new contaminant migration pathways (e.g. due to the creation of boreholes, piles or excavations connecting previously unconnected geological strata).	• Compliance with British Standard 5930 (Code of Practice for Ground Investigations) and BS 10175 (Investigation of Potentially Contaminated Sites – Code of Practice). • Compliance with Environment Agency (EA) Technical Report P5-065/TR (Technical Aspects of Site Investigation). • Production of risk assessments, method statements and contingency plans.
	Inadvertent contamination of soils and/or groundwater arising from temporary storage of contaminated soils, wastes or materials.	• Sampling and testing of soils, wastes and materials prior to storage as appropriate. • Segregation as appropriate. • Use of containment (e.g. membranes) to eliminate cross-contamination, as appropriate. • Management of rainwater run-off from storage areas for contaminated or potentially contaminated soil, wastes and materials.
	Inadvertent contamination of soils and/or groundwater arising from inappropriate use of contaminated soils, wastes or materials as infill materials.	• Sampling and testing of potentially contaminated soils, wastes and materials prior to use as appropriate. • Authorised disposal of unsuitable soils, wastes and materials.
	Changes in soil and groundwater quality due to spills or leaks of non-radioactive substances.	• Bunding of chemical and fuel storage according to EA Pollution Prevention Guidance (PPG) Notes 2 and 6[2]. • Appropriate protocols for chemicals and fuel handling in line with PPG 6, with trained staff only to operate facilities. • Emergency spill response planning according to PPG 21, including spill kits kept on Site and trained staff available.
	Derogation of existing groundwater abstractions due to on Site dewatering operations, if any.	If necessary, placement of recharge barriers as appropriate (i.e. inject back into the ground an equivalent amount of water to that extracted).
	Changes in groundwater flow/water table regime beneath nearby sites designated for their ecological value due to on Site dewatering operations, if any.	If necessary: • Placement of physical barriers (e.g. sheet piles) and recharge barriers as appropriate (i.e. injection back into the ground an equivalent amount of water to that extracted). • Provision of compensation flows directly into the feature affected.

[2]Pollution Prevention Guidance has been withdrawn by the Environment Agency and is now only available through the 'National Archive,' but should still be referred to for good practice guidance.

Initial Decommissioning Works Phase

Mitigation measures already identified (Condition 3a) - continued

Topic	Nature of impact	Mitigation Measures Proposed
Landscape and Visual	Light spill from Site works.	Any new lighting to be installed on Site should be directional lighting.
Noise and Vibration	Local residential properties, recreational areas & industrial receptors. General changes to noise directly from the Site and associated changes in traffic.	As appropriate: • Use of equipment fitted with effective silencers where practicable. • Appointment of a Site contact to whom complaints/queries about construction/demolition activity can be directed – any complaints to be investigated and action taken where appropriate. • Local residents informed of exceptional activities. • No potentially significant external working outside of normal working hours without prior agreement with the local authority. • All construction activity to be undertaken in accordance with good practice as described by British Standard 5228:1997[3] Noise and Vibration Control on Construction and Open Sites. This includes minimising unnecessary revving of engines, turning off machines when not required and routine maintenance of equipment.
	Noise & vibration caused by explosive demolition (if used).	Use of good blasting practice and warning members of the public and the operators of Sizewell B and Sizewell C in advance of demolition activities using explosives.
Socio-economic	Long term loss of Direct Employment.	NRS will encourage its contractors to make use of local labour, equipment and services as far as practicable. NRS will attempt to redeploy affected staff, provide opportunities for early re-tirement & support staff retraining/reskilling.
Surface Water Quality and Drainage	Changes in North Sea water quality due to the potential release of turbid and/or contaminated water from decommissioning activities on the Site.	Where necessary: • Wetting down (e.g. excavation or construction/demolition areas) to prevent windblown spread of dust into locations where subsequent washing into surface water drains would be likely, and appropriate management of wastewater arising. • On Site roads to be regularly kept free from mud/dust deposits, including the use of recirculating water wheel washers and road cleaners as appropriate. • Sheeting or seeding of any stockpiles of soil or potentially contaminating materials. • Careful design and siting of spoil mounds as necessary to manage run-off, including use of low walls around such mounds if appropriate. • See also measures under 'Geology, Hydrogeology and Soils'.
	Changes in North Sea water quality due to minor spills and leaks of non-radioactive substances, if they occurred.	• Careful siting of concrete plant and fuel/chemical handling facilities according to EA Pollution Prevention Guidance (PPG)[4] Notes 5 and 6. • Bunding of chemical and fuel storage according to PPG 2, PPG 5 and PPG 6. • Appropriate protocols for chemicals and fuel handling in line with EA PPG 6, with trained staff only to operate facilities. • Emergency/spill response planning according to PPG 21; including spill kits kept on Site and trained staff.

[3]BS5228 : 1997 has been superseded by BS5228-1:2009+A1:2014.

[4]Pollution Prevention Guidance has been withdrawn by the Environment Agency and is now only available through the 'National Archive,' but should still be referred to for good practice guidance.

Initial Decommissioning Works Phase

Mitigation measures already identified (Condition 3a) - continued

Topic	Nature of impact	Mitigation Measures Proposed
Traffic and Transport	Impacts on safety on roads with an accident record worse than average (King George's Avenue, Leiston).	No specific mitigation is possible because of the absence of specific accident clusters and causes. However, a Travel Plan is incorporated into the Site Management Control Procedure for Environmental Management[5]. This encourages, among other actions, communal transport and car sharing. Personnel are encouraged to avoid the centre of Leiston if possible. Heavy Goods Vehicles are to use B1122 Lovers Lane-C228 route between the A12 and Site as appropriate.
	Impacts on safety etc. due to mud on roads.	Wheel washing of lorries as necessary.

Deferral Phase

Mitigation measures already identified (Condition 3a)

Topic	Nature of impact	Mitigation Measures Proposed
Landscape and Visual	During Deferral no significant works are planned with the possible exception of recladding the reactor buildings (should this be required). It is anticipated that the reactors would be reclad in a similar material to that used at the start of Deferral hence the visual impact will remain unchanged.	No mitigation measures are required.
No other significant adverse environmental impacts were identified during Deferral.		

[5]The Environmental Management Control Procedure has been withdrawn and the Travel Plan has been incorporated into a Section Working Instruction.

Reactor Dismantling and Site Clearance Phase

Mitigation measures already identified (Condition 3a)

Topic	Nature of impact	Mitigation Measures Proposed
Air Quality and Dust	Increase in Site dust emissions due to construction, demolition and waste/materials handling operations etc. which could impact on residential and industrial receptors.	As appropriate: • Use of the Building Research Establishment, Guidance on the Control of Dust from Construction and Demolition Activities (2003). • On Site roads to be regularly cleaned of mud/dust deposits, including the use of recirculating water wheel washers and road cleaners as appropriate; and sheeting of vehicles carrying potentially dusty loads. • Minimisation of unnecessary material and waste handling as far as practicable. • Use of water sprays for external demolition activities as appropriate. • Use of water sprays during outside infill operations. • Avoidance of vehicular use on unsurfaced (soft) ground where possible and limits on vehicle speeds on such surfaces where it can not be avoided. • Use of water sprays during particularly windy or dry conditions. • Use of water sprays to maintain damp surfaces during dry and windy weather (e.g. soil stockpiles, demolition rubble); or sheeting or seeding of surfaces of stockpiles of soil or other dusty materials. • Sheeting or seeding of surfaces and/or use of wind fences as appropriate. • Covering of containers and/or use of wind fences as appropriate.
	Dust emissions due to any use of explosives.	Such activities will not be carried out under particularly dry or windy conditions, and local residents, Sizewell B and Sizewell C will be informed in advance.
	Increase in dust at residential properties along traffic routes due to soiled vehicles or vehicles carrying dusty loads.	As appropriate: • Sheeting of lorries carrying dusty loads. • Provision of wheel washing for, as a minimum, heavy goods vehicles on leaving the Site.
Archaeology and Cultural Heritage	No significant adverse environmental impacts identified arising from decommissioning activities.	
Ecology	Loss of nest sites for Black Redstarts.	Provision of additional, appropriately designed nest boxes prior to the commencement of Site works.
	Loss of foraging habitat for Black Redstarts.	Minimisation of habitat loss, where reasonably practicable. At any one time parts of the Site will provide potentially suitable foraging habitat for Black Redstarts.
	Incidental mortality/noise (including explosions) and visual disturbance of Black Redstarts.	Employee awareness programme and experienced individual tasked with identifying active nest sites.
	Incidental mortality of Reptiles.	Reptile proof fencing to be used to prevent reptiles from moving into working areas. Reptile proof fencing should be installed prior to works commencing, allowing a period of time for reptiles to move out of the working area.

Reactor Dismantling and Site Clearance Phase

Mitigation measures already identified (Condition 3a) - continued

Topic	Nature of impact	Mitigation Measures Proposed
Geology, Hydrogeology and Soils	Inadvertent or uncontrolled disturbance or spreading of existing contaminated soils, including movement by windblown dust, entrainment in runoff, attachment to vehicles and/or inappropriate soil handling operations.	• Desk studies and Site investigation, if necessary, before works commence in order to determine the presence or absence of contamination, so that appropriate working practices can be adopted from the outset. • Controlled access to or from known or potentially contaminated working areas as appropriate. • Use of recirculating wheel washers on lorries leaving Site as appropriate. • See also measures under 'Inadvertent contamination of soils and/or groundwater arising from temporary storage of contaminated soils, wastes or materials'. • See also control measures under 'Air Quality and Dust'.
	Mobilisation of existing contamination by direct rainwater infiltration due to changes in ground coverage.	Investigation of contaminated soils prior to removal of hard-standings or buildings/foundations (possibly by desk study alone if appropriate), with prior remediation if necessary.
	Mobilisation of existing contamination by direct rainwater infiltration due to the creation of temporary open excavations.	• Desk studies and Site investigation, if necessary, before works commence in order to determine the presence or absence of contamination, so that appropriate working practices can be adopted from the outset. • Excavation dewatering, if necessary, with monitoring and appropriate management/disposal of any waters arising. • Tenting of exposed areas or excavations, if necessary.
	The potential contamination of ground and groundwater due to contaminated water entering those external drains that run to soakaways.	• See mitigation measures required to prevent contamination of soils and/or groundwater; and spills and leaks.
	Creation of new contaminant migration pathways (e.g. due to the creation of boreholes, piles or excavations connecting previously unconnected geological strata).	• Compliance with British Standard 5930 (Code of Practice for Site Investigations) and BS 10175 (Investigation of Potentially Contaminated Sites – Code of Practice). • Compliance with EA Technical Report P5-065/TR (Technical Aspects of Site Investigation). • Production of risk assessments, method statements and contingency plans.

Reactor Dismantling and Site Clearance Phase

Mitigation measures already identified (Condition 3a) - continued

Topic	Nature of impact	Mitigation Measures Proposed
Geology, Hydrogeology and Soils	Inadvertent contamination of soils and/or groundwater arising from temporary storage of contaminated soils, wastes or materials.	• Sampling and testing of soils, wastes and materials prior to storage as appropriate. • Segregation as appropriate. • Use of containment (e.g. membranes) to eliminate cross-contamination, as appropriate. • Management of rainwater run-off from storage areas for contaminated or potentially contaminated soil, wastes and materials.
	Inadvertent contamination of soils and/or groundwater arising from inappropriate use of contaminated soils, wastes or materials as infill materials.	• Sampling and testing of potentially contaminated soils, wastes and materials prior to use as appropriate. • Authorised disposal of unsuitable soils, wastes and materials.
	Changes in soil and groundwater quality due to spills or leaks of non-radioactive substances.	• Bunding of chemical and fuel storage according to EA Pollution Prevention Guidance (PPG) Notes 2 and 6[6]. • Appropriate protocols for chemicals and fuel handling in line with PPG 6, with trained staff only to operate facilities. • Emergency spill response planning according to PPG 21, including spill kits kept on Site and trained staff available.
	Derogation of existing groundwater abstractions due to on Site dewatering operations, if any.	If necessary, placement of recharge barriers as appropriate (i.e. inject back into the ground an equivalent amount of water to that extracted).
	Changes in groundwater flow/water table regime beneath nearby sites designated for their ecological value due to on Site dewatering operations, if any.	If necessary: • Placement of physical barriers (e.g. sheet piles) and recharge barriers appropriate (i.e. injection back into the ground an equivalent amount of water to that extracted). • Provision of compensation flows directly into the feature affected.
Landscape and Visual	Light spill.	Any new lighting to be installed on Site should be directional lighting.

[6]Pollution Prevention Guidance has been withdrawn by the Environment Agency and is now only available through the 'National Archive,' but should still be referred to for good practice guidance.

4.2 Options where mitigation may be required but options cannot yet be selected (Condition 3b)

Environmental Impact	Mitigation Measures under consideration
Historic value	
Historical value of Sizewell A	A strategy to preserve the historical and industrial value of all NRS reactor sites, of which Sizewell A is one, is being considered. NRS will provide supporting information to the Nuclear Decommissioning Authority as required to assist in making any decisions. Potential options include the following: • Conducting a Royal Commission of the Historical Monuments of England (RCHME) level 1 survey. • Undertaking a comprehensive cataloguing of existing photographs and supplementing these with new photographs where appropriate. • Retaining operational records and other documents of interest. • Displaying items of plant of interest, e.g. panels from a control room, in a visitors centre and/or museum.

4.3 Activities where mitigation may be required but it is not yet possible to identify possible mitigation measures (Condition 3c)

Environmental Impact
Currently no such activities have been identified.

5. Implementation of the Environmental Management Plan

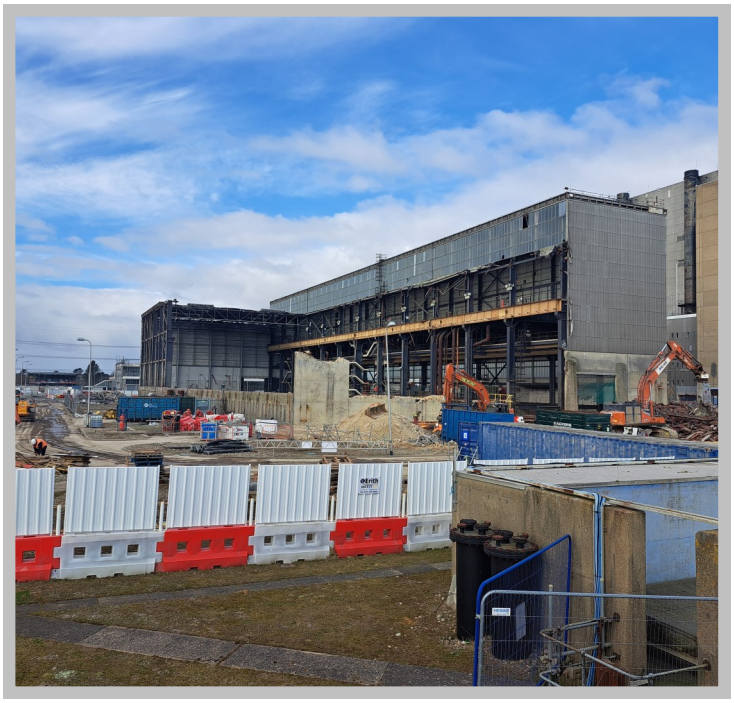
It is a requirement of the conditions attached to the consent (see Appendix A), to implement the mitigation measures and to describe their effectiveness. This section covers the measures (as identified in section 4) that have been implemented (with details of some of the projects implemented during the previous year) and describes how the effectiveness of these measures have been assessed.

Note: Not all mitigation measures were required during 2024/25 due to the lack of potential for a significant adverse impact.

Process for Implementation of Mitigation Measures

Company and Site Management Control Procedures (see Appendix B) ensure that decommissioning activities are carried out in accordance with the Environmental Management Plan. All changes to the configuration of plant and systems are assessed, during the proposal stage, against the requirements of the Environmental Management Plan and, where appropriate, mitigation measures are put in place to prevent impacts identified. This is part of the company integrated management system which is certified to ISO's 9001, 14001, 45001 and 55001. In addition, where there is the potential for an activity to produce significant discharges or disposals, either radioactive or non-radioactive, the Site undertakes Best Available Techniques (BAT) studies in accordance with the Company Process S-391 (Options Assessment for Radioactive Substances Legislation BAT/BPM Compliance).

Figure 5: **Turbine Hall Demolition— March 2025**



Process for Determining Effectiveness of Mitigation Measures

The Site aims to continually monitor the effectiveness of mitigation measures over time. Where mitigation measures are not sufficiently effective, they will be reviewed and amended as necessary to ensure success in minimising significant adverse environmental impacts. A key part of this process is the close interaction between the Project Teams and the Environment Team, ensuring that mitigation measures are considered, applied and, where relevant, reviewed throughout the lifespan of the project. The effectiveness of the mitigations are monitored in a variety of ways as described below.

1) Environmental Performance Monitoring

Environmental performance monitoring (e.g. dust, noise, groundwater monitoring) is performed using specialist equipment. This allows assessment of environmental impacts post-mitigation in addition to being of use for determining baseline conditions. The main use of post-mitigation environmental monitoring will be for larger projects, such as the demolition of buildings or movement of large quantities of spoil. The need for this form of monitoring is determined on an individual basis for each project based on the anticipated activities and the potential for significant adverse impacts.

2) Visual Evidence

Inspections of the work area both prior to, during and after project works are used to assess the requirements for mitigation, on going suitability of the mitigations and overall success in minimising significant adverse impacts. Where it is deemed appropriate, photographic evidence can be gathered to support the assessment of effectiveness.

Routine Site tours by suitably qualified individuals are used to identify areas of success and areas for improvement. These tours are used to monitor the effectiveness of mitigations on environmental receptors.

3) Review of Regulatory Action, Complaints and Internal Event Reporting

This is a form of reactive monitoring and learning which can provide valuable information about where mitigations may not be effective or where further mitigations are required. The Site operates a robust system of internal event reporting, where workers are encouraged to report conditions which are unsafe or pose a threat to the environment. As part of this system, events are investigated and, where necessary, remedial actions are put in place.

Examples of Work Completed and Upcoming Works Requiring Mitigation Measures

The Turbine Hall demolition project has continued to progress over the last 12 months. Current successes to date include the removal of hazardous asbestos products utilised for pipe lagging insulation, removal of several transformer units situated around the building, pressure washing transformer sumps to remove any free oils, removal of 8000 scaffold boards and removal of approximately 35 miles worth of cabling.

The project have removed more than 10,000 tonnes of metal to date which has been despatched off-site for metal recycling. This has been derived from the removal of legacy plant items and the building fabric of the structure itself.

East Suffolk Local Planning Authority requested that an Environmental Impact Assessment (EIA) was conducted for the demolition of the Turbine Hall Structure under the Town and Country Planning (EIA) Regulations 2017. An EIA was produced and planning consent was granted in 2024. As part of the EIA process, various surveys were conducted by external consultants to identify whether any additional mitigation measures were required to those already stated within this document like the deployment of bat boxes within Hill Wood which has been completed.

The largest single use of electronic detonators and cartridge explosive ever used on a licensed UK nuclear site was permissioned by the ONR and carried out in November 2024. The explosives were used to debilitate reinforced concrete plinths within the Turbine Hall's basement which supported the low and high pressure turbines. This innovative approach was conducted to reduce the projects timeline and reduce percussive noise impacts by up to 40%.

The Turbine Hall project has also achieved end of waste criteria by utilising the Quality Protocol: Aggregates from Inert Waste for some of the project's demolition arisings. The resulting material has been used to construct an access ramp into the structure's basement to support continued demolition activities, saving the requirement for additional material to be brought to site for the same purpose. The site is currently looking into options for its sustainable reuse once the project has been completed.

Figure 6: **Explosives Positioned in Concrete Plinths**

Other mitigation measures adopted by the project includes but not limited to, the use of dust suppression, road sweeping, noise and dust monitoring.

Land situated to the west of site which housed the former National Grid sub building has been sold to Sizewell B for future use. The sale was agreed by the Secretary of State in July 2024. The land has been subsequently transferred from Sizewell A Site's environmental permit and site licence to Sizewell B Site following agreement from both regulators (EA and ONR) before sale transfer.

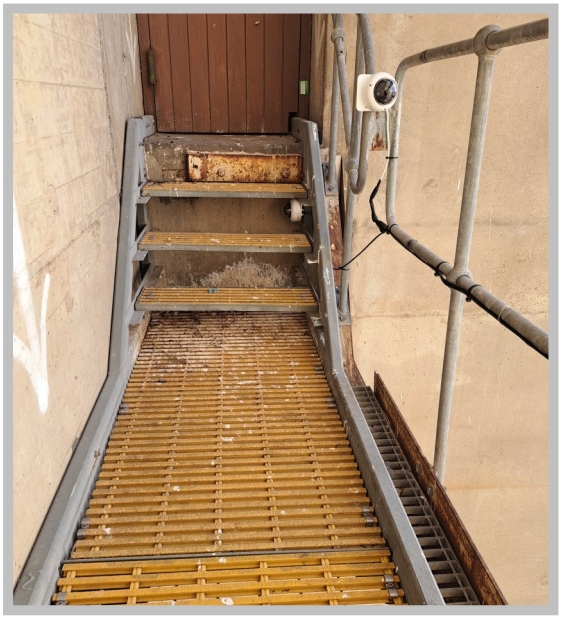


Figure 7: **Installation of Nesting Cameras**

Nesting camera's have been installed in the location where the site's resident Peregrine Falcons have opted to nest over the last two nesting seasons. The pair have used this location to great success and the site hopes that they return again this year.

The Site continues to monitor the coastal area, adjacent to the boundary through the Sizewell Shoreline Users Group. There has not been any storm or geomorphological events during the last year which were significant enough to damage the Site's coastal defences.

The socio-economic impact of any changes will continue to be managed in accordance with the mitigation measures to support personnel to redeploy, reskill, or retire.

Other measures were implemented to mitigate against potential environmental impacts resulting from plant modifications made throughout the year. Maintenance, procedures, training, and emergency response planning provides the basis of mitigation measures employed. The effectiveness of these measures can be ascertained from spoil samples, groundwater monitoring results, event reporting analysis, environmental impact scoring and various Site inspections.

6. Changes to the Environmental Management Plan

It is recognised that the current EIADR project description may not yet reflect alternative NRS decommissioning strategies such as a rolling programme of decommissioning. These will be accessed in line with internal standards and incorporated in the EIAB project description once site specific details are defined and agreed when necessary underpinning to implement the change has been carried out. These will be addressed in future issues of the EMP as and when appropriate.

Since the start of decommissioning works on Site, a number of changes have been made to the consented Environmental Statement (ES). The ES provides the description of works proposed for decommissioning activities. Sizewell A Site will notify the ONR of any significant change to a mitigation measure no less than 30 days before the change is made, or within such shorter time as the ONR may agree.

Listed below are the changes made to the consented activities:

Decommissioning Deferral - 2007

An indicative programme showing entry into Deferral as being around 2019. However, it was made clear that the programme was under development and would be subject to revision. The Site's Lifetime Plan (LTP) indicates entry into Deferral as being around 2034 *(the Site's date for Deferral has now been extended to 2041)*.

Hours of work - 2007

The Site's hours of work will depend upon the specific work being undertaken. The ES states that the works will normally be undertaken between 08:00 and 17:00 hours, Monday to Friday. Since the introduction of the 4 day week in January 2007, the majority of work is carried out between 07:30 and 17:00 hours Monday to Thursday. However, there is often work carried out between these times on a Friday.

Detritiation Trial of Desiccants and Catalysts - 2007

A trial program to test the feasibility of detritiation of desiccants and catalysts from Site was proposed. Subsequent treated desiccant would be disposed of as LLW. Desiccant was transported to Waste Management Technology at Winfrith in Dorset for the trial. Once the product was treated, the resultant LLW desiccant was returned to Site for disposal at LLWR (Low Level Waste Repository) near Drigg.

The ES states the Site's ILW arisings were to be retrieved, placed in new packages, and stored (after any required treatment) within existing Site structures, prior to a transfer to a new radioactive waste storage building on Site.

Installation of Two New Oil Filled Boilers – 2007

Installation of two new oil filled boilers were required to provide heating to the reactor Pile Cap to ensure ambient temperatures were maintained to aid defueling activities. The two boilers were housed within a steel-clad portal frame structure situated to the southeast of the reactor building within the ISB fence. These boilers are no longer in service and have been removed from Site.

Street Lighting Column Replacement – 2008

Due to the degradation of concrete lighting columns over time, all columns have been replaced around the Site with an aluminium equivalent with an upgrade of low energy florescent bulkhead lamp fittings.

Resurfacing and Alterations to Overflow Car Park – 2008

Works carried out to enlarge the overflow car park entrance to allow for 2-way traffic and adaptation to the pedestrian crossing. In addition, introduction of new improved lighting within the area, construction of a recognised road base standard with demarcation of perimeter, parking spaces and segregation of footpath achieved by the installation of mid height fencing.

Installation of Two 6" Nominal Bore Pipelines – 2008

Installation of two 6" nominal bore pipelines inside the existing northern outfall tunnel to enable Active Effluent and Treated Sewage Effluent to be discharged directly to the North Sea outfall location after the redundancy of cooling water pumping.

Replacement of Existing Cycle Shelters in New Location in Main Car Park – 2008

Installation of new concrete slab base, bollards and purchase of new metal bike shed to the southern edge of the main car park to replace the existing shelter from the north-eastern corner of the car park.

Contaminated and Activated Metals Disposition – 2008

Contaminated and activated metals which could not be decontaminated to LLW thresholds would be disposed of as ILW. This proposal sought permission for the transport of these metals to facilities in Germany, Sweden, and the USA for smelting and assaying of these metals before repurposing within the nuclear industry.

LLW arisings were enclosed within ISO containers and sent to the national facility near Digg in Cumbria**.** The new facilities proposed represents a change from the Baseline.

Greater Gabbard Windfarm – 2009

Site works were required to facilitate the installation of a new offshore wind farm on the Greater Gabbard sand bank. These works included the connection from Leiston 132kV substation to the grid network using the 132kV connection at Site. Cables were installed via underground ducts below the Site utilising directional drilling.

Asbestos Containing Materials (ACM) Removal - 2010

As part of the ACM removal works it was necessary to infill areas of voidage below the ground to ensure that the ground loadings from the required equipment could be accommodated. Due to the locations of the voids, it was necessary to use a resin injection technique to prevent damage to surrounding buildings and infrastructure. This resin will remain in-situ for the foreseeable future and impacts on the surrounding areas will be monitored periodically.

The original Baseline states any underground voids should be infilled with demolition materials.

Coastal Processes Monitoring Equipment - 2013

A radar and cameras have been installed on the Reactor Building Roof along with computer equipment, radio receiving equipment, and a data logger internally. The purpose of this equipment is to monitor and provide data for coastal erosion.

Figure 8: **CEFAS Radar on Reactor Building Roof**

Street Lighting Electrical Overlay - 2013

As part of the Electrical Overlay Project, it became necessary to replace the old street lighting around the Reactor Building. Instead of a like for like replacement, it was decided to install 4x20 metre high masts with directional luminaires to replace the existing lower-level circuit 2 street lighting. The masts will be required until the Deferral Phase.

Security Perimeter Fence Replacement - 2013

Some of the sections of concrete security fencing had degraded over the years. This project replaced sections of this fencing with steel palisade fencing.

Pond Decommissioning Enabling Works - 2016

Enabling works were required to aid decommissioning activities within the ponds building. Two new structures were required for material and personnel access and egress. The materials access/egress is an extension to the existing building and the personnel access/egress is a temporary building set on a roof area within the silhouette of existing buildings.

IONSIV Cartridge Strategy Change - 2016

IONSIV Cartridges from Sizewell A Site were transferred to the Oldbury Site to consolidate the waste stream. This will enable processing and storage in one location and negate the requirement to duplicate facilities. The Baseline proposed that such waste would be retrieved and packaged within existing Site buildings and then stored until a disposal route became available.

Interim Storage Facility Strategy Change - 2016

ILW packages from Sizewell A Site will be consolidated at Bradwell Site's Interim Storage Facility. This will negate the requirement to construct an Interim Store for ILW at Sizewell A Site.

Figure 9: **20m High Lighting Mast**

Offshore Structure Maintenance - 2017

Due to degradation of the offshore structures, hazard reduction work was required prior to their removal. This included the relocation of the navigation aids to floating buoys and removal of non-structural items, including the landing platforms and access ladders. The ES covers the full decommissioning of the structures.

Reservoir Demolition - 2017

The two concrete reservoir tanks and associated pump-houses located on land leased from EDF have been demolished as part of the surrender of the lease. A Material Management Plan was produced to enable the concrete and soil to be reused as an infill material.

Demolition of the Engineering Block - 2017

As part of the demolition of redundant facilities to the south of the site, the Engineering Block was demolished using conventional demolition techniques. The area was first surveyed for hazards and services were disconnected. Materials generated through the demolition were disposed of to a licensed facility. The land is now repurposed as a lay-down area.

Remediation of Land Slip at the Sewage Plant - 2018

The sewage plant is managed by Sizewell A on behalf of both Sizewell A and Sizewell B and is located on EDF land adjacent to the Sizewell Marshes SSSI. The plant is located at the top of an embankment which had experienced some washing out of material. A package of work was completed to remediate the slippage and reinforce and stabilise the embankment to prevent future issues.

Disposal of Demolition Rubble - 2020

Disposal of rubble generated from the demolition of the Administration Building, Water Treatment Plant and cladding from the Splitter Vane Store was required following a change in regulatory position on the re-use of demolition material. This material was being stored with the future aim to use as infill of site voids under the CL:AIRE protocol. The justification for future use of the stockpile is no longer appropriate and therefore the material had to be disposed of as waste.

Reconfiguration of the Site's Towns Main Water Supply and Fire Hydrant System - 2020

Due to EDF's additional land requirements for the Sizewell C project, they required the Site's old reservoir land as a lay down area for outage equipment. This land was leased to NRS by EDF, and under the original configuration the below ground town mains water supply for Sizewell A ran under this land. It was therefore necessary to reroute the supply pipework to Sizewell A to bypass the intended EDF build area. The Site's supply now runs parallel to the main access road to the east side of the main car park.

Construction of a New Waste Processing Compound - 2020

A new waste processing compound has been constructed on the north end of Site, comprising of a reinforced concrete slab on the former CO2 plant area. The area was assigned to be used for the storage of the Site's ILW arisings in a new purpose built ISF. A change in company strategy negated the requirement for the Site to construct its own. ILW packages will now be stored within Bradwell Site's ISF. The increased number of HGV movements required for the removal of redundant excavation material was assessed against the Baseline.

Demolition arisings from Turbine Hall Demolition – 2022

The Turbine Hall demolition is planned to begin in 2024. Demolition material from these activities will be transported off Site as waste. Alternative options are currently being explored for the reuse of material to reduce impacts on local highways. The Baseline states that all demolition material from the Site shall be stockpiled and retained for the infill of voids.

Omission of Reptile Proof Fencing Mitigation – 2022

As part of the Turbine Hall demolition project. This change proposes a deviation from the original Baseline mitigations for the omission of reptile proof fencing during the demolition phase. A habitat survey identified the lack of suitability for protected species within the project's area.

Change to the Deferral Entry State for the Turbine Hall Basement Void – 2022

The omission of puncturing the basement void represents a change of strategy from the original Baseline. The current end state for the Turbine Hall void is currently undetermined. Any future effluent arisings from ponding will be managed accordingly.

Transfer of former National Grid Sub-Station land to Sizewell B Licensed Site – 2024

The transfer of land that formerly accommodated a National Grid Sub-station will provide the Site with an opportunity to help facilitate the construction of a future Sizewell C Power Station. Transferring ownership and usage of this land to EDF's Sizewell B Station will fundamentally reduce the footprint of the Site.

7. Distribution of the Environmental Management Plan

In addition to the submission of this EMP to the ONR, NRS will make the document publicly available via the NRS Website. This EMP can also be viewed at the following locations:

- Leiston Library, Old Post Office Square, Main Street, IP16 4ER.
- Aldeburgh Library, Victoria Road, Aldeburgh, IP15 5EG.
- Saxmundham Library, County Offices, Street Farm Road, Saxmundham, IP17 1AL.
- Southwold Library, North Green, Southwold, IP18 6AT.
- Woodbridge Library, New Street, Woodbridge, IP12 1DT.
- Framlingham Library, The Old Court House, Bridge Street, Framlingham, IP13 9BA.
- Wickham Market Library, Resource Centre, Chapel Lane, Wickham Market, IP13 OSD.

8. Definitions

AETP	**Active Effluent Treatment Plant**
ALARP	**As Low As Reasonably Practicable**
AOD	**Above Ordnance Datum**
AONB	**Area of Outstanding Natural Beauty**
BAT	**Best Available Techniques**
BPM	**Best Practicable Means**
CL:AIRE	**Contaminated Land Applications in Real Environments**
C&M	**Care and Maintenance**
C&MP	**Care and Maintenance Preperations**
CWS	**County Wildlife Sites**
DEF	**Deferral**
EA	**Environment Agency**
EIA	**Environmental Impact Assessment**
EIADR	**Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999**
ES	**Environmental Statement**
EMP	**Environmental Management Plan**
FSC	**Final Site Clearance**
HGV	**Heavy Goods Vehicle**
HSE	**Health and Safety Executive**
IDW	**Initial Decommissioning Works**
ISB	**Inner Security Barrier**
ISF	**Interim Storage Facility**
ILW	**Intermediate Level Waste**
ISO 9001	**Accreditation system for Quality Management Systems**
ISO 14001	**Accreditation system for Environmental Management Systems**
ISO 45001	**Accreditation system for Occupational Health and Safety Management Systems**
ISO 55001	**Accreditation system for Asset Management Systems**
LLW	**Low-Level Waste**
LLWR	**Low-Level Waste Repository**
LPA	**Local Planning Authority**
LTP	**Lifetime Plan**
PPG	**Pollution Prevention Guidance**
NDA	**Nuclear Decommissioning Authority**
NNR	**National Nature Reserve**
NRS	**Nuclear Restoration Services**
ONR	**Office for Nuclear Regulation**
RCHME	**Royal Commission on the Historical Monuments of England**
RDC	**Reactor Dismantlement and Site Clearance**
RIGS	**Regionally Important Geological Sites**
SAC	**Special Area of Conservation**
SLA	**Special Landscape Area**
SPA	**Special Protection Area**
SSSI	**Site of Special Scientific Interest**

APPENDIX A

Letter Providing Consent to Decommission and Attached Conditions

Decommissioning Project Consent No.1 May 2006

NUCLEAR REACTORS (ENVIRONMENTAL IMPACT ASSESSMENT FOR DECOMMISSIONING) REGULATIONS 1999

CONSENT

granted under regulation 4(b)
in accordance with regulation 8(3)
with conditions attached under regulation 8(4)

SIZEWELL A POWER STATION

The Health and Safety Executive, for the purposes of regulation 4(b) in accordance with regulation 8 (3), hereby grants consent for carrying out the project applied for under regulation 4(a), in particular, to remove all buildings except the reactor buildings, alter the reactor buildings for a period of deferment, retrieve and package operational intermediate level waste, and store the intermediate level waste until it can be removed from site, and clear the site, subject to the conditions under regulation 8 (4) attached.

Dated:

For and on behalf of the
Health and Safety Executive

Signed

Dr S. L. Creswell
A person authorised to
act in that behalf

NUCLEAR REACTORS (ENVIRONMENTAL IMPACT ASSESSMENT FOR DECOMMISSIONING) REGULATIONS 1999

CONDITIONS

attached under regulation 8(4)
to Decommissioning Project Consent No. 1 granted under regulation 4(b)

SIZEWELL A POWER STATION

Condition 1
The project shall commence before the expiration of five years from the date of this Consent.

Condition 2
(1) The licensee is required to prepare and implement an environmental management plan to cover mitigation measures to prevent, reduce and where possible offset any significant adverse effects on the environment.
(2) The project shall not be carried out except in accordance with the environmental management plan.

Condition 3
Within 90 days of the date of this Consent, with reference to the Environmental Statement provided under regulation 5(1) and evidence to verify information in the Environmental Statement, provided under regulation 10(9), the environmental management plan shall:
a. list the mitigation measures that are already identified in the Environmental Statement and evidence submitted to verify information in the Environmental Statement;
b. list the options to implement work activities where mitigation measures may be required but where selection of an option will only be possible in the future;
c.list the work activities where mitigation measures may be required but where assessments to identify mitigation measures will only be possible in the future.

Condition 4
Subsequent to condition 3, the environmental management plan shall:
a. with reference to condition 3b, identify the mitigation measures for options that have been selected, giving reasons for their selection;
b. with reference to condition 3c, identify the mitigation measures from assessments carried out, giving reasons for their selection;
c. describe the effectiveness of the mitigation measures over time;
d. describe significant changes to the mitigation measures in light of experience, giving reasons for such changes.

Condition 5
The licensee is required to:
a. provide the environmental management plan to the Health and Safety Executive within 90 days of the date of this Consent and every year thereafter, or within such longer time as the Executive may agree;
b. make the environmental management plan available to the public within 30 days of the plan being sent to the Health and Safety Executive, or within such longer time as the Executive may agree; the plan may replace earlier versions.

Condition 6
The licensee is required to provide notice to the Health and Safety Executive of any significant change to a mitigation measure to prevent, reduce and where possible offset any major adverse effects on the environment no less than 30 days before the change is made, or within such shorter time as the Executive may agree.

Dated:
For and on behalf of the
Health and Safety Executive
Signed

Dr S. L. Creswell
A person authorised to act in that behalf

APPENDIX B

Site Procedures for Minimisation of Impacts —

Decommissioning Proposal Approval Form

PART 5 – ENVIRONMENTAL SAFETY ASSESSMENT Both 5.1 and 5.2 are to be categorised individually before an overall environmental category is assigned in 5.3.				
5.2	**EIADR 99, ENVIRONMENTAL IMPACT AND OTHER REGULATORY COMPLIANCE** The following checklist must be completed by an **Environment SQEP** (with land quality / planning consultation as required). The assessment is for compliance with the EIADR 99 Regulations, Planning requirements, non-rad. Permits / consents, other relevant legislation and environmental issues including management of land quality.			
	PARAMETER	**CONSIDER POTENTIAL FOR:**	**YES**	**NO**
5.2.1	Decommissioning Baseline	Does this proposed modification represent a change from the Decommissioning Project baseline as described in the EIADR 99 Environmental Impact Assessment Baseline document (in particular, is it sufficient to trigger Regulation 13 determination)? If 'YES', (F-871 and F-872, as necessary) in accordance with S-159.		
5.2.2	Planning	Does the proposal involve building or structures construction, external modification or demolition (planning permission)? Does the proposal involve on-site / inter-site disposal / transfer of waste (including stockpiling) in any form? If 'YES' confirm if permissions have been agreed, or identify how this will be addressed prior to implementation of proposal.		
5.2.3	Non-radioactive Discharges & Waste	Could the proposal, if inadequately conceived or executed, lead to a breach of an existing Environmental Permit / consent, or other environmental licence / regulatory requirement (e.g. controlled activities regs, pollution control permit, wildlife management licence, PCB registration, marine consent, waste management exemption)?		
5.2.4	Non-radioactive Discharges & Waste	Is a change to an existing Environmental / PPC Permit, Licence or Consent or new Environmental Permit or registered waste management licence or exemption required for this proposal?		
5.2.5	Land Quality	Will the proposed work involve 'breaking ground' or otherwise have the potential to affect the sub-surface or controlled waters? If 'YES', complete form F-158 in accordance with S-154, and ensure that any required mitigation measures are included in this DPAF.		
5.2.6	Site End State	Will the proposal involve permanent deposition of non-radioactive waste or recovered waste (e.g. to backfill subsurface voids)?		
5.2.7	Other Environmental Impacts	Could the proposal, if inadequately conceived or executed, lead to an unacceptable environmental impact? (Consider relevant legislation and formal guidance). If so, appropriate controls / mitigation must be specified.		
5.2.8	If all answers are 'NO' then the proposal is Category E3. If 'YES' is answered to any questions above, then assess the environmental impacts and provide further information below.			
5.2.9	**CONTROL MEASURES AND COMMENTS** Describe the control measures that will be used to ensure that environmental risks are adequately managed. Refer to environmental assessments, BAT / BPM studies where appropriate and consult the Site End State Technical Lead from the central team.			
5.2.10	**Potential Environmental Category with respect to EIADR 99 Compliance and all other environmental aspects:** Use the criteria identified in MCP-099, Appendix 1.			
	E1	E2	E3	
	Name: ***Environment SQEP***	Signature:	Date:	

APPENDIX B — Continued

Site Procedures for Minimisation of Impacts —

Decommissioning Proposal Approval Form

<table>
<tr><td colspan="4">PART 5 – ENVIRONMENTAL SAFETY ASSESSMENT
Both 5.1 and 5.2 are to be categorised individually before an overall environmental category is assigned below.</td></tr>
<tr><td>5.3</td><td colspan="3">OVERALL ENVIRONMENTAL ASSESSMENT</td></tr>
<tr><td>5.3.1</td><td colspan="3">ENVIRONMENTAL JUSTIFICATION / MITIGATION
Refer to control measures under 5.1 and 5.2, make a summary statement. Also consider if there is any conflict between mitigations that need to be addressed or if additional mitigations are required overall.</td></tr>
<tr><td>5.3.2</td><td colspan="3">OVERALL ENVIRONMENTAL CATEGORY
The environmental category is determined by reviewing the adequacy of the environmental hazard identification and assessment which has need carried out and consider whether any other relevant aspects of the category definitions given in MCP-099 Appendix 1 are relevant. Select the relevant box below.

Environmental control and mitigation measures required have been identified above and will be incorporated in the design or working methods. Any further Environmental Justifications (e.g. BAT / BPM) should be attached.

RECOMMENDED ENVIRONMENTAL CATEGORY:
Use the criteria identified in MCP-099, Appendix 1.</td></tr>
<tr><td></td><td>E1</td><td>E2</td><td>E3</td></tr>
<tr><td></td><td>Name:
Environment SQEP / PRSLA</td><td>Signature:</td><td>Date:</td></tr>
<tr><td></td><td colspan="3">For category E1 modifications, two additional signatures are required:</td></tr>
<tr><td></td><td colspan="3">1) Confirm awareness of the modification proposal.</td></tr>
<tr><td></td><td>Name:
EHSS&Q Manager</td><td>Signature:</td><td>Date:</td></tr>
<tr><td></td><td colspan="3">2) Confirm that the modification proposal has been reviewed by Head of Profession – Environment and that comments / recommendations have been addressed.
Record these comments in part 2.9.</td></tr>
<tr><td></td><td>Name:
NRE</td><td>Signature:</td><td>Date:</td></tr>
</table>

APPENDIX C

Stakeholder Engagement

Whilst decommissioning represents the next phase in the lifecycle of the Site, NRS remains committed to engaging with stakeholders at all phases in the process. Regular meetings were held with the Local Community Liaison Council and this process is continuing with its successor body, the Sizewell A, B and C Stakeholder Group. The organisations listed in Figure 10 were also involved in the public consultation process for the Environmental Statement.

As well as regular meetings with stakeholders, where appropriate, other interested parties are kept informed of specific decommissioning activities. Some examples are shown in Figure 11.

Figure 10. **Local Stakeholders**

East Suffolk District Council

Suffolk County Council

Environment Agency

Natural England

RSPB

Suffolk Wildlife Trust

Figure 11. **Examples of Activity Specific to Stakeholders**

- Informing/liaising with the Crown Estate, Natural England, RSPB and Marine Management Organisation (MMO) in preparation for dismantling of the Off-shore Structures.
- Informing local residents of any short-term activities that may cause a significant noise nuisance.
- Consultation with the Environment Agency on demolition material re-use and stockpiling.

The role of the Nuclear Decommissioning Authority (NDA)

The Energy Act (2004, as amended)[7] requires that the NDA must prepare a strategy for carrying out its functions and from time to time to review that strategy. This strategy must set out the steps that the NDA proposes to take for:

- giving appropriate publicity to its responsibilities and strategy;
- explaining them both to persons having a particular interest in matters relating to the carrying out by the NDA of its functions and to the general public;
- ensuring that the NDA is kept informed at all times of the opinions about such matters of persons having such a particular interest;
- facilitating the communication by such persons of their opinions to the NDA.

The NDA is also required to give encouragement and other support to activities that benefit the social or economic life of communities living near those sites for which it has responsibilities, including Sizewell A.

[7]The Energy Act 2023 has superseded the 2004 revision.

APPENDIX D

Information on Site Working and Environmental Performance

Site Management and Decommissioning

General Site Management

Hours of Work

Current normal working hours are between 07:25 and 17:00 hours, Monday to Friday. Most decommissioning work on Site will also be undertaken during these hours under a single shift working arrangement, but this may alter for certain activities. For example, from time to time the working day may be extended in order to complete specific items of work safely, and some night-time working may be required to accommodate certain activities such as concrete pouring. Seven days a week, 24 hours a day shift working may be necessary for retrieval of waste and for subsequent waste packaging operations.

Lighting

The existing night time illumination of the Site consists mainly of internal lights within the transparently clad parts of the Reactor Building, together with 'street' lights supplementing four elevated lighting stands.

During IDW and RDC, increased lighting may be necessary at times. Suitable lighting will be installed to assist in Site works and would only normally be required at the start and end of the working day during the winter months at the discretion of the relevant Site Supervisor. The existing security lighting will be retained.

During DEF it is expected that there will be occasional low level 'street' lighting on service roads, provided for staff attending Site during the hours of darkness, and lighting activated by security systems.

Transport

Significant vehicle movements to and from Sizewell A will be subject to a project Travel Plan.

Decommissioning Methods

Conventional Area Decommissioning

Conventional plant and buildings will be de-planted and demolished using standard construction industry methods. The exact methods to be employed will be detailed in method statements for individual projects.

The interiors of buildings will be de-planted and decontaminated as necessary prior to demolition of the buildings themselves. To facilitate this, large or heavy plant/equipment may be cut or split into components or sub-component parts prior to their removal. It is expected that after de-planting etc. is complete, demolition will be carried out using conventional methods.

All buildings will be demolished and structures removed to ground or slab level. Once removed, the footprints of buildings will be gravelled over if required. Any remaining below ground building structures will be filled in accordance with the Company's end state strategy.

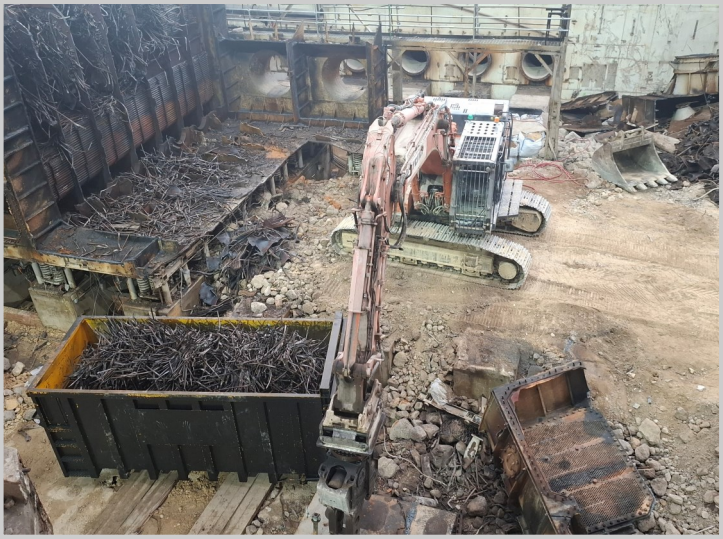
The only existing road to be retained into DEF will be the road that enters the main gate, turns right towards the Reactor Building, and passes round the inner fence before returning to the main gate via the same approach. Existing car parks will also be retained into the DEF period. Other current hard-standings, paths and roads are planned to be removed.

Demolition of Radioactive Facilities

A risk based assessment of radioactive buildings will take place during the IDW period. This will determine whether de-planting and/or demolition will take place during the IDW period, or whether the buildings will remain in a passively safe state during DEF.

Radioactive plant and equipment in areas such as the Reactor Building may be decontaminated and dismantled, in-situ where practicable and recycled where possible. Contamination control provisions would be applied (e.g. work completed within temporary enclosures) and working procedures will take account of the requirement to minimise workers' exposure to radiation to As Low As Reasonably Practicable (ALARP). Following decontamination and de-planting, buildings scheduled for demolition during IDW will be demolished, using conventional techniques. Radiological monitoring checks will be made on the buildings as demolition proceeds and on the resulting demolished materials prior to re-use or disposal.

Figure 12: **Machine Use in Turbine Hall Basement**



Waste Management

Redundant plant and materials continue to be managed to ensure compliance with Best Available Techniques and progress hazard reduction on Site.

Intermediate Level Radioactive Waste (ILW)

During the IDW period of the Site's Lifetime Plan, a number of ILW streams which arose during the operation of the Site will be processed. These wastes will either be managed to enable them to be treated as LLW or 'Out of Scope'. Alternatively they will be packaged for interim storage at Bradwell Site in specially designed facilities. Prior to facilities being available to package ILW for transport, temporary buffer storage areas have been established to safely and compliantly manage the wastes at Sizewell A.

Low Level Radioactive Waste (LLW)

LLW arising from operational and decommissioning activities is processed and packaged before being transferred from Site to a holder of an Environmental Permit for further treatment or disposal. Aqueous radioactive effluent requiring disposal is transferred to the Active Effluent Treatment Plant (AETP) for processing and disposal to sea in compliance with the Site's Environmental Permit.

'Out of Scope' Waste

'Out of Scope' wastes are those generated which have been assessed as being 'out of the scope' of the requirements of the Environmental Permitting Regulations for radioactive material. These wastes are processed and packaged on Site before being transferred to a holder of an Environmental Permit for further treatment or disposal as Controlled Waste.

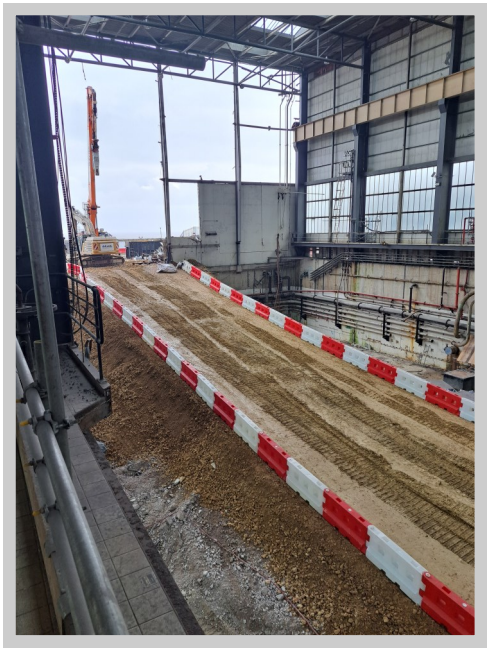


Figure 13: **Reuse of Material Under WRAP Protocol**

Non-radioactive Hazardous Wastes

Disposal of hazardous waste is via authorised contractors who hold the appropriate Waste Carrier's Registration and Environmental Permits or exemptions for the waste management activities to be undertaken. These are checked for validity before any disposal occurs. The specific contractor used will depend on the type of waste requiring disposal. All records are auditable and are checked regularly.

Figure 14: **Waste Storage Area Compound**

Asbestos

The Site continues to strategically manage asbestos hazards by assessing and prioritising work to encapsulate or remove asbestos. This has included work to collate historic asbestos records as well as physical work to weatherproof buildings and conduct removal in areas around the Site.

Insulation containing asbestos is removed under stringent safety conditions using specialist personnel working in tented areas which are subject to airlocks and a negative air pressure system. All work is carried out in strict accordance with The Control of Asbestos Regulations 2012. The tents fully enclose and seal the work areas and the entire volume is smoke tested to ensure its integrity before asbestos removal commences. Prior to removal, all asbestos lagging is injected with a water solution to reduce the number of fibres released into the tented enclosure. Respirators and clothing change facilities are required for all personnel working in the asbestos controlled areas.

Non-radioactive asbestos disposal is via licensed contractors to approved disposal sites. Carrier's Registrations and Environmental Permits for the waste management activities to be undertaken are checked before any disposal occurs. Under the contract conditions, the contractor is required to meet the nationally set controls for disposal of the waste through approved landfill sites.

APPENDIX D — Continued

Other Wastes

Non-radioactive waste materials have arisen throughout the operating life of Sizewell A. In general, the management of waste at Sizewell A aims to minimise the need to use landfill by reducing waste volumes through adherence to the hierarchy of waste management (i.e. reduce, reuse, recycle) in line with the Waste (England and Wales) Regulations 2011, as amended. Sizewell A follows the Duty of Care principles for all waste arisings and where waste is transferred, it is accompanied by a transfer or consignment note (as applicable).

Scrap metal (e.g. steel and copper from wiring), plastic, cardboard, paper, and glass are sent to an appropriate contractor for recycling. If it is not practicable to reuse or recycle any scrap materials, they will be disposed of via approved routes in accordance with the Duty of Care principles.

Non-radioactive effluent is disposed of under the Site's Water Discharge Activities Permit, issued under the Environmental Permitting Regulations 2016, via the Site cooling water outfall to the North Sea. Discharges under this permit include rain water, trade effluent generated during decommissioning activities and secondary treated effluent from the A and B Site Sewage Treatment Plant.

Radioactive Discharges and Emissions during Initial Decommissioning Works Phase

Radioactive discharges to air and water from Sizewell A during decommissioning will continue to be made in accordance with the permit granted by the Environment Agency under the provisions of the Environmental Permitting Regulations 2016 (as amended). Annual aqueous and gaseous discharges have significantly reduced since generation ceased, although there may be some temporary peaks resulting from certain hazard reduction activities in the future.

Environmental Performance

During the year the Site has assisted the Company in retaining accreditation to ISO 14001 through continued maintenance of the environmental management system.

Figure 15: Despatch of Legacy Radioactive Waste

The Site continues to work on minimising the use of resources including electricity and town mains water. The aim is to either reduce or maintain usage levels year on year.

The Site's resource usage is affected by decommissioning activities on the Site, for example; demolition of buildings, isolations (making areas 'cold and dark'), reducing and rationalising systems, and demineralised water management. Management of leaks and use of the fire system also contribute to water usage.

Waste retrievals continue to take place safely and compliantly, enabling storage and disposal of LLW and ILW streams. Following a Company Group Key Target for the reduction of legacy radioactive waste at sites for 2024/25, the waste operations team exceeded the target of 1.08m³ for the financial year with 1.28m³ being despatched.

The decommissioning project team's focus is on progressing with the size reduction of pond skips and associated waste processing. The team is also progressing with a system reduction to the Active Effluent Treatment Plant due to a significant reduction in aqueous discharges from the Site since the emptying of the cooling water ponds in 2019.

There have been no environmental events which have been classified as significant, and all plant tours and monitoring of mitigations have demonstrated their effectiveness at minimising environmental harm.

Wildlife observed on the Site continues to be diverse. Each year, varied bird species return and nest. The Site aims to minimise the impacts on these species from it's activities.

The Kittiwake population on the Off-shore Structures appears to remain at a healthy level. Environmental Impact Assessment and screening assessments for any future work on the Off-shore Structures will be conducted before work takes place, Stakeholders will be included in consultations.

The Site has continued to safely and compliantly deliver work during the past year which has helped to reduce or remove environmental hazards in line with objectives and targets. This included conventional demolition, ongoing asbestos remediation/removal, and waste retrievals.

Routine groundwater monitoring continues and has not shown any areas of concern. Also, excavations and de-planting did not reveal any areas of concern with regards to ground contamination.

During 2015, the Environmental Monitoring Programme for Sizewell A was successfully handed over to EDF. Regular oversight is maintained and the results are reported to the EA. The Environmental Monitoring Programme continues to be reviewed to ensure that it follows Environment Agency Guidance and meets the BAT principal. Results from monitoring in the environment during the year have not shown any significant levels of radioactivity as a result of the Site's activities.

NRS and Sizewell A remain committed to safe and compliant work delivery whilst protecting the environment.

Notes:

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