

Hunterston B Environmental Management Plan

HPS/TSSD/SR882
Rev 000 : December 2024

Executive Summary

In December 2023 EDF Energy Nuclear Generation Limited (EDF) applied for consent to decommission Hunterston B Nuclear Power Station, under the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999 (as amended) (EIADR).

Consent was granted by the Office for Nuclear Regulation in August 2024 subject to 6 conditions. In compliance with condition 2, an Environmental Management Plan was prepared to provide information relating to environmental risks and mitigations anticipated during the project.

This document is the first issue of the Hunterston B Environmental Management Plan which will be updated annually and sent to the ONR in compliance with condition 5 of the consent. This document provides detail of the mitigation measures available to Hunterston B to prevent, reduce and offset any significant adverse environmental effects of the decommissioning work, where possible. This plan also provides an update on how these measures have been and will be implemented on site during decommissioning activities.

Joe Struthers
Station Director
Hunterston B

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1. Introduction

Hunterston B Nuclear Power Station (HNB) ceased electricity generation on 7 January 2022. In line with government policy, the site has now entered a defueling phase whereby all fuel will be removed from the reactors. Once all fuel has been removed, the station will undergo Fuel Free Verification (FFV). The site will enter decommissioning post defueling, whereby the plant and buildings associated with electricity generation will be systematically dismantled, as per the project description in the EIADR₂ (1999) (as amended) submission.

Prior to commencing decommissioning, EDF Energy, the licensee of the site, was legally required to gain consent from the Office for Nuclear Regulation (ONR) under EIADR (1999) (as amended). Following a period of extensive public consultation, the ONR granted consent in August 2024, subject to specific conditions (listed in full in Appendix A). Condition 2 requires the licensee to prepare and implement an Environmental Management Plan (EMP), which shall:

- Identify mitigation measures.
- Describe the implementation and effectiveness of mitigation measures.
- Describe any changes to mitigation measures and reasons for changes.

It is a requirement of condition 4 of the consent to describe the effectiveness of the mitigation measures over time. Therefore, this EMP is a living document that will be periodically reviewed and revised throughout the decommissioning phases. The ONR must also be notified in advance of any proposed significant changes to the mitigation measures in the plan. The EMP will be reissued annually and made available to the public as required by Condition 5 of the consent.

Other supporting information, which may be of interest to the public but is not directly required^[DR1] by the consent conditions, is located in Appendix A.



Figure 1. HNB Power Station

A detailed decision report was prepared by the ONR in 2024. This report describes the content of the conditions attached to the consent and the main reasons and considerations for the decision. Copies of this document are available from the [ONR Website](#).

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

Hunterston B Power Station
West Kilbride
North Ayrshire
Scotland
KA23 9QX

2. Scope of the Environmental Management Plan

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

Geographical Scope

The HNB Nuclear Site Licence area occupies approximately 30 hectares. The decommissioning works, as defined in the EADR consent application, cover some areas outside of the nuclear site licence boundary such as those related to the cooling water infrastructure. This represents a wider Works Area which covers approximately 34.5 hectares, as illustrated in Figure 2. This consists of several temporary and permanent structures, including brick and prefabricated buildings, as well as a road network. This area also includes the cooling water inlet and outlet points.

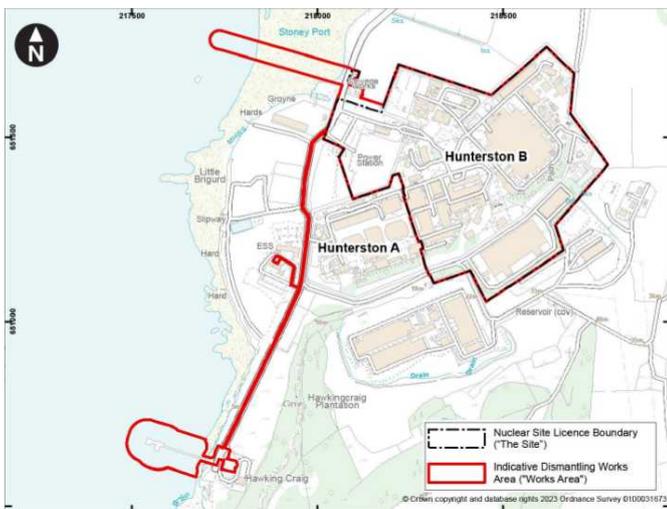


Figure 2. Location of the site and Works Area

Decommissioning Phases

The decommissioning project at HNB is divided into three phases:

- Preparations for Care & Maintenance (Quiescence): This phase includes the de-planting, dismantling and deconstruction of all plant and buildings not included within the Safestore structure and the

relevant management of wastes arising from the activities undertaken during this phase. In addition, it includes the modification of the existing reactor building to create the Safestore structure.

- Care & Maintenance (Quiescence): A period of relative inactivity with management of a mainly quiescent state to allow further radioactive decay of materials within the Safestore. The duration of this phase is approximately 67 years, during which there would be a regime of continuous monitoring and surveillance, with periodic care and maintenance interventions as required.
- Final Site Clearance: The Safestore encompassing the reactors and debris vaults, will be dismantled and removed. Construction and engineering works will provide the necessary infrastructure, services and facilities to prepare for these final dismantling tasks. Upon clearance and delicensing, the land will be released for appropriate future reuse.

The mitigation measures listed in section 4 of this EMP are set out against the three phases listed above.

EDF Energy continues to undertake fundamental reviews of its approach to decommissioning; any impact on HNB will be included in future issues of this document.

Mitigation measures may change in the future in light of experience and developing technologies. The impacts of later work phases have been documented in the original Environmental Statement₂ (ES), however, due to the long-term unpredictability of environmental and regulatory regimes, more confidence should be attached to assessments 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 justifications for any changes made.

Topics

Environmental impacts, both beneficial and adverse, are divided into fourteen topic areas within the ES, as are the mitigation measures in this EMP. While the ES provides information on radioactive waste and

discharges, this topic is outside the scope of the HNB EIADR consent as agreed with the ONR as it is covered by other regulatory regimes.

Environmental Topics -

- Air Quality
- Climate Change
- Terrestrial Biodiversity and Ornithology
- Marine Biodiversity
- Coastal Management and Water Quality
- Surface Water and Flood Risk
- Soils, Geology and Hydrogeology
- Historic Environment
- Landscape and Visual Impact
- Noise and Vibration
- Traffic and Transport
- People and Communities
- Major Accidents and Disasters
- Conventional Waste

3. The Site and Surrounding Area

Site Description

HNB comprises two Advanced Gas-cooled Reactors (AGR). Each reactor pressure vessel is cylindrical, made from steel and situated within a large concrete bio shield. During operation, the reactors were cooled using carbon dioxide. Each reactor has 4 boilers, which converted water to steam to drive the turbines located inside the Turbine Hall. The cooling of the steam was achieved using seawater through condensing units in the Turbine Hall basement. The cooling water intake and outfall structures are located in the marine environment, connected to the Turbine Hall by large underground tunnels. Other associated buildings include the Cooling Water Pump house, National Grid Substation, Workshops, Stores and Offices.



Figure 3. HNB site layout and adjoining industry

Surrounding Area

HNB is located on the west coast of Scotland near West Kilbride, on the Firth of Clyde. The site is elevated at approximately 12 meters Above Ordnance Datum (AOD). The coastal area is relatively low-lying with gently undulating landform, providing some natural screening. The surrounding area includes agricultural land, residential areas and other industrial facilities including Hunterston A (HNA) Decommissioning Site. The coastal foreshore of Hunterston Sands and mudflats are to the north and west of the Site. The South Annan Sands Site of Special Scientific Interest (SSSI) and raised beach to the north-east are prominent features in the local landscape.

Transport Infrastructure

The main access to HNB from the national highway network is via the A78. The site is also accessible by rail, with the nearest station at West Kilbride [DR2]. Cycling and pedestrian access is limited but available. The Clyde Port (Hunterston Terminal) is the closest port with marine shipping facilities.

Local Watercourses

The primary body of water near HNB is the Firth of Clyde, adjacent to the site's western boundary. There are several freshwater features within 2 kilometres of the site, including ponds and streams. The site is within a rainwater catchment area that drains to the Firth of Clyde.

Groundwater monitoring undertaken within the site indicates that flow is generally to the north-west

beneath HNB, moving towards the sea [ML3][ML4]. There is varying permeability of made ground and the superficial deposits and the presence of below ground infrastructure and basements will result in local variations in groundwater flow on the site.

Geology and Hydrogeology

The site is underlain by mostly Raised Marine Deposits (clay, silt, sand and gravel), these consist of a thin layer of raised beach deposits overlying glacial till and bedrock of the Kelly Burn Sandstone formation. Made ground is also known to be present across the Site and based on previous ground investigation is confirmed at up to 5 m in thickness. This is likely to date from construction of the power station. The site's hydrogeology is influenced by these geological formations, impacting groundwater flow and quality.

Sensitivity of the Receiving Environment

4. Mitigation Measures

The mitigation measures presented in this section are based upon the project description and the environmental assessment within the ES, as part of the EIADR (1999) application. Any significant changes to the project description shall be managed under the EIADR (1999) (as amended) regulations (otherwise known as regulation 13). As stated in condition 6, the ONR will be made aware of any changes to proposed mitigation measures no less than 30 days before the change is made.

In compliance with Condition 3 of the EIADR (1999) consent, the mitigations in the tables below are coded relative to their breakdown within Condition 3, as below:

- 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.

The nearest settlements within a 10-kilometer radius include West Kilbride, Fairlie and Largs. However the nearest residential properties are located 0.45km east of the site. The site is located within an area of scenic and environmental importance, including a designated nature conservation area and SSSI. The surrounding area is also known for its cultural and historical significance, with several listed buildings, archaeological sites and nearby Environmental Sensitivities.

- Portencross Woods SSSI, 0.05km east
- Southannan Sands SSSI, 0.18km north
- Goldenberry Hill Local Nature Conservation Site (LNCS) and Ancient Woodland Inventory (AWI), 0.08km south-east
- Portencross Woods AWI, 0.03km east
- Millport Conservation Area, 2.9km north-west

Preparations for Care & Maintenance

Topic	Nature of impact	Mitigation Measures Proposed
Air Quality	Dust emissions generated through the proposed works	Appropriate Dust Management Plan(s) will be produced for the demolition activities as part of the Proposed Works, in accordance with IAQM ₃ (Institute of Air Quality Management) guidance on the Assessment of Dust from Demolition and Construction. (a)
	Dust emissions due to any use of explosives	Such activities will not be carried out under particularly dry or windy conditions. Local residents and HNA will be informed in advance. (a)
	Increase in dust at residential properties along traffic routes due to soiled vehicles or vehicles carrying dusty loads	As appropriate: <ul style="list-style-type: none"> Sheeting of lorries carrying dusty loads. Provision of wheel washing for heavy goods vehicles on leaving Site (b)
Climate Change	Release of Greenhouse Gas (GHG) emissions arising from activities during the Proposed Works	Within the scope of the Proposed Works, periodic reviews will be undertaken to identify opportunities for GHG (Green House Gas) emissions reduction and to enable the introduction of carbon reducing measures at relevant stages in the decommissioning process. (c)
	Embodied GHG emissions	Carbon measuring and reporting will be undertaken. (a) Where possible: <ul style="list-style-type: none"> Local sourcing of construction materials will be encouraged. Circular economy principles will be considered and deployed. (b)
Terrestrial Biodiversity and Ornithology	Potential degradation of habitats and biodiversity conservation sites	In advance of site works (including preparatory investigations/enabling works), information of the sensitive ecological features that are on or near the Site will be shared with the relevant working party to ensure appropriate precautionary working practices are developed and implemented. (a) Inspection and monitoring will be carried out by an Ecologist (Clerk of Works), also referred to as 'ECoW', for planned and ongoing works as appropriate. (a) Habitats within and immediately adjacent to the Works Area, will continue to be managed in accordance with the Integrated Management System (IMS), which includes a Biodiversity Action Plan (BAP) and an Integrated Land Management Plan (ILMP). This process currently monitors and manages non-operational land holdings in accordance with biodiversity benchmarks. (a)

Topic	Nature of impact	Mitigation Measures Proposed
		<p>Whilst tree loss to facilitate works is unlikely, any unavoidable tree loss will be limited and compensated through planting of at least two trees for each one that is removed within Hunterston Local Wildlife Site (LWS) or bordering areas. (a)</p> <p>Pollution risk and pollution controls will be managed in accordance with the IMS. Risk assessments will be undertaken to assess the level of risk and if secondary and tertiary containment is needed. (a)</p>
	<p>Potential disturbance of mammals and other fauna (general measures)</p>	<p>Gates to compound areas are to be designed to prevent mammals from gaining access and would be closed at night. Any temporarily exposed pipes would be capped when contractors are off site, to prevent mammals from gaining access. (a)</p> <p>Construction/demolition materials are to be stored in predetermined parts of the Works Area and wherever practicable elevated off the ground (e.g., on pallets), or stored within skips prior to their removal, unless otherwise agreed by the ECoW. Storage and handling of materials should minimise the risk of creating refuge for, or harming, mammals. (a)</p> <p>As far as practicable, any areas or mounds of spoil and/or earth are to be fully compacted, removing cracks or crevices that could create wildlife refuges. (a)</p> <p>No litter or waste materials are to be discarded in works areas as they could create temporary refuges for wildlife. (a)</p> <p>Any mammal paths are to be cleared of materials and/or equipment at the end of each working day; (a)</p> <p>All personnel are to remain vigilant and are to be aware of the risk of encountering mammals, for example otters, badgers and hedgehogs, when driving to and from the Site. A low maximum speed limit will be implemented within the Works Area, in accordance with HNB's established safety procedures relating to vehicle movements. Statutory speed limits will be adhered to on approach to the Works Area via surrounding routes. This will limit the risk of animal mortality due to traffic collisions. (a)</p> <p>In the event that a protected species (e.g., otters, badgers, bats, nesting birds etc) is observed, or its presence suspected within or adjacent to works areas, all work will cease and the advice of the ECoW will be sought immediately. (a)</p>

Topic	Nature of impact	Mitigation Measures Proposed
		<p>In advance of site works (including preparatory investigations/enabling works), the ECoW will brief the Principal Contractor on the sensitive ecological features that are on or near the Site and the Principal Contractor will ensure all site personnel are aware of the precautionary working practices set out in the EMP. (a)</p> <p>Where practicable, within constraints associated with the Proposed Works, excavations are to be:</p> <ul style="list-style-type: none"> • Backfilled • Covered and securely sealed. • Have a means of escape for any entrapped fauna, for example gradually sloping sides, or ramps extending from the base of the excavation up to the ground surface. <p>Where this is impracticable during the works, voids will be monitored and any entrapment of fauna will be reported to the ECoW, who will recommend additional working practices as appropriate. (b)</p> <p>Baseline surveys of legally protected species (badger, roosting bats and reptiles) will be repeated/updated to further inform the EMP. Additional embedded measures may be needed if the status of these species at or near the works area changes. (c)</p>
	Potential disturbance of Otters	As appropriate; in advance of demolition activities, surveys of the work areas will be carried out by qualified specialists and in accordance with the IMS. In the event an otter is recorded, an appropriate method of work and mitigation will be developed and implemented in accordance with the advice from the qualified specialist. (c)
	Potential disturbance of bats	As appropriate; prior to demolition or modification of built structures (typically in the spring/summer period prior to demolition), a preliminary roost assessment and any follow-up surveys that are necessary will be carried out by a qualified specialist and in accordance with the IMS. In the event a bat roost is discovered it will be removed under a European protected Species (EPS) licence to ensure compliance with the legal protection of bats. An appropriate method of work and mitigation will be developed and implemented in accordance with the advice from the qualified specialist. (c)
	Potential disturbance of badgers	As appropriate; in advance of demolition activities, surveys of the work areas will be carried out by qualified specialist and in accordance with the IMS. In the event a badger is recorded, an appropriate method of

Topic	Nature of impact	Mitigation Measures Proposed
		work and mitigation will be developed and implemented in accordance with the advice from the qualified specialist. (c)
	Potential disturbance of hedgehogs	Any hedgehog that is encountered during the Proposed Works will be removed from the Works Area and released into a suitable habitat that will remain undisturbed. (a)
	Spreading of non-native species	As appropriate; in advance of demolition activities, surveys of the work areas and those in the vicinity will be carried out by a qualified specialist and in accordance with the IMS. In the event an invasive non-native species (INNS) is recorded, an appropriate method of work and mitigation will be developed and implemented in accordance with the advice from the qualified specialist. (c)
	Potential disturbance to reptiles	In the event that habitat disturbance is unavoidable, the area of disturbance will be kept to the practicable minimum and additional precautions are to be implemented in accordance with the advice from the qualified specialist. (a)
	Potential disturbance to birds	<p>As appropriate; in circumstances where work on buildings or disturbance of vegetation during the breeding season is unavoidable, a breeding bird and nest check will be carried out in advance by a qualified specialist and in accordance with the IMS. In the case that any active nests are discovered, an exclusion (no disturbance) zone will be defined by the qualified specialist until the young birds fledge. (a)</p> <p>In the event of unavoidable disturbance, damage or destruction of a bird's nest, a Nature Scot licence to ensure compliance with the legal protection of breeding birds will be in place. (a)</p> <p>If a birds' nest is encountered, all works within 30 m would cease as soon as it is safe to do so. A qualified specialist will inspect the area and define appropriate measures as required. (c)</p>
Marine Biodiversity	Disturbance of marine mammals and other fauna and deterioration of flora	<p>As much work as possible will be carried out away from the shore, including work in the inter-tidal zone. Working 'in the dry' will minimise sediment mobilisation and facilitate avoidance of disturbance to sensitive features. (a)</p> <p>The deck and surrounding piles of the cooling water intake structure will be removed using conventional methods and not using explosives. This may include the use of diamond-wire cutting machines, vibro-piling to remove piles from the seabed, jack-up vessels, floating cranes and guard vessels during the works. (b)</p>
	Disturbance to marine environment, water	Pollution risk and pollution controls will be managed in accordance with the IMS. (a)

Topic	Nature of impact	Mitigation Measures Proposed
	quality and secondary effects on marine biota	
	Potential disturbance to benthic habitats and secondary effects on biota and water quality	Voids within the seabed beyond the intertidal area will not be plugged, instead, they will be left to infill naturally with marine sediments, minimising further disturbance to the marine environment. (a)
Coastal Management and Water Quality	Potential disturbance of marine environment, water quality and secondary effects on marine biota due to accidental spillage	<p>Pollution risk and pollution controls will be managed in accordance with the IMS. (a)</p> <p>During jetty dismantling, as much work as possible will be carried out away from the shore, including work in the intertidal zone. Working 'in the dry' will minimise sediment mobilisation and disturbance to sensitive intertidal and subtidal features. (a)</p>
	Deterioration of water quality	<p>The use of anti-fouling material may remain in areas which will be operational after the initial decommissioning activities, such as the Active Effluent Discharge Line (AEDL). This is expected to protrude from the end of the existing outfall infrastructure; use will be minimised to reduce the amount of harmful chemicals / biocides being discharged. (a)</p> <p>The intake structure will be removed to the seabed level. There will be no use of explosives. During the installation of the Alternative Active Effluent Discharge Line (AAEDL), works will be undertaken from an anchored pontoon: This will minimise sediment mobilisation. (a)</p>
	Accidental spillage of harmful materials adaption measures	<p>Inventories of harmful materials present held near or over the marine environment will be minimised, consistent with operational safety requirements. (a)</p> <p>Pollution risk and pollution controls will be managed in accordance with the IMS. (a)</p>
Surface Water and Flood Risk	Coastal protection and flood risk adaptation measures	<p>As appropriate; relevant sea defences will be maintained. (a)</p> <p>An Emergency Flood Response Plan will be prepared and incorporated as part of the Site Emergency Plan. (a)</p> <p>The EDF Energy HNB Safety Case will continue to appraise the risks associated with external hazards. The HNB Safety Case will be updated to account for hazards on site and periodically reviewed to take account of any new data. (c)</p>
	Surface water flooding	Where the Proposed Works have the potential to affect Site drainage inputs or change the permeability of the ground surface, the suitability of existing drainage systems and the potential requirement for

Topic	Nature of impact	Mitigation Measures Proposed
		<p>alternative drainage arrangements, will be assessed. Suitable drainage systems will be defined in a decommissioning drainage plan prior to the relevant proposed activity commencing. (c)</p>
	<p>Surface water contamination</p>	<p>Site runoff will be managed within the Works Area, with turbid water from the demolition zone collected and treated appropriately. This will include settlement and discharge to the existing site drainage system, or off-site disposal depending on contamination levels. Wheel washes will be used to avoid silt loads being removed from the Works Area by vehicles. The existing drainage system includes elements to capture and treat contaminants. (a)</p> <p>The requirement for dewatering will also be considered in advance of excavation work. If required, an assessment will be carried out in advance to identify suitable environmental measures to minimise the potential for contaminant mobilisation and to protect the water environment. Compliance with water environment legislation will be ensured. The licensee will ensure compliance with the Environment Agency for water abstraction. (c)</p>
	<p>Groundwater contamination</p>	<p>Pollution risk and pollution controls will be managed in accordance with the IMS. (a)</p> <p>The Site Protection and Monitoring Programme (SPMP) will be managed in accordance with the IMS. (a)</p> <p>Appropriate groundwater monitoring and management regime in accordance with the IMS. (a)</p>

Topic	Nature of impact	Mitigation Measures Proposed
Soils, Geology and Hydrogeology	<p>Ground, surface water and groundwater contamination</p> <p>Ground, surface water</p>	<p>Land condition data will continue to be collected and managed in accordance with the IMS (a)</p> <p>During the Proposed Works, construction strategies will be implemented that will seek to maximise the reuse of excavated materials or demolition derived materials, which are suitable for the intended re-use in the context of the future site. Waste management planning and the reuse of materials will be completed in accordance with the Definition of Waste Code of Practice (DoWCoP), use of a Materials Management Plan (MMP), the HNB Waste Management Plan (WMP) and the Site Wide Environmental Safety Case (SWESC). The MMP will set out how stockpiles will be managed and segregated to avoid cross-contamination and will include the anticipated programme for storage of materials. Where it is identified that materials cannot be re-used on the Works Area or on the Site, these will be suitably contained to prevent uncontrolled releases to the environment. An off-site disposal option at a suitably licensed facility by a licensed waste carrier will be identified and collection arranged at the earliest opportunity. (a)</p> <p>Decommissioning plans for the Proposed Works will reflect that delicensing and surrender of the Radioactive Substances Regulations (RSR) permit are distinct regulatory processes with different requirements. Specifically, the plans will note that the programme of validation monitoring required to demonstrate that the Site reference state has been achieved may differ from the clearance survey required for delicensing. The Site end state description will continue to be clarified as the plans are developed during the Proposed Works and the plans updated as and when required. (c)</p> <p>Where the Proposed Works have the potential to affect Site drainage inputs or change the permeability of the ground surface, the suitability of existing drainage systems will be assessed. (c)</p>
	Contamination risk to human health	<p>All aspects of the Proposed Works will be in accordance with the Health and Safety at Work etc Act (1974)⁵, regulations made under the Act and the Construction (Design and Management) Regulations 2015⁶. Potential risks to human health from any unexpected ground contamination will be avoided by the use of a risk assessment to adopt appropriate working practises. with the use of Personal Protective Equipment (PPE). (a)</p>

Topic	Nature of impact	Mitigation Measures Proposed
		<p>Asbestos and asbestos containing materials will be managed in according with the IMS (a)</p> <p>Suspect materials encountered during groundworks will be characterised through sampling and testing protocols to identify appropriate further actions. (c)</p>
Historic environment	Loss of historic assets	A written scheme of building recording is to be developed as appropriate. (a)
	Loss of / disturbance of historic assets	<p>A Protocol for Archaeological Discovery (PAD) is to be in place during the Proposed Works in the marine environment, to define the reporting and subsequent treatment of unexpected archaeological discoveries. (a)</p> <p>A strategy to preserve the historical and industrial value of all EDF Energy reactor sites, of which HNB is one, is being considered. EDF Energy will provide supporting information to the Nuclear Decommissioning Authority as required to assist in making any decisions. Potential options include the following:</p> <ul style="list-style-type: none"> • 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. (b)
Landscape and Visual Impact	Built environment in relation to the surrounding landscape character	<p>An Interim Landscape Management Plan is to be implemented to enhance the landscape features and visual amenity. (a)</p> <p>Cladding in the colour of dark grey / blue will be proposed as part of the design of the Safestore building. (b)</p>
Noise and Vibration	Disturbance to residents arising from noise emissions	<p>Noise emissions from the operation of the Operational Waste Processing Facilities (OWPF) and Decommissioning Waste Processing Facilities (DWPF) will be managed and controlled through the implementation of appropriate operational controls on site. (a)</p> <p>An appropriate noise monitoring programme will be undertaken at the boundary of the Work Areas during the greatest intensity of simultaneous work. (a)</p> <p>Investigate and address noise complaints in accordance with the IMS. (a)</p>

Topic	Nature of impact	Mitigation Measures Proposed
Traffic and Transport	Construction Traffic	Appropriate Construction Traffic Management Plan(s) will be produced for the demolition activities that form part of the Proposed Works. (a)
People and Communities	Potential impacts on HNB Workers	Appropriate people and resource planning/management will continue to be managed on site in accordance with the ongoing strategy. (a) The Nuclear Decommissioning Authority (NDA)/Nuclear Restoration Services (NRS) socio-economic programmes will be considered at HNB when the site is transferred to NDA/NRS. (a)
Major Accidents and Disasters	Risk of major accidents and disasters	The Incident Management Plan (IMP) will be managed in accordance with the IMS. (a) Management of security will be managed in accordance with the IMS and the Nuclear Site Security Plan. (a) Waste management will continue to be managed in accordance with the IMS. (a) Appointment and management of contractors will be managed in accordance with the IMS. (a) Pollution risk and pollution controls will be managed in accordance with the IMS. (a) Work management and risk assessment will be managed in accordance with the IMS (a) The decommissioning of the surface water drainage, bunding and containment and any other safeguards will be assessed against the ongoing risk of major accidents. The residual risk will be maintained at a level that is as low as reasonably practicable, throughout the duration of the Proposed Works. (c)
	Risk from releases of hazardous materials	Emergency response/Incident management plan will be managed in accordance with the IMS. (a)
Conventional Waste	Waste generation	Waste management will continue to be managed in accordance with the IMS. (a)

Care & Maintenance

Topic	Nature of impact	Mitigation Measures Proposed
Landscape and Visual Impact	During Care & Maintenance no significant works are planned with the possible exception of recladding the reactor buildings. If required, it is anticipated that the reactors would be re-clad in a similar material to that used at the start of Care & Maintenance hence the visual impact would remain unchanged. For the purpose of the landscape assessment, it is assumed that the reactor building will remain at full height during Safestore under current decommissioning plans.	The cladding would be in dark grey / blue colour. (a)
	Built environment in relation to the surrounding landscape character	An Interim Landscape Management Plan is to be maintained to enhance the landscape features and visual amenity. (a)
No other significant adverse environmental impacts were identified during Care & Maintenance.		

Final Site Clearance

Topic	Nature of impact	Mitigation Measures Proposed
Air Quality	Dust emissions generated through the proposed works	Appropriate Dust Management Plan(s) will be produced for demolition activities as part of the Proposed Works, in accordance with IAQM guidance on the Assessment of Dust from Demolition and Construction. (a)
	Dust emissions due to any use of explosives	Such activities will not be carried out under particularly dry or windy conditions. In addition to this, local residents and Hunterston A (HNA) will be informed in advance. (a)
	Increase in dust at residential properties along traffic routes due to soiled vehicles or vehicles carrying dusty loads	As appropriate: <ul style="list-style-type: none"> Sheeting of lorries carrying dusty loads. Provision of wheel washing for heavy goods vehicles on leaving Site (b)
Climate Change	Release of Greenhouse Gas (GHG) emissions arising from activities during the Proposed Works	Within the scope of the Proposed Works, periodic reviews will be undertaken to identify opportunities for GHG (Green House Gas) emissions reduction and to enable the introduction of carbon reducing measures at relevant stages in the decommissioning process. (c)
Terrestrial Biodiversity	Potential degradation of habitats and biodiversity conservation sites	In advance of site works (including preparatory investigations/enabling works), information of the sensitive ecological features that are on or near the Site will be shared with the

Topic	Nature of impact	Mitigation Measures Proposed
and Ornithology		<p>relevant working party to ensure appropriate precautionary working practices are developed and implemented. (a)</p> <p>Inspection and monitoring will be carried out by an Ecologist (Clerk of Works), also referred to as 'ECoW', for planned and ongoing works as appropriate. (a)</p> <p>Habitats within and immediately adjacent to the Works Area will continue to be managed in accordance with the IMS, which includes a Biodiversity Action Plan (BAP) and an Integrated Land Management Plan (ILMP). This process currently monitors and manages non-operational land holdings in accordance with biodiversity benchmarks. (a)</p> <p>Whilst tree loss to facilitate works is unlikely, any unavoidable tree loss will be limited and compensated through planting of at least two trees for each one that is removed within Hunterston LWS or bordering areas. (a)</p> <p>Pollution risk and pollution controls will be managed in accordance with the IMS. Risk assessments will be undertaken to assess the level of risk and if secondary and tertiary containment is needed. (a)</p>
	Potential disturbance of mammals and other fauna (general measures)	<p>Gates to compound areas are to be designed to prevent mammals from gaining access and would be closed at night. Any temporarily exposed pipes would be capped when contractors are off site to prevent mammals from gaining access. (a)</p> <p>Construction/demolition materials are to be stored in predetermined parts of the Works Area, over 30 m from adjacent habitats and wherever practicable elevated off the ground (e.g., on pallets), or stored within skips prior to their removal, unless otherwise agreed by the ECoW. Storage and handling of materials should minimise the risk of creating refuge for, or harming, mammals. (a)</p> <p>As far as practicable, any areas or mounds of spoil and/or earth are to be fully compacted, removing cracks or crevices that could create wildlife refuges; (a)</p> <p>No litter or waste materials are to be discarded in works areas as they could create temporary refuges for wildlife. (a)</p> <p>Any mammal paths are to be cleared of materials and/or equipment at the end of each working day; (a)</p>

Topic	Nature of impact	Mitigation Measures Proposed
		<p>All personnel are to remain vigilant and are to be aware of the risk of encountering mammals, for example otters, badgers and hedgehogs, when driving to and from the Site. A low maximum speed limit will be implemented within the Works Area, in accordance with HNB’s established safety procedures relating to vehicle movements. Statutory speed limits will be adhered to on approach to the Works Area via surrounding routes. This will limit the risk of animal mortality due to traffic collisions. (a)</p> <p>In the event that a protected species (e.g., otters, badgers, bats, nesting birds etc) is observed, or its presence suspected within or adjacent to works areas, all work will cease and the advice of the ECoW will be sought immediately. (a)</p> <p>In advance of site works (including preparatory investigations/enabling works), the ECoW will brief the Principal Contractor on the sensitive ecological features that are on or near the Site and the Principal Contractor will ensure all site personnel are aware of the precautionary working practices set out in the EMP. (a)</p> <p>Where practicable, within constraints associated with the Proposed Works, excavations are to be:</p> <ul style="list-style-type: none"> • Backfilled. • Covered and securely sealed. • Have a means of escape for any entrapped fauna, for example, gradually sloping sides, or ramps extending from the base of the excavation up to the ground surface. <p>Where this is impracticable during the works, voids will be monitored and any entrapment of fauna will be reported to the ECoW, who will recommend additional working practices as appropriate. (b)</p> <p>Baseline surveys of legally protected species (badgers, roosting bats and reptiles) will be repeated/updated to further inform the EMP. Additional embedded measures may be needed if the status of these species at/near the works area changes. (c)</p>
	Potential disturbance of otters	As appropriate; in advance of demolition activities, surveys of the work areas and in the vicinity will be carried out by qualified specialists and in accordance with the IMS. In the event an otter is recorded, an appropriate method of work and mitigation will be

Topic	Nature of impact	Mitigation Measures Proposed
		developed and implemented in accordance with the advice from the qualified specialist. (c)
	Potential disturbance of bats	As appropriate; prior to demolition or modification of built structures (typically in the spring/summer period prior to demolition), a preliminary roost assessment and any follow-up surveys that are necessary will be carried out by a qualified specialist and in accordance with the IMS. In the event a bat roost is discovered it will be removed under an EPS licence to ensure compliance with the legal protection of bats. An appropriate method of work and mitigation will be developed and implemented in accordance with the advice from the qualified specialist. (c)
	Potential disturbance of badgers	As appropriate; in advance of demolition activities, surveys of the work areas and those in the vicinity will be carried out by a qualified specialist and in accordance with the IMS. In the event a badger is recorded, an appropriate method of work and mitigation will be developed and implemented in accordance with the advice from the qualified specialist. (c)
	Potential disturbance of hedgehogs	Any hedgehog encountered during the Proposed Works will be removed from the Works Area and released into suitable habitat that will remain undisturbed. (a)
	Spreading of non-native species	As appropriate; in advance of demolition activities, surveys of the work areas and those in the vicinity will be carried out by a qualified specialist and in accordance with the IMS. In the event an invasive non-native species (INNS) is recorded, an appropriate method of work and mitigation will be developed and implemented in accordance with the advice from the qualified specialist. (c)
	Potential disturbance to reptiles	In the event that habitat disturbance is unavoidable, the area of disturbance will be kept to the practicable minimum and additional precautions are to be implemented in accordance with the advice from the qualified specialist. (a)
	Potential disturbance to birds	<p>As appropriate; in circumstances where work on buildings or disturbance of vegetation during the breeding season is unavoidable, a breeding bird and nest check will be carried out in advance by a qualified specialist and in accordance with the IMS. In the case that any active nests are discovered, an exclusion (no disturbance) zone will be defined by the qualified specialist until the young birds fledge. (a)</p> <p>In the event of unavoidable disturbance, damage or destruction of a bird's nest, a Nature Scot licence to ensure compliance with the legal protection of breeding birds will be in place. (a)</p>

Topic	Nature of impact	Mitigation Measures Proposed
		If a birds' nest is encountered, all works within 30 m would cease as soon as it is safe to do so. A qualified specialist will inspect the area and define appropriate measures as required. (c)
Marine Biodiversity	Disturbance to marine environment, water quality and secondary effects on marine biota	Pollution risk and pollution controls will be managed in accordance with the IMS. (a)
Coastal Management and Water Quality	Deterioration of water quality	The use of anti-fouling material may remain in areas which will be operational after the initial decommissioning activities, such as the Active Effluent Discharge Line (AEDL). This is expected to protrude from the end of the existing outfall infrastructure; use will be minimised to reduce the amount of harmful chemicals/biocides being discharged. (a)
	Accidental Spillage of harmful materials adaption measures	Inventories of harmful materials present held near or over the marine environment will be minimised, consistent with operational safety requirements. (a) Pollution risk and pollution controls will be managed in accordance with the IMS. (a)
Surface Water and Flood Risk	Coastal Protection and Flood Risk Adaptation Measures	As appropriate; relevant sea defences will be maintained. (a) An Emergency Flood Response Plan will be prepared and incorporated as part of the Site Emergency Plan. (a) The EDF Energy HNB Safety Case will continue to appraise the risks associated with external hazards. The HNB Safety Case will be updated to account for hazards on site and periodically reviewed to take account of any new data. (c)
	Surface water flooding	Where the Proposed Works have the potential to affect Site drainage inputs or change the permeability of the ground surface, the suitability of existing drainage systems and the potential requirement for alternative drainage arrangements, will be assessed. Suitable drainage systems will be defined in a decommissioning drainage plan prior to the relevant proposed activity commencing. (c)
	Surface water contamination	Site runoff will be managed within the Works Area, with turbid water from the demolition zone collected and treated appropriately. This will include settlement and discharge to the existing site drainage system, or off-site disposal depending on contamination levels. Wheel washes will be used to avoid silt loads being removed from the Works Area by vehicles. The existing drainage system includes elements to capture and treat contaminates. (a)

Topic	Nature of impact	Mitigation Measures Proposed
	Groundwater contamination	<p>The requirement for dewatering will be considered in advance of excavation work. If required, an assessment will be carried out in advance to identify suitable environmental measures to minimise the potential for contaminant mobilisation and to protect the water environment. Compliance with water environment legislation will be ensured. The licensee will ensure compliance with the Environment Agency for water abstraction. (c)</p> <p>Pollution risk and pollution controls will be managed in accordance with the IMS. (a)</p> <p>Site Protection and Monitoring Programme (SPMP) will be managed in accordance with the IMS. (a)</p> <p>Appropriate groundwater monitoring and management regime in accordance with the IMS. (a)</p>
Soils, Geology and Hydrogeology	Ground, surface water and groundwater contamination	<p>Land condition data will continue to be collected and managed in accordance with the IMS (a)</p> <p>During the Proposed Works, construction strategies will be implemented that will seek to maximise the reuse of excavated materials or demolition derived materials, which are suitable for the intended re-use in the context of the future site. Waste management planning and the reuse of materials will be completed in accordance with the Definition of Waste Code of Practice (DoWCoP), use of a Materials Management Plan (MMP), the HNB Waste Management Plan (WMP) and Site Wide Environmental Safety Case (SWESC). The MMP will set out how stockpiles will be managed and segregated to avoid cross-contamination and will include the anticipated programme for storage of materials. Where it is identified that materials cannot be re-used on the Works Area or on the Site, these will be suitably contained to prevent uncontrolled releases to the environment. An off-site disposal option at a suitably licensed facility by a licensed waste carrier will be identified and collection arranged at the earliest opportunity. (a)</p> <p>Where the Proposed Works have the potential to affect Site drainage inputs or change the permeability of the ground surface, the suitability of existing drainage systems will be assessed. (c)</p> <p>Decommissioning plans for the Proposed Works will reflect that delicensing and surrender of the RSR permit are distinct regulatory processes with different requirements. Specifically, the plans will</p>

Topic	Nature of impact	Mitigation Measures Proposed
		note that the programme of validation monitoring required to demonstrate that the Site reference state has been achieved may differ from the clearance survey required for delicensing. The Site end state description will continue to be clarified as the plans are developed during the Proposed Works and the plans updated as and when required. (c)
	Soil Remediation	Options: In-situ bioremediation, soil excavation and off-site treatment, or chemical stabilization. Final selection depends on contamination levels discovered during future site investigations. (b)
	Contamination risk to human health	<p>All aspects of the Proposed Works will be in accordance with the Health and Safety at Work etc Act (1974), regulations made under the Act and the Construction (Design and Management) Regulations 2015. Potential risks to human health from any unexpected ground contamination will be avoided by the use of a risk assessment to adopt appropriate working practises. (a)</p> <p>Asbestos and asbestos containing materials will be managed in according with the IMS (a)</p> <p>Suspect materials encountered during groundworks will be characterised through sampling and testing protocols to identify appropriate further actions. (c)</p>
Noise and Vibration	Disturbance to residents arising from noise emissions	<p>An appropriate noise monitoring programme will be undertaken at the boundary of the Work Areas during the greatest intensity of simultaneous work (a)</p> <p>Investigate and address noise complaints in accordance with the IMS. (a)</p>
Landscape and Visual Impact	Built environment in relation to the surrounding landscape character	An Interim Landscape Management Plan is to be maintained to enhance the landscape features and visual amenity. (a)
Historic Environment	Historic Value of HNB	A strategy to preserve the historical and industrial value of all EDF Energy reactor sites, of which HNB is one, is being considered. EDF Energy will provide supporting information to the Nuclear Decommissioning Authority as required to assist in making any decisions. (b)
Traffic and Transport	Construction Traffic	Appropriate Construction Traffic Management Plan(s) will be produced for the activities that form part of the Proposed Works. (a)
People and Communities	Potential impacts on HNB Workers	Appropriate people and resource planning/management will continue to be managed on site in accordance with the ongoing strategy. (a)
	Risk of major accidents and disasters	The Incident management plan will be managed in accordance with the IMS. (a)

Topic	Nature of impact	Mitigation Measures Proposed
Major Accidents and Disasters		<p>Management of security will be managed in accordance with the IMS and the Nuclear Site Security Plan. (a)</p> <p>Appointment and management of contractors will be managed in accordance with the IMS. (a)</p> <p>Pollution risk and pollution controls will be managed in accordance with the IMS. (a)</p> <p>The decommissioning of the surface water drainage, bunding and containment and any other safeguards will be assessed against the ongoing risk of major accidents. The residual risk will be maintained at a level that is as low as reasonably practicable, throughout the duration of the Proposed Works. (c)</p> <p>Work management and risk assessment will be managed in accordance with the IMS. (a)</p>
	Risk from releases of hazardous materials	An Emergency response/Incident management plan will be managed in accordance with the IMS. (a)
Conventional Waste	Waste generation	<p>Waste management will continue to be managed in accordance with the IMS. (a)</p> <p>Appropriate waste management plan will be produced for the demolition activities that form part of the Proposed Works. (a)</p>

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.

The formal decommissioning programme is yet to commence at HNB, however throughout the defueling phase, the site has taken steps to reduce any safety risk by managing redundant systems and ensuring the re-use and recycling of materials, with appropriate onward disposal. The measures taken so far align with the mitigations proposed for the future decommissioning projects, mentioned within this document.

Removal of redundant plant and hazardous substances

The site has removed some of the larger plant associated with electricity generation resulting in the off-site removal of significant quantities of mineral oil, lubricating oil, insulation fluids, diesel fuel oil and Fire-Resistant Fluids. In addition, the site stock of hazardous compressed gases and other liquid hazardous chemicals were also removed between 2022 and 2023. This is an ongoing campaign at HNB.

Removal of equipment and demolition of the Fish Farm

The old Fish Farm is located outside the nuclear licensed site boundary and has been used by HNB for the storage of non-hazardous spare equipment, which is now redundant. Work has been carried out to ensure the re-use of much of the equipment by other sites or via supply chain companies. Any waste items have been removed in accordance with the site's waste management principles and standards.



Figure 4. Old Fish Farm (storage facility) at HNB

The building has been emptied in readiness for demolition. Wildlife assessments and hazardous materials surveys of the building fabric are being carried out.

Stator shed removal

The stator shed housed a redundant stator and other redundant equipment. It was necessary to remove the shed and contents as part of the enabling works for a refurbishment of one of the waste facilities. The Stator contained asbestos materials that were appropriately managed and disposed of.



Figure 5. Redundant Stator internal

6. Changes to the Environmental Management Plan

This is the first submission of the HNB Environmental Management Plan and this section will contain all changes that have been made and will be updated annually.

During the time between the EIADR (1999) submission and the production of this EMP, there has been a change to the HNB decommissioning baseline. This has been assessed through the relevant company process and there has been no changes to the proposed mitigations.

HNB will notify the ONR (Office of Nuclear Regulation) of any significant change to a mitigation measure not less than 30 days before the change is made, or within such shorter time as the ONR may agree.

7. Distributions of the Environmental Management Plan

In addition to the submission of this EMP to the ONR, EDF Energy will make the document publicly available via the EDF Energy website.

This EMP can also be viewed at the following locations:

- Fairlie Library
- Millport Library
- Largs Library
- West Kilbride Library

8. Definitions

AEDL – Active Effluent Discharge Line
AGR – Advanced Gas Cooled Reactor
AWI – Ancient Woodland Inventory
BDP – Baseline Decommissioning Plan
CTMP – Construction Transport Management Plan
DWPF – Decommissioning Waste Process Facility
DoWCoP – Definition of Waste Code of Practice
ECoW – Ecological Clerk of Works
EIADR – Environmental Impact Assessment for Decommissioning Regulations
EMP – Environmental Management Plan
EPS – European Protected Species
ES – Environmental Statement
FFV – Fuel Free Verification
GHG – Green House Gas
HES – Historic Environment Scotland
HNA – Hunterston A
HNB – Hunterston B
IAQM – Institute of Air Quality Management

IMS – Integrated Management System
INNS – Invasive Non-native Species
LNCS – Local Nature Conservation Site
LWS – Listed Wildlife Site
MMP – Materials Management Plan
NDA – Nuclear Decommissioning Authority
NRS – Nuclear Restoration Services
ONR – Office for Nuclear Regulation
OWPF – Operational Waste Processing Facility
PAD – Protocol for Archaeological Discovery
PPE – Personal Protective Equipment
RSR – Radioactive Substances Regulations
SEPA – Scottish Environment Protection Agency
SPMP – Site Protection and Monitoring Programme
SSSI – Site of Special Scientific Interest
SWESC – Site Wide Environmental Safety Case
WMP – Waste Management Plan

9. References

- 1 EIADR 1999. Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999 (online). Available at: <https://www.legislation.gov.uk/uksi/1999/2892/contents/made>
- 2 Hunterston B Nuclear Power Station – Environmental Statement (online). Available at: <https://www.onr.org.uk/media/njgbefhm/environmental-statement-volume-4-non-technical-summary.pdf>
- 3 IAQM (2023). Guidance on the assessment of dust from demolition and construction (Online). Available at: <https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-dust-2023-BG-v6-amendments.pdf>
- 4 SEPA (n.d). Biosecurity and management of invasive non-native species for construction sites and Controlled Activities. (Online) Available at: <https://www.sepa.org.uk/media/163480/biosecurity-and-management-of-invasive-non-native-species-construction-sites.pdf>
- 5 UK Government (1974). Health and Safety at Work etc. Act 1974 (online). Available at: <http://www.legislation.gov.uk/ukpga/1974/37>
- 6 UK Government (2015). The Construction Design and Management Regulations 2015 (online). Available at: <http://www.legislation.gov.uk/uksi/2015/51/contents/made>

APPENDIX A - Letter Providing Consent to Decommission and Attached Conditions

09 August 2024

Dear Mr Struthers,

Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations, 1999, as amended (EIADR)

Hunterston B – Nuclear Site Licence No. Sc.13

Regulation 4 – Consent for Dismantling or Decommissioning

As per your letter of 1 December 2023, you submitted an Application for Consent to decommission Hunterston B nuclear power station under EIADR. This was assessed by ONR and was subject to public consultation. I can confirm that after due consideration of the environmental statement and comments received during the consultation period, ONR grants consent for the decommissioning project and attaches six conditions to the consent as set out in the appendix of this letter.

The EIADR consent applies to EDF Energy Nuclear Generation Ltd as the 'licensee', whereby the 'licensee' means a person to whom a nuclear site licence has been granted under the Nuclear Installations Act 1965 whether or not that licence remains in force. As such, if the licensee of the site changes, the EIADR consent would be carried forward to the new licensee of the site.

Our decision will be communicated via the Hunterston Site Stakeholder Group and our Project Assessment Report will be made available on our website shortly.

Appendix – Conditions attached to the EIADR consent

Condition 1

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

APPENDIX A continued

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 six months 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.

APPENDIX A continued

Condition 5

The licensee is required to:

- a. provide the environmental management plan to ONR within six months of the date of this consent and every year thereafter, or within such longer time as ONR may agree;
- b. make the environmental management plan available to the public within 30 days of the plan being sent to ONR, or within such longer time as ONR may agree; the plan may replace earlier versions.

Condition 6

The licensee is required to provide notice to ONR 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 ONR may agree.

APPENDIX B – Stakeholder Engagement

The Site Licensee will continue to be committed to engaging with stakeholders at all phases in the decommissioning process, focusing on those who may be affected by the decommissioning works. The Site Licensee will develop and implement a stakeholder communications plan that includes community engagement before works that may cause disturbance to commence in the Works Area. This will include the appointment of a site contact to whom complaints and queries about the works can be directed. Any complaints will be investigated and action taken where appropriate.

In addition, the existing Site Stakeholder Group (SSG) meetings will continue to be utilised to provide an update on current site activities throughout the Preparations for Care & Maintenance phase.

APPENDIX C – Information on Site Working and Environmental performance.

General Site Management

Hours of Work - HNB has operated 24 hours a day, 7 days a week through operations and into defueling. During decommissioning the working hours will change to represent the different nature of activities occurring on site. Some aspects of active area deplanting may necessitate the need for shift working, the majority of the proposed works will be limited to normal working hours of 7:30 and 18:00 hours Monday to Friday. There may be exceptions where the working day is extended to complete specific work safely. During preparations for Care & Maintenance it is anticipated that security will remain on site 24 hours a day, operating a shift pattern.

Lighting - The existing night-time illumination within the Site consists mainly of internal lights within the transparently clad parts of the Reactor Building and Turbine Hall, together with low level 'street' lights. During the Preparation for Care & Maintenance phase, additional lighting may be necessary at the start and end of the working day during the winter months. Use of such lighting will be at the discretion of the relevant Site Supervisor. Consideration will be given to the use of directional lighting to minimise any light spill when any further on-site lighting is required for the works. The existing security lighting will be retained through the Preparations for Care & Maintenance phase.

Transport - Traffic generated by the Proposed Works will be managed in accordance with a Construction Traffic Management Plan (CTMP). An outline CTMP is provided in **Appendix 16A** of the ES.

Decommissioning Methods

Conventional Area - Conventional plant and buildings will be de-planted and demolished using construction industry methods. Exact methodologies to be employed will be determined by the appointed contractor and will be detailed in their method statements. All Conventional Area buildings and structures will be demolished in their entirety. Whilst demolition is usually to ground level, some buildings on site contain basements and will need demolition and deconstruction, hence there will be some work below ground level. Any voids that are created will be filled in accordance with the licensee's end state strategy.

Active Area – The Radiation Controlled Areas (RCA) consists of a number of buildings that have been used to handle radioactive materials. Although the basic deplanting and demolition methods will be similar to that of Conventional Area decommissioning, well established and effective techniques for controlling and containing radioactive contamination and reducing radiation exposure will be applied in line with the As Low As Reasonably Practicable (ALARP) and Best Practicable Means (BPM) principles. Radioactive plant and equipment may be decontaminated and dismantled, in situ where practicable and recycled where possible. Radiological monitoring checks will be made on the buildings as demolition proceeds and on the resulting demolished materials prior to re-use or disposal.