

Response to consultation on the application for consent for Hunterston B under EIADR

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# Introduction

The Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations, 1999, as amended (EIADR) is a legal instrument that requires the environmental impact of decommissioning nuclear power stations and other nuclear reactors to be considered in detail before consent for the decommissioning project can be granted. To obtain consent, the licensee must submit an environmental statement (ES) to us which presents a detailed environmental impact assessment (EIA) for the proposed decommissioning project and any features of the project or measures envisaged to avoid, prevent or reduce and, if possible, offset, any likely significant adverse effects on the environment.

On 1 December 2023, EDF Energy Nuclear Generation Ltd (EDF) submitted its application for consent to decommission Hunterston B nuclear power station (HNB) under EIADR. In order to inform our consent decision, we are required to consider the ES and the supporting documents and have a statutory requirement to consult with relevant bodies, which includes other regulatory authorities, such as the appropriate environmental regulator, local highway and planning authorities, together with the public and other interested parties.

Between 7 December 2023 and 28 March 2024, we conducted a consultation on the HNB application for consent and sought views from all of these parties. The responses to the consultation have helped to inform our assessment of EDF’s ES.

This report presents our response to the public consultation.

# Review of comments

We received seven responses from six organisations during the consultation. All comments received were collated and carefully considered. The majority of the responses received were supportive of ONR consenting to the decommissioning project based on the application, but some raised issues on aspects of the environmental statement.

The consultation comments which required a response are shown below along with our response. The full consultation responses were used to inform our assessment and are available on our website.

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| --- | --- |
| NatureScot | |
| 1.1 Consultation comment | |
|  | “Whilst we broadly agree that there will be no significant in-combination effects arising from this proposal we note that two large proposals within 3km of the site were not included in the otherwise comprehensive review of relevant projects (Appendix 4A). These projects are as follows and should be taken into account when planning the project to determine if additional steps are required to minimise the overall effects of these projects on the identified marine receptors.  - Environmental Impact Assessment (EIA) scoping for upgrade of the existing Hunterston Construction Yard. 23/00757/EIA  - Marine (Scotland) Act 2010, Part 4 Marine Licensing 00009702 - North Ayrshire Council - Construction of Coastal Protection, Millport, Great Cumbrae. 2022 [Currently in construction]” |
| ONR’s response | |
|  | We requested EDF to provide evidence of its consideration of the potential inter-project effects of these two developments and the decommissioning project. The Millport Coastal Protection Scheme is due to complete works by autumn 2024, therefore there would be no temporal overlap between this and the decommissioning project, and hence no inter-project effects are anticipated.  The Hunterston Construction Yard upgrade project is currently in the scoping stage and so does not yet have a fixed and complete design, however, there is potential for the project and the proposed works to temporally overlap. There is potential for inter-project effects to occur in the marine environment where the zone of influence would overlap in relation to marine biodiversity receptors.  However, since the EIA of the decommissioning project identified negligible or minor effects on marine receptors, the Hunterston Construction Yard development application would have to consider any resulting inter-project effects in its EIA and provide any mitigation as necessary. We are therefore satisfied that all relevant developments have been considered in the EIA. |
| Scottish Environment Protection Agency (SEPA) | |
| 2.1 Consultation comment | |
|  | “… recognising that prior to the commencement of the proposed works, a detailed EMP will be prepared for consultation with ONR and other stakeholders, including SEPA, which will be subject to review and comment.” |
| ONR’s response | |
|  | EIADR does not require the environmental management plan (EMP) to be subject to formal consultation or a formal regulatory decision. As such, we will not hold a public consultation on the EMP. However, once submitted to us, the EMP and each subsequent annual revision will be made available on our website and we would welcome comments on the document. |
| Health and Safety Executive (HSE) | |
| 3.1 Consultation comment | |
|  | “Our records show that the Hunterston B site is within land-use-planning consultation zones set by HSE. The zones are based on planning consent for specified hazardous substances, deemed by the planning authority in 1993, for the Hunterston A Power Station site. However, our understanding is that the Hunterston A power station has been decommissioned for over 30 years. This indicates no need for the specified hazardous substances to be present at the site. Therefore, if the hazardous substances are no longer present at Hunterston A there is no need to consider the effects of major accidents involving those substances at Hunterston A on the proposed decommissioning project.  Our records also show that Hunterston B Power Station has planning consent for specified hazardous substances granted by North Ayrshire Council. As HNB ceased generating in January 2022 this indicates no need for the specified hazardous substances to be present at the site. If the specified hazardous substances are no longer on site there is no need to consider major accidents involving the substances in the Environmental Impact Assessment.  HSE’s land-use-planning zones remain in place until HSE is informed by the planning authority that the relevant hazardous substances planning consents for the sites have been revoked or are otherwise extant. If you could bring this issue to the attention of North Ayrshire Council that will be much appreciated.” |
| ONR’s response | |
|  | With regards to hazardous substances, Hunterston B is a lower tier establishment under the COMAH regulations, holding quantities of diesel and sodium hypochlorite. Table 22.13 of the environmental statement states ‘The majority of chemicals and fuels will be removed during the Preparations for Quiescence phase but there will be some residual inventories of hazardous substances that will be removed during Final Site Clearance phase.’ We are satisfied that major accidents involving the substances were considered in the Environmental Impact Assessment. |
| NHS Ayrshire & Arran | |
| 4.1 Consultation comment | |
|  | “[In regards to air quality] The proposed desk-based approach seems proportionate for this assessment. However, a list of monitoring stations that were used for this would be helpful. As there are no Air Quality Management Areas within North Ayrshire, it would be useful to know how air quality is going to be monitored throughout the different phases of the decommissioning process and where samples will be taken. This is not only from the perspective of direct human health impacts but also in relation to the agriculture surrounding the site (given possible food chain contamination). This will also be useful in terms of feedback to local residents who are already concerned about the decommissioning process and have raised concerns about air quality and dust. Evidence suggests that environmental, man-made hazards within a person’s local surroundings can have indirect negative health impacts e.g. loss of sleep, stress related exacerbations, other psychosocial effects. Sharing air quality monitoring results may aid in alleviating some of these anxieties.” |
| ONR’s response | |
|  | Volume I, Chapter 6: Air Quality and Volume II, Figures 6.1 and 6.2 describe the locations of the monitoring stations used to inform the assessment of air quality. The assessment has considered the impacts of dust within 250m of the boundary of the site; and/or 50m of the route(s) used by construction vehicles on the public highway, up to 250m from the site entrance(s). This is in accordance with the Institute of Air Quality Management Guidance (Assessment of dust from demolition and construction 2024) which provides guidance for developers, their consultants and environmental health practitioners on how to undertake a construction impact assessment (including demolition and earthworks), and the management measures to be adopted. One of such measures, as outlined in the chapter and within the Outline Environmental Management Plan submitted with the application, was to undertake regular site inspections to monitor compliance with a Dust Management Plan.  It is proposed that the existing and well-established Site Stakeholder Group (SSG) at Hunterston B power station could be used as a means for discussing and sharing appropriate information in terms of feedback to local communities and stakeholders as relevant. If you would like to contact the station or the SSG regarding some of these comments, please provide us ([contact@onr.gov.uk](mailto:contact@onr.gov.uk)) with contact details and we will forward on to the respective parties. |
| 4.2 Consultation comment | |
|  | “[In regards to coastal management and water quality] Expertise and regulation for this topic sit mainly with SEPA. Human health concerns would be related mainly to the two designated bathing waters which are situated within the study area. Given the increase in outdoor water-based recreation (such as wild swimming), this should be a priority. Are there plans to potentially communicate with water users and/or where necessary limit access to these areas whilst any works that could potentially affect the water quality are carried out?  Embedded measures outline water testing prior to release to ensure it meets environmental standards – it would be useful for this to be extended to human health standards (SEPA bathing water quality standards). In addition, will testing of the water, particularly from the bathing sites, be incorporated after any significant discharge, localised work within the study area or any other major works that could result in run-off etc?” |
| ONR’s response | |
|  | Volume I, Chapter 10: Coastal Management and Water Quality considers the potential impacts of the proposed works and compliance with the Bathing Waters (Scotland) Regulations 2008 and whilst they are assessed as high sensitivity receptors, will experience a very low magnitude of change, due to the continued implementation of environmental controls. Therefore, the Water Framework Directive coastal water bodies within the study area (Seamill and Millport Bay), which currently have a good ecological status and good overall status, and designated bathing waters at a good standard, will continue to maintain their status throughout the decommissioning programme.  Volume III, Appendix 5B identifies the following measures to be implemented with respect to activities in the marine environment: exclusion zone around the works area, communication programmes with local ports and marine operators (including notice to mariners), measures specific to vessel movements in constrained areas (such as ports), and additional physical mitigating measures (e.g. to prevent small craft drifting onto part-finished offshore engineering works), as well as overarching project level safety measures. |
| 4.3 Consultation comment | |
|  | “[In regards to soils] Likewise with coastal management and water quality, SEPA will hold the expertise here in terms of the plans in place to monitor, remediate and prevent land / water contamination. We note the previous occurrences of contamination and proposals for ongoing monitoring. Again, it would be useful to know the outline of this and if this information will be shared with the local community, particularly when discussing future uses of the site.” |
| ONR’s response | |
|  | The radioactive substances permit issued by SEPA under the Environmental Authorisations (Scotland) Regulations [EA(S)R] imposes conditions on EDF to ensure procedures and plans are in place to prevent land and water contamination, and to carry appropriate remediation and monitoring; these are delivered through the established Integrated Management System (IMS) at Hunterston B power station. Future uses of the site will be subject to a range of regulatory regimes to ensure historical and potential liabilities are addressed and do not result in adverse impacts on human health and the environment.  In addition, please see SEPA's response to the EIADR consent application consultation providing further assurance, states: We would expect any ground contamination to be addressed as part of our on-going site regulation and ultimately through the surrender processes for the site’s permits under the Pollution Prevention and Control (Scotland) Regulations 2012 and Environmental Authorisations (Scotland) Regulations 2018. Any ground contamination associated with historical contamination that may fall out with these regimes would be best addressed during the decommissioning process to address potential liabilities under other regimes. Including Part IIA of the EPA 1990. |
| 4.4 Consultation comment | |
|  | “[In regards to people and communities] We note that significant effects on local employment rates and individual workers are anticipated. It is important to recognise that local-level impacts on employment and loss of skilled workforce from the closure of a major employer can be very important to health and wellbeing outcomes for individuals, families, and communities, even if these changes appear to be negligible on larger geographical scales (such as at local authority level). The report also states that EDF do not anticipate people will be out of work long term, however, we would question this assumption and request further information on the evidence on which it is based. Any resultant unemployment may negatively impact the local economy and the health of communities, families and individuals and potentially exacerbate already high levels of inequalities and child poverty which are experienced in North Ayrshire.  Further consideration should be given to potential impacts on people should they need to travel further for work than they already do as we are aware of transport poverty and transport issues in North Ayrshire and also any potential impacts should people need to retrain for work in other industries. To mitigate these impacts, we suggest engaging at an early stage with the Local Employability Partnership (LEP) as a key stakeholder in terms of employability, to ensure that affected workers are provided with support for job search and applications as well as skills development that reflects their individual needs and the local labour market.” |
| ONR’s response | |
|  | EDF would consider this further and would appreciate if you could contact them to discuss further. Due to the anonymous nature of this consultation, we are unable to provide EDF with your contact details. |
| 4.5 Consultation comment | |
|  | “[In regards to conventional waste] We note that conventional waste procedures are already in place. We welcome the proposals for re-use of materials (non-hazardous) on-site and that minimal additional waste generated during the Preparing for Quiescence phase will be removed via conventional routes. We would welcome the chance to review the Site Waste Management Plan when it becomes available.” |
| ONR’s response | |
|  | It is proposed that the existing and well-established Site Stakeholder Group (SSG) at Hunterston B power station could be used as a means for discussing and sharing appropriate information in relation to the re-use of non-hazardous materials on site. |
| 4.6 Consultation comment | |
|  | “[In regards to the cumulative effects assessment] We remain concerned that the cumulative effects of changes in employment, noise, traffic, air quality during preparation for quiescence may have significant adverse effects on the health and wellbeing of local communities. The mitigating measures rely heavily on replacement of employment opportunities via the Ayrshire Growth Deal but it is not clear that the timelines or labour market opportunities will align sufficiently to provide the degree of mitigation expected – and heavy reliance on a single initiative to mitigate a range of cumulative impacts seems problematic.  We would therefore request careful consideration of the other recommendations made here regarding potential mitigations (particularly relating to communities and employment) and would propose that a health and health inequalities impact assessment be carried out, led by health professionals, utilising the Place and Wellbeing Outcomes for Scotland (Place and Wellbeing Outcomes | Improvement Service), and involving a range of stakeholders on a participatory basis. This is something that we can consider supporting – please contact us to discuss further.” |
| ONR’s response | |
|  | EDF would consider this further and would appreciate if you could contact them to discuss. Due to the anonymous nature of this consultation, we are unable to provide EDF with your contact details. |
| Hunterston Site Stakeholder Group (HSSG) | |
| 5.1 Consultation comment | |
|  | “The EIADR Report does not say how they will decommission the station and therefore cannot be an Environmental Impact Statement…  HSSG is acutely aware of the escalating costs of nuclear decommissioning, that Sellafield and Dounreay hazards are rightly prioritised, that the pressure of work on inspectors in other areas like GDF, GDAs, SMRs and new nuclear build could deplete the ability of the regulators to carry out timely due diligence of civil reactor decommissioning plans and work. This is of great concern.” |
| ONR’s response | |
|  | Chapter 2 of the environment statement contains a description of how the power station will be decommissioned and Chapter 3 presents the alternatives to some of the techniques selected by EDF, which is in line with EIADR Schedule 1 information requirements for inclusion in an environmental statement. Given the long length of the project, which is expected to take decades to complete, it is not expected that the details of all decommissioning activities are provided at this stage. We are content that the project description provided meets the legal requirements of EIADR.  Furthermore, the site will continue to hold its Nuclear Site Licence throughout decommissioning, through which we will regulate the safe implementation of decommissioning activities on the site. For example, Licence Condition 35 requires the licensee to make and implement adequate arrangements for the decommissioning of any plant or process which may affect safety.  We take a proportionate, targeted and risk-informed approach to regulation. This means making sure that actions are targeted primarily on those activities that give rise to the most serious risks, where the hazards or vulnerabilities are least well controlled, or where ongoing compliance with the law needs to be established; and that action is focused on the dutyholders who are responsible for the risk and who are best placed to control it.  We have processes in place to help decide which inspections, investigations or other regulatory activities should take priority according to the nature and extent of risks presented by a dutyholder’s operations. |
| 5.2 Consultation comment | |
|  | “Over the past two decades, there is a lack of progress in improving visual amenity at the HNA site. We have been consulted on various types and colours of cladding for the A site reactor buildings for all these years. The public had wanted cladding that blended into the background better, but we still have the white “temporary” cladding with no sign of that changing.  There is only one viewpoint of the B site from Fairlie, i.e. at Allanton Park Terrace, when in reality half the village lies elevated and looks down on the site. Pointless to do detailed study for B station when promises regarding the A station cladding have just been ignored.” |
| ONR’s response | |
|  | Improving the visual amenity of the HNA site is not in scope of this assessment. However, Chapter 14 presents the visual impact assessment for HNB and considers the cumulative visual impact of HNA and HNB together. The assessment incorporates mitigation measures to reduce such impacts, including the use of darker greyscale/blue cladding on the safestore building. |
| 5.3 Consultation comment | |
|  | “The waterway (River Clyde) is where liquid radioactive discharges are released from A (decommissioning) and B (defuelling) nuclear stations. They currently share the same discharge pipe, and we assume the B station cooling water pumps are still ensuring large volumes of water going out, to help dilute and disperse radionuclides. HNB, when defuelling is complete, or maybe even before, intends to stop the pumps and drastically reduce the current abstracted seawater output.  This is of concern to us, as we are unconvinced, that the discharge pipe is in deep enough water or far enough from the shore to dilute or disperse the radioactivity from the numerous treatment and disposal options that will be ongoing, not only at the B site but also at the A site. We have concerns about the radionuclides which have not been dispersed, but lie in the sediment around the discharge pipe which is uncovered at low tide.” |
| ONR’s response | |
|  | The proposed new effluent discharge arrangements i.e. post turning-off of the cooling water pumps have been submitted to SEPA as a variation application to the existing Radioactive Substances Permit in accordance with the Environmental Authorisation (Scotland) Regulations [EA(S)R]. The assessments carried out in support of the variation application demonstrate no additional significant environmental impacts from the proposed arrangements. The EASR Permit variation application is currently with SEPA for determination. |
| 5.4 Consultation comment | |
|  | “We are pleased that ONR, in its Pre Application Opinion has questioned EDF about monitoring of the sediments. Like ONR, we would wish to see more consideration go into, and get more information regarding potential for cross contamination from other radioactive sources outside the current site boundary, including a closed landfill (does this refer to the High Volume Very Low Level Waste pits on the foreshore or somewhere completely different?) and in respect to the 39” outfall and its two associated lagoons.  In addition, the Environmental Statement should provide further details on the interactions with Hunterston A regarding receptors and co-polluters and the interactions with potential sources of radioactive contamination. The assessment should also consider the risks posed by existing contamination and how the contamination may change over time…  Whilst HNB no longer generates electricity and thus some radwaste discharges are negated or reduced, the ongoing decommissioning work with its different waste streams will produce different radioactive discharges and we are hopeful that the need for any Environmental Impact Assessment from these, will be reviewed as detailed plans evolve. We do not want those scoped out aspects to remain scoped out, if plans evolve which need Environmental Impact Assessment to be a consideration. Will there be reviews?” |
| ONR’s response | |
|  | Radioactive wastes and discharges are scoped out of the EIA on the basis that those aspects are covered by ongoing site regulation by SEPA and ourselves under other legislative regimes, which will continue as decommissioning progresses. This was agreed at the scoping stage. We are satisfied that we have been provided with sufficient information on soils and sediments to carry out its assessment of the EIA. |
| 5.5 Consultation comment | |
|  | “During removal of marine structure, there is potential for nearby sediment to be disturbed and suspended in the water column. It is not clear if any sampling of the sediment has been undertaken to understand the potential for mobilisation of existing contamination in the sediments. Consideration of changes in water quality due to suspended sediments should also be included in the Environmental Statement.” |
| ONR’s response | |
|  | We have been provided with ground investigation and water quality data and reports and are content that EDF has carried out sufficient site monitoring and characterisation to support the assessment in the EIA. We have agreed with SEPA that ground contamination should be addressed by them as part of their ongoing site regulation and ultimately through the surrender processes for the site’s environmental permits. |
| 5.6 Consultation comment | |
|  | “There is potential that explosives could be used in the marine environment. This may result in disturbance to marine fauna as a result of underwater noise and vibration. The impact of noise and vibration on marine fauna and physical harm/damage to marine habitats and species as a result of the use of explosives should be assessed along with the possible disturbance to sediment and potential contaminant release.” |
| ONR’s response | |
|  | The use of explosives in the marine environment has been discounted in preference of more conventional decommissioning and dismantling methods. This has removed the requirement to consider the impact of noise and vibration from this specific source of potential impact. |
| 5.7 Consultation comment | |
|  | “HSSG is unsure about the Regulations quoted by EDF’s consultant, as to whether, the stated regulations will adequately protect against all potential noise nuisance. From past experience, Infrasound Low frequency Noise (ILFN) i.e. frequencies below 20 Herz have proved to be detrimental to health. HSSG asks that ILFN is considered as part of any noise and vibration baseline or monitoring programme. This is to ensure people are not subjected to noise nuisance as decommissioning work continues.” |
| ONR’s response | |
|  | The nature of the decommissioning works at Hunterston B are not considered to be the source of such infrasound. The noise emissions from the activities assessed are characterised by sound that falls within the audible spectrum.  The standards and legislation applicable to noise generation from the site have been applied such that levels below the Significant Observable Adverse Effect Level (SOAEL) are achieved throughout the project lifespan, with mitigation provided to minimise sound exposure to receptors to as low as practicable. There is no rationale for undertaking further baseline surveys to account for Infrasound Low Frequency Noise (ILFN), as ILFN is not a risk for this project. |
| 5.8 Consultation comment | |
|  | “HSSG is not opposed to this being used for B station ILW, so long as safety and security are not compromised in any way. We are not opposed so long as it has sufficient capacity and does not stop future A station ILW being stored.  We are concerned about SEPA’s discontent with the characterisation already done for the radwaste from the five old vaults at HNA. We would ask for reassurance that the lack of adequate characterisation of the waste already in the ILW store, does not pose a problem. Specifically, we ask if any plutonium contaminated items, which might have been in the old vaults and transferred into the stainless steel boxes already, pose a problem in any regard. We are aware that if Plutonium (alpha) is there, it can change into Americium, a gamma emitter and we ask if this has implications that need assessing.  HSSG is interested in finding out if any of the plutonium released into the waterway, or contained (hopefully in very small amounts), in the ILW store has changed into Americium and how, if happening, this is being factored in.” |
| ONR’s response | |
|  | Characterisation of waste in the HNA vaults is not in scope of this assessment. We and SEPA have previously asked EDF and Nuclear Restoration Services (NRS) if there is sufficient capacity in the HNA vaults to store HNB waste and they stated that there is sufficient capacity to store intermediate level radioactive waste (ILW) from both stations. This will be monitored by both regulators and will need to be demonstrated by EDF and NRS in the final safety justification. |
| 5.9 Consultation comment | |
|  | “With regard to the Solid ILW Encapsulation Plant… HSSG is as yet not aware what HNA based facilities will be utilised with regard to HNB decommissioning.” |
| ONR’s response | |
|  | Chapter 2 contains a description of the facilities required for HNB decommissioning. In particular, it describes the use of the Operational Waste Processing Facility (OWPF) and the Decommissioning Waste Processing Facility (DWPF) that will be built on HNB to process waste during the project.  In regards to HNA, paragraph 2.4.22 of the environmental statement states “Following an optioneering study considering a new build ILW store and use of Magnox Ltd’s existing ILW store at HNA, it was concluded that ILW requiring long-term storage processed and packaged during the proposed works would be stored in the HNA ILW store until a near surface management facility in line with Scottish Government policy is available.” |

# Conclusions

We have carefully reviewed and considered all of the consultation responses received. The majority of responses were supportive of consenting the HNB decommissioning project whilst raising matters for us to consider when assessing the ES.

During the consultation exercise, two developments near to HNB were identified which were not considered in EDF’s cumulative impact assessment. EDF subsequently provided evidence of its consideration of the potential inter-project effects of these two developments and the decommissioning project.

The consultees raised a number of topics that were relevant to the decommissioning process but which did not necessarily require detailed consideration under the EIA process under EIADR. Consultees also raised a number of topics that we consider have been dealt with reasonably in the ES, when the long timescale of the project and resulting uncertainties are taken into account. Consequently, it is for these reasons that we have decided not to pursue such topics.

Along with the publication of this consultation response document, we have published the full individual responses received to the consultation exercise and our Project Assessment Report.

We will continue to engage with and keep stakeholders informed of future EIADR applications.

Any enquiries related to this document should be sent to [contact@onr.gov.uk](mailto:contact@onr.gov.uk)

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