Office for Nuclear Regulation

The decision on the application to carry out a decommissioning project at Rosyth Royal Dockyard under the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999 (as amended)

A report prepared by the Office for Nuclear Regulation

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FOREWORD

This document reports on the decision taken by the Office for Nuclear Regulation to grant consent for a decommissioning project at Rosyth Royal Dockyard the licensee, Rosyth Royal Dockyard Ltd, under the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999 (as amended).

The process of assessing the potential environmental impacts of the project has involved extensive public consultation. The process has been open and inclusive and I take this opportunity to thank everyone who has been involved in this important work, especially those who took the time to send comments on the documentation provided by the licensee.

All of us, and particularly the local population, have a keen and vested interest in the avoidance or minimisation of potential environmental impacts during the dismantling of the seven submarines at Rosyth Royal Dockyard. ONR have attached conditions to the consent to ensure the continued effective management of the environmental impact of the project. This indicates a requirement to make available to Office for Nuclear Regulation and the public an annual Environmental Management Plan that provides information on the progress of the decommissioning work and the measures being used to minimise the environmental impact. Experience so far has shown that this provides an effective means of managing potential environmental impacts.

During our decision-making process, we have strived to be open and transparent. Openness and transparency will continue to be a key factor in managing environmental impacts throughout this decommissioning project. My intent is to provide clarity as to the reason for our decision and trust that this report proves helpful in this regard.

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October 2014

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SUMMARY

The Environmental Impact Assessment Directive 85/337/EEC, (as amended by Council Directive 97/11/EC and Council Directive 2003/35/EC), sets out a framework on the assessment of the effects of certain public and private projects on the environment. Additionally, it sets out a framework for public participation in respect of drawing up certain plans and projects relating to the environment. The Directive is implemented in Great Britain for decommissioning nuclear reactor projects by the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999, as amended in 2006.

The intention of the Environmental Impact Assessment and Regulations is to involve the public through consultation in considering the potential environmental impacts of a decommissioning project, and to make the decision-making process on granting consent open and transparent.

Environmental Impact Assessment for Decommissioning Regulations requires the licensee to undertake an environmental impact assessment, prepare an environmental statement that summarises the environmental effects of the project, and apply to The Office for Nuclear Regulation for consent to carry out a decommissioning project. There is an optional stage where the licensee may request from Office for Nuclear Regulation an opinion on what the environmental statement should contain (called a pre-application opinion).

Rosyth Royal Dockyard Limited applied to Office for Nuclear Regulation for consent to carry out the initial dismantling of seven nuclear submarines currently at Rosyth Royal Dockyard and provided an environmental statement in January 2014. The Office for Nuclear Regulation undertook a public consultation on the environmental statement. Consultations involved 110 individuals and 16 organisations.

The Office for Nuclear Regulation was of the opinion that the environmental statement submitted provided sufficient information on which to base its decision. Copies of the environmental statement are available for public inspection at public libraries close to Rosyth Royal Dockyard, and The Knowledge Centre at The Office for Nuclear Regulation headquarters in Bootle for a period of one year from the date of the Consent granted by Office for Nuclear Regulation (that is, until October 2015).

The Office for Nuclear Regulation took relevant factors into account when reaching its decision to grant consent. In brief, these were: the adequacy of the information provided in the environmental statement and supporting evidence; the conclusion that environmental benefits would far outweigh detriments; the prediction that there would be no significant effects on the environments of other countries; and the recognition that some issues would be adequately covered elsewhere, such as through other regulatory regimes.

The conditions attached to the Consent relate to mitigation measures to prevent, reduce and, if possible, offset adverse environmental effects of the project. Succinctly, Rosyth Royal Dockyard Limited must prepare an annual environmental management plan that describes mitigation measures in use, reports on their implementation and effectiveness, and reports on changes to such measures in light of experience. The Office for Nuclear Regulation must be notified by the Licensee in advance of any significant change to a mitigation measure to control any major adverse effects on the environment. A copy of the environmental management plan and its subsequent revisions must be sent by the licensee to The Office for Nuclear Regulation and be made available to the public.

INTRODUCTION

1. The Environmental Impact Assessment (EIA) Directive 85/337/EEC[1], (as amended by Council Directive 97/11/EC[2] and Council Directive 2003/35/EC[3]), sets out a framework for the assessment of the effects of certain public and private projects on the environment. Additionally, it sets out a framework for public participation in respect of drawing up certain plans and projects relating to the environment. This is known as the EIA Directive.

2. The EIA Directive is implemented in Great Britain by the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999, as amended[4] (TCPA (EIA)99) and the Environmental Impact Assessment (Scotland) Regulations 1999, as amended[5] The competent authorities for these Regulations are the relevant local planning authorities.

3. The Directive is implemented in Great Britain for the specific cases of decommissioning nuclear power stations and nuclear reactors by the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999 (EIADR99)[6] as amended by the Nuclear Reactors (Environmental Impact Assessment for Decommissioning) (Amendment) Regulations 2006 (EIADR99)[7], hereafter EIADR. The enforcing authority for EIADR is the Office for Nuclear Regulation (ONR). Further information on the EIADR process and the legislative framework can be found in Annex 1.

4. An application for consent includes primarily an Environmental Statement (ES), which presents an EIA for the decommissioning project and the mitigation measures to be used to avoid or minimize any significant adverse impacts on the environment. A non-technical summary is provided to support the ES and to provide information in a non-technical format.

5. This document reports on ONR's decision to grant consent for the initial dismantling of seven nuclear submarines at Rosyth Royal Dockyard (hereafter Rosyth Dockyard). It describes the main reasons and considerations for the decision, the content of the conditions attached to the Consent and a description of the main measures that the licensee, Rosyth Royal Dockyard Ltd. (hereafter RRDL) must take to control any adverse effects of the project on the environment.

6. The ES submitted by RRDL covers in detail the first stage of the overall project to dismantle the submarines, known as initial dismantling. This is the removal of all radioactive Low-Level Waste (LLW) and Intermediate-Level Waste (ILW) from the submarines, including the Reactor Pressure Vessel (RPV).

7. All LLW and ILW will be removed from Rosyth Dockyard and taken to an existing LLW repository and a facility for storing ILW that has yet to be named, and is part of a separate ongoing national consultation exercise. The ILW store will be an interim storage and will not be at the Rosyth site as the Ministry of Defence (MoD) ruled it out during optioneering.

8. The constraints of the initial dismantling project are such that LLW will be removed from the submarines first and no ILW will be removed from any of the submarines prior to an interim ILW storage site being identified and submissions of methodology (pertaining to the ILW storage) submitted to and accepted by ONR. All ILW will be appropriately packaged and there will be no long-term storage of ILW at Rosyth Dockyard. There will however, be some work required on each of the ILW packages in preparation for transport and this will carried out in the AWAF at Rosyth Dockyard, with the condition that no more than the ILW from two submarines is in this scenario at any one time.

9. Once all radioactive waste has been removed, the seven submarines will be taken by sea to a ship recognised ship breaking facility and finally dismantled according to the appropriate regulations governing such work.

APPLICATION TO CARRY OUT A DECOMMISSIONING PROJECT

The consultation process

Public consultation on the environmental statement

10. RRDL applied to ONR for consent to carry out a decommissioning project at Rosyth Dockyard and provided an environmental statement in January 2014. ONR consulted on the environmental statement, the consultees are listed in Annex 2. In addition, RRDL publicised the environmental statement in the press (Dunfermline Press and Edinburgh Gazette) to involve local people. ONR publicised the consultation on the environmental statement on its website, which had a direct link to RRDL's website. RRDL made copies available for public inspection at the site, and ONR made copies available at 14 public libraries close to the site and The Knowledge Centre at ONR headquarters in Bootle.

11. The public consultation period ended in April 2014. The consultees who responded and were content for their comments to be made publicly available are listed in Annex 3 and copies of these responses were sent to the licensee.

12. These documents will remain available for public inspection at public libraries close to the site, and HSE's Knowledge Centre for a period of one year from the date of the Consent granted by ONR (that is, until October 2015).

Request for evidence to verify information within the environmental statement

13. ONR was of the opinion that no further information was necessary before it could make its decision. The ES provided sufficient information and Annex 4 provides an explanation as to why further information was not requested for specific topics.

REASONS FOR GRANTING CONSENT

Decision to grant consent

14. ONR granted consent to carry out the initial dismantling of seven nuclear submarines at Rosyth Dockyard under EIADR in October 2014, and attached conditions to the Consent. A copy of the Consent and conditions is appended as Annex 1.

15. ONR took relevant factors into account when reaching its decision to grant consent. In brief, these were as follows:

    - ONR's view of the adequacy of the information provided in the ES and evidence;
    - ONR's conclusion that environmental benefits would far outweigh detriments;
    - ONR's acceptance of the licensee's determination that the assessed impacts of the project would not be likely to have significant adverse effects on the environment in another European Economic Area (EEA) State; and
    - ONR's recognition that some issues would be adequately covered by other regulatory bodies and legislation. These issues were: town and country planning matters; compliance with health, safety, security and environment legislation; and decommissioning timetables relating to government policy.

Review of the Environmental Statement

Introduction

16. The Submarine Dismantling Project (SDP) at Rosyth Dockyard is a comparatively small project being carried out on a much larger and well-established industrial site. The work is confined to a single dry dock along with some temporary works contained

within the Active Waste Accumulation Facility (AWAF) structure. Impacts from the project (including all environmental impacts) are significantly lower than both current works and future proposed projects (such as the container port) at Rosyth Dockyard.

17. The ES submitted to support the application for consent provided all the information required to fully describe and assess the potential environmental impact of the decommissioning project. The content provided all the relevant information indicated in Schedule 1 of EIADR.

Review of the environmental impact of the decommissioning project

18. The ES covers a wide range of environmental aspects and for each provides an assessment of the likely environmental impact. These have been reviewed in detail by ONR, taking into account comments received from respondents of the consultation. These reviews are presented below, together with an overall assessment of the environmental impact of the decommissioning project.

Air quality and climatic factors

ONR Review

19. The potential for the decommissioning work to impact on air quality and climate change were assessed in detail in the ES. All three of the major topic areas identified were deemed to have negligible adverse environmental affect.

20. Impacts on air quality caused by the generation and release of exhaust, potential ozone depleting gases and particulate matter from plant and vehicles is expected to be intermittent throughout the lifetime of the project. The impact of this is expected to be minimal given the limited amount of work and traffic involved, and when set against day-to-day operations at the dockyards.

21. Some dust may be generated during the excavation for the crane rail footings and transportation off-site of any excavated material could allow for release of dust. However, mitigation measures will be in place if pre-assessment shows this to be required.

22. The project will necessarily consume energy but the scale of the project is relatively small. The project cannot measurably influence climate change.

23. Scottish Environment Protection Agency (SEPA) require that exposures of the public to ionising radiation are As Low As Reasonably Achievable (ALARA). This is analogous to the As Low As Reasonably Practicable (ALARP) methodology employed by ONR. In order to satisfy this requirement, a framework of three related

Best Practicable Means (BPM) requirements is imposed on radioactive substances users by SEPA.

24. Engineered measures and administrative controls will be employed for solid, liquid and gaseous radioactive wastes and discharges throughout the design and operation of the project. Examples of mitigation measures that will be employed are:

- high-efficiency particulate air (HEPA) filtration;
- use of ion exchange resin to remove radionuclide species such as Cobalt 60.

25. The use of fuels and hence emissions of greenhouse gases and changes in air quality is minimised by forward planning and management, e.g. good plant maintenance and logistics management. The use of fuels however, is a necessary part of the project. Analysis of vehicle movements and potential for impact on neighbouring communities

26. The Inventory of Hazardous Materials (IHM) allows for identification and pre-planning. Where residual Chlorofluorocarbons (CFCs) may be encountered, preparations will be made for collection in containment, segregation and appropriate final disposal. The pink foam and any other such material identified in other Reactor Compartments (RCs) IHMs will be similarly removed and contained. These activities will be subject to health and safety and environmental risk assessment, with a suitable method statement written for the tasks of removal and disposal.

    - CFCs will not be released to the atmosphere and hence the potential for damage to the ozone layer is minimal.

    - Removal, treatment/disposal measures for asbestos will be addressed and be undertaken by qualified, experienced personnel in containment.

    - Administrative controls and management arrangements ensure that in expectation of extreme weather conditions certain operations will cease and additional controls are established i.e. crane operations cease and storm anchors are fitted.

    - Certain operations will not be carried out when extreme weather conditions are anticipated. A forecast storm surge would result in work being made safe thus minimising risk. As the project progresses, there may be a need to consider flood risk and provision of flood protection.

Consultation Comments

26. In relation to liquid and gaseous discharges Nuclear Free Local Authorities (NFLA) suggested that the ES should be comparing the new discharges with current actual discharges, given that 2012 gaseous discharges were zero.

27. A comment from a member of the public raised the issue of the potential for release of dust and particulate matter as a potential health risk to human health. Particles less than 2.5 micrometers in diameter ($PM_{2.5}$) are known as "fine" particles. Sources of fine particles include all types of combustion, including motor vehicles, power plants, residential wood burning, forest fires, agricultural burning, and some industrial processes.

Conclusion

28. ONR is satisfied that the identified impacts are minor in nature and that appropriate mitigation measures will be in place for air quality and climatic factors. Recommendations by NFLA are noted and ONR would expect that once work begins and monitoring information becomes available that this information will be included in the Annual Environmental Management Plan (EMP) submitted by RRDL.

29. The potential to produce particles during the work is minimal and the proposed mitigations (e.g. tented areas) will serve to further bolster safety margins. Additionally, EIADR does not currently cover health effects, and workers will be protected appropriately with Personal Protective Equipment (PPE), if needed, with no risk to public.

30. Environmental assessment of the proposed process considered that there would be a negligible impact on air quality with no observable effects on local communities and biodiversity adjacent to the site and local transport routes. Nonetheless, mitigation and control measures will be in place and will be itemised in the EMP. These will include use of HEPA filtration systems where appropriate, reduction in use (where appropriate) measures, and good choice and maintenance of plant, all leading to minimisation of emissions.

Archaeology and cultural heritage

ONR Review

31. The potential for the decommissioning work to impact on archaeology and cultural heritage was assessed in detail in the ES. There is no evidence of any surviving features of archaeological interest within the licensed site that will be physically

affected by the decommissioning project. The initial construction of the dockyard, in particular, the deep foundations of the dry docks would have already affected (and probably destroyed) any below ground remains.

32. Within Rosyth Dockyard there are two Grade B listed historic buildings:

    - Pumping Station, Building No. 500
    - Generating Station, Building No. 333

33. In addition, the Rosyth Waterfront area has two Grade A listed buildings:

    - Rosyth Castle
    - Rosyth Castle Dovecote

34. Finally, to the west of the Dockyard at Limekilns is the Grade B listed Rosyth Old Kirk, Burial Ground and Mortuary. The Rosyth Dockyard Barham Road Signal Box is listed as Category C(S) according to the Listed Buildings and Conservation Areas) (Scotland) Act 1997.

35. The project will not affect any of the infrastructure or buildings on the Rosyth Dockyard Site and the likely impact of the project on any of the above structures is zero.

Conclusion

36. ONR is satisfied with the identified impacts and mitigation measures for archaeology and cultural heritage. Should any artefacts be found, the Treasure Trove in Scotland Code of Practice will be followed the portable items will be recovered and reported to the Treasure Trove Unit. If they are left in situ, a report will be made to regional/local museum, the Local Authority archaeologist, Historic Scotland, or the National Museums Scotland.

Ecology

ONR Review

37. Rosyth Dockyard is located adjacent to the sensitive environment of the Firth of Forth Special Protection Area (SPA) and Ramsar Wetland, which contains extensive invertebrate-rich intertidal mudflats that provide feeding grounds for nationally and internationally important numbers of wintering and migratory birds. These are waders mainly, but there are also large numbers of shelduck and pink-footed geese. The salt

marshes located behind the mudflats support scarce plants and provide feeding and roosting grounds for birds. They also act as a natural coastal defence, absorbing the impact of waves. Despite this location, there is little diversity of flora and fauna actually within the dockyard itself save for in and around the site boundary. The report indicates that there are no reports of bats within the AWAF structure, which is to be used for preparing packages of ILW prior to transport.

38. The only reported wildlife use of the site is occasional seagull exploitation of stranded fish during the emptying of the dock. Nesting of gulls on dock structures and buildings is deterred using suitable mitigation measures. However, an area on the South Arm, remote from the rest of the site, and projecting into the estuary is marked as a protected nesting area for sandwich terns.

39. The primary pathways identified for potential harm to occur are:

- By radioactive effluent discharged to the estuary
- By discharge to the dock drainage system of the licensed dock and discharge to the Non-Tidal Basin (NTB)

40. All expected works for the project will take place in areas of hard cover and are currently already in industrial use. Where the potential for a release is foreseen, containment will be in place, which in the case of dock drainage system means two levels of containment – both the collecting sump and the NTB itself. Any radioactive discharges from project activities will remain within existing discharge limits, thus posing no further risk than is already present and all gaseous discharges will be HEPA - minimising risk to vegetation. All discharges to the environment are regulated under the authorisation from SEPA.

41. Prior to the submission by RRDL the MoD undertook a Plan-level Habitats Regulations Assessment (HRA), including any likely effects of submarine dismantling on Natura 2000 sites at Rosyth. This concluded that, at Plan level, the residual (post-mitigation) effects would be at most minor, localised, temporary and reversible, and that there will not be an adverse impact on the integrity of any Special Area of Conservation (SAC), SPA or Ramsar Site.

Conclusion

42. ONR is satisfied with the identified impacts and mitigation measures for ecology. Given the current operational nature of Rosyth Dockyards the anticipated works of the project do not pose any further significant environmental risk than currently exists even when moving from plan to operational level.

43. Dismantling activities will take place within the dry dock or in a shore based building. Furthermore, containment will be in place for all activities, where there may be release of radiological or hazardous material. Radioactive discharges from project activities will be within existing discharge limits. All gaseous discharges will be HEPA filtered and there is therefore negligible risk of vegetation damage.

Geology, hydrogeology and soils

ONR Review

44. The potential for the decommissioning work to impact on geology, hydrogeology and soils was assessed in detail in the ES. The geological and geomorphological diversity of the Forth area includes many features including volcanic rocks, minerals and fossil deposits. The main body of the Port of Rosyth site was constructed between 1910 and 1915 with the underlying strata being a mixture of carboniferous sandstones, siltstones, shales and subordinate limestones of the Strathclyde Group.

45. As the docks and much of the land at Rosyth Dockyard are covered with an impermeable surface, the only realistic route for land contamination is via excavations. As this is restricted to minor activity regarding the foundations of the crane in the dockside itself, the potential for land contamination is considered to be negligible.

46. The sandstone horizons in the Strathclyde Group are fine to coarse grained and are classified by SEPA as a minor aquifer. Risks to the hydrogeological status of the site are considered minimal with proper containment of hazardous and potentially radioactive materials.

47. Regarding existing contamination; the site is deemed to be free of radiological contamination but work identifying areas of non-radiological contamination across the site highlighted two areas showing contamination due to historic land use. These areas are:

    - The previous hazardous waste storage area
    - the area of the electro-plating shop

    Both areas have now been capped and concreted over.

Conclusion

48. ONR is satisfied with the identified impacts and mitigation measures for geology, hydrogeology and soils and that the impacts are negligible.

49. Potentially contaminating materials will be identified, properly stored and disposed of appropriately to avoid land contamination.
50. Wherever possible water will not be used unless necessary and together with the normal management procedures of containment, will prevent the establishment of any link between source and receptor. This extends to other liquids where there are suitable alternatives and will minimise all liquid arisings. For example, diamond wire cutting techniques use no water as cooling or lubricant. Hull cuts will be undertaken using oxy-acetylene burning and no water cooling is required.

Landscape and visual

ONR Review

51. The potential for the decommissioning work to impact upon landscape and visual effects was assessed in the ES.
52. The dockyard itself is not within a designated area of landscape value. However, it is adjacent to three candidate special landscape areas (SLAs):

    - South West Dunfermline
    - Ferryhills
    - Forth Islands

    There are no national scenic areas in the Rosyth area.
53. Rosyth Dockyard is a substantial industrial site. The SDP will be carried out on the existing dockyard and use existing buildings and will therefore not alter the landscape or visual impact of the area to any significant degree. The one temporary structure that has been identified as being necessary to be constructed to complete the project is a new crane over the licensed site to remove the RPVs. This structure is expected to be no more than 15 meters in height. There are currently permitted development rights for development carried out on industrial land for the purposes of an industrial process, allowing installation of plant and machinery not exceeding 15m in height. As such, planning permission for the crane would not be necessary.

54. Wherever possible any additional lighting that is required during the project will be directed down or into the dock or shielded therefore will not give rise to significant visual disturbance.

Conclusion

55. ONR is satisfied with the identified impacts and mitigation measures for landscape and visual and that Initial dismantling activities will not have any effect on the

established dockyard skyline and landscape. The crane will be of a height below the established dockyard skyline. Any additional lighting will be shielded and avoid visual disturbance

Noise and vibration

ONR Review

56. The potential for the decommissioning work to have impacts on the environment from noise and vibration was assessed in detail in the ES. Health and Safety at Work legislation require that if noise poses a risk to workers health, mitigation measures be put in place. Likewise, the public and residents must be protected not only from any physical damage to health, but also from nuisance or deterioration in quality of life.

57. Noise and lighting level monitoring is carried out every two weeks at 01.00hrs to provide assurance that works at Rosyth Dockyard do not cause nuisance to other people on the Rosyth site or nearby residents during after hours. This includes readings taken for both light and noise inside and outside the northern perimeter of the site. These matters are reported on in the annual Rosyth Dockyard Safety, Health and Environmental report.

58. It is unlikely that any activity on the SDP will be noisier or have the potential to cause more vibration or nuisance lighting than any other activity currently undertaken at Rosyth Dockyard.

Conclusion

59. ONR is satisfied with the identified impacts and mitigation measures for noise and vibration.

Socio - economic

ONR Review

60. Near to Rosyth Dockyard are the towns of Rosyth and Dunfermline to the north; Inverkeithing, Dalgety Bay and North Queensferry to the east; the villages of Limekilns and Charlestown to the west; and South Queensferry, to the southeast on the southern bank of the estuary.

61. There is no temporary population within 1 km of the dockyard (e.g. caravans, chalets, marinas etc.). The nearest permanent marinas are at North and South Queensferry and at Limekilns Harbour (at distances of 3.5 km east south-east, 4 km SE and 2 km west northwest, respectively).

62. There is no resident population within 0.5 km of the site in any direction. The distance from the licensed docks to the nearest occupied house is over half a kilometre (the AWAF is 0.55 km). Two areas for new housing are identified about 1.5 km to the northeast, off Castle Road.

63. Babcock International commissioned a Socio-economic Impact Study in 2012 to assess the impact of its Scottish Operation, the key findings were:

- Rosyth (in 2012) supported almost 1,600 jobs and over £100 million of Gross Value Add (GVA).
- Earnings at Rosyth are 1.8 times the local authority average.
- 86% of the workforce are in the two highest skill categories compared to just 51% across Fife as a whole.
- 87% of employees live in Fife.
- Babcock staff have an annual GVA per worker of £67,000 - 43% above the average of £46,700 for all Scottish workers

64. It is expected that approximately 80 new jobs will be created and maintained through the 12-year life of the project. These will be in a variety of disciplines including radiation workers and managers; providing valuable skills and experience that at the end of the project will be readily transferable to the civil nuclear industry.

65. Many other temporary jobs will be provided by businesses that may be local, such as scaffolders, asbestos removal specialists and transport contractors. Plant and machinery will also be required; currently, the majority of those consulted, are UK based.

66. Those consultees involved in the Babock International study expressed most concern about the risks of undertaking dismantling activities on people's health and wellbeing, and that these had been underestimated. RRDL will seek to mitigate these concerns by generating a sustained confidence in the project and demonstrating it is safe and operated within a robust internal and external regulatory framework. These will include but not be limited to:

67. Promotion of a project culture which values appropriate transparency and engagement with the local community.
68. Provision of information on safety management and regulatory oversight arrangements.
69. Provision of information and ongoing communication with the site Local Liaison Committee.

70. Responding promptly to any questions or concerns raised directly by members of the community or expressed in local media.

Consultation Comments

71. Comments from Members of the Public included a request that while an EMP, has not yet been produced; it should include explicit consideration of Limekilns due to the close proximity to Rosyth Dockyard

Conclusion

72. ONR is satisfied with the identified impacts and mitigation measures for socio-economic factors. Overall, the project may create around 80 new jobs for the area, which is considered a minor positive impact. Regarding the comment concerning EMP's in paragraph 71, a condition of consent requires an annual EMP, which should contain information of all environmental aspects and impacts including those affecting local communities adjacent to the site.

Surface water quality, drainage & discharges

ONR Review

73. The potential for the decommissioning work to impact on surface water quality and drainage was assessed in detail in the ES. The project has the potential to affect surface and groundwater quality, through discharges of radiological and/or non-radiologically contaminated liquids or by leaching of materials. In addition any contamination of groundwater could affect the land along with the surface waters to which it is discharged

74. Potential Pathways for contamination are:

    - flow through dock drainage systems
    - groundwater flow
    - mobilisation by surface water

    with the main receptors being the NTB, Forth estuary and the ground itself.

75. Any radioactive effluent generated during removal of primary coolant residues and the RPV (including water added to the RPV as temporary shielding and for flushing) will be contained and disposed of through fixed pipework to an active waste tank sited on the dock floor within a double bunded area. This will then be taken to the AWAF for treatment prior to discharge in accordance with the discharge authorisation.

76. It is expected that 25.3 tonnes of 0.2% potassium chromate solution contaminated with low levels of cobalt 60, carbon 14 and tritium within each Primary Shield Tank (PST) will be removed before any cutting or lifting operations within the RPV/PST are undertaken. This is a hazardous chemical solution that is toxic to human health and a potential carcinogen. Chromium compounds are also very persistent in water as sediments and pose a real risk to the environment.

77. Whilst potassium chromate is inherently hazardous, the removal and disposal of it is a well-established and controlled process. In addition to this, there will be further oversight and review of the process within the context of the SDP by SEPA who will require detailed information to provide a new or varied Authorisation to RRDL for removal, and must be informed in the event of any spills.

78. In addition to the chemical wastes covered above, almost all of the waste material taken from the submarine in Initial Dismantling, is from the RC and may be radioactive. By appropriate assessment and characterisation, these materials will be segregated to ensure the most appropriate disposal/treatment route, minimising disposal to landfill, the LLWR and the GDF. The majority of non-active waste will be contained within the 'cleared' submarine hulk and transferred offsite for further processing with an accompanying updated IHM.

Consultation Comments

79. NFLA noted that in 2012 tritium emissions were only 19% of the authorised limit, and Cobalt 60 and other radionuclides were less than 1% of the authorised limit. In line with the suggestion regarding liquid and gaseous discharges it was suggested that comparisons should be made against current actual discharges. Additionally, it was felt that further characterisation work wold be required to determine the optimum waste treatment/disposal solution for the PST.

80. SEPA welcomed the approach RRDL has taken to assess impacts including optioneering, hazard and operability (HAZOP) studies and proposed mitigation measures and agreed that the likely significance of impacts will have a negligible impact. SEPA support the use of BPM regarding any discharges and will look to optimise dose limits as directed by Scottish Ministers and to ensure that public exposures to ionising radiation resulting from the disposal of radioactive waste are kept ALARA. SEPA will comply with this Direction by imposing conditions requiring RRDL and MoD to use BPM in their regulation of the submarine dismantling works.

81. SEPA also commented that they wished to ensure appropriate measures are being taken in relation to the potential for land and water environment impacts associated

with this project by reviewing any EMP submitted by RRDL. The EMP is a public available document and therefore available for any review SEPA wish to conduct.

82. The Environment Agency (EA), SEPA and members of the public had concerns regarding the disposal of the 25.3 tonnes of 0.2% aqueous solution of potassium chromate from the PST. The documents provide some clarity on incineration and managing this waste stream (including likely radiological contaminants), but it was recommended that RRDL undertake further work in the near term to fully assess the disposability of this waste stream.

Conclusion

83. ONR is satisfied with the identified impacts and mitigation measures for surface water quality, drainage and discharges taking into account the information provided by RRDL. However, it is noted that there is further work proposed to address potassium chromate disposal; the outcome of which may affect the proposed environmental baseline. ONR will have continued oversight of changes to any environmental baselines and amendments to plans or practices with environmental impacts via regular Licensee engagement and EMPs along with enforcement of Regulation 13 processes where appropriate.

84. The disposal of potassium chromate via incineration is currently supported by a Best Practicable Environmental Option (BPEO) study. The study considered a variety of options against a set of criteria including environmental and radiological impact. Overall, disposal via incineration was the preferred option and at this stage it does not seem unreasonable that disposal of potassium chromate via this route may continue to be the BPEO.

85. However, prior to the second stage of initial dismantling, a new application will be made to SEPA to address ILW and potassium chromate disposal. A new option study will be undertaken to look at the current methods and techniques available and assess which disposal route represents the BPEO. The BPEO study will form part of the underpinning documentation submitted to SEPA.

86. When considering the rest of the proposed work along with the necessary mitigation measures, the effects of the project on water quality and resources should be negligible as there would be no change in water demands and no change in amounts and quality of surface water and groundwater flows. In line with NFLA considerations, ONR suggests that RRDL compares discharges against current levels and not simply upper discharge limits in the annual EMP. ONR would expect that Best Available techniques (BAT) and BPM are used throughout initial dismantling in accordance with

SEPA requirements and that any changes or improvements to proposed methods are reflected via the EMP or Regulation 13 processes.

87. Clearly, prior to the transport and disposal of any radioactive material the extent of radioactivity must be determined. In the case of a previous disposal of potassium chromate, the level of radioactivity was less than 25 MBq comprising Cobalt 60, Tritium and Carbon 14.

88. SEPA are responsible for regulating non-radioactive contamination at Rosyth Dockyard and will regulate disposals of radioactive waste by including conditions and limitations on disposal in an authorisation granted under the Radioactive Substances Act 1993 (RSA). For the MoD, they will regulate the disposals of radioactive waste under a Letter of Agreement (LoA) which "mirrors" the requirements of RSA 93.

Traffic and transport

ONR Review

89. The potential for the decommissioning project work to impact on traffic and transport was assessed in detail in the ES. The assessment considered the impact of traffic associated with the decommissioning project at Rosyth Dockyard on the operation of the highways, road safety and the local environment. This includes the experience and any difficulties encountered by other road users and pedestrians (excluding the noise/vibration and emission effects of traffic, which were considered separately under the topics of noise and vibration and air quality respectively).

90. Initial Dismantling will result in additional traffic movements to and from Rosyth Dockyard however, this needs qualification. Materials and plant are regularly brought to Rosyth Dockyard, as it is a busy industrial site. This site traffic is set to increase substantially once work on the Rosyth International Container Terminal begins. This work alone is set to increase daily traffic over four fold to the port area. When set against this, and the current daily traffic to the site, the potential increase expected from the submarine dismantling work at Rosyth Dockyard is deemed a minor negative.

91. The biggest single impact from traffic and transport caused by SDP is likely to derive from the increase of private vehicles of the predicted additional 80 workers travelling to and from the site over the period of the project. There will also be a number of lorries required to transport LLW from each of the submarines. Finally, there will be the transport of the RPV within its transport container, (considered an abnormal load). However, such a movement will occur seven times in total with a likely interval of 6 months to a year between each transport.

Conclusion

92. ONR is satisfied with the identified impacts and mitigation measures for traffic and transport and the comments received. ONR recommend RRDL continue to liaise with Fife Council to assess and mitigate any adverse impacts on the local population. Whilst it is clear that the SDP will generate a modest increase in traffic to Rosyth Dockyard, the environmental impact of this is expected to be minor when set against current and future projects at he Port of Rosyth. It is recommended that a Traffic Management Plan should be prepared and agreed between the major developers at the Port of Rosyth.

Cumulative Impacts

ONR Review

93. It is important that an EIA takes full account of any surrounding developments that could create cumulative environmental impacts, or which could impact upon the effectiveness of mitigation put in place to protect the environment. A number of significant infrastructure projects surrounding Rosyth Dockyard are underway and proposed for the future.

94. The most significant developments place locally are:

    - The Queensferry Crossing (formerly Forth Replacement Crossing).
    - Rosyth International Container Terminal (RICT).

95. Both of these projects have been or are being assessed for their environmental impact and whilst these are two substantial projects it is not expected that there will be any interaction save for the RICT and SDP project being at sites adjacent to one another. The traffic generated by the RICT is expected to be considerable (905 vehicle trips per day) and this far outweighs that expected to be generated by the daily return journey of an additional of 80 staff, and LLW/ILW transports for the SDP.

96. It should also be noted that any future major developments in the area will be subject to EIA regulations under the Town and Country Planning Scotland Act, and any EIA's that arise from this will have to take into account the decommissioning project at Rosyth as part of a cumulative impact assessment.

Conclusion

97. ONR is satisfied with the identified impacts and mitigation measures for cumulative impacts and with the comments received. ONR recommend that RRDL continue to

address the cumulative impacts associated with other major significant infrastructure. It is further recommended that the cumulative impact assessment be conducted annually as projects progress. These assessments should be reported as appropriate in the annual EMPs. ONR will monitor the potential cumulative effects between Rosyth Dockyard and other significant developments and attend meetings, such as the Rosyth Local Liaison Committee (LLC), where appropriate.

Effects on other European Economic States

ONR Review

98. The environmental effects of the decommissioning project are generally local in nature and limited to the vicinity of the site; for instance impacts related to local contamination, noise and impact on local flora and fauna. In general, there are very few ways in which a decommissioning project could realistically cause an environmental impact at a substantial distance from the decommissioning site. These ways might include discharges of pollutants or radioactive material into the local sea or waterways or to air, or through transfer of contamination to other sites via the migration of birds or other animals.

99. All of the environmental impacts identified in the ES are restricted to the environment around the Rosyth site. Any discharges to water and air during decommissioning will be controlled according to appropriate authorisations granted by SEPA under The Radioactive Substances Act 93 (RSA93) and other relevant legislation. Similarly, the decommissioning project will not generate significant amounts of greenhouse gases, for instance through transport or use of machinery, and thus will have no or negligible impact on climate change. Overall, no concerns for significant environmental impact from the decommissioning project in other EEA States were highlighted. ONR presented this opinion to the Secretary of State in April 2014.

Conclusion

100. ONR is satisfied that the SDP at Rosyth is unlikely to have a significant environmental effects on other EEA States.

Overall Conclusion

101. In ONR's view, the environmental statement and evidence provided a comprehensive EIA for the decommissioning project. The ES showed that the predicted environmental benefits overall far outweighed any adverse environmental effects of the project.

102. The impact of any new developments around Rosyth Dockyard will need to be assessed as details become available. The mechanism of the EMP will be used to ensure that future surveys, mitigation requirements and revisions (as required by new developments), are reported to the ONR and stakeholders.

103. Continued engagement with regulators and stakeholders is an important part of the decommissioning project at Rosyth Dockyard. As the details of any surrounding developments become available, RRDL will assess any likely cumulative impacts and, in combination with regulators and stakeholders, will agree and implement appropriately any required additional mitigation measures to protect the environmental and socio-economic assets of the Rosyth area. It is recommended that RRDL address the cumulative impacts associated with other major significant infrastructure projects and utilise additional mechanisms for assessment alongside the annual EMP.

104. However, it should be noted that if a proposed change to the decommissioning project may result in a significant adverse effect on the environment, then RRDL must apply to ONR for a determination as to whether the change should be subjected to an EIA (under regulation 13 of EIADR). Such changes can include delays or accelerations of the decommissioning plan, changes in methods to be used etc.

105. RRDL must prepare an annual EMP that identifies mitigation measures, reports on their implementation, effectiveness, progress of the decommissioning work and reports on changes to such measures in light of experience. This is considered to provide an important way for ONR to maintain close awareness of the progress of the decommissioning project. A copy of the EMP and its subsequent revisions must be sent by the licensee to ONR and be made available to the public.

106. The ONR EIADR team will maintain regulatory oversight of the Rosyth Dockyard decommissioning project. In addition to the EMP and other conditions of the consent described above, the EIADR team will also conduct periodic audits of the decommissioning work to assess progress and management of the environmental impact.

107. After reviewing the information and evidence provided as part of the RRDL application for consent, consent to decommission was granted in October 2014 with relevant conditions attached. The conditions of consent can be found in the decision report.

Environmental benefits, detriments, and consideration of measures to control adverse environmental effects (mitigation measures)

108. In ONR's opinion, the ES (including evidence) showed overall, the predicted environmental benefits far outweighed any adverse environmental effects of the project. The environmental statement summarised all the environmental impacts of the decommissioning project in 15 key areas, describing their magnitude in terms of Significant Positive, Minor Positive, Negligible, Minor Negative and Significant Negative impacts. The proposed two stage decommissioning process will likely pose minimal risk to the environment

109. Traffic and transport was the only key area where any negative impact was identified. This was the likely small increase in traffic, and was deemed minor negative as it will likely be negligible when considering other plant traffic generated already by Rosyth Dockyard, and by the proposed Container Port.

110. A medium-term Minor Positive socio-economic impact was identified as the potential for up to 80 people to be employed during the project.

111. Another Minor Positive was identified under the area of Waste Management & Sustainability, in that the project is likely to release valuable quantities of metal for recycling.

112. Further details on environmental effects and measures to control environmental effects are provided in Annex 5.

Issues covered elsewhere

Town and country planning

113. Where there are new structures to be built or substantial alterations to buildings, these developments will require planning consent. This will be obtained from the local planning authority, i.e. projects that will require planning consent at Rosyth Dockyard will be regulated under the Town and Country Planning (Scotland) Act 1997 (TCPSA97)[8] and enforced by the relevant local planning authorities. ONR will be consulted on any associated applications for planning permissions by the relevant local planning authorities. In such cases where environmental impact assessment is required the public will also be consulted before any decision is made.

114. It follows, therefore, that RRDL can begin work on all parts of the decommissioning project so long as the work does not require additional permissions under town and country planning legislation.

115. ONR and the local planning authorities have had and will continue to have discussions on the interface between EIADR, NIA65, TCPSA97 and other town and country planning legislation, as necessary.

Health, safety and environment legislation

116. The environmental statement described links to related health, safety and environment legislation. This included legislation covering: occupational health and safety; nuclear safety; radioactive contamination and discharges; and treatment of non-radioactive contamination and wastes (involving materials such as asbestos).

117. ONR is satisfied that control of such health, safety and environment matters is achieved and will continue to be achieved through regulation and enforcement of existing legislation by the relevant regulatory authorities. Compliance with relevant legislation should ensure that adverse environmental impacts would be minimal. The majority of the legislation is enforced by ONR and The Scottish Environment Protection Agency (SEPA), and there are administrative arrangements in place between ONR and SEPA on working together on matters of mutual interest.

118. It follows, therefore, that RRDL can begin work on all parts of the decommissioning project so long as the work does not require additional permissions under related health, safety and environment legislation.

119. ONR and SEPA have had and will continue to have discussions on the interface between EIADR, NIA65, RSA93 and other health, safety and environment legislation, as necessary.

CONDITIONS ATTACHED TO THE CONSENT

Content of the conditions

120. ONR has attached conditions to the Consent. A copy of the Consent and conditions is appended at Annex 1. In brief, RRDL must prepare and implement an environmental management plan that identifies mitigation measures, describes their implementation and effectiveness, and any changes in light of experience. A copy of the environmental management plan and its subsequent revisions must be sent to ONR and made available to the public. ONR must also be notified in advance of any

significant changes to mitigation measures to prevent, reduce and where possible offset any major adverse effects on the environment.

121. Regulation 16 of EIADR provides ONR with sufficient powers under HSWA74 to effectively enforce these conditions.

122. The licensee will make a copy of the environmental management plan available for public inspection at public venues close to the site.

Condition 1

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

Condition 2

124. 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.

125. The project shall not be carried out except in accordance with the environmental management plan.

Condition 3

126. Within 90 days of the date of this Consent, with reference to the environmental statement provided under regulation 5(1) the environmental management plan shall:

a. list the mitigation measures that are already identified 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; and

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

127. 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 taken over time; and

d. describe significant changes to the mitigation measures in light of experience, giving reasons for such changes.

Condition 5

128. The licensee is required to:

a. provide the environmental management plan to ONR within 90 days of the date of this Consent and on each anniversary of the of the expiry of this 90 day period or within such longer time as ONR may agree, the licensee shall provide an updated environmental management plan;

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 the ONR may agree; the plan may replace earlier versions.

Condition 6

129. 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.

Reasons for the conditions

130. In order to successfully control environmental impacts, mitigation measures will be necessary in a number of areas. This is why ONR attached conditions to the Consent that cover mitigation measures.

131. Some future work activities can only be assessed for the need for mitigation measures to control environmental impacts during the later stages of the decommissioning project, such as impacts on wildlife during construction of temporary buildings. In such cases, mitigation measures to protect wildlife would be dependent on the wildlife present at that future time. Condition 3c requires these work activities to be listed in the environmental management plan. Although the need for

mitigation measures for such work activities cannot yet be assessed, it seems likely that measures would be similar to those for similar work activities during the earlier stages of the project.

132. As the project progresses, condition 4 requires the environmental management plan to be updated. Where options for implementation of work activities have been selected from the list of work activities and options compiled under condition 3b, condition 4a requires these selected options and associated mitigation measures to be included in the plan, along with reasons for their selection.

133. Where the need for mitigation measures to control environmental impacts during the later stages of the decommissioning project have been assessed from the list of work activities compiled under condition 3c, condition 4b requires these mitigation measures to be included in the environmental management plan, along with reasons for their selection.

134. Condition 4c requires the environmental management plan to describe the effectiveness of mitigation measures over time. Condition 4d requires the plan to describe significant changes to mitigation measures in light of experience, along with reasons for those changes. The plan will be, therefore, a living document that will be periodically reviewed and revised throughout the whole of the decommissioning project.

135. Condition 5 requires RRDL to send the environmental management plan and its subsequent revisions to ONR periodically. The timeframe for sending the plan to ONR is on an annual basis, or such longer period of time as ONR may agree. In the first part of the works phase it is likely that this timetable will be followed, but as experience is gained and effectiveness of mitigation measures demonstrated, the period of time between subsequent documents may well increase. During the care and maintenance period, this period of time is likely to be much longer, perhaps every five to ten years. Timeframes for the site clearance phase are likely to be similar to those for the works phase.

136. Condition 5 also requires RRDL to make copies of the environmental management plan available to the public. This is to keep the local population informed on progress with mitigation measures.

137. Condition 6 requires RRDL to give ONR advance warning of any significant changes to mitigation measures to control major adverse effects on the environment. Significant changes to mitigation measures might become necessary to control major adverse environmental effects in the future.

Annex 1

Decommissioning Project Consent **October 2014**

NUCLEAR REACTORS (ENVIRONMENTAL IMPACT ASSESSMENT FOR DECOMMISSIONING) REGULATIONS 1999 (THE REGULATIONS)

CONSENT

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

ROSYTH ROYAL DOCKYARD LIMITED – License Number Sc.8

The Office for Nuclear Regulation , pursuant to an application under the Regulations for consent to carry out the project* under regulation 4(a) and in accordance with the requirements of regulation 8(3) and subject to conditions attached under regulation 8(4) grants consent for the project under regulation 4(b), as follows:

i. to remove all LLW from the 7 submarines currently berthed at Rosyth Royal Dockyard;

ii. to retrieve, package and remove all ILW from the 7 submarines currently berthed at Rosyth Royal Dockyard, only when an interim ILW storage site has been identified and submissions of methodology (pertaining to the ILW storage) submitted to and accepted by ONR. All ILW will be appropriately packaged, with no long-term storage of ILW at Rosyth Dockyard. Work required on ILW packages in preparation for transport will however, be carried out in the AWAF at Rosyth Dockyard, under condition that no more than the ILW from two submarines is in this scenario at any one time;

iii. to ensure that each submarine is structurally sound and free of radioactive contamination such that each can be transported safely to a recognised ship breaking facility

Dated: October 2014

Signed

For and on behalf of the Office for Nuclear Regulation

Dr Richard Savage

A person authorised to act in that behalf

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* Project as defined in regulation 2

Conditions attached to Decommissioning Project Consent **October 2014**

NUCLEAR REACTORS (ENVIRONMENTAL IMPACT ASSESSMENT FOR DECOMMISSIONING) REGULATIONS 1999 (THE REGULATIONS)

CONDITIONS

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

ROSYTH ROYAL DOCKYARD LIMITED – License Number Sc.8

Condition 1

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

Condition 2

a. 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.

b. The project shall not be carried out except in accordance with the environmental management plan.

Condition 3

Within 90 days of the date of this Consent, with reference to the environmental statement provided under regulation 5(1) the environmental management plan shall:

a. list the mitigation measures that are already identified 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; and

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 taken over time; and

d. describe significant changes to the mitigation measures in light of experience, giving reasons for such changes.

Condition 5

The licensee is required to:

a. provide the environmental management plan to the Office for Nuclear Regulation within 90 days of the date of this Consent and on each anniversary of the of the expiry of this 90 day period or within such longer time as the Office for Nuclear Regulation may agree, the licensee shall provide an updated environmental management plan;

b. make the environmental management plan available to the public within 30 days of the plan being sent to the Office for Nuclear Regulation, or within such longer time as the Office for Nuclear Regulation may agree; the plan may replace earlier versions.

Condition 6

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

Dated: October 2014

Signed

For and on behalf of the Office for Nuclear Regulation

Dr Richard Savage

A person authorised to act in that behalf

Annex 2

Consultation on the environmental statement

Following extensive consultation exercises prior to the submission of the EIA, ONR was keen to maintain the continuity of involving all parties who had shown an interest in the project. To do this ONR used the extensive database built up by Green Issues Communiqué, who coordinated the working groups to make sure everyone previously involved was contacted.

Documents were made readily available at 14 local libraries to Rosyth Dockyard, along with HSE knowledge centre and online.

Organisations and individuals involved in the consultation process

ONR's consideration included holding discussions with ONR's site inspector for RRDL, stakeholders with expertise in environmental matters as well as taking into account written comments received during public consultations. In addition to this, the Ministry of Defence (MoD) held extensive nationwide consultations regarding the Submarine Dismantling Project (SDP) since the project was first announced. The results of these consultations were used to inform both the final ES and conclusions by ONR.

ONR directly contacted statutory and non-statutory consultees. The consultation was notified directly to over 110 individuals including 15 organisations.

Statutory Consultation Bodies

ONR consulted 4 individuals in 3 organisations:

- Scottish Natural Heritage (SNH)
- Scottish Environment Protection Agency (SEPA)
- Fife Council

Non-Statutory Consultation Bodies

ONR consulted 111 individuals and 17 organisations:

- Nuclear Information Service
- Whiteox
- Scottish Government
- Environment Agency
- University College London
- Eden Nuclear and Environment

- NuLeAF
- University of Central Lancashire
- Argyll-Bute Council
- Public Health England
- Plymouth Council
- Green Issues Communiqué
- Forth Ports
- Defence Academy
- BAE Systems
- CECA
- NHS

Annex 3

Consultees who responded on the environmental statement

- Environment Agency
- Scottish Government
- Fife Council
- Scottish Environment Protection Agency
- Members of the Public
- Charlestown, Limekilns, and Pattiesmuir Community Council
- Scottish Natural Heritage
- Nuclear Free Local Authorities

Annex 4

Topics not pursued for evidence or further information – topics raised by consultees

Consultees raised a number of topics relevant to the decommissioning process but which did not necessarily require detailed consideration under the environmental impact assessment process under EIADR. Many of these topics are legislated for specifically under other regulations such as RSA 93 and HASWA (See Annex 6) and so do not need to be considered explicitly under EIADR.

Consultees also raised a number of topics that ONR considered had been dealt with adequately in the environmental statement, when the staged approach of the project and requirements for further information as the project progresses are taken into account.

Consequently, ONR decided not to pursue such topics for the purposes of further information, and an overview of the main topics raised is given below.

- Further information regarding dose rates to the general public
- Further information on disposal of wastes and potential radioactive emissions, noting that disposals including discharges will continue to be made under RSA93 and regulated by SEPA.
- Emergency Planning – with specific reference to dropping the RPV
- Perceived lack of engagement with the public and local councils during consultation
- Human health impacts
- Cost to taxpayer of adopting a 2 stage approach to the project
- Specific detail regarding the final dismantling of the submarines following removal of radioactive material
- Reference to other projects in the vicinity that are unrelated to this project

Annex 5

BACKGROUND Legislative framework for nuclear safety

Energy Act 2013

Part 3 of The Energy Act 2013 deals with Nuclear Regulation. It establishes ONR as a statutory corporation. Amongst other things, it makes the ONR responsible for the enforcement of statutory provisions which are 'relevant statutory provisions' for the purposes of that Act. These provisions include sections 1; 3-6; 22 and 24A of NIA65 as well as the Nuclear Industries Security Regulations 2003 (NISR) and the Carriage of Dangerous Goods (CDG) 2009 as they apply to the carriage of radioactive material for civil purposes. It refers throughout to the 'appropriate national authority' which in England, Wales and Scotland is the ONR. In relation to Northern Ireland, it is the Secretary of State.

Health and Safety at Work Act (HASWA)

The Health and Safety at Work etc Act 1974 (HSWA74)[9] is primarily a statute for securing, among other things, the health and safety of persons at work and protecting others against the risks to their health and safety in connection with the activities of persons at work. HSWA74 places duties on employers and employees, establishes the Health and Safety Commission and HSE, and provides for health and safety regulations. HSWA74 also provides for the appointment of inspectors and defines the powers available to them. There are also provisions relating to the disclosure of

information and to offences. In relation to nuclear installations, it incorporates the licensing parts of the Nuclear Installations Act 1965 (NIA65)[10] as relevant statutory provisions.

Nuclear Installations Act 1965

NIA65 is the main piece of legislation used to regulate the safety of nuclear installations. It was amended in 1974 when HSE was created to allow for, among other things, the substitution of HSE as the licensing authority. Under NIA65, no site may be used for the purpose of installing or operating any nuclear reactor or prescribed nuclear installation unless a nuclear site licence has been granted to a corporate body by HSE and is for the time being in force.

Under NIA65, ONR may at any time attach to a licence such conditions as appear necessary or desirable in the interests of safety, or with respect to the handling, treatment and disposal of nuclear matter. These conditions give ONR powers to directly regulate the licensees' activities using licence instruments. In addition, the goal-setting nature of the licence conditions requires each licensee to develop compliance arrangements which best suit its business needs, provided they demonstrate that safety is being managed adequately.

Other legislation dealing with nuclear and radiological hazards

A range of other legislation dealing with nuclear and radiological hazards applies to nuclear licensed sites in addition to NIA65. Radiological protection under routine and emergency situations is regulated under the Ionising Radiations Regulations 1999 (IRR99)[11] and Radiation (Emergency Preparedness and Public Information) Regulations 2001 (REPPIR)[12], respectively, and enforced by ONR. Radioactive disposals, including discharges, are regulated under the Radioactive Substances Act 1993 (RSA93)[13] and enforced by the Environment Agency in England and Wales, and Scottish Environment Protection Agency (SEPA) in Scotland.

Effects of decommissioning on other countries

Decommissioning is one of the activities for which the European Commission requires a submission by governments of Member States under Article 37 of the Euratom Treaty. The submission identifies the potential impacts on Member State countries of the decommissioning strategy of a particular nuclear installation.

EIADR contains arrangements for consultation with other States party to the Agreement on the European Economic Area (EEA) if a decommissioning project is

likely to have significant environmental effects on those States; EIADR do not require a submission to the European Commission.

Regulators and others working together

Regulators and others work together on matters of mutual interest, and in particular, there are administrative arrangements between ONR and the Environment Agency, SEPA and the Food Standards Agency (FSA). When considering discharge authorisations, for example, the Environment Agency and SEPA consult ONR and FSA, and FSA monitors terrestrial and aquatic food.

Regulators and others also work together in other areas. The lead on the submission under Article 37 of the Euratom Treaty, for example, is with the Department for Environment, Food and Rural Affairs (DEFRA) for nuclear installations in England and Wales, and with the Scottish Executive for nuclear installations in Scotland. The Article 37 submission is prepared by the Environment Agency or SEPA, as appropriate, in consultation with ONR and FSA. The Nuclear Decommissioning Authority (NDA) has the responsibility for liabilities arising from past and future government civil nuclear programmes and ONR liaises with NDA on issues of mutual interest regarding the decommissioning of reactors.

Legislative process under EIADR

Application for consent to carry out a decommissioning project

The intention of the EIA Directive and EIADR is to involve the public through consultation in considering the potential environmental impacts of a decommissioning project, and to make the decision-making process on granting consent open and transparent.

EIADR99 came into force in November 1999. Since then, any licensee wishing to begin to decommission a nuclear power station or other nuclear reactor (as defined) must apply for consent to carry out a decommissioning project under EIADR, undertake an environmental impact assessment and prepare an environmental statement that summarises the environmental effects of the project.

When planning to undertake an environmental impact assessment and preparation of an environmental statement, there is an optional stage where the licensee may request from ONR an opinion on what the environmental statement should contain (called a pre-application opinion). In such a case, the licensee must provide information (such as in the format of a scoping report) on which ONR will base its opinion.

When preparing its opinion, ONR must consult and take into account the views of the consultation bodies identified in EIADR, which are the local planning authority, local highway authority, any principal council for the area (if it is not the local planning authority), and the relevant environment agency. a range of environmental organisations and agencies, namely:

- Scottish Natural Heritage (SNH)
- Scottish Environment Protection Agency (SEPA)
- Fife Council

ONR may also consult and take into account the views of other organisations and members of the public.

The environmental statement must provide the information in Schedule 1 to EIADR that is reasonably required and which the licensee can reasonably compile. Briefly, the environmental statement should contain a description of the following:

- the project (including aspects such as physical characteristics and expected emissions)
- main alternatives (options) studied by the licensee
- aspects of the environment likely to be significantly affected (such as water and air)
- likely effects on the environment (such as short-, medium-and long-term effects and cumulative effects)
- any mitigation measures envisaged to prevent, reduce and where possible offset any significant adverse environmental effects

The environmental statement must also contain a non-technical summary of the information provided.

Public consultation on an environmental statement

Once the licensee has undertaken an environmental impact assessment, applied for consent and provided an environmental statement, a public consultation must be carried out on the environmental statement. The consultation includes the consultation bodies and other organisations that ONR may wish to consult and local people. The licensee must publicise the environmental statement in at least one newspaper local to the site, make copies of the environmental statement available for

public inspection at one or more locations near the site, and invite people to write to ONR with their views.

Public consultation on further information

If ONR is of the opinion that further information is necessary before it can make its decision, then ONR may request such information from the licensee. In such a case, public consultation is carried out on the further information under arrangements similar to those described above.

Evidence to verify information in the environmental statement

ONR may ask the licensee to produce evidence to verify any information in the environmental statement. Evidence is not subject to public consultation.

Change or extension to a decommissioning project

If there is a change or extension to any decommissioning reactor project that may have significant adverse environmental effects, the licensee must apply to ONR for a determination as to whether the change or extension should be subject to an environmental impact assessment. The licensee shall not commence or continue with the change or extension to the project, or any other part of the project that ONR may direct, until a determination is made.

This requirement is relevant irrespective of whether the project began after or before EIADR came into force (that is, whether consent for the project was granted under EIADR, or whether the project began before November 1999 and so consent was not required). If a positive determination is made, the licensee must apply for consent and provide an environmental statement on the project to support the application. A public consultation must be carried out on that environmental statement. Regulation 13 of EIADR deals with changes or extensions to projects.

Effects of decommissioning on other countries

EIADR contains arrangements for consultation with other States party to the agreement on the EEA if a decommissioning project is likely to have significant adverse environmental effects on those States. The consultation is through the Secretary of State with the lead for the EIA Directive. These arrangements apply to new decommissioning projects, and to any existing projects needing changes or extensions that require an environmental impact assessment.

Granting consent and attaching conditions

At the end of the public consultation on the environmental statement including further information or evidence (if requested), ONR must take into account the views of consultees and, if appropriate, responses from EEA States, when making its decision on whether or not to grant consent for a decommissioning project under regulation 8(3) of EIADR. If ONR decides to grant consent, ONR may attach conditions to the consent as may appear to it to be necessary or desirable in the interests of limiting the impact of that project on the environment under regulation 8(4) of EIADR.

Transparency of ONR's decision on an application

At the end of the process when ONR has made its decision on whether or not to grant consent for a new decommissioning project to start or a change or extension to an existing project, ONR must:

- inform the licensee and the Secretary of State of the decision under regulation 11(a); inform the public by publishing a notice in a local newspaper unless by other means as appropriate in the circumstances under regulation 11(b); and make available a statement (a report) for public inspection under regulation 11(c) of EIADR.

This report must contain:

- the content of ONR's decision and, if consent is granted, the content of any conditions attached to that consent; the main reasons and considerations on which the decision is based;

- and a description, where necessary, of the main measures that the licensee will take to avoid, reduce and if possible, offset any major adverse effects of the decommissioning project on the environment.

Also under regulation 11(c) of EIADR, ONR must provide information regarding the right to challenge the validity of the decision and the procedures for doing so. The mechanism in place to challenge decisions made by ONR under EIADR, is via the judicial review process.

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