

Transport and Environment Committee

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Nuclear Submarine Dismantling at Rosyth: Ministry Of Defence Response to Consultation

Item number	7.16
Report number	
Wards	All

Links

Coalition pledges	
Council outcomes	CO18 , CO21
Single Outcome Agreement	SO4

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Executive summary

Nuclear Submarine Dismantling at Rosyth: Ministry Of Defence Response to Consultation

Summary

The UK government through the Ministry of Defence (MOD) have decided that Rosyth Dockyard and Devonport Dockyard will be used to dismantle the decommissioned nuclear powered submarines stored afloat at these locations. Rosyth will only dismantle the seven submarines currently stored there with all others including future decommissioning taking place at Devonport.

A list of potential sites to store the Intermediate Level Nuclear Waste (ILW) produced when the Reactor Pressure Vessels are removed from the hull of the submarine will be drawn up by MOD and reviewed by the end of 2013. A further review of the selected site short list is expected to be followed by a consultation and then decision by end of 2014 or early 2015. No ILW will be removed from the submarine until a storage site has been selected.

It is expected, if the regulatory process approves, that the Low Level Nuclear Waste (LLW) in the submarines such as steam generators and pumps will be removed separately from the ILW reactor pressure vessel. This may result in an earlier than expected start to the dismantling process than previously envisaged in the timeline issued within the MOD consultation.

Recommendations

- 1 It is recommended that Committee notes the content of this report.

Measures of success

The submarine disposal process is concluded safely.

Financial impact

There are no financial implications arising from this report.

Equalities impact

This report proposes no change to current policies or procedures and as such a full impact assessment is not required. The contents have no relevance to the public sector Equality Duty of the Equality Act 2010.

Sustainability impact

A Strategic Environmental Assessment has been carried out by the MOD. Once storage sites are selected, site-specific Environmental Impact Assessments will be undertaken. The Strategic Environmental Assessment concluded that the project would not have any significant negative environmental impacts associated with storage of radioactive materials. The Strategic Environmental Assessment identified two potentially significant negative environmental impacts, both relating to the option of storing the large intact Reactor Compartments:

- visual impact of the large building required to store 27 intact Reactor Compartments;
- possible effects on protected wildlife habitats at Devonport due to the requirement to dredge the seabed.

Dismantling is not expected to increase radioactive discharges to the environment above current permitted levels. There is likely to be a local environmental impact due to noise from cutting up the hulls, but this will not be greater than existing dockyard operations.

Approximately 90% of the dismantled submarines will be recycled with 5% of non-radioactive hazardous waste, 4% low level radioactive waste and 1% intermediate level nuclear waste going to disposal sites.

Consultation and engagement

This report updates Committee on the outcome of the MOD consultation process.

Background reading / external references

<https://www.gov.uk/government/consultations/consultation-on-the-submarine-dismantling-project>

Nuclear Submarine Dismantling at Rosyth: Ministry Of Defence Response to Consultation

1. Background

- 1.1 On 21 February 2012 the Transport, Infrastructure and Environment Committee were invited to comment on a consultation from the MOD on the Submarine Dismantling Project.
- 1.2 The Submarine Dismantling Project is a project to develop a solution for disposing of the Royal Navy's 27 nuclear powered submarines after decommissioning. The project will extend over a period of at least 60 years and will involve provision of facilities to dismantle the submarines and store the resultant Intermediate Level Radioactive Waste until it is transferred to the proposed national Geological Disposal Facility. The submarines were defueled when taken out of service and so contain no radioactive fuel. These proposals refer to the safe disposal of material which has become radioactive during operation of the boat during its working lifetime.
- 1.3 Committee agreed to:
 - 1) advise the Ministry of Defence that this Council rejects the dual site option as outlined in paragraph 3.17 of the report by the Director of Services for Communities and was firmly of the view that the submarine dismantling work and the storage of resultant intermediate Level Radioactive Waste should not take place at Rosyth; and
 - 2) otherwise note the report.

2. Main report

- 2.1 On 22 March 2013 the UK Government in a written statement provided a response to the Submarine Dismantling Project Consultation exercise. The written response is reproduced at Appendix 1.
- 2.2 Along with the Government written statement the consultation document was released to the public. The executive summary is as attached at Appendix 2. The report states that more than 1,200 people attended consultation events and the MOD received over 400 written responses.

2.3 The main conclusions reached following the consultation exercise are as follows:

- the approach to removing the radioactive material from the submarines will be to remove and store the Reactor Pressure Vessel (RPVs) intact prior to disposal in the planned Geological Disposal Facility (GDF).
- radioactive waste will be removed from submarines in-situ at both Devonport and Rosyth dockyards.
- the proposed approach to selecting a site for storage of ILW has been revised. The MOD has chosen not to limit the site-specific selection process to one type of site. The revised process will consider all potential storage sites on an equal basis, irrespective of type.
- the first submarine will be dismantled at Rosyth as a demonstration of the radioactive waste removal process. The rate and order of dismantling the remaining submarines, at both Rosyth and Devonport, will then be optimised. Priority will be given to clearing the seven submarines currently at Rosyth, but this does not preclude the potential for parallel work in Devonport.
- the opportunity to undertake early removal of LLW from the submarines will be explored. This opportunity could help to reduce technical and industrial risks and speed up final clearance of submarines from the dockyards once an ILW storage solution is agreed.

2.4 These decisions mean that the seven submarines currently stored afloat at Rosyth will be dismantled in-situ with the reactor pressure vessel removed and disposed of in a yet to be decided Geological Disposal Facility. The MOD has stated that no dismantling work will start at Rosyth until such a facility is identified.

2.5 The Rosyth facility will be used as a demonstrator for the first submarine dismantling and priority would be given to removal of the remaining six submarines thereafter. The demonstration will assess the dismantling process rather than the safety aspects; these will be assessed and signed off by Nuclear Regulators before the process is allowed to start.

2.6 The MOD have stated that the next phase of work, will involve “seeking regulatory approvals for the demonstration of initial dismantling activities”. This will include applications to SEPA and Office of Nuclear Regulation (part of the Health and Safety Executive), expected later in 2013, to amend radioactive waste disposal and discharge authorisations for Rosyth Dockyard and seek approval under the Environmental Impact Assessment for Decommissioning Regulations.

2.7 Following the consultation process the MOD have decided to widen the selection of a site for storage of the ILW generated during the dismantling process to include all MOD nuclear sites, Nuclear Decommissioning Sites and those owned by private industry. It is expected around 40 sites, including Rosyth, will be evaluated with a decision on a short list expected by the end of 2013. A further review will take place in 2014 followed by a consultation and site location decision by end 2014 or early 2015.

- 2.8 A decision has been taken to separate the removal of Low Level Nuclear Waste (LLW) from the removal of Intermediate Level Nuclear Waste (ILW). The High Level Nuclear Waste was removed when the submarines were defueled prior to storage. It is reported that removing the LLW separately will allow work to begin much sooner and perhaps complete the process two years earlier than anticipated.
- 2.9 Babcock who operate Rosyth Dockyard have worked up proposals to remove the LLW which includes the steam generators and pumps attached to the nuclear reactor pressure vessel and dispose of them in a normal regulated way and not hold them at Rosyth. The Scottish Environment Protection Agency (SEPA) will consult on any application for ILW removal by Babcock.
- 2.10 Dismantling is not expected to increase radioactive discharges to the environment above current permitted levels.
- 2.11 If an Intermediate Level Waste site is identified as anticipated in late 2014 early 2015 the process of removal of the reactor pressure vessel (RPV) would commence at Rosyth. The RPV's would then be moved and stored at the "temporary" ILW site with a life span of 100 years until a permanent Geological Disposal Facility is identified.

3. Recommendations

- 3.1 It is recommended that Committee notes the content of this report.

Mark Turley

Director of Services for Communities

Links

Coalition pledges

Council outcomes

CO18 Green – We reduce the local environmental impact of our consumption and production

CO21 Safe - Residents, visitors and businesses feel that Edinburgh is a safe city

Single Outcome Agreement

SO4 Edinburgh's Communities are safer and have improved physical and social fabric

Appendices

1 Parliamentary Statement on Submarine Dismantling Project Recorded In Hansard

2 Submarine Dismantling Project (SDP) MOD's Response to Consultation

APPENDIX 1

Parliamentary Statement on Submarine Dismantling Project Recorded In Hansard

22 Mar 2013: Column 61WS

Submarine Dismantling Project

The Parliamentary Under-Secretary of State for Defence (Mr Philip Dunne): I am announcing today that, following public consultation, the submarine dismantling project (SDP) has passed a main gate decision point.

The Ministry of Defence (MOD) has previously proposed that the intermediate level waste (ILW) storage site selection process should start by narrowing the range of options to a particular type of site, that is, by deciding whether Nuclear Decommissioning Authority (NDA) or MOD and industry sites should be considered further, and discounting the other types. However, based on the findings of the public consultation, alongside recent legal advice, it has been decided that the process of selecting a specific site for the interim storage of ILW should consider all UK nuclear licensed and authorised sites that might be suitable. This will therefore include MOD sites, industry sites and NDA sites on an equal basis. The MOD will carry out further public consultation as part of this process. No radioactive waste will be removed from the submarines until a disposal or storage solution has been agreed.

We have decided to demonstrate the initial dismantling process for nuclear-powered submarines that have left service with the Royal Navy by removing all radioactive waste from a single nuclear-powered submarine at Rosyth. The reactor pressure vessel from this submarine will be removed and stored whole. Subject to the successful conclusion of this demonstration, we then intend to carry out dismantling of the remaining submarines at both Rosyth and Devonport.

These decisions have taken account of the findings of the public consultation that was announced by the then Minister for Defence Equipment, Support and Technology, 27 October 2011, *Official Report*, column 16WS and ran from 28 October 2011 until 17 February 2012.

More than 1,200 people attended consultation events and the MOD received over 400 written responses, all of which were recorded and considered by the SDP team. We are grateful to everyone who took part in this consultation, and the wide range of comments provided valuable input to the MOD's options analysis, which has changed and matured significantly as a result.

We have today published the MOD "Response to Consultation", which summarises the comments that were received and explains how they have been taken into account. This is available from the SDP consultation page on the www.gov.uk website:

<https://www.gov.uk/government/consultations/consultation-on-the-submarine-dismantling-project>

A copy will also be placed in the Library of the House.

APPENDIX 2

Submarine Dismantling Project (SDP) MOD's Response to Consultation

March 2013

Executive Summary

In October 2011 the Ministry of Defence (MOD) launched a public consultation on the strategic options for dismantling redundant nuclear submarines.

The Submarine Dismantling Consultation ran for 16 weeks from 28 October 2011 to 17 February 2012, seeking the views of local people in the areas around candidate sites for submarine dismantling as well as the wider public and stakeholders nationally, on three key questions.

- How should the radioactive material be removed from the submarines?
- Where should the radioactive material be removed from the submarines?
- Which type of site should be used to store the ILW awaiting disposal?

The consultation also sought views on the environmental effects of submarine dismantling as set out in MOD's Strategic Environmental Assessment (SEA).

Every comment was registered and considered by the project team, using a structured process which was developed with input from members of the project's independent Advisory Group. A Post Consultation Report was issued in July 2012 documenting the consultation process and providing a summary of the responses received.

The MOD then revisited its analysis of the strategic options for submarine dismantling. New expert workshops were run to consider comments on specific topics within both the quantitative and the qualitative assessments.

The MOD has now reached a conclusion on each of the three key questions and this report, alongside the SEA Post-Adoption Report, has been issued in parallel with the MOD's announcement of its decisions, in order to explain how the comments made during consultation have been taken into account.

Having taken account of the comments received during consultation, the MOD's revised position on how and where radioactive waste is removed, and the types of site at which it is stored is as follows:

- The approach to removing the radioactive material from the submarines will be to remove and store the Reactor Pressure Vessels intact prior to disposal in the planned Geological Disposal Facility. This position has not changed and the arguments for this option have, on balance, been supported by the responses to the consultation.
- Radioactive waste will be removed from submarines in-situ at both Devonport and Rosyth dockyards. This position has not changed and the arguments for

dual-site dismantling have been strengthened by the responses to the consultation.

- The proposed approach to selecting a site for storage of ILW has been revised. The MOD has chosen not to limit the site-specific selection process to one type of site. The revised process will consider all potential storage sites on an equal basis, irrespective of type.

On the SEA, MOD's position is that the findings set out in the Environmental Report remain valid in the light of consultation. The adopted approach does not have any significant environmental effects, except in the waste category where the overall effect (including new waste streams and dealing with the legacy of laid-up submarines) was found to be positive.

Two other significant decisions that have been taken since consultation are as follows:

- The first submarine will be dismantled at Rosyth as a demonstration of the radioactive waste removal process. The rate and order of dismantling the remaining submarines, at both Rosyth and Devonport, will then be optimised. Priority will be given to clearing the seven submarines currently at Rosyth, but this does not preclude the potential for parallel work in Devonport.
- The opportunity to undertake early removal of Low Level radioactive Waste (LLW) from the submarines will be explored. This opportunity could help to reduce technical and industrial risks and speed up final clearance of submarines from the dockyards once an ILW storage solution is agreed.

The MOD's revised position has been influenced by the significant changes made to the options analysis as a result of the comments received in consultation. In particular, the MOD has accepted and applied the following in relation to SDP, which will also be considered in future decision making on the project:

- Changes have been made to the definitions and scales of safety and environmental criteria in the option comparison methodology, to clarify how the assessment of cost and operational effectiveness are applied in comparison of the options.
- Stakeholder perspectives have been incorporated into the option analysis process, through the use of alternative weightings in the sensitivity analysis.
- When more detailed information on environmental discharges is available, it should be made publicly available in a timely manner. This should include summary information that can be readily understood.
- The importance of on-going communication and engagement with stakeholders outside of consultation periods is accepted and will be strengthened, where appropriate, for the next stage.
- The implications of delays or changes to the Geological Disposal Facility programme have been more explicitly and comprehensively taken into account.

MOD notes the comments that communities around selected sites are likely to seek additional benefits as part of any planning consent process. These would need to be raised, at site or programme level, in the context of a specific planning application

Similarly, MOD notes the comments that communities may also seek wider benefits (for example, through strategic partnerships). These would be outside the scope of the SDP and would need to be raised as part of discussions on the wider context of MOD or other activities at a given site.

There were comments that have not been accepted because the MOD believes they are based on misunderstandings or because it does not accept the conclusions that have been drawn. For instance:

- MOD believes some of the criticism of its comparative analysis of safety and environmental impacts is based on a misunderstanding of the information provided, which has been interpreted as meaning that 'compliance with limits' did not encompass full commitment to the 'ALARP' or 'ALARA' regulatory requirements¹ (which it does).
- MOD recognises the potential value of regional or broad-scope socio-economic assessments but believes that in practice, local authorities will do this to inform their positions; only they have the remit, information and skills to do so at this stage MOD will, however, participate on request; sharing whatever information it has and providing any socioeconomic submissions required as part of planning consent processes.
- Arguments made in favour of using a new Greenfield or Brownfield site for dismantling, or named sites which MOD has previously ruled out, are not sufficiently persuasive to justify reconsidering them as options. The ILW Storage Site shortlist has yet to be developed, but MOD would only consider Greenfield or Brownfield sites if no suitable existing nuclear site could be found.
- Submarine defuelling remains outside the SDP's scope and as it is a prerequisite to all dismantling options it did not act as a significant discriminator between them

In the next phase of work, the project will be seeking regulatory approvals for the demonstration of initial dismantling activities at Rosyth Dockyard. It will also take forward a process for shortlisting and subsequently selecting an ILW storage site, which will be informed by an updated SEA and consultation with local communities.