

Project Overview

After many years in service, nuclear submarines eventually reach the end of their operational life and are taken out of service. The used nuclear fuel is removed and the submarines are then prepared for safe storage afloat pending dismantling. Afloat storage is safe but it is not a long-term solution and UK Government policy is that decommissioning and disposal operations should be started as soon as practicable.

The Submarine Dismantling Project (SDP) is the MOD's programme to deliver a safe, secure and environmentally responsible solution for dismantling 27 defuelled submarines. This involves recycling the bulk of the submarine and safely disposing of the remainder.

The submarine's Reactor Pressure Vessel (RPV) contains Intermediate Level radioactive Waste (ILW). After the RPV has been removed in its entirety, it must be stored for an interim period until it can be processed and sent to a proposed Geological Disposal Facility (GDF) sometime after 2040. This public consultation will help us decide where the interim RPV storage site should be.

Simplified
illustration of a
Reactor Pressure
Vessel



Decisions Already Made

The decisions about where and how the initial dismantling of the submarines should be done have already been the subject of a major programme of technical and financial assessments and three major public consultations have been completed.

As a result, it has been decided that:

- Initial dismantling will take place at both Devonport and Rosyth Dockyards.
- The RPVs will be removed whole for interim storage.

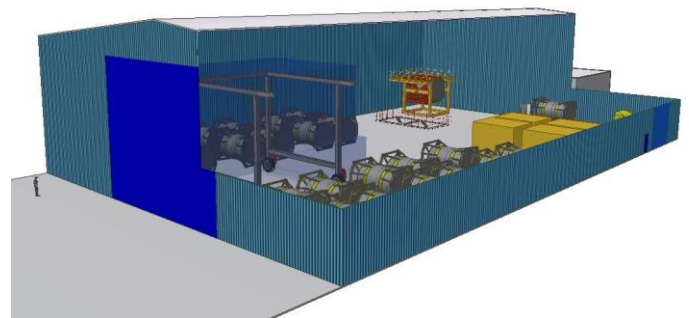
Initial dismantling of the first submarine will be at Rosyth to demonstrate the process. No RPVs will be removed until a storage site has been decided upon and the necessary planning approvals and permits have been obtained for the store.

The RPV Store

After they are removed from the submarines, the RPVs will be transported and stored in secure shielded containers.

The RPV store must be large enough to take the 27 RPVs in their Containers with space for access and local shielding. An early concept drawing below shows one possible layout, with a floor area of approximately 47m x 44m (around 2000m²). A typical store height might be 20m.

At the end of the interim storage period, the RPVs will be repacked and sent for size reduction. The current assumption is that a repackaging capability would be added when needed. An additional 50% is included in the total facility footprint for this, giving an overall footprint of about 3100 m².



One possible arrangement for an RPV store



Key RPV Store Milestones

The SDP has systematically assessed all the existing UK nuclear sites. The result is five shortlisted sites which are potentially both suitable for building a store and available within the project timescales.

- Aldermaston in Berkshire
- Burghfield in Berkshire
- Capenhurst in Cheshire
- Chapelcross in Dumfriesshire
- Sellafield in Cumbria

The shortlisting process was open to comment by stakeholders and the wider public for a period of 'pre-engagement', during which the MOD also asked for comments on plans for future assessment and public consultation proposals.

The project team has started to collect initial assessment data from each site. Some early results of that work are included in the Consultation Document. The current Public Consultation will add to this information and allow the team to complete its analysis.

On completion of the site assessment process, a recommendation will be made to the relevant MOD authority. This recommendation will be subject to detailed scrutiny by MOD's independent financial and project management specialists.

Once the analysis has passed scrutiny and funding for the next stage of work has been approved, the Minister for DE&S will announce the recommended site. The key project milestones, with indicative dates, include:

- Public Consultation (2014-15)
- End of data collection for site assessment, feedback on consultation (2015)
- Recommended site announced (2016)

- Contract(s) let for store design and build (2017+)
- Store construction starts (2018/19)
- Store ready to receive first RPV (2021/22)

See the Public Consultation Document for more information on all the topics in this Project Overview Factsheet

Public Consultation

To inform this decision making process, this consultation seeks the views of potentially involved communities, nuclear industry experts, other stakeholders and the wider public. The project team is gathering views on three main topic areas:

- The Strategic Environmental Assessment (SEA).
- The process and criteria being used to compare the shortlisted storage sites.
- The shortlisted sites and the differences between them.

The Consultation Document describes the analysis framework and the available information on the different sites.

It does not propose a storage site because no conclusion has yet been reached and the final decision will depend on information collected during the consultation.

There is also a statutory requirement to consult on the SEA Environmental Report as it applies to the shortlist of sites.

Online Documents

Further information and all SDP consultation documents are available at:

<https://www.gov.uk/government/publications/submarine-dismantling-project-interim-storage-of-intermediate-level-radioactive-waste>

Contact Information

Comments and questions on the SDP project should be directed to the team administering the Public Consultation on behalf of the MOD.

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