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ISM

SUBMARINE DISMANTLING PROJECT

Intermediate Level Waste Storage Site Selection: Approach to Decision Making

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Amendment History

Issue	Date	Details of Amendment	DCCF
1.0	September 2013	New document based on discussion paper SDP: ILW Storage Site Selection – Overview of Proposed Approach to Decision Making (Issue 0.6, August 2013).	
1.0	February 2014	Updated for publication	
2.0	June 2014	Updated for publication alongside other Pre-engagement documents.	
2.1	September 2014	Minor editorial changes and changes made for consistency with the SEA. and other documents.	

Distribution

SDP Virtual Team
SDP Scrutiny Meeting Members
SDP Advisory Subgroup Members
SDP Consultation web pages (as PDF)

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1. Introduction

- 1.1.1. This report is an overview of the MOD's Submarine Dismantling Project (SDP) Intermediate Level radioactive Waste (ILW) storage site decision making process.
- 1.1.2. It is intended for a broad audience of SDP project team members and other organisations involved in project delivery but it will also be circulated to external stakeholders and the wider public.
- 1.1.3. Abbreviations and key references are listed in Annexes A and B respectively.

1.2. This Issue

- 1.2.1. This report was updated to Issue 2.0 for release when the final shortlist is announced. The changes in the main text are editorial only but in response to requests from stakeholders an annex has been added (published separately) to provide a more detailed description of the ILW storage site option assessment procedures and criteria.
- 1.2.2. Issue 2.1 adds a small number of editorial changes and also clarifies the situation in respect of the decision criteria and the link between strategic siting and commercial processes.
- 1.2.3. The body of the report was written before screening started and therefore remains in the future tense.

2. SDP Context

- 2.1.1. The MOD's SDP is developing a solution for the dismantling of 27 Royal Navy nuclear submarines, once they have left Naval Service and have been defuelled, and the safe interim storage of the ILW arising, which SDP assumes is limited to the Reactor Pressure Vessels (RPVs). These submarines include the eleven currently stored afloat at Devonport and seven at Rosyth, as well as nine that are still in service.
- 2.1.2. The first stage of SDP's decision-making addressed the questions of how and where the radioactive waste would be removed from the submarines, once they have been defuelled and laid-up, and where the ILW should be stored until the UK's planned Geological Disposal Facility becomes available after 2040. The culmination of this work, which included a three-month public consultation, was the submission to the MOD's Investment Approvals Committee in December 2012 of a first 'Main Gate Business Case' recommending the optimum combination of answers to these three key questions.
- 2.1.3. The MOD formally announced on 22 March 2013 that the following decisions had been made: initial submarine dismantling will take place in situ at both Devonport and Rosyth; the RPVs will be removed and stored intact; and a revised approach to selecting an ILW storage site will be taken forward. The MOD's Response to Consultation report explained how comments from stakeholders and the wider public influenced these decisions.

- 2.1.4. In this previous consultation, only the type of site, defined by ownership and its proximity to an initial dismantling site, was factored into the option assessment. Economic assessment conducted jointly with the Nuclear Decommissioning Authority (NDA) showed relatively little difference in the cost and performance results of each type of site. No recommendation about site type could therefore be made as part of the business case submission.
- 2.1.5. Now that Main Gate Business Case approval has been obtained, a further stage of analysis and public consultation is necessary to determine the ILW storage site.
- 2.1.6. The site screening and option assessment processes described below have been designed on the basis that the SDP team's analysis must consider all potential storage sites, including NDA sites, on an equal basis. Legal advice confirmed that such an approach would be the most robust in demonstrating a rational and transparent site selection process, and this was supported by consultation responses.
- 2.1.7. The MOD's decision making will be consistent with the principles set out in its Nuclear Liability Strategy¹. Specifically, the MOD will seek the optimum solution for the storage of ILW that protects people and the environment in a safe and cost effective manner. This may include exploring opportunities for shared storage.

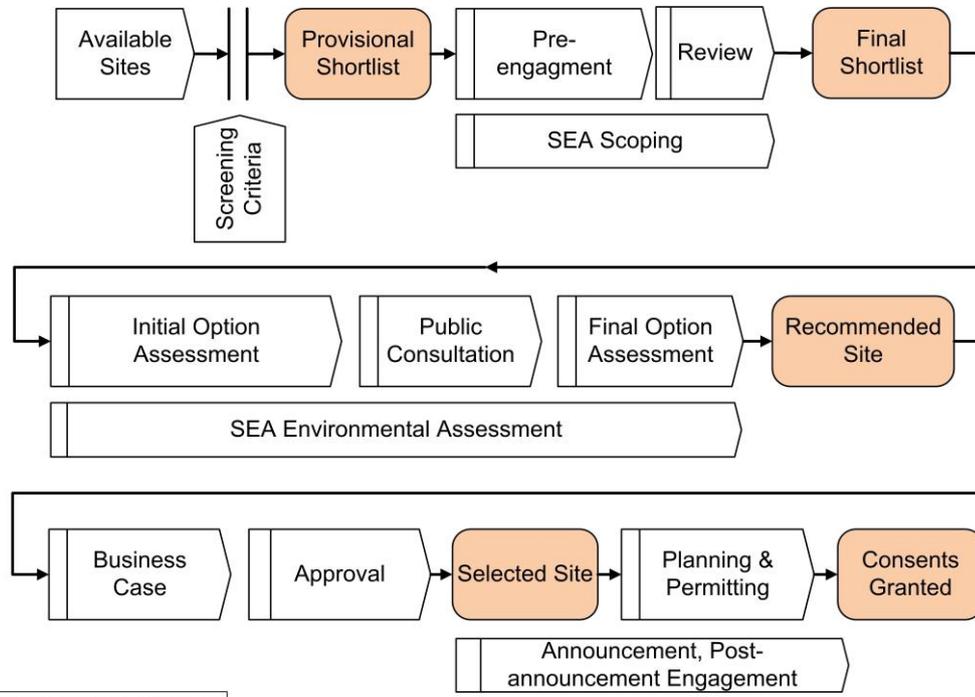
3. Process Overview

3.1. Decision Making

- 3.1.1. The main elements of the Storage Site decision making process are shown on the flowchart overleaf.
- The 'longlist' of potential storage sites will be screened down for detailed assessment (top line of flowchart). This is done by first establishing with site owners which of the longlist sites are actually *available* to the SDP, and then by checking these *available* sites against the Project's Screening Criteria to produce a shortlist of *suitable* sites. Pre-engagement with stakeholders takes place during this phase and starts with the publication of a provisional shortlist of sites.
 - Detailed assessment of the shortlisted sites will then identify a specific recommended storage site (middle line of flowchart). Assessment of the options is expected to continue through 2014 and into 2015, including twelve weeks of public consultation. Stakeholder and wider public input will contribute significantly to the analysis.
 - A first Business Case Review Note will be submitted to the MOD's Investment Approvals Committee, probably in 2015 (bottom line of flowchart). A further round of stakeholder engagement will follow when the decision is announced.
- 3.1.2. Once approval has been obtained and contracts have been placed, the chosen contractor will prepare the site-specific design and apply for planning consent and regulatory permits for the store. No removal of ILW from the first submarine or construction of the store can start until these have been received.

¹ MOD's Nuclear Liabilities Management Strategy, 2011.

3.1.3. Screening and option assessment are described in more detail below, with further comment on some of the key issues such as stakeholder engagement, Strategic Environmental Assessment (SEA), planning and permitting.



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Figure 1: Storage Site Decision Making Process

3.2. Public and Stakeholder Engagement

- 3.2.1. There have already been three major 'set piece' public consultations carried out under SDP and its predecessor, the project for the Interim Storage of Laid-Up Submarines (ISOLUS).
- 3.2.2. The proposals for the Storage Site selection phase build on this experience and will again provide local and national stakeholders with:
- The information they need to understand the project, the options, the decision making process and the MOD's proposals; and,
 - The opportunity and the information they need to engage with the project and inform the MOD's decision making process.
- 3.2.3. Dialogue involving site owners, local communities and stakeholders will be necessary on a site-by-site basis throughout the assessment phase, not just during formal PSE periods. Early engagement with planning authorities is also anticipated.
- 3.2.4. There are three points where more structured PSE activities are envisaged during the Storage Site selection process.
- Pre-engagement: the first phase comprises a minimum of one month of pre-engagement with local authorities and other stakeholders on: screening; future PSE and assessment plans; and SEA scope.
 - Public Consultation: the second phase is the main 12 week public consultation, to review and comment on the evidence base and preliminary information from the detailed option assessment.
 - The last phase encompasses a range of engagement and feedback activities following approval and announcement of the Storage Site decision. It includes publication of the MOD's 'Response to Consultation' and 'SEA Post-Adoption' reports which provide feedback on how comments have influenced decision making.
- 3.2.5. As with the initial dismantling site selection process, there will be further requirements for consultation and engagement led by the chosen contractor / site licensee as part of statutory planning and environmental and health and safety permitting processes.

4. Site Screening

4.1. Approach

- 4.1.1. The Storage Site screening process is described in detail in the SDP's internal Strategy for Screening report and the public domain Criteria & Screening Report. During screening, the longlist of potential ILW storage sites (i.e. all UK nuclear licensed or authorised sites) will be reduced to a shortlist for detailed assessment by:
- Establishing with site owners which of the longlist sites are actually *available* to the SDP; and,

- Checking these *available* sites against the Project's screening criteria to confirm that they are actually *suitable* for MOD use.

4.2. Available Sites

- 4.2.1. Site owners make their own decisions as to which sites (if any) they wish to put forward. The owners of commercially-owned sites were invited in July 2013 to submit them for consideration. In parallel, MOD and NDA site owners review the potential *availability* of their sites. The process used for establishing *availability* must be equivalent, whether the site is owned by a commercial organisation or by the MOD or NDA. To do otherwise might compromise future commercial processes.
- 4.2.2. In making their decisions, site owners have sight of the RPV Store Functional Requirement and expected timeline for the project. The SDP team cannot dictate the criteria site owners might use, but a typical set was included in project documentation and used for MOD sites. The main issues covered are:
- Consistency with the SDP's Functional Requirement;
 - The degree of financial, commercial or strategic benefit anticipated;
 - Consistency of ILW storage with the owner's 'core business', generally and for that site;
 - Any resulting constraints on operations or future site use would be acceptable to the site owner;
 - The degree of technical and programme risk to other site activities; and,
 - An assessment of 'deliverability' through the planning process.
- 4.2.3. For MOD sites, the site owner role is fulfilled jointly by the budget holder operating on the site and the Defence Infrastructure Organisation as the custodian of the MOD Estate as a whole.
- 4.2.4. MOD and NDA site owner decisions on availability may be subject to challenge and must therefore be properly structured and documented. Commercial site owners are not subject to this requirement and it is important to note that they may withdraw their sites at any point during screening or subsequent option assessment.

4.3. Suitable Sites

- 4.3.1. The SDP team then assess the resulting list of *available* sites against its screening criteria to confirm their *suitability* for MOD use. The resulting Provisional Shortlist thus comprises sites that have been both declared *available* by their owners and judged *suitable* by the SDP. The SDP screening criteria are:
- The Functional Requirement can be met, with its own list of sub-criteria such as store capacity, transport, package-handling ability, licensing, security etc;
 - The proposed solution is consistent with the SDP's Benchmark Programme assumptions and schedule deliverability, and any challenges to programme are manageable;
 - The proposed solution does not interfere to an unacceptable extent with MOD operations on the designated site; and,

- There are no legal, licensing or policy constraints that would result in a failure to obtain the necessary consents and permissions.
- 4.3.2. Pre-engagement involves stakeholders in shaping the format and scope of the main public consultation, which is planned to follow relatively soon after. Stakeholders and the wider public will also be invited to comment on the screening process. A Criteria & Screening Report containing a summary of the process to date, and any other provisional conclusions reached, will be published. An updated draft SEA scope will be sent to statutory consultees and placed on the project web pages for wider comment (see Section 6). The Final Shortlist will be confirmed once any feedback has been considered.

5. Option Assessment

5.1. Approach

- 5.1.1. Preparations for the Option Assessment phase have already started but most of the work will take place after Pre-engagement is complete and the shortlist finalised.
- 5.1.2. Initial assessment will focus on establishing the advantages and disadvantages of the candidate sites and the potential impacts on the local communities and other stakeholders. Note that further assessment of a site may be halted at any point if it can be shown to fail an 'unacceptable performance' threshold test.
- 5.1.3. After public consultation comments have been considered, the option assessment studies, the cost models, and the wider decision logic will be completed and a recommended option identified. The Business Case Review Note and its supporting papers will be prepared and submitted for MOD approval. The objective is to recommend a single interim storage site.

5.2. Main Activities

- 5.2.1. The Option Assessment phase comprises the following main activities.
- During Initial Assessment, the shortlisted sites will be compared, primarily on the basis of whole life cost and operational effectiveness.
 - SEA studies on the shortlisted sites will be completed and the SEA Environmental Report issued.
 - Public consultation follows, including dissemination of a Public Consultation Document plus events for communities associated with shortlisted sites, national stakeholders, and the wider public. Information is gathered for the 'Other Contributory Factors' (OCF) analysis which complements the whole life cost and operational effectiveness analyses. The SDP will publish a summary of the comments received while retaining the comments received in full, for any interested parties to review.
 - After the public consultation, responses will be considered, the Operational Effectiveness Multi-Criteria Decision Analysis will be finalised and the data reports completed.

- The Business Case Review Note and supporting documents will be prepared, bringing together all the information and arguments. A recommended Storage Site will be identified. After approval, feedback will be given to stakeholders and the wider public.

5.2.2. The Consultation Document will describe the analysis framework and summarise the available information on the different sites. It will not include a proposed option, because this will depend to a significant degree on OCF information collected during the consultation and stakeholder views.

5.3. Criteria and Scope

5.3.1. The initial (pre-consultation) and final (post-consultation) assessments generally have the same scope. The balance will differ between assessment themes, but they will both cover the following.

- Functional objectives that the project must achieve are mainly assessed through the Operational Effectiveness analysis. These are likely to include storage capacity, site availability, legal and licensing, transport constraints, security, policy and strategy, and robustness against programme risk.
- Potential impacts that the project must seek to reduce (if negative) or enhance (if positive) are also mainly assessed through the Operational Effectiveness analysis. These are likely to include impacts from routine operations and transport, accident risks, construction and demolition, and impacts on local communities and other MOD operations. The SEA is both a source of data for the analysis and draws upon it.
- Factors affecting deliverability that the project must satisfy are mainly assessed through the OCF analysis. These will include public confidence, socio-economics, and political / policy frameworks etc. Each has several sub-factors.
- Financial costs and benefits that the project must optimise are mainly assessed through the Investment Appraisal process. They will include whole life direct and indirect costs and benefits at both project and programme level. The Whole Life Cost model compares the options in respect of costs, 'net present value', confidence levels, and the impact of risk.

5.3.2. More information on these criteria and the assessment procedures is contained in Annex C (The Assessment Criteria Overview, published as a separate document).

5.3.3. Further information on costs and other issues will be required from site owners before and during the main Option Assessment activities. This will be done in a way that is consistent with commercial procedures.

5.3.4. It should be recognised that important factors which may influence the MOD's decision lie outside the control of site owners, for instance the influence of Government and wider MOD strategic benefit.

6. Sustainable Development Issues

- 6.1.1. Submarine dismantling has a range of environmental and socio-economic aspects that by law need to be assessed and managed.
- 6.1.2. The MOD therefore undertook an environmental assessment of the SDP strategic options, incorporating the requirements of the SEA Regulations. The results of that assessment were incorporated into the Operational Effectiveness, Investment Appraisal and OCF analyses and presented during the 2011/12 public consultation.
- 6.1.3. However, although the SEA considered the end-to-end process of submarine dismantling, as already explained it was not possible at that stage to identify specific potential interim ILW storage sites. As a result, the SEA could only consider the generic storage options of 'point of generation' and 'remote' sites (ownership was not a relevant distinction).
- 6.1.4. The SEA Regulations require that the SEA both develops in parallel to and influences the plan or programme it is assessing. Since the option studies now address the choice of a specific ILW storage site, the SEA will be updated to assess the effects of developing, operating and decommissioning the interim ILW storage facility at each candidate site.
- 6.1.5. The SEA update will again follow the statutory process as detailed in the 2011 SEA Environmental Report, beginning with production of the updated SEA Scoping Report and Statutory Body consultation during Pre-engagement. As no other factors have changed significantly, the update will focus principally on the candidate ILW storage sites.
- 6.1.6. Consideration will also be given to the effects of ILW storage on other elements of the end-to-end process where they are apparent; for example, transport to the site from Rosyth and Devonport, the initial dismantling sites. Further size reduction prior to disposal may be required, but the forthcoming assessment does not assume that this will take place at the interim ILW storage site.

7. Planning & Permitting

- 7.1.1. Once MOD approval has been obtained, contracts will be competed as necessary and placed. This is potentially quite a lengthy procedure. The contractor(s) will then develop the site-specific design before applying for planning consents. The planning process also includes a further element of public consultation.
- 7.1.2. The contractor will also apply for the necessary regulatory permits for any radioactive and non-radioactive discharges. There will be further public consultation opportunities during the regulators' consideration of these applications.
- 7.1.3. In addition, planning authorities and regulators may organise their own consultations during their consideration of the applications.
- 7.1.4. MOD will support the contractor and participate as and when required.
- 7.1.5. Subject to regulatory approval, removal of ILW from the first submarine and construction of the RPV Store can start once any necessary planning consent and environmental permits have been received.

Annex A: Abbreviations

DE&S	Defence Equipment and Support
ILW	Intermediate Level (radioactive) Waste
ISOLUS	Interim Storage of Laid-UP Submarines
ISM	In-Service Submarines
LLW	Low Level (radioactive) Waste
MOD	Ministry of Defence
NDA	Nuclear Decommissioning Authority
OCF	Other Contributory Factors (analysis)
PSE	Public & Stakeholder Engagement
RPV	Reactor Pressure Vessel
SDP	Submarine Dismantling Project
SEA	Strategic Environmental Assessment

Annex B: Key References

Title	Originator	Reference/ Version	Date
SDP: (SDC) Consultation Document <i>Public Consultation Document supporting the 2011 Submarine Dismantling Consultation.</i>	MOD/ISM	Issue 1.0	October 2011
SDP: (SDC) MOD's Response to Consultation <i>Follow up to 2011 Submarine Dismantling Consultation, setting out MOD's decisions and how consultation had influenced them.</i>	MOD/ISM	Issue 1.0	March 2013
SDP: (SDC) Post Consultation Report <i>Follow up to 2011 Submarine Dismantling Consultation public consultation, summarising the comments made.</i>	MOD/ISM	Issue 1.0	July 2012
SDP: Strategic Environmental Assessment (SEA): Environmental Report <i>Report of potential environmental impacts. Includes Non-Technical Summary.</i>	MOD/ISM	Issue 1.0	October 2011
SDP: ILW Storage Site Selection: Criteria & Screening Report <i>Summary of the screening process and shortlist of sites for detailed assessment.</i>	MOD/ISM	Issue 2.0	June 1014
SDP: ILW Storage Site Selection: Approach to Public & Stakeholder Engagement <i>Overview of the public and stakeholder engagement activities during the ILW storage site selection process.</i>	MOD/ISM	Issue 2.0	June 1014
SDP: ILW Storage Site Selection: Assessment Criteria Overview <i>A more detailed description of the ILW storage site option assessment procedures and criteria.</i>	MOD/ISM	Issue 2.0	June 1014

Annex C: Assessment Criteria Overview

Published as separate document:

SDP ILW Storage Site Selection: Assessment Criteria Overview. Issue 2.0 – June 2014