

ISM

# **SUBMARINE DISMANTLING PROJECT**

## **Intermediate Level Waste Storage Site Selection: Criteria & Screening Report**

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### Document Information

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### Amendment History

Issue	Date	Details of Amendment	DCCF
0.1	June 2013	Concept draft	
0.2	July 2013	Development draft	
0.3	September 2013	Draft including site information	
1.0	February 2014	Updated for provisional release for Pre-engagement	
2.0	June 2014	Section 6 onwards updated to reflect Final Shortlist status	

### Distribution

Issue 2.0

SDP Virtual Team  
SDP Advisory Group and Subgroup Members  
Pre-engagement participants  
SDP consultation web pages

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Enclosure 1: NDA Site Screening Report

## 1. About this document

- 1.1.1. This is an internal project technical report published for transparency purposes as part of the Submarine Dismantling Project (SDP) Intermediate Level radioactive Waste Storage Site selection process. It describes the screening process used to arrive at a shortlist of sites to be taken forward as the basis for public consultation and detailed assessment. It also summarises the results of screening work.
- 1.1.2. This report is not intended to be a public consultation document. A formal Consultation Document will be issued as part of the public consultation currently planned to start in late 2014 and conclude in early 2015. This will be the main opportunity for members of the public to comment on the MOD's decision process and assessment of the shortlisted sites.
- 1.1.3. Annex A contains a list of the SDP reports referred to in the text, which are available on the project's web pages and give more information on the project's decision-making process and proposed public and stakeholder engagement activities. A list of abbreviations is given at Annex B.
- 1.1.4. Anyone requiring further clarification of the proposed process or printed copies of documents may contact the project team at the following address.

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

## 2. Introduction

### 2.1. SDP Context

2.2. This section provides an overview of the programme context and decision making process.

2.2.1. 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 Intermediate Level radioactive Waste (ILW) arising. These include the eleven submarines currently stored afloat at Devonport and seven at Rosyth, as well as nine submarines that are still in service.

2.2.2. 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 a disposal route becomes available (the UK's Geological Disposal Facility planned for 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.

2.2.3. 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; Reactor Pressure Vessels (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.

2.2.4. In this previous consultation, only the type of site, defined by ownership and whether it was local or remote 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. No recommendation about site type could therefore be made as part of the business case submission.

2.2.5. 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.

2.2.6. The site screening and option assessment processes described below have been designed on the basis that the SDP's analysis must consider all potential storage sites, including NDA sites, on a 'level playing field'. 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.

2.2.7. The MOD's decision-making will be consistent with the principles set out in its Nuclear Liability Strategy<sup>1</sup>. 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 that may include exploring opportunities for shared storage.

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<sup>1</sup> MOD's Nuclear Liabilities Management Strategy, 2011.

## 2.3. SDP Decision Making

- 2.3.1. The main elements of the ILW Storage Site decision making process are shown on Figure 1 overleaf. More detail is provided in the SDP 'Approach to Decision Making' report.
- 2.3.2. The 'longlist' of potential storage sites (i.e. all UK Nuclear Licensed or Authorised sites) is being screened down for detailed assessment (top line of Figure 1 flowchart) by:
- Establishing with site owners which of the sites on the longlist are actually *available* to the SDP; and then
  - Checking these *available* sites against the project's screening criteria to confirm that they are actually *suitable* for MOD use for ILW storage.
- 2.3.3. Detailed assessment and consultation on the shortlisted sites will then identify a specific recommended storage site (middle line of Figure 1 flowchart).
- 2.3.4. A first Business Case Review Note will be submitted to the MOD's Investment Approvals Committee (bottom line of Figure 1 flowchart), recommending a site for selection. Once approval has been obtained and contracts have been placed, the chosen contractor will prepare the site-specific store design and apply for planning consent and regulatory permits. RPV removal from the first submarine and construction of the store can start once these have been received.

## 2.4. Public and Stakeholder Engagement

- 2.4.1. The project's Public & Stakeholder Engagement (PSE) programme is described in its Approach to Public & Stakeholder Engagement report. There are three main points in the decision-making process where structured PSE activities are envisaged:
- Pre-engagement: This is an important pre-requisite to Public Consultation and involves pre-engagement with Statutory Bodies, devolved administrations, local authorities, elected representatives and established site stakeholder groups on shortlisting, future PSE plans, and the scope of the Strategic Environmental Assessment (SEA).
  - Public Consultation: This is the main engagement activity aimed at all stakeholders and the wider public and will involve review of and comment on the evidence base, including information from the detailed option assessment. Public Consultation feedback is considered fundamental to subsequent completion of the analysis.
  - Post-approval: This will follow approval and announcement of the storage site decision. It includes briefings and publication of the MOD's 'Response to Consultation' and 'SEA Post-Adoption' reports which provide feedback on how comments have been taken into account in the decision-making process.

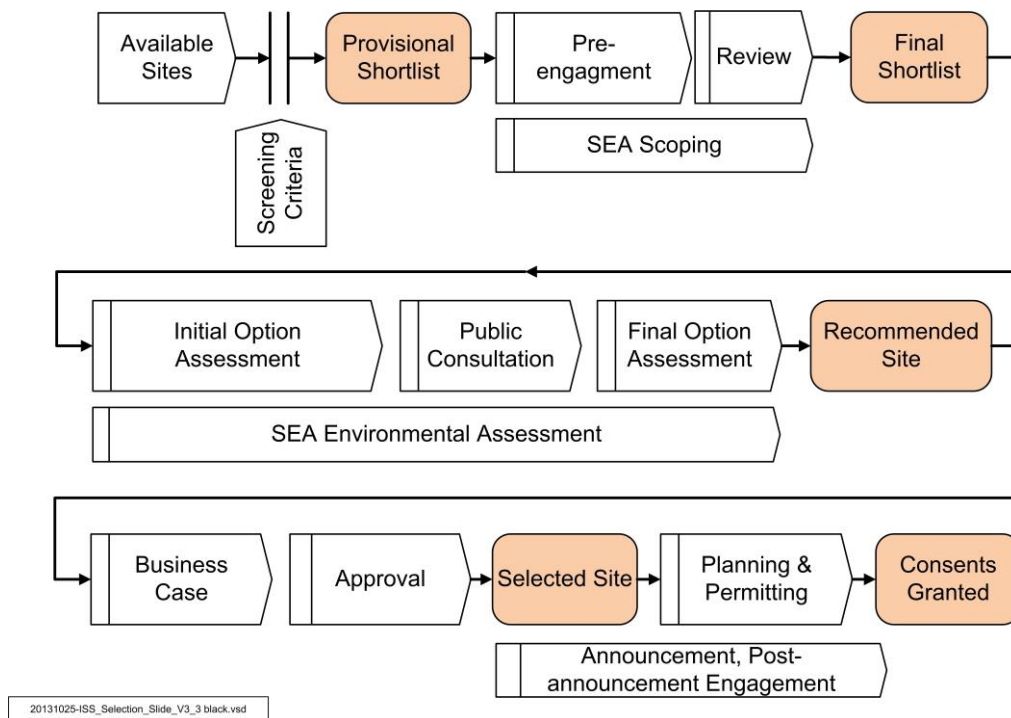


Figure 1: Storage Site Decision Making Process

## 2.5. Remainder of this Report

2.5.1. The remainder of this document describes the screening process and results in more detail:

- The longlist of possible sites;
- The process used to determine *availability* and the results;
- The process used to determine *suitability* and the results.;
- Pre-engagement with stakeholders, including feedback and changes made;
- Final SDP review of the shortlist;
- Future option assessments and public consultation.



### 3. Available Sites

#### 3.1. The ILW Storage Site Longlist

3.1.1. Bulk ILW storage must be on a Nuclear Licensed or Authorised site. The storage site could therefore be:

- An existing MOD or civil Nuclear Licensed site; or
- An existing MOD Nuclear Authorised site; or
- A non-nuclear greenfield or brownfield site which could be licensed.

3.1.2. Earlier assessments did not discount non-nuclear greenfield or brownfield sites but found that there would be major cost, schedule and project risk implications which would make them unsuitable. There were also environmental impacts to take into account, as well as the resultant extension of the UK nuclear footprint. The SDP team's view was that there were Licensed or Authorised sites which were likely to prove suitable without the need to consider greenfield and brownfield sites, so the longlist was limited to existing UK Nuclear Licensed and Authorised sites.

3.1.3. There have been transfers of ownership and other changes to the list of Nuclear Licensed and Authorised sites since the SDP's assessment work began. Annex C is an updated list correct as at April 2013 (when the main screening activity started). Footnotes in that Annex give more information on nuclear site licensing.

3.1.4. Work prior to the Main Gate Business Case submission suggested that some potential storage sites should be screened out because they could not meet the Functional Requirement as defined at the time. The Functional Requirement, however, has been refined since Main Gate Business Case approval. For instance, there is no longer a need to consider whether sites are suitable for storing complete Reactor Compartments. Although this early assessment work remains a useful input, the conclusions of this initial screening work have been set aside and screening restarted as described below.

#### 3.2. Establishing Availability

3.2.1. As already noted, the current shortlisting process involves two main steps:

- Establish with site owners which of the sites on the longlist are actually *available* to the SDP; and then
- Check these *available* sites against the Project's screening criteria to confirm that they are actually *suitable* for MOD use for ILW storage.

3.2.2. It was anticipated that a site owner would only make a site *available* to the SDP if it met the project's Functional Requirement and if SDP ILW storage would not compromise the site's main purpose or approved decommissioning programme.

3.2.3. The process for establishing *availability* is equivalent for different types of site owner but inevitably differs in detail. For instance, commercial site owners do not need to publicly explain their decisions, whereas MOD and NDA site owners do. The MOD and NDA therefore declared the criteria they used and provided information on *unavailable* as well as *available* sites, whereas commercial site owners did not.

### 3.3. Available MOD Sites

3.3.1. The owners of the six longlisted MOD Licensed and Authorised sites (see below) were informed in 2012 about the storage site screening process. The Royal Dockyards at Devonport and Rosyth are commercially-owned, not MOD-owned (see Section 3.5).

- Her Majesty’s Naval Bases (HMNB) at (Clyde) Coulport, (Clyde) Faslane and Devonport;
- Atomic Weapons Establishment (AWE) Aldermaston and Burghfield in Berkshire;
- Vulcan Naval Reactor Test Establishment (NRTE) in Caithness.

3.3.2. A ‘Site Owner’s Questionnaire’ was sent in June 2013 through senior management to the head of each site. The Defence Infrastructure Organisation provided site owners with advice as required. To maintain a degree of separation, the SDP team responded to questions on context and process but did not carry out any of the site-specific analysis or advise on the correct response.

3.3.3. All MOD site owners used the following criteria set, circulated by the SDP team as part of the data gathering questionnaire, to establish *availability*.

- |                      |                          |                     |
|----------------------|--------------------------|---------------------|
| • Spatial capacity   | • Tenure & lifetime plan | • Nuclear licensing |
| • Security           | • Programme              | • Strategic impacts |
| • Current wastes     | • Future use             | • MOD operations    |
| • Planning & permits |                          |                     |

3.3.4. Responses were received in July 2013. After clarifications had been provided at a review meeting, positive responses were confirmed for four sites – two with significant caveats – as shown in alphabetic order in Table 1 below. A more detailed record of MOD owners’ assessment of their sites’ *availability* is included in Annex E.

Available		SDP Comments
AWE Aldermaston	Licensed	Both standalone and combined SDP/AWE store options are possible
AWE Burghfield	Licensed	No ILW currently stored on site, site licence extension required
<b>Available (but with caveats)</b>		
HMNB Clyde (Coulport)	Authorised	Caveats on topography and programme
HMNB Devonport	Authorised	Caveats on land disposal and programme
<b>Not Available</b>		
HMNB Clyde (Faslane)	Authorised	Insufficient space available within required timescales
NRTE Vulcan	Authorised	Insufficient space available within required timescales

Table 1: Available MOD Sites

3.3.5. The SDP team's subsequent assessment of the *available* MOD sites' *suitability* is covered in 4.3 below.

### 3.4. NDA Sites

3.4.1. The NDA was informed of the proposed decision making process and their sites' inclusion on the longlist in January 2013. The SDP then asked the NDA in May 2013 for its assessment of site *availability* and for the information needed to assess *suitability*.

3.4.2. The NDA conducted its assessment on the basis of the five criteria listed below, which relate to its strategic mission:

- Can the site meet the SDP ILW Functional Requirement?
- Are there any current NDA consultations ongoing concerning the site?
- When is the site due to enter quiescence<sup>2</sup>?
- Are there any effects on the NDA's Land and Property Management Strategy?
- Is there any effect on the co-generation sites (where there is another nuclear power generator on the same or an adjacent site)?

3.4.3. The NDA's Site Screening Report is at Enclosure 1 and describes the definition of the above criteria, NDA screening of each of its sites against them, and additional issues or caveats highlighted for the MOD to take into account in its assessment of site *suitability*.

3.4.4. On the basis of its Site Screening Report, the NDA put forward the following sites as potentially *available*.

NDA Site	Site Licensed Contractor
Chapelcross	Magnox
Dounreay	DSRL
Harwell	RSRL
Hinkley	Magnox
Sellafield	Sellafield Ltd.
Sizewell	Magnox

Table 2: Sites put forward by NDA as potentially available

3.4.5. The SDP team's subsequent assessment of the *suitability* of these sites is covered in 4.4 below.

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<sup>2</sup> Quiescence is an interim state prior to final decommissioning when activities on a nuclear site are mainly limited to maintenance and monitoring only.

### 3.5. Commercial Sites

- 3.5.1. The SDP advertised a 'Request for Information' and subsequent Contract Notice (including the Functional Requirement) to establish which owners of longlisted commercial sites might be interested in hosting an SDP ILW store. The Contract Notice was issued in July 2013 with a closing date of August 2013.
- 3.5.2. The owners of three sites responded to the Contract Notice expressing an interest in further discussions. After a briefing for interested parties in September 2013 and one-to-one follow-up meetings in October, Capenhurst Nuclear Services (CNS) confirmed that the Capenhurst site was *available* for further consideration by the SDP<sup>3</sup>.
- 3.5.3. No other commercial sites were offered and confirmed by their owners as *available* and so no others will be considered by the SDP for its shortlist.

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<sup>3</sup> Capenhurst Nuclear Services Limited, which put the site forward for consideration, is a wholly owned subsidiary of URENCO Ltd. It operates as a tenant of URENCO UK Ltd. which owns part of the site and currently leases the rest from NDA.

## 4. Suitable Sites

### 4.1. Suitability Criteria

4.1.1. *Available* sites were deemed *suitable* and added to the Provisional Shortlist if they satisfied the following criteria:

- The Functional Requirement can be met. The Functional Requirement has its own list of sub-criteria including: store capacity, transport, package-handling ability, licensing, and security (see Annex D);
- The proposed solution is consistent with the SDP's Benchmark Programme assumptions and schedule deliverability, and any risks to programme are judged manageable;
- The proposed solution does not interfere to an unacceptable extent with MOD operations on the designated site;
- There are no legal, licensing or policy constraints that could be reasonably foreseen to result in a failure to obtain the necessary consents and permissions.

4.1.2. Sites were tested against these criteria on the basis of the information available to the SDP project team at the time.

4.1.3. More detailed analysis, after pre-engagement is complete, could lead to one or more sites being subsequently removed from the assessment process. The first of these 'ongoing evidence reviews' is currently scheduled for mid-2014.

### 4.2. Key Reviews & Workshops

4.2.1. *Suitability* was reviewed at separate screening meetings between project team technical and process specialists plus other MOD stakeholders and specialists as necessary. Compliance against each criterion was rated as '*Suitable*', '*Unsuitable*', or '*Deferred*'. The meaning of these terms is as follows:

- *Suitable* – consensus that no reason had been found in the course of selection (assuming effective risk management) as to why the site should not be passed on for detailed option assessment;
- *Unsuitable* – consensus that good reason had been found in the course of selection as to why the site should not be passed on for detailed option assessment;
- *Deferred* – consensus that significant doubt had been found in the course of selection as to whether the site should be passed on for detailed option assessment, and that the doubt could probably be resolved by seeking clarification.

4.2.2. All deferrals were resolved and the provisional status of all sites confirmed prior to Pre-engagement.

### 4.3. MOD Site Suitability

4.3.1. HMNB Clyde (Faslane) and NRTE Vulcan are *unavailable* and were not considered further by the SDP. The four remaining *available* MOD sites were reviewed against all the SDP screening criteria. Some key arguments are given below and Table 3 summarises the conclusions. Detailed checklist results are tabulated in Annex F.

4.3.2. AWE Aldermaston and Burghfield met these criteria and remain on the Provisional Shortlist as potential storage sites, noting however that an SDP store at Burghfield would require an extension of the Nuclear Licensed site and that it does not currently have an ILW storage regime in place.

4.3.3. The key arguments affecting the suitability of HMNBs Clyde (Coulport) and Devonport were:

- HMNB Clyde (Coulport) would present a range of significant regulatory and planning issues and there are physical constraints (notably topography) associated with store build and access. These combined make it unlikely that the site could meet the SDP's programme and value for money objectives.
- HMNB Devonport has a number of parcels of land potentially available but these are all complicated by significant planning issues (such as listed buildings and planned land disposals) or operational constraints. These combined make it unlikely that the site could meet the SDP's programme and value for money objectives.

4.3.4. HMNBs Clyde (Coulport) and Devonport were therefore deemed *unsuitable* for the SDP's purposes.

<b>Available and Suitable</b>		
AWE Aldermaston	Licensed	Assessed as suitable.
AWE Burghfield	Licensed	Assessed as suitable.
<b>Available but Unsuitable</b>		
HMNB (Clyde) Coulport	Authorised	Unsuitable due to topography and programme risk associated with planning and regulation.
HMNB Devonport	Authorised	Unsuitable due to programme risk associated with operations, planning and regulation.

Table 3: MOD Site Suitability

#### 4.4. NDA Site Suitability

- 4.4.1. The six NDA sites assessed by the NDA as potentially *available* were reviewed against all the SDP suitability criteria. The key arguments are given below and Table 4 summarises the conclusions. Detailed checklist results are tabulated in Annex F.
- 4.4.2. Chapelcross and Sellafield met these criteria and are provisionally shortlisted as potential storage sites. SDP has noted the NDA's advice that Sellafield is already managing a complex waste management programme and that there are factors such as quiescence<sup>4</sup> which would need to be taken into account during detailed option assessment for Chapelcross.
- 4.4.3. Hinkley and Sizewell were deemed *unsuitable* due to the programme risk posed by interactions with the NDA's own ILW consolidation and Fuel Element Debris dissolution strategies and uncertainties over land availability.
- 4.4.4. The NDA has ongoing ILW storage at Harwell but an additional SDP store would be inconsistent with plans for the future use of the site, which are now in an advanced state. The SDP team considered that this situation would create significant planning issues for an SDP ILW store, making it unlikely that the site could meet the SDP's programme and value for money objectives. Harwell was therefore deemed *unsuitable*.
- 4.4.5. When it was assessed for *suitability*, Dounreay has a target date range for quiescence of 2022 to 2025, rather than a single date. As a result it did not automatically fail the NDA's availability criterion on quiescence. However, the SDP team considers that the likelihood of Dounreay achieving early quiescence and / or the SDP programme taking longer than its baseline assumption combine to create an unacceptable level of risk to its programme and value for money objectives. Dounreay was therefore deemed *unsuitable*.

<b>Available and Suitable</b>		
Chapelcross	Magnox	Assessed as suitable.
Sellafield	Sellafield Ltd.	Assessed as suitable.
<b>Available but Unsuitable</b>		
Dounreay	DSRL	Unsuitable on quiescence dates.
Harwell	RSRL	Unsuitable due to programme risk associated with planning and future land use.
Hinkley	Magnox	Unsuitable due to programme risk associated with NDA ILW consolidation plans and land availability.
Sizewell	Magnox	Unsuitable due to programme risk associated with NDA ILW consolidation plans and land availability.

Table 4: NDA Site Suitability

<sup>4</sup> See section 3.4.2.

#### 4.5. Commercial Site Suitability

- 4.5.1. Commercially owned sites which have not been declared *available* were not considered further.
- 4.5.2. The one *available* commercial site - Capenhurst - was reviewed against all the screening criteria. It met these criteria and is retained into the next phase as a potential storage site.

Suitable		
Capenhurst	Capenhurst Nuclear Services	Assessed as suitable.
Available but Unsuitable		
N/A		

Table 5: Commercial Site Suitability

#### 4.6. Provisional Shortlist

- 4.6.1. The Provisional Shortlist was therefore as follows:

Site	Owner / Site License Company
Aldermaston	MOD / AWE
Burghfield	MOD / AWE
Capenhurst	Various / Capenhurst Nuclear Services <sup>5</sup>
Chapelcross	NDA / Magnox
Sellafield	NDA / Sellafield Ltd.

Table 6: ILW Storage Site Provisional Shortlist

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<sup>5</sup> Capenhurst Nuclear Services operates on the Capenhurst site under the nuclear license held by URENCO UK Ltd.



## 5. Pre-engagement

### 5.1. Introduction

- 5.1.1. In the Provisional Issue of the Criteria & Screening Report, this section briefly described the remaining parts of the process that would be followed to reach the Final Shortlist.
- 5.1.2. Pre-engagement is now complete so it now summarises the engagement activities that took place and the main themes emerging. More details of these activities and themes, and the MOD's response, are set out in the project 'Response to Pre-engagement' report.

### 5.2. Pre-engagement Process

- 5.2.1. Pre-engagement gave local authorities, elected representatives and site stakeholder groups, from potentially affected communities and elsewhere, an early opportunity to understand how the process is developing and, by commenting on published project documents, a chance to help shape the site comparison studies and the main Public Consultation.
- 5.2.2. To inform the Pre-engagement process, the MOD published reports summarising the results of the ILW storage site selection process to date and setting out its plans for the remaining steps. These reports were:
- Approach to Decision Making – an overview of the decision process for selection of an ILW storage site;
  - Approach to Public and Stakeholder Engagement – an overview of how the MOD intends to engage the public and stakeholders as part of its decision making process;
  - Provisional Criteria & Screening Report – this document – a description of the work done to date on ILW storage site screening;
  - Strategic Environmental Assessment (SEA) Scoping Report – the proposed scope for an update of the SDP's SEA, which was simultaneously issued to the relevant UK Statutory Bodies and Devolved Administrations for comment.
- 5.2.3. An additional report was published on 4<sup>th</sup> April after the first Pre-engagement workshop in response to requests for more detailed information on assessment criteria.
- Assessment Criteria Overview – a more detailed description of the ILW storage site option assessment procedures and criteria. It was issued as an annex to the 'Approach to Decision Making' report already published.
- 5.2.4. Supporting activities included two stakeholder workshops and briefings for elected representatives and site stakeholder groups. Consultation documents also offered the option of direct feedback by phone, email or post direct to the project team.

### **5.3. Publication of Comments**

- 5.3.1. SDP has committed to publishing on its web page a digest of comments received. For Pre-engagement, the project team's judgement is that this is most usefully done by publication of a 'Response to Pre-engagement' report, including a report of the stakeholder workshops. This has now been done. It gives more detail on the comment themes and MOD responses summarised below.

### **5.4. Main Comment Themes**

- 5.4.1. The main comment themes were:

- RPV transport
- Community benefits
- Approach to planning & permitting
- Responsibility and accountabilities
- Generic comments on screening and assessment
- Generic comments on public and stakeholder engagement
- Comments on SEA scope

### **5.5. MOD Response**

- 5.5.1. The option assessment process as a whole stood up well to stakeholder review but significant changes have been made to the criteria maps in response to comments, strengthening and making more explicit the analysis relating to the main comment themes above.
- 5.5.2. A variety of useful suggestions were made which would improve the project's PSE strategy (as set out in the 'Approach to PSE' report), its implementation at local level, and the range of stakeholders engaged. These have been taken into account in revisions of project documents and will in due course be reflected in detailed engagement planning.
- 5.5.3. Relatively few site-specific comments were made during the workshops, though there were a few more in the briefings. They are also summarised in the Response report. They were fed in to the project team's review of the shortlisted sites as described below.
- 5.5.4. No recommendations for additional shortlist sites were received, although there were a number of questions at the workshops seeking clarification about the reasons why sites declared available by the owner had subsequently been screened out.

## 6. Final Shortlist

- 6.1.1. Pre-engagement feedback and the results of additional analysis have now been considered and the project team has reviewed any points arising and developments since the earlier screening workshops. The status of the caveats or opportunities recorded in the Provisional Criteria and Screening Report (CSR) and the main stakeholder caveats recorded in the Response to Pre-engagement Report (RPR) for each site are set out below.
- 6.1.2. In most cases no conclusions have yet been reached, which is understandable as detailed site-level option analysis has only just started. Note that this table is only a brief summary linking the two referenced documents; in practice, a much wider range of caveats and opportunities are under consideration and may become significant.

Site	Caveat / Opportunity
Aldermaston	Both standalone and combined SDP/AWE store options are possible (CSR). <i>This remains the case but the baseline option is the standalone store.</i>
Burghfield	There is no ILW currently stored on site (CSR/RPR). <i>The regulatory and other implications are now being investigated through the OCF analysis. No conclusions have been reached but no information has been received to date which suggests the site should have failed screening.</i>
Burghfield	A site licence extension would be required (CSR). <i>The regulatory and other implications are now being investigated through the OCF analysis. No conclusions have been reached but no information has been received to date which suggests the site should have failed screening.</i>
Burghfield	The site is vulnerable to flooding (RPR). <i>The regulatory and other implications are now being investigated through the OCF analysis. No conclusions have been reached but no information has been received to date which suggests the site should have failed screening.</i>
Chapelcross	The implications of quiescence dates and plans need considering (CSR). <i>The main implication currently being assessed is the consistency of planned state with MOD security requirements. No conclusions have been reached but no information has been received to date which suggests the site should have failed screening.</i>
Chapelcross	The Scottish Government (SG) position should be taken into account (RPR). <i>Clarification is being sought concerning the implications of the SG's position but no information has been received to date which suggests the site should have failed screening.</i>
Sellafield	Sellafield is already engaged in a complex waste management programme and that this may have implications (CSR/RPR). <i>The SDP team is working with the site owner and licensee to clarify the potential impact and an initial assessment will be completed before public consultation.</i>

Table 7: Caveats and Opportunities

## 6.2. Final Shortlist

- 6.2.1. The caveats in the above table were reviewed at a project team meeting in May 2014. The meeting concluded that, although important issues for consideration during the next phase of assessment had been raised in Pre-engagement and some further caveats were potentially emerging during the early phases of option analysis, no information has yet been confirmed which changed the MOD's views on screening. The Final Shortlist is therefore unchanged from the Provisional equivalent.

Site	Owner / Site License Company
Aldermaston	MOD / AWE
Burghfield	MOD / AWE
Capenhurst	Various / Capenhurst Nuclear Services <sup>6</sup>
Chapelcross	NDA / Magnox
Sellafield	NDA / Sellafield Ltd.

Table 8: ILW Storage Site Final Shortlist

## 7. Future Option Assessments & Consultation

- 7.1.1. Now that the Criteria & Screening Report has been finalised and placed in the public domain, updated versions of the 'Approach to PSE' and 'Approach to Decision Making' reports have been prepared and published. Any significant changes to these documents have been fed back through the publication of the Response to Pre-engagement report to local authorities and to others who made comments.
- 7.1.2. In line with its PSE strategy, the SDP team will continue to engage with local authorities, established site stakeholder groups and elected representatives on the design and preparations for public consultation.
- 7.1.3. Looking forward to option assessment, the following main activities are briefly summarised below.
- i. During Initial Assessment, the shortlisted sites will be compared, primarily on the basis of whole life cost and operational effectiveness. 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.
  - ii. SEA studies on the shortlisted sites will be completed and the SEA Environmental Report issued.

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<sup>6</sup> Capenhurst Nuclear Services operates on the Capenhurst site under the nuclear license held by URENCO UK Ltd.

- iii. 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' 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.
  - iv. After the Public Consultation, responses will be considered, the assessment criteria will be reviewed and finalised, and the analyses and data reports completed.
  - v. The Business Case Review Note and supporting documents are prepared, bringing together all the information and arguments. A Recommended ILW Storage Site is identified. After approval, feedback is given to stakeholders and the wider public in conjunction with an announcement of MOD's selected site.
- 7.1.4. More detail on the project's plans for assessment and consultation is provided in the 'Approach to Decision Making' and 'Approach to Public and Stakeholder Engagement' reports.

## Annex A: Key Project References

All references listed below are available from the [www.gov.uk](http://www.gov.uk) website. SDP reports can be found via two web pages:

<https://www.gov.uk/government/publications/submarine-dismantling-project-interim-storage-of-intermediate-level-radioactive-waste> for current ILW storage site selection consultation documents and supporting reports; and

<https://www.gov.uk/government/consultations/consultation-on-the-submarine-dismantling-project> for previous consultation documents and supporting reports.

Title	Reference/ Version	Date
SDP: (SDC) Consultation Document <i>Public Consultation Document supporting the 2011 Submarine Dismantling Consultation.</i>	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>	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>	Issue 1.0	July 2012
SDP: ILW Storage Site Selection Approach to Decision Making <i>Overview of the ILW storage site decision making process.</i>	Issue 2.0	June 2014
SDP: ILW Storage Site Selection: Assessment Criteria Overview <i>A more detailed description of the ILW storage site option assessment procedures and criteria</i>	Issue 2.0	June 2014
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>	Issue 2.0	June 2014
SDP: ILW Storage Site Selection Strategic Environmental Assessment Scoping Report <i>Proposed scope of the updated project SEA and subsequent Environmental Report.</i>	Issue 1.0	February 2014
SDP: ILW Storage Site Selection Response to Pre-engagement <i>Summary of Pre-engagement activities, the main themes arising and MOD's response.</i>	Issue 1.0	June 2014

## Annex B: Abbreviations

DE&S	Defence Equipment and Support
ILW	Intermediate Level Waste
HMNB	Her Majesty's Naval Base
MOD	Ministry of Defence
NDA	Nuclear Decommissioning Authority
NRTE	Naval Reactor Test Establishment
PSE	Public & Stakeholder Engagement
RPV	Reactor Pressure Vessel
SDP	Submarine Dismantling Project
SEA	Strategic Environmental Assessment

## Annex C: Longlist Sites

This list was last updated from the current list of licensees (downloadable from HSE's website<sup>7</sup>) in April 2013.

Site	Land Owner	Licensed/ Authorised <sup>8</sup>
HMNB Devonport	MOD	Authorised
Devonport Royal Dockyard	Babcock Marine	Licensed (with additional Authorised activities)
HMNB (Clyde) Faslane	MOD	Authorised
HMNB (Clyde) Coulport	MOD	Authorised
Rosyth Royal Dockyard	Babcock Marine	Licensed
AWE Aldermaston	MOD	Licensed
AWE Burghfield	MOD	Licensed
Barrow-in-Furness (Devonshire Dock Complex)	BAE Systems Marine	Licensed
Neptune Reactor, Fuel Production Plant, Derby	Rolls Royce Marine Power Operations	Licensed
DSRL Dounreay	NDA	Licensed
NRTE Vulcan	MOD, leased from NDA	Authorised
RSRL Harwell	NDA, leased from United Kingdom Atomic Energy Authority	Licensed
RSRL Winfrith	NDA	Licensed
Sellafield (Windscale & Calder)	NDA	Licensed
LLW Repository	NDA	Licensed
Capenhurst	URENCO, partially leased from NDA	Licensed
Springfields	NDA	Licensed
Magnox Reactor Sites	NDA	Licensed
EDF Reactor Sites	EDF Energy Nuclear Generation	Licensed
Hinkley 'C'	NNB Genco	Licensed
Other commercial sites	Various	Licensed

<sup>7</sup> See [www.hse.gov.uk/nuclear/licensees/pubregister.pdf](http://www.hse.gov.uk/nuclear/licensees/pubregister.pdf), including for details of other commercial sites.

<sup>8</sup> A Nuclear Licence allows specific nuclear activities to take place at a specific site. Such 'Licensed' sites are subject to the Nuclear Installations Act (1965), with licences being granted by the Office for Nuclear Regulation. Authorisations allow specific defence-related nuclear activity to take place. Such 'Authorised' sites or activities are not subject to the Nuclear Installations Act (unlike civil nuclear sites) and so activities are not formally 'Licensed'. Instead, Authorisations are granted by the Defence Nuclear Safety Regulator. Where appropriate to the activity, Authorisation Conditions are equivalent to Licensing Conditions applied to civil nuclear work.



## Annex D: SDP ILW Storage Site Functional Requirement

	Requirement	Comment
<b>Storage Standard</b>	In accordance with NDA Interim Storage Industry Guidance.	Store to fully meet requirements, whilst noting package may not be approved for GDF disposal.
<b>Quantity</b>	RPV type PWR 1: 23 off. RPV type PWR 2: 4 off.	
<b>Package Dimensions</b>	RPV type PWR 1: Length 5190 mm, Width 3180 mm, Height 3160 mm.	Based upon pre-concept transport container design.
	RPV type PWR 2: Length ~6000 mm, Width ~4000 mm, Height ~4000 mm.	Estimated. No current design.
<b>Packaged Weight</b>	RPV type PWR 1: 90,000 kg.	Assumes no internal grouting, and shielding only sufficient to meet transport regulation requirements.
	RPV type PWR2: 135,000 kg.	Estimated at 150% of PWR1.
<b>Package Type</b>	Type IP2.	
<b>Package contact dose rate</b>	<2 mSv/hr.	To meet Transport Regulation requirements.
<b>Over-packing / re-containerisation contingency</b>	Capacity for future extension of the store to allow for over-packing / re-containerisation and onward transport of the RPV to either a disposal or cut-up facility.	A 50% extension to the store would provide for either over-packing / re-containerisation or extension of the store to allow for delay to the Geological Disposal Facility (GDF), but not both.
<b>Transport</b>	Road.	Assumed too large for rail.
<b>Drop withstand</b>	0.3m.	Current assumption for transport.
<b>Handling features</b>	To be determined.	
<b>Package Life</b>	Fit for 40-100 years storage.	
<b>Storage contingency</b>	The potential to allow for extension of the size of store to cover delay to the GDF.	See over-packing above.
<b>Receipt Rate</b>	Three per annum	This is a maximum Initial peak rate – project assumption is then 1 RPV per annum after initial RPV(s) received.
<b>Dispatch Rate</b>	Empty store of RPVs in one year.	Assumes worst case of direct disposal to a dedicated area of the GDF, which is then closed.
<b>Seismic qualification</b>	As required.	
<b>Security</b>	As per Defence Manual of Security (JSP 440).	No access to non-UK Nationals.

### Annex E: SDP Summary of Information Received from MOD Site Owners

Criterion	Aldermaston	Burghfield	Devonport	Coulport	Faslane	Vulcan
<b>Spatial Capacity</b>	Pass	Pass	Caveat (land availability)	Caveat (land availability)	Fail	Fail
<b>Tenure &amp; Lifetime Plan</b>	Pass	Pass	Pass	Pass	Pass	Fail
<b>Nuclear Licensing</b>	Pass	NSL extend?	Pass	Pass	Pass	Pass
<b>Security</b>	Pass	Pass	Pass	Pass	Pass	Pass
<b>Programme</b>	Pass	Pass	Significant risk	Significant risk	Significant risk	Fail
<b>Strategic Impacts</b>	Benefit (if shared)	Pass	Pass (caveat)	Pass (caveat)	Pass (caveat)	Significant risk
<b>Existing Waste Storage</b>	ILW/ LLW/ VLLW	No	No	No	VLLW	LLW at Dounreay
<b>Future Use</b>	Pass	Pass	Significant risk	Pass	Pass	Significant risk
<b>MOD Operations</b>	Pass	Pass	Pass (caveat)	Pass (caveat)	Pass (caveat)	Significant risk
<b>Planning &amp; Permits</b>	Pass	Pass	Significant risk	Significant risk	Significant risk	Significant risk
<b>Additional Factors</b>	Timescales need aligning	Wastes moved to Aldermaston	Policy, stakeholders	Policy, stakeholders	Policy, stakeholders	Policy, stakeholders
<b>Conclusion</b>	Available	Available (caveat)	Available (caveat)	Available (caveat)	Unavailable	Unavailable



ENCLOSURE 1: NDA SITE SCREENING REPORT

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# 1. NDA Submarine Dismantling Project Site Screening

## ST/STY(13)0058

### November 2013

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#### Outline/Background

The Ministry of Defence (MoD) is currently going through an option assessment and consultation process regarding the dismantling and subsequent storage of Intermediate Level Waste (ILW) from their decommissioned nuclear 'Submarine Dismantling Project' (SDP). The recently published results of part of this assessment have outlined the locations for dismantling and the approach to dismantling that will take place.

The next stage of the MOD's assessment will identify a suitable location for the interim storage of the relatively small volumes of ILW that will arise during submarine dismantling. The ILW will consist of around 27 large shielded packages (the reactor pressure vessels). The initial assumption is that a purpose built, unshielded store will be required. The ILW will eventually be disposed of in the Geological Disposal Facility (GDF).

The MOD SDP team is currently shortlisting potential sites for interim storage and has asked the Nuclear Decommissioning Authority (NDA), along with MoD site owners and private nuclear site license holders, if any of their sites would be available for inclusion on the shortlist. We have an obligation to cooperate, in the UK taxpayer's best interest, with other government departments. It is therefore right and proper for us to assess each of our sites to see if they are available to be put forward for the shortlisting process.

The SDP team will consider those sites that are identified as available and undertake a further suitability assessment before running a public consultation in 2014 based on a shortlist of sites that are both available and suitable. The NDA's shortlisting is therefore the first step in a thorough assessment and consultation exercise being undertaken by the MoD to find a suitable site for storage. Before a final site is chosen there will be sufficient opportunity for all views to be heard from any potentially affected areas. If an NDA site is taken forwards into the shortlist then MOD will continue to work closely with NDA as the process progresses.

This paper outlines our approach considering which, if any, of our sites would be available to MOD for interim storage of their ILW. An assessment for each of our sites is then undertaken.

#### NDA Screening Tests

Our approach has been to define five screening criteria and apply these to each of our sites. The five screening criteria are described below:

1. Does the site meet the SDP ILW Functional Requirements?
2. Are there any current NDA consultations ongoing concerning the site?
3. When is the site due to enter quiescence?
4. Are there any effects on NDA's Land and Property Management Strategy?
5. Is there any effect on the co-generation sites

In addition to this there may be additional, site specific areas that are highlighted to MoD SDP.

By applying the screening criteria to each site, the basis on which sites are screened out can be clearly articulated. Any sites that were not screened out are therefore potentially available to the MOD and will be put forward for suitability testing and then shortlisting within the MOD's process.

Where the effect of a criterion on a site is of no concern then it is marked available. If the effect of a criterion is significant and unacceptable to us then it is marked unavailable. Where a criterion can be seen to have an effect but is not sufficient to mark a site unavailable it is marked as available but with areas that need to be addressed through the SDP suitability and shortlisting process, e.g. to assess the impact on SDP's programme and project risk.

The following sections describe the basis for the screening criteria.

*Does the site meet the SDP ILW Functional Specification requirements?*

The SDP functional specification outlines the requirements for the interim storage of the SDP ILW. It provides information such as the size, weight, dose rate, transport and access requirements, receipt rate, dispatch rate and security requirements. Where a site would not be able to meet these requirements the site will fail this screening criterion and not be available for onward shortlisting.

*Are there any current NDA consultations ongoing concerning the site?*

We consult widely on different aspects of our work, there is currently ongoing consultation regarding ILW Storage Consolidation and Fuel Element Debris (FED) Dissolution at Magnox sites in England.

Currently at the preferred options stage, opportunities have been identified to make a number of consolidating movements between sites that, if implemented, would provide an equitable distribution of responsibilities for ILW storage and FED dissolution, and in doing so provide potential savings of ~£90m to the UK taxpayer.

The preferred options centre on a south-east (SE) and south-west (SW) solution. The SW part of the preferred option is to move ILW from Oldbury to Berkeley and FED from Oldbury to Hinkley for treatment. This would mean that there would be no ILW store or FED plant built at Oldbury. The SE part of the preferred option transfers FED from Sizewell to Dungeness. ILW from Dungeness is first moved to Bradwell and then, if that store becomes full, to Sizewell. This would mean that no store would be required at Dungeness and no FED plant would be required at Sizewell. These moves sit together as one integrated option that is equitable, changing one part of the option may jeopardise the whole option.

The decision regarding the option to be implemented, and approval of related investment in plant, is time sensitive and will be required early in FY 2014/15.

In the meantime, in order to screen sites for potential SDP ILW storage, we have worked on the basis that if, under the current preferred option there is not likely to be an ILW store present then the site is deemed probably not available to MOD, since ILW storage would be inconsistent with NDA's plans to move ILW storage away from the site. Where the preferred option currently states that there is likely to be an ILW store then we have stated that the site is potentially available.

It is important to note that NDA's strategic decision regarding Magnox consolidation will be made in order to maximize savings and maintain equity amongst the Magnox sites and will not be able to consider SDP implications. That decision will also need to take account of the plans that emerge from the successful bidder for the Magnox/RSRL competition. So inclusion in MOD's

shortlist of an NDA site that is currently deemed potentially available, but is the subject of ongoing NDA strategic decision making, carries programme risk for MOD, in that the site may subsequently become unavailable if the preferred option for the location of ILW stores and FED dissolution change.

*When does the site enter a quiescence phase?*

A number of our sites are heading towards an interim state where activity on the site will be minimal. During this phase it may be possible to have occasional imports of SDP ILW<sup>9</sup> but it would not be suitable to have any large scale building or commissioning works. The financial consequences of delaying the entry into these interim states are significant and far outweigh any potential national savings through collaboration with the MoD SDP process. Where commissioning of the store will not be completed by the time the site enters an interim/quiescence state then the site has been screened out and is not considered available for onward shortlisting.

The planning assumption SDP makes, and therefore we have made, is that the first package will be placed in the store in 2022. Arisings will be roughly once a year until all the packages are emplaced. The start date and rate for transfer to the GDF would be determined as part of GDF planning.

*Are there any effects on NDA's Land and Property Management Strategy?*

All sites within the NDA estate fit within the Land and Property Management Strategy. Certain aspects of the strategy will screen out certain sites as the building and operation of a store on the site would be counter to it. There may also be space constraints associated with the site that needs to be taken account of in the suitability/shortlisting process.

*Is there any effect on the co-generation sites?*

Where there is co-generation on sites within the NDA estate there may be ongoing discussions regarding different aspects of cooperation between the sites. No sites have been flagged as unavailable on this criterion but it should be taken account of when moving forward with the suitability/shortlisting process. The ILW consolidation consultation does consider co-generation sites and conversations are ongoing to see if a joint solution on ILW storage can be adopted.

This section, where appropriate, takes account of sites that may be affected by nuclear new build. Where we feel this has an effect on a certain site it will be flagged as an area in need of further investigation if the site is shortlisted.

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<sup>9</sup> An assumption has been made that imports into a store on an occupied site in quiescence would be possible. Initial high level analysis around this has shown this to be an appropriate assumption at this stage in the process. If any sites that this effects are on the MoD SDP shortlist we would expect a more detailed assessment to be undertaken at that stage.

## Individual site screening

The full screening process is shown in Appendix 1. The table below provides a summary of the availability of NDA sites. Where comments are identified these are used to either highlight the specific reasons for making a site not available, or highlight areas where we believe SDP may need to investigate further.

Site License Company	Site	Availability	Comments
Sellafield Ltd	Sellafield	Potentially Available	<p>Sellafield is a complex sites with many and varied programmes. To date, implications to the Sellafield Programme of providing storage for SDP ILW have not been considered in detail, such work will be required if the site progresses into the MoD's shortlist.</p> <p>There may be an opportunity to co-locate SDP ILW in an existing store on Sellafield site rather than build a specific MoD store.</p> <p>Land near this site has been identified as a location for possible new nuclear build. Although not directly affecting the NDA programme we see this as an important potential programme risk to bring to the attention of the MoD.</p>
Magnox Ltd	Berkeley	Probably Not Available	The site enters quiescence in 2021 – before the planned commissioning date for any new store.
	Bradwell	Probably Not Available	The site enters quiescence in 2015 – before the planned commissioning date for any new store.
	Chapelcross	Potentially Available	<p>The site enters a period of interim quiescence in 2017, with reduced activity and personnel on site. This is not anticipated to have a significant impact the SDP process, but should be confirmed by MoD if the site is shortlisted.</p> <p>Initial studies have not highlighted any significant issues related to the site entering quiescence in 2028, however if this site is shortlisted it should be investigated further.</p> <p>The NDA is unsure on any implications/uncertainties there may be between MoD – SDP storage of ILW and the Scottish HAW Policy.</p> <p>Parts of the site have been designated an Enterprise zone, indications show that this would not cause space constraints for any potential store.</p>



	Dungeness A	Probably Not Available	The site is currently part of the ILW Consolidation/FED Dissolution preferred option consultation. Under the preferred options this site would not have a store located on it. Importing SDP ILW on this site would foreclose this option and be inconsistent with the NDA not storing ILW on the site.
	Hinkley A	Potentially Available	<p>This site is part of the ongoing ILW Consolidation/FED Dissolution preferred option consultation. Under the preferred options the site will have a store and so be available. However, the site carries significant risk for MoD SDP as the consultation is ongoing and there may be changes to the preferred option.</p> <p>Initial studies have not highlighted any significant issues related to the site entering quiescence in 2025, however if this site is shortlisted it should be investigated further.</p> <p>There may be logistical challenges associated with land availability due to current decommissioning activities.</p> <p>Discussions are ongoing regarding the consolidation of waste from co-generation sites.</p> <p>Land near this site has been identified as a location for possible new nuclear build. Although not directly affecting the NDA programme we see this as an important potential programme risk to bring to the attention of the MoD.</p>
	Hunterston A	Probably Not Available	The site enters quiescence in 2022 – before the planned commissioning date for any new store.
	Oldbury	Probably Not Available	The site is currently part of the ILW Consolidation/FED Dissolution preferred option consultation. Under the preferred options this site would not have a store located on it. Importing SDP ILW on this site would foreclose this option and be inconsistent with the NDA not storing ILW on the site.

	Sizewell A	Potentially Available	<p>This site is part of the ongoing ILW Consolidation/FED Dissolution preferred option consultation. Under the preferred options the site will have a store and so be available. However, the site carries significant risk for MoD SDP as the consultation is ongoing and there may be changes to the preferred option.</p> <p>Initial studies have not highlighted any significant issues related to the site entering quiescence in 2027, however if this site is shortlisted it should be investigated further.</p> <p>There may be logistical challenges associated with land availability due to current decommissioning activities.</p> <p>Discussions are ongoing regarding the consolidation of waste from co-generation sites.</p> <p>Land near this site has been identified as a location for possible new nuclear build. Although not directly affecting the NDA programme we see this as an important potential programme risk to bring to the attention of the MoD.</p>
	Trawsfynydd	Probably Not Available	<p>The site enters quiescence in 2016 – before the planned commissioning date for any new store.</p>
	Wylfa	Probably Not Available	<p>The site is still operational so waste plans not yet finalised. It is likely the volume of waste produced will be relatively small and could potentially be consolidated elsewhere. There would therefore be no store on site and it would be inconsistent to build a SDP store.</p>

DSRL	Dounreay	Potentially Available	<p>The entry date for quiescence of the site is scheduled to be between 2022 and 2025. Should the earlier part of the range be achieved this may cause programme challenges to the commissioning of an SDP store. If the later part of the date range is achieved then, similarly to other sites in quiescence during the import phase, it is unknown if quiescence will have a significant impact.</p> <p>When the site enters the interim end state the only task left will be emptying the store of the waste. No further decommissioning is required e.g. reactor buildings.</p> <p>The NDA is unsure on any implications/uncertainties there may be between MoD – SDP storage of ILW and the Scottish HAW Policy.</p> <p>It is noted that the site is a significant distance from either of the two identified dismantling sites for SDP. Rail travel would almost certainly have to be used for transport.</p>
LLWR	LLWR	Probably Not Available	<p>Storage of ILW would be inconsistent with the permitted land use.</p> <p>Land associated with LLWR is a strategic NDA asset.</p>
RSRL	Harwell	Potentially Available?	<p>Initial studies have not highlighted any significant issues related to the site entering quiescence in 2027, however if this site is shortlisted it should be investigated further.</p> <p>Sitting of a store for SDP ILW on Harwell site is inconsistent with the next planned use. The land at this site is not owned by the NDA but leased. It is seen as valuable and actively sort for uses outside of the nuclear industry such as light industry and housing.</p> <p>When the site enters the interim end state the only task left will be emptying the store of the waste. No further decommissioning is required e.g. reactor buildings.</p>
	Winfrith	Probably Not Available	<p>The site does not meet the functional specification as it is to be cleared to heath land by 2021.</p>

Appendix 1 – Table outlining the SDP screening criteria/analysis

SLC	NDA SITE	Does the site meet the SDP ILW Functional Specification requirements?	Are there any current NDA consultations ongoing concerning the site?		When is the site due to enter quiescence?		Are there any effects on NDA's Land and Property Management Strategy?	Is there any effect on the co-generation sites?	Additional Comments
			ILW storage consolidation	FED Dissolution	Date	Comment			
Sellafield Ltd.	Sellafield	Meets all aspects of the SDP ILW functional specification.	N/A	N/A	N/A	None	None	Land near this site has been identified as a possible location for nuclear new build. Although this does not directly affect the NDA programme, there may be an indirect effect. This should be taken into account when SDP undertake the suitability assessment and the subsequent consultation after shortlisting.	The NDA programme at the Sellafield Site is complex; it involves many activity streams, buildings and plant configurations that are not all fully defined. To date, implications to the Sellafield Programme of providing storage for SDP ILW have not been considered in detail, such work will be required if the site progresses into the MOD's shortlist. There may be an opportunity to co-locate SDP ILW in an existing store on Sellafield Site rather than build a specific MOD store. Further detailed investigation may reveal significant negative implications to the Sellafield programme that could prevent Sellafield from offering the ILW storage service to the MOD.
Magnox	Berkeley	Meets all aspects of the SDP ILW functional specification.	This site is part of the ongoing ILW Consolidation/FED Treatment preferred option consultation. Under the preferred options the site will have a store and so be available. However, the site carries significant risk for MoD – SDP as the consultation is ongoing and there may be changes to the preferred option.		2021	Site due to enter quiescence before any potential store would be fully commissioned.	None	N/A	
	Bradwell	Meets all aspects of the SDP ILW functional specification.	This site is part of the ongoing ILW Consolidation/FED Treatment preferred option consultation. Under the preferred options the site will have a store and so be available. However, the site carries significant risk for MoD – SDP as the consultation is ongoing and there may be changes to the preferred option.		2015	Site due to enter quiescence before any potential store would be fully commissioned.	None	N/A	

SLC	NDA SITE	Does the site meet the SDP ILW Functional Specification requirements?	Are there any current NDA consultations ongoing concerning the site?		When is the site due to enter quiescence?		Are there any effects on NDA's Land and Property Management Strategy?	Is there any effect on the co-generation sites?	Additional Comments
			ILW storage consolidation	FED Dissolution	Date	Comment			
	Chapelcross	Meets all aspects of the SDP ILW functional specification.	N/A	N/A	Interim End State 2017 Final End State 2028	Site due to enter quiescence after any potential store would be fully commissioned however interim state may effects have not been fully investigated.	Portion of the site has been defined as an Enterprise Zone by Scottish Enterprise and is allocated for commercial use within the Local Plans. The remaining land area still considered to be sufficient for any potential additional waste storage facility.	N/A	Chapelcross is entering an interim quiescence state in 2017 where there is a reduced presence on site. We do not believe this will affect any ability for MoD to build a store but it has not been fully investigated.  There are uncertainties regarding the interactions between MoD – SDP and Scottish HAW policy.  An assumption was made at the beginning of the process that a site in a quiescent state would be able to import SDP ILW. There has been no work undertaken by us to understand the cost implications of this assumption.
	Dungeness A	Meets all aspects of the SDP ILW functional specification.	The site is currently part of the ILW Consolidation/FED Treatment preferred option consultation. Under the preferred options this site would not have a store located on it. Importing SDP ILW on this site would foreclose this option and be inconsistent with the NDA not storing ILW on the site.		2027	Site due to enter quiescence after any potential store would be fully commissioned.	Logistical requirements for current decommissioning programme may restrict land available for an additional waste storage facility.	Ongoing discussions regarding consolidation of co-generation site waste.	
	Hinkley A	Meets all aspects of the SDP ILW functional specification.	This site is part of the ongoing ILW Consolidation/FED Treatment preferred option consultation. Under the preferred options the site will have a store and so be available. However, the site carries significant risk for MoD – SDP as the consultation is ongoing and there may be changes to the preferred option.		2025	Site due to enter quiescence after any potential store would be fully commissioned.	Logistical requirements for current decommissioning programme may restrict land available for an additional waste storage facility.	Ongoing discussions regarding consolidation of co-generation site waste.  Land near this site has been identified as a possible location for nuclear new build. Although this does not directly affect the NDA programme, there may be an indirect effect. This should be taken into account when SDP undertake the suitability assessment and the subsequent consultation after shortlisting.	An assumption was made at the beginning of the process that a site in a quiescent state would be able to import SDP ILW. There has been no work undertaken by us to understand the cost implications of this assumption.

SLC	NDA SITE	Does the site meet the SDP ILW Functional Specification requirements?	Are there any current NDA consultations ongoing concerning the site?		When is the site due to enter quiescence?		Are there any effects on NDA's Land and Property Management Strategy?	Is there any effect on the co-generation sites?	Additional Comments
			ILW storage consolidation	FED Dissolution	Date	Comment			
	Hunterston A	Meets all aspects of the SDP ILW functional specification.	N/A	N/A	2022	Site due to enter quiescence before any potential store would be fully commissioned.	None	Ongoing discussions regarding consolidation of co-generation site waste.	
	Oldbury	Meets all aspects of the SDP ILW functional specification.	The site is currently part of the ILW Consolidation/FED Treatment preferred option consultation. Under the preferred options this site would not have a store located on it. Importing SDP ILW on this site would foreclose this option and be inconsistent with the NDA not storing ILW on the site.		2027	Site due to enter quiescence after any potential store would be fully commissioned.	None	Land near this site has been identified as a possible location for nuclear new build. Although this does not directly affect the NDA programme, there may be an indirect effect. This should be taken into account when SDP undertake the suitability assessment and the subsequent consultation after shortlisting.	
	Sizewell A	Meets all aspects of the SDP ILW functional specification.	This site is part of the ongoing ILW Consolidation/FED Treatment preferred option consultation. Under the preferred options the site will have a store and so be available. However, the site carries significant risk for MoD – SDP as the consultation is ongoing and there may be changes to the preferred option.		2027	Site due to enter quiescence after any potential store would be fully commissioned.	Logistical requirements for current decommissioning programme may restrict land available for an additional waste storage facility.	Ongoing discussions regarding consolidation of co-generation site waste.  Land near this site has been identified as a possible location for nuclear new build. Although this does not directly affect the NDA programme, there may be an indirect effect. This should be taken into account when SDP undertake the suitability assessment and the subsequent consultation after shortlisting.	An assumption was made at the beginning of the process that a site in a quiescent state would be able to import SDP ILW. There has been no work undertaken by us to understand the cost implications of this assumption.
	Trawsfynydd	Meets all aspects of the SDP ILW functional specification.	No consolidation planned.	N/A	2016	Site due to enter quiescence before any potential store would be fully commissioned.	Optioneering currently underway by Welsh Government to establish credible commercial opportunities for the site. Remaining land area still considered to be sufficient for additional waste storage facility.	N/A	

SLC	NDA SITE	Does the site meet the SDP ILW Functional Specification requirements?	Are there any current NDA consultations ongoing concerning the site?		When is the site due to enter quiescence?		Are there any effects on NDA's Land and Property Management Strategy?	Is there any effect on the co-generation sites?	Additional Comments
			ILW storage consolidation	FED Dissolution	Date	Comment			
	Wyifa	Meets all aspects of the SDP ILW functional specification.	While the plant is still operating the ILW Storage Consolidation consultation highlights that no options have been identified for consolidation of waste. Waste could be consolidated to or from the site in the future. There is little waste anticipated to be arising from this site. Storing SDP waste on this site would preclude future options available to the NDA for future ILW management.	N/A	2025	Site due to enter quiescence after any potential store would be fully commissioned.	Logistical requirements for current decommissioning programme may restrict land available for an additional waste storage facility.	Land near this site has been identified as a possible location for nuclear new build. Although this does not directly affect the NDA programme, there may be an indirect effect. This should be taken into account when SDP undertake the suitability assessment and the subsequent consultation after shortlisting.	
DSRL	Dounreay	Meets all aspects of the SDP ILW functional specification.	N/A	N/A	2022 - 2025	Earliest possible quiescence date could cause SDP commissioning risk.	When Dounreay enters interim end state the only task left will be emptying the store of the waste. No further decommissioning is required e.g. reactor buildings.	N/A	<p>Dounreay has a date range for entering quiescence, the earlier date overlapping the date given for first SDP waste import. NDA is striving to meet the earlier date but accepts there is currently a range.</p> <p>There are uncertainties regarding the interactions between MoD – SDP and Scottish HAW policy.</p> <p>An assumption was made at the beginning of the process that a site in a quiescent state would be able to import SDP ILW. There has been no work undertaken by us to understand the cost implications of this assumption.</p> <p>It is noted that Dounreay is a significant distance from either of the two identified dismantling sites for SDP. Rail travel would almost certainly have to be used for transport.</p>

SLC	NDA SITE	Does the site meet the SDP ILW Functional Specification requirements?	Are there any current NDA consultations ongoing concerning the site?		When is the site due to enter quiescence?		Are there any effects on NDA's Land and Property Management Strategy?	Is there any effect on the co-generation sites?	Additional Comments
			ILW storage consolidation	FED Dissolution	Date	Comment			
LLWR	LLWR	Meets all aspects of the SDP ILW functional specification.	N/A	N/A	N/A	None	Would not be consistent with current permitted land use. The land associated with LLWR is a valuable strategic asset for the NDA. It is not considered suitable to use this for the storage of SDP ILW.	N/A	
RSRL	Harwell	Meets all aspects of the SDP ILW functional specification.	N/A	N/A	2027	Site due to enter quiescence after any potential store would be fully commissioned.	Sitting of a store for SDP ILW on Harwell site is inconsistent with the next planned use. The land at this site is not owned by the NDA but leased. It is seen as valuable and actively sort for uses outside of the nuclear industry such as light industry and housing.  When Harwell enters interim end state the only task left will be emptying storage of the waste. No further decommissioning is required e.g. reactor buildings.	N/A	An assumption was made at the beginning of the process that a site in a quiescent state would be able to import SDP ILW. There has been no work undertaken by us to understand the cost implications of this assumption.
	Winfrith	The site does not meet the SDP ILW functional specification as it enters end state before during the storage period.	N/A	N/A	2021	The current baseline puts the Winfrith site into an end-state by 2021 with none of the required infrastructure in place to support SDP storage operations.	Would not be consistent with the agreed end use of public access health-land which the current site restoration programme will deliver by 2021.	N/A	