

Meeting:	NuLeAF Steering Group, 25 January 2012
Agenda Item:	11
Subject:	Consultation on the Submarine Dismantling Project
Author:	Fred Barker
Purpose:	To propose a response to the consultation

Introduction

This report proposes a response to national consultation on the Submarine Dismantling Project.

Recommendation

That the Steering Group:

- 1 consider whether it is minded to agree the response; and
- 2 delegate final sign-off to the Chair, Vice Chair and Executive Director, following the workshop in Birmingham on 31 January.

Contribution to Achieving Strategic Objectives

The initiatives are intended to contribute to the achievement of the following NuLeAF objectives:

- encourage any member authority that may be affected by the management of the radioactive wastes from laid up nuclear submarines to participate in consultation in the proposed way forward;
- encourage MoD to adopt clear objectives and good practices in the consultation on options for managing radioactive wastes from the Submarine Dismantling Project; and
- seek to ensure that the approach taken to the implementation of the Submarine Dismantling Project is consistent with developments in the civil nuclear industry.

SDP Consultation

The consultation was launched by the MoD on 28 October and ends on 17 February. The Consultation Document is available on the MoD website at [Consultation on the Submarine Dismantling Project](#).

The feedback from the consultation will be used to inform three key decisions within the project:

- how radioactive material should be removed from laid-up nuclear submarines;
- where the radioactive waste should be removed; and
- which type of site should be used to store the resultant Intermediate Level Waste (ILW).

MoD has already announced that the candidate sites for where the radioactive waste is removed are Devonport and Rosyth Dockyards, or a combination of the two.

Interim storage options have been identified in generic terms as types of site owned by MoD, industry or the NDA.

The MoD's proposed way forward on interim storage options is "to continue working closely with NDA and wider government to assess whether it would be more cost effective and beneficial to use NDA storage facilities or to develop a new one for SDP. If this assessment found in favour of an NDA option, we would then ask NDA to develop a suitable storage solution for SDP. To do this, the NDA would need to follow its own processes and governance arrangements to identify which of its storage facilities and sites would be used" (para 8.7.2 of the Consultation Document).

The MoD is organising two national workshops on 31 January (Birmingham) and 6 February (Glasgow) to discuss its consultation proposals. The workshops are intended for stakeholders who have a strategic or specialist interest in the project, for example, from local authorities, industry and statutory bodies. The ED is attending the 31 January workshop.

Member authorities were alerted to the consultation and encouraged to respond. A draft response to the main consultation questions was also circulated to key contacts in potentially affected authorities for comment. No comments have been received suggesting changes or additions to the draft response. The draft response is attached in the Annex to this report.

It is recommended that the SG consider whether it is minded to agree the response. Final sign-off can be delegated to the Chair, Vice Chair and Executive Director, following the workshop in Birmingham on 31 January.

ANNEX A: DRAFT RESPONSE TO SDP CONSULTATION QUESTIONS

Q1. What are your views on the overall objectives for the dismantling submarines that have left service? [chapter 4]

The overall objectives appear reasonable. It would however be possible to specify additional objectives which could help ensure that the MOD monitors and assesses progress against an appropriate set of objectives. Two additional objectives could be that the SDP:

- must be achievable and deliverable; and
- must be capable of inspiring public confidence.

It is arguable that the first suggested additional objective is implicit in the existing objective that the SDP is required to dismantle 27 nuclear submarine by 2050, but there may be advantage in an objective which explicitly requires MOD to monitor and assess progress against achievability and deliverability. We note that there are precedents for this sort of objective: for example, it was recently proposed by Government as an appropriate 'condition' for identifying preferred options for managing the UK's civil plutonium stockpile.

With regard to the second suggested additional objective, this was the formulation set in CoRWM's original terms of reference for consideration of long-term management options for higher activity wastes. We note that MOD has already categorised some of the project's requirements and criteria in terms of 'public confidence', but would suggest that there is merit in elevating this to an explicit project objective to ensure an appropriate focus during monitoring and assessment of progress.

Q2. What are your views on the options for how the radioactive materials could be removed from the submarine? Do you think any significant options have been left out? [chapter 6]

We do not consider that any significant options have been left out. We note that the main differences between the three options (RC separation, RPV removal and packaged waste) are the order and timing in which size reduction and storage activities are carried out, but that a further possibility is being explored with the NDA that would involve direct disposal of RPVs to a GDF (and would not therefore require size reduction). If this further possibility is established as a credible option, it will be important that the further process of assessment and decision making is made clear to stakeholders and that appropriate opportunity for engagement and comment is provided (see also the response to Q9).

Q3. What are your views on the candidate sites for where the radioactive waste is removed from the submarines? Do you think any significant options have been left out? [chapter 6]

Having reviewed the information in the 'Criteria and Screening Paper' at Level 5 of the consultation materials, we do not consider that any significant options have been left out. We also consider that an appropriate screening process has been used to identify candidate sites. We note that this initially found that there are significant advantages associated with the use of existing nuclear licensed or authorised sites, compared with the development of new facilities at Greenfield or Brownfield sites. We also note that existing nuclear licensed or authorised sites have been appropriately screened against fundamental and detailed requirements, and that the outcome of the process has been effectively and transparently documented in the 'Criteria and Screening Paper'.

Q4. What are your views on the options for which type of site is used to store the intermediate level waste from submarine dismantling? Do you think any significant options have been left out? [chapter 6]

We agree that it has not been appropriate to conduct a screening exercise at this stage to identify specific candidate storage sites, and that the focus should be on types of site. We do not consider that any significant options for types of site have been left out. With regard to the potential use of NDA storage facilities, it is important to note that NDA is still some way from establishing a clear and agreed way forward on storage consolidation, particularly for making its facilities available for use by operators outside the NDA estate. It will be particularly important that the further process of assessment of whether it would be more beneficial to use NDA storage facilities or to develop a new facility at other sites is robust and open to stakeholder comment (see also the responses to Q5 and Q9).

Q5. What are your views about the methods used to compare dismantling and storage options, in particular the factors considered to assess their suitability/effectiveness / performance? [chapter 6]

It is particularly important that the methods used to compare dismantling and storage options are robust and inspire stakeholder confidence. We have a number of comments in this regard:

Use of Multi-Criteria Decision Analysis to assess the 'effectiveness of options'

We accept that MCDA is a well established method for ensuring a structured approach to options assessment and informing decision-making. However, there are challenges in demonstrating that a robust assessment has been undertaken, and in explaining the results and the way these are used in decision-making. Ultimately, this is important because confidence in project proposals can be linked to confidence that these challenges have been adequately addressed. Although recognising the considerable effort MOD has made, we would like further assurances in this regard.

First, it is not clear why a 'swing weighting' approach was not used for criteria weighting (SDPAG Observer Comments, p32). A 'swing weighting' approach seeks to ensure that criteria weightings take appropriate account of the plausible range of differences in option performance against each criterion. If this is not done, weightings could have been inappropriately based on more abstract notions of the importance of each criterion.

Second, it is not clear why MOD relied exclusively on expert groups to undertake the subjective and value laden task of criteria weighting, when there are a number of precedents in other nuclear related projects for involving stakeholders to generate different criteria weighting sets. The advantages of directly generating stakeholder weightings are that these can then be used in sensitivity testing within the MCDA, and the impacts on findings can be presented and discussed. In this case, for example, we note that the category of criteria, 'reduction of impact to operations', has been given a high weighting and that an extreme sensitivity test based on its removal from the MCDA "completely changes the pattern of results" from the MCDA. In such circumstances, it would have been useful to have been able to use stakeholder generated weightings to explore and present the impacts of plausible variations in weightings (particularly relating to the criteria group 'reduction of impacts to operations').

Third, it is not always possible to see and understand the basis for the scores that have been given against key criteria. In particular, with regard to criterion 3 policy (transport), it is unclear why the expert scoring workshop agreed that 2 sets of transportations should merit a score of 5 while 3 sets of transportations should merit a 6 (Operational Effectiveness paper, pD-7). This closeness of scores (effectively across all options) has the effect of minimising

the discriminatory impact of the transport criterion in the MCDA. This is potentially significant as it raises a question over the robustness of the conclusion that options involving ILW storage at the point of generation show no net advantage. The 'Operational Analysis Supporting Document' (para 9.2.1) states that this conclusion arises because transport impacts (for storage at remote sites) were balanced by operational impacts (for storage at the point of waste generation). For reassurance that this conclusion is robust, it would be helpful to be able to see the results of sensitivity tests, based on realistic potential variations in the scores and weights attributed to the transport criterion and in the weights attached to operational impacts. Without seeing the results of specific sensitivity testing of this nature, we are left wondering whether options involving storage at the point of generation could show a net advantage on the basis of plausible variations in transport scores and weights and operational weightings.

Fourth, MOD's approach to health and safety and environmental factors in the MCDA is not the only approach that could be taken. Specifically, MOD argues that these factors did not discriminate significantly between the effectiveness of the options because, in its assessment, all options could be designed to achieve the legally required standards. There is an important and high profile case where a similar approach was strongly criticised by a Public Inquiry Inspector (C S McDonald, 'Cumbria County Council - Appeal by United Kingdom Nirex Ltd', 21 November 1996). In that case, the Inquiry Inspector criticised Nirex's MCDA for attaching little importance or weight to the different margins by which alternative potential sites for a GDF were likely to be able to meet the then regulatory safety targets. He also criticised the company's subsequent failure to comply with the precautionary principle by taking these different margins forward into the ranking of sites. In the light of this case, we consider that MOD would be well advised to undertake specific sensitivity testing to explore the impact of assigning significant weight to the different margins by which different options achieve legally required environment and health and safety standards.

Finally, in general terms, we find the statistical approach to sensitivity testing in the MCDA (using Monte Carlo simulations) hard to understand and rather un-illuminating. We would prefer an approach to sensitivity testing which explicitly explores the impacts of using combinations of scores and weights, where the latter derive directly from, or at least could be reasonably attributed to, a range of stakeholder perspectives. We believe that such an approach could contribute significantly to generating stakeholder confidence in the results of the MCDA and subsequently in MoD's proposals.

Other Contributory Factors

We welcome MOD's commitment to develop a parallel analysis of factors that are less amenable to quantitative analysis and the intention to gather relevant evidence during the course of public consultation. However, we think that the Consultation Document could have been used more effectively to encourage stakeholders to review and comment on MOD's initial thinking in the 'Other Contributory Factors' paper at level 4 of the consultation support material. In particular, MoD could have invited comments on its initial views on the discriminatory power and significance of the OCFs set out in the summary table of that paper (4.1.2).

Our comments on specific aspects on that table are as follows:

- We agree that public confidence could be a significant discriminator, not just between initial dismantling site options, but also between types of storage site. We note that the consultation is likely to generate feedback relevant to this issue, particularly from areas around potential initial dismantling sites as local consultation events are planned in those areas. However, the amount of feedback on public confidence issues relating to type of storage site is likely to be much more limited as, understandably at this stage, no local consultation will have taken place in areas other than at the sites of waste generation. MOD

should be careful not to let a lack of feedback from other types of sites skew its subsequent assessment. It could be that subsequent direct engagement with the relevant communities would find that significant public confidence issues arise.

- We are not convinced that socio-economic impacts should be accorded "low significance". Often, the local view on the significance of socio-economic impacts will be shaped by local circumstances. In particular, the value accorded locally to a certain number of local jobs can depend on local context. We understand that this is acknowledged in the Treasury's 'Green Book', which recognises that a pound spent in a deprived area can be worth more than a pound spent in an affluent area. Because of this, it is recommended that 'distributional' weightings are developed. In principle, if combined with scope for impact mitigation and/or community benefit schemes, then socio-economic impacts could be viewed in some areas as particularly significant.

- We are not convinced that impacts of/on other radwaste management initiatives should be accorded only "moderate" significance. If NDA were unable to deliver its aspiration for waste store consolidation, or Government were unable to deliver its programme for GDF development, there would be highly significant impacts on options for managing submarine ILW.

Q6. Do you think we have captured all the potential advantages and disadvantages and if not which others would you propose? [chapter 7]

In the light of the comments on assessment methods in response to Q5, it is difficult to make a judgement about whether all the potential advantages and disadvantages have been adequately captured. This difficulty is exacerbated by the absence of a clear explanation in the consultation document of how the lists of advantages and disadvantages in Figures 11, 12 and 13 are linked to the findings of the MCDA. Indeed, we provide specific comments below which throw up questions about those linkages.

We also assume that the preliminary findings from the OCF assessment have not yet been incorporated into figures 11, 12 and 13 summarising the advantages and disadvantages of each option.

Overall, we think a judgement on whether all the potential advantages and disadvantages have been captured needs to be made in the light of: (a) the results of a more accessible and focused approach to sensitivity testing within the MCDA (which takes into account the comments in response to Q5 above); and (b) a more developed assessment of the discriminatory power and significance of the OCFs (informed by stakeholder review and comment on MOD's initial thinking).

We have the following specific comments on the advantages and disadvantages in Figures 11, 12 and 13 of the consultation document:

- We note that despite the assertion that environmental factors did not discriminate significantly between options (see comment above in response to Q5), Figure 11 includes a "largest overall environmental impact" disadvantage against the RC separation and storage option and Figure 12 includes a "reduced risk of disturbance to local community" advantage against the Rosyth dockyard option. Although we are not disagreeing that these are legitimate findings, we would like to be able to see that they are underpinned by a more accessible and focused approach to sensitivity testing which systematically explores the discriminatory power of environmental and health and safety factors. Such an approach might also help identify further advantages and disadvantages associated with particular options from different stakeholder perspectives.

- We also note that despite an approach to scoring within the MCDA that appears to minimise the discriminatory impact of the transport factor, reduced or increased amounts of transport are listed as advantages or disadvantages, particularly in Figure 13. Again,

although we are not disagreeing that these are legitimate findings, we would like to be able to see how they are underpinned by sensitivity testing within the MCDA.

- In Figure 11, it is not clear that the disadvantage "less flexible to changes in entry conditions to the proposed GDF", as accorded to the technical option RPV removal and size-reduction for storage as packaged waste, is soundly based. We note that the ILW in this option would be packaged in a way that is consistent with civil nuclear requirements for disposal. As such, the packaged wastes would conform with currently anticipated 'entry conditions' for a GDF. Against this background, it is not clear what sort of foreseeable changes to GDF entry conditions could arise which would require changes to well established and widely practised approaches to packaging. As such, is it right to accord a disadvantage of "less flexibility" to this option?

- In Figure 13, we note that a possible additional advantage associated with 'storage at point of waste generation' is compliance with UK policy and strategy on radioactive waste management, as the Operational Effectiveness report states that this option scores highest against this factor (para 4.2.9).

Q7. Are there any other significant issues or factors you think we have overlooked?
[chapter 7]

Our concerns are not that significant issues or factors have been excluded, but that it is not clear that all relevant issues or factors have been robustly taken into account in assessment (see responses to Qs 5 and 6).

Q8. What are your views on our proposals, and associated rationale, for:

a. how we remove the radioactive waste [chapter 8]

The proposed option of RPV removal and storage appears reasonable, but we would like to see a more systematic and robust underpinning that takes into account the comments in our responses to Q5 and 6 above. We agree that further assessment could make either the RPV removal OR Packaged Waste options more attractive.

b. where we remove the radioactive waste; and [chapter 8]

The proposed option of initial dismantling at both Devonport and Rosyth appears reasonable, but we would like to see a more systematic and robust underpinning that takes into account the comments in our responses to Q5 and 6 above. We think that further assessment should be used to establish whether it is possible to differentiate between the initial dismantling site options more conclusively. It is also very important that further assessment enables the views of the relevant local authorities at the proposed sites to be properly and explicitly addressed.

c. which type of site will be used to store Intermediate Level radioactive Waste?
[chapter 8]

The proposed way forward of continuing to work with the NDA and wider Government to assess whether it would be more cost effective and beneficial to use NDA storage facilities or to develop a new one for SDP appears reasonable. As this work is undertaken, it will be important to provide adequate opportunity for stakeholders to see and comment on the results of assessment. If it becomes clear that there is a robust case for using NDA storage facilities, it will be very important that the NDA engages with the relevant local authorities

in identifying which of its storage facilities and sites could be used. Similarly, if it becomes clear that existing licensed or authorised sites owned by MOD or industry are preferred, it will be very important that MOD or industry engages with the relevant local authorities in identifying which sites could be used.

On MOD's current view that there is little separation between the options to store ILW either at the point of generation or remotely we would like to see a more systematic and robust underpinning that takes into account the comments in our responses to Q5 and 6 above.

Q9. Do you have any comments on the next stages of decision making process that will follow this consultation? [chapter 9]

We think it essential that MOD publishes timely information that clearly explains what further assessments are being undertaken, over what timescales, and with what opportunity for stakeholder engagement and comment.

We suggest that the further assessments include:

- a more accessible and focused approach to sensitivity testing within the MCDA, which explicitly explores the impact of using combinations of scores and weights, where the latter derive directly from, or at least could be reasonably attributed to, a range of stakeholder perspectives;
- a more developed assessment of the discriminatory power and significance of the OCFs, informed by stakeholder review and comment on MOD's initial thinking;
- a more developed assessment of the differentiation between initial dismantling sites, taking proper and explicit consideration of the views of the local authorities in those areas;
- a more developed assessment of the cases for using NDA storage facilities, or new storage facilities at MOD or commercial sites, taking into account the views of relevant stakeholders on those cases;
- review and development of the advantages and disadvantages of each option, taking into account the findings of the four sets of further assessments above;
- if it becomes clear that there is a robust case for using NDA storage facilities, engagement by NDA of the relevant local authorities in identifying which of its storage facilities and sites could be used; and
- if it becomes clear that existing licensed or authorised sites owned by MOD or industry are preferred for storage, engagement by MOD or industry of the relevant local authorities in identifying which sites could be used.

Q10. Do you have any comments about how this consultation has been conducted? Did the consultation provide enough information for you to reach views on the key decisions? Did it meet the seven consultation criteria of the government Code of Practice (outlined at Annex D)?

As explained in the response to Q5 above, we think that there would have been value in:

- engaging a wider range of stakeholders in criteria weighting as part of the MCDA;
- engaging stakeholders to review and comment on MOD's initial thinking in the 'Other Contributory Factors' paper; and
- explaining more clearly how the tables of advantages and disadvantages are derived from and link to the findings of the MCDA .

Notwithstanding these comments, we welcome the amount of information published as consultation support documents, which was essential for us to be able to reach the views articulated above.

We recognise that MOD has strived to meet the consultation criteria, but have reservations regarding its accessibility (criterion 4) and level of burden (criterion 5). These reservations

relate to the complexity and detail of the assessments informing the consultation. These have required a considerable investment of our time and effort to get to grips with the key documentation that sits beneath and informs the consultation document. It is not yet possible to judge whether MOD will meet criteria 6 (responsiveness to consultation).