Consultation on ISOLUS Outline Proposals (CIOP)

Autumn 2003

Centre for the Study of Environmental Change, Lancaster University

Lancaster University Summaries of Proposals and Sites

Introduction

Five Outline Proposals have been received by the MoD. These are summarised briefly below, and one page summaries are provided on the next pages. A summary of what is proposed at each site is included at pages 9-11.

The full text provided by each contractor/consortium summarising their proposal are included separately in this pack.

As these are Outline Proposals, they do just that - outline the proposal. Full proposals will be prepared by those contractors who are shortlisted after this stage of consultation.

Brief Outlines of the Proposals

Babcock Engineering Services-MBN

To cut up Reactor Compartments and package wastes at Rosyth, and store ILW wastes at Coulport or Sellafield.

BNFL

To cut up Reactor Compartments and package wastes (with RPV packaged seperately) at Devonport and/or Rosyth, and to store ILW wastes at Sellafield.

DML

To cut out the Reactor Compartments at Devonport, and store the intact RCs at another site (the feasibility of Dounreay is currently under investigation), with the option of cutting up the RCs at a later stage.

Sir Robert McAlpine

Proposal Withdrawn

To cut out the Reactor Compartments and store the RCs at Ardyne Point, with the option of cutting up the RCs at a later stage.

SERCO

To cut out the RCs and store intact at an unidentified site, or to cut up the RCs, package ILW and store on an unidentified site or at Sellafield.

Lancaster University Summaries of Proposals

LU Summary of Babcock-MBN proposal Consortium includes Babcock Support Services Ltd and Motherwell Bridge Nuclear Ltd	
Option	To transport submarines from Devonport to Rosyth and cut out RCs at Rosyth, or to cut out RCs at Devonport and transport RCs to Rosyth. Cut up RCs at Rosyth in new facility, package ILW in existing Active Waste Accumulation Facility, and transport to purpose built store at Coulport or Sellafield. LLW would be sent to Drigg or its successor. The remainder of the submarine would be recycled. The number of RCs at Rosyth would not exceed 7 at any one point, and should be reduced early in the programme. Babcock-MSN state that their proposal provides 'a national solution that leads to the disposal of the submarines at Rosyth as soon as practicable'.
Siting	**Devonport**: possible cutting out of RCs and break-up of remainder of submarine. **Rosyth**: cutting out of Rosyth submarine RCs, and possibly also Devonport submarine RCs, and break-up of remainder of submarine. Cutting up RCs and packaging of ILW. **Coulport or Sellafield**: storage of ILW. These sites are all nuclear licensed sites. All are in or near existing centres of population.
Transport	Intact submarines or RCs from Devonport to Rosyth by sea. ILW waste packages from Rosyth to Coulport or Sellafield by road, rail or sea. LLW waste to Drigg by road or rail. Transport of waste packages is likely to involve existing routes running through centres of population.
Safety	Babcock-MBN state that the mechanisms of safety are standard and familiar to them and they will comply with all the relevant regulations. They consider the risks to be entirely manageable.
Scrutiny	Babcock-MBN state they will 'encourage and facilitate public inspection throughout the life of the project'.
Openness	Babcock-MBN state they will maintain 'open and transparent channels of information to the public'.
Workforce	Babcock-MBN state their proposal will 'generate jobs throughout its life'. No numbers are given.
Environment & sustainability	Babcock-MBN state that environmental safety will be addressed in an Environmental Statement, and local environmental issues through the planning process. They state that their proposal resolves intergenerational equity issues.
Development	Babcock-MBN state their proposal is to deal with 27 submarines, and after this, new facilities will be decommissioned. The lifetime of the facilities is 35 years plus.

LU Summary of BNFL proposal	
Option	Dismantle submarine, cut up RC and cut out RPV, package RPV (separately) and other ILW and LLW wastes at either or both Devonport and Rosyth. Transport packaged RPV and other ILW wastes to Sellafield for storage in a purpose built store. LLW will be sent for disposal at Drigg. The remainder of the structure will be 'disposed of to land-fill or re-cycled as deemed appropriate'.
Siting	**Devonport and/or Rosyth:** cutting up submarines and RC, and packaging of radioactive wastes. **Sellafield:** Interim storage of ILW, including RPV, in purpose built store **Drigg:** Disposal of LLW These sites are all existing nuclear licensed sites. All are near existing centres of population
Transport	ILW and LLW waste packages from Devonport and/or Rosyth to Sellafield and Drigg, respectively, by rail. This involves using existing routes which run through centres of population.
Safety	BNFL state that the mechanisms of safety are standard and familiar to them, and that they will comply with all the relevant controls. As existing nuclear sites are being used, security arrangements are also familiar and in place.
Scrutiny	BNFL state that existing arrangements for scrutiny exist and that 'these existing arrangements will continue...and be supplemented on a local or project level as deemed necessary'.
Openness	BNFL state they will produce 'proactive publicity materials' and distribute these using their normal channels. A ' policy on publication of information will be agreed with MoD'.
Workforce	BNFL state that the relevant skills are available at these sites, and will have to be maintained in relation to other activities at the sites. Additional employment (no numbers given) will be generated, for 30 years.
Environment & sustainability	BNFL state that cutting out the RPV now, when skills and resources are available, reduces the burden on future generations. The proposed sites are near to areas with high environmental and amenity value.
Development	The design lifetime of the store is 100 years. The store could be expanded, and could be refurbished to extend its lifetime.

LU Summary of DML proposal	
Option	To cut out the RC at Devonport and transport the intact RC to a site Dounreay for storage. An extension to the MoD's Vulcan Naval Reactor Test Establishment (NRTE) site at Dounreay in Caithness is under investigation as a possible storage location. Further cutting up could be undertaken at the storage site, or at a further site, if decided upon. The remaining parts of the submarine will be processed at the RC separation site(s). DML states that this will follow established procedures and best practice.
Siting	Devonport: dismantling submarines and cutting out RC. (Please note: dismantling submarines and cutting out RC at Nigg is no longer under consideration.) Dounreay: potential storage site for intact RCs, and possible site for further cut-up of the RCs. Devonport and Dounreay are nuclear licensed sites; Nigg on the Cromarty Firth is not. Devonport is within an existing centre of population; the other sites are not.
Transport	Up to seven intact submarine hulks could be moved from Rosyth to Devonport. Cut out RCs would be moved by sea from Devonport to Dounreay. Later, packaged ILW would be moved from the disassembly site to the National Repository, and LLW sent to Drigg or its successor site. No transport through existing centres of population is envisaged other than of LLW and VLLW.
Safety	DML state that the mechanisms of safety are standard and familiar to them, and that they will comply with all the relevant controls. The exception is the transport of RCs, but DML state this is 'well within established criteria for operations of this type'. No significant risks are anticipated.
Scrutiny	DML state that existing arrangements for scrutiny exist, primarily via the regulatory bodies. Community liaison meetings will be used to provide information.
Openness	DML state that 'a structured communications programme will be designed and implemented' and that they will publish relevant reports and summaries.
Workforce	DML state that skills will be maintained in relation to their ongoing submarine support work. Additional employment (no numbers given) will be generated.
Environment & sustainability	DML state their proposal seeks a balance between ALARP principles and not leaving legacy for future generations. The proposed sites are near to areas with high environmental and amenity value.
Development	The design lifetime of the store is 60 years. The store could be expanded, and could be refurbished to extend its lifetime.

LU Summary of SERCO proposal

Consortium includes SERCO Assurance, Parsons Brinckerhoff Ltd and RWE Nukem Ltd

Option	SERCO present two options: 1) Transport submarines to a site for cutting out the RC. Transport RC by sea and road to an interim storage site. Later, cut up the RCs. 2) Cut up the RCs, package long lived ILW and store on site or, more likely, transport to Sellafield. Process remaining wastes and store on site in a new storage facility or dispatch to a National Waste Repository if it is available. This is SERCO's preferred option.
Siting	No sites are named in this proposal. Sites would be required for Option 1) cutting out the RCs and storing the RCs Option 2) cutting up the RCs, packaging and processing wastes, and storage of long lived wastes and shorter lived wastes.
Transport	Movement of submarines by sea from Rosyth to DML, Plymouth, or elsewhere. Movement of RCs by sea and possibly road to storage and processing site. LLW waste packages to Drigg by road, rail or sea. Although sites are not identified, some transport routes are likely to run through existing centres of population.
Safety	SERCO state that that the mechanisms of safety are standard and familiar to them, and that they will comply with all the relevant controls. They state they have a proven track record in this area.
Scrutiny	SERCO state that existing arrangements for scrutiny exist, primarily via the regulatory bodies and independent review. They state their intention to form liaison committees where issues of local concern could be raised by local representatives directly with the company.
Openness	SERCO state that they are committed to and support the need for 'openness, transparency, full stakeholder engagement and public participation' at all stages as the project progresses.
Workforce	SERCO state the skills will be provided by consortium members, the MoD, and the Dockyards. They also state an intention to 'use the local workforce wherever possible'. No numbers are given: SERCO state that 'potential workforce numbers will be established as the project scope is developed'.
Environment & sustainability	SERCO state that the Environmental Impact Assessment will address sustainability and will comply with latest government regulations and good practice guidance.
Development	SERCO state that processing and storage facilities could be used to manage other radioactive wastes.

Site Summary

Six sites have been named in the proposals and these are described below. Some proposals refer to more than one site, and some sites feature in more than one proposal.

The sites named in the proposals are not a definitive list - other sites may also be considered. The sites described below are those that have been named publicly, to date, as possibilities.

Ardyne Point (Withdrawn)	
• RC cut-out site (McAlpine) • RC storage site (McAlpine) • Cut-up site (3 Hays - McAlpine) • Waste storage site (McAlpine)	Ardyne Point is on the west side of the Firth of Clyde. It is opposite Rhu Spit and about 10 miles from Dunoon. McAlpine built three concrete oil platforms there in the 1970's. Since then the three docks have been largely unused. One of the docks contains a fish farm.

Proposal Withdrawn

Coulport	
• Storage site (Babcock)	Coulport is on Loch Long which leads northwards off the Firth of Clyde, opposite Gouroch. The nearest village is Gairlochhead and the nearest town is Helensburgh. Coulport is a nuclear-powered submarine base. (Faslane, another nuclear-powered submarine base, is close by on Gare Loch.)

Dounreay	
• RC storage site (DML) • Cut-up site (DML)	Dounreay is in Caithness on the north coast of Scotland, approximately eight miles west of Thurso. The proposal concerns the MoD's Vulcan Naval Reactor Test Establishment (NRTE) (adjacent to the UKAEA site). It is envisaged that storage of the submarine reactor compartments at Dounreay would involve an extension of the MoD site.

Nigg (Withdrawn)	
• RC cut-out site (DML)	Cromarty Firth is a deep water port in the north east of Scotland. It lies off the inner Moray Firth approximately 10 miles north of Inverness. It includes an oil terminal and areas of special scientific interest.

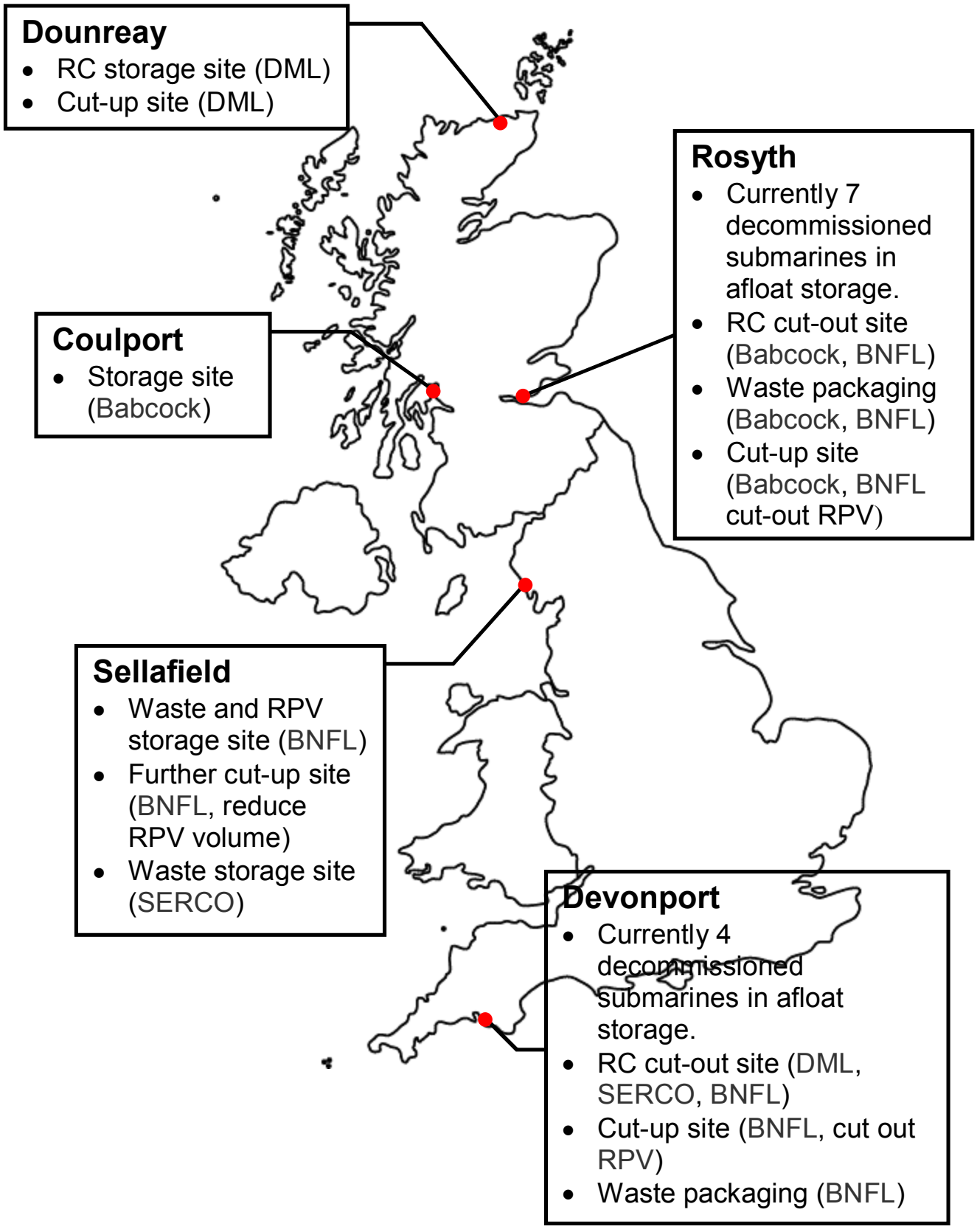
Proposal Withdrawn

Devonport	
• 4 submarines currently in afloat storage • RC cut-out site (DML,SERCO, BNFL, Babcock) • Cut-up site (BNFL, cut out RPV) • Waste packaging (BNFL)	Devonport is in Plymouth in south west England. Plymouth has a population of around a quarter of a million. Plymouth has a long tradition as a base of the Royal Navy. Devonport Naval Dockyard carries out refuelling and refitting activities for the Royal Navy's fleet of nuclear submarines.

Rosyth	
• 7 submarines currently in afloat storage • Cut-out site (Babcock, BNFL) • Waste packaging (Babcock, BNFL) • Cut-up site (Babcock, BNFL cut-out RPV)	Rosyth is a town on the north of the Firth of Forth, near Edinburgh. The Babcock dockyard in Rosyth currently stores 7 laid-up submarines, and used to carry out refitting activities for the Royal Navy's fleet of nuclear submarines. The dockyard area is currently being redeveloped.

Sellafield	
• Waste and RPV storage site (BNFL) • Further cut-up site (BNFL, reduce RPV volume) • Waste storage site (SERCO)	Sellafield is a reprocessing and radioactive waste storage site on the west coast of Cumbria. More radioactive waste is currently stored at Sellafield than anywhere else in the UK. A halt to reprocessing and focus on decommissioning existing facilities and upgrading waste storage was announced recently.

UK Map


Dounreay
• RC storage site (DML)
• Cut-up site (DML)
Rosyth
• Currently 7 decommissioned submarines in afloat storage.
• RC cut-out site (Babcock, BNFL)
• Waste packaging (Babcock, BNFL)
• Cut-up site (Babcock, BNFL cut-out RPV)
Coulport
• Storage site (Babcock)
Sellafield
• Waste and RPV storage site (BNFL)
• Further cut-up site (BNFL, reduce RPV volume)
• Waste storage site (SERCO)
Devonport
• Currently 4 decommissioned submarines in afloat storage.
• RC cut-out site (DML, SERCO, BNFL)
• Cut-up site (BNFL, cut out RPV)
• Waste packaging (BNFL)