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LANCASTER
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Centre for the Study of
Environmental Change

Thursday 9th August 2001

Dear Mr Ainslie

Project ISOLUS Front End Consultation: Stakeholder Workshop

You recently participated in a stakeholder workshop, run by Lancaster University, on the issues to be taken into account when deciding what to do with the nuclear waste from nuclear powered submarines. I would like to thank you for your contribution to the discussion, which formed a valuable part of the consultation.

The report of the stakeholder workshop in which you participated is enclosed. I hope you find this an interesting and accurate report of the issues raised. If you have any comments, please do get in touch.

All of the stakeholder workshop reports, as well as the summary reports and final reports, will be available on the website at http://www.nucsubs.org.uk as they are produced. The final report should be available in late September. Again, if you would like printed versions of these reports, please let us know.

Once again, thank you for your contribution to the consultation,

With best wishes

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Project ISOLUS
Front End Consultation

Stakeholder Workshop 4
Edinburgh
26th June 2001

Introduction

This stakeholder workshop is part of the Front End consultation being conducted by the Centre for the Study of Environmental Change (CSEC), Lancaster University for the Warships Support Agency (WSA) of the MoD. This event was the last of four workshops (the others were held in London, Plymouth and Manchester).

Further details of the consultation, and an opportunity to comment, are available on the consultation website at www.nucsubs.org.uk.

Description of the workshop

Sixteen stakeholders, five facilitators from the CSEC team, and one representative from the WSA attended the workshop. Participants are listed in Appendix 2.

An introductory session comprised a presentation from Brian Hooper (WSA) outlining Project ISOLUS. This was followed by a presentation from Jane Hunt (CSEC) describing the Project ISOLUS Front End Consultation, and explaining the way in which Front End consultation takes place before decisions are reached (unlike the decide, announce, defend (DAD) model) to identify the issues that consultees need to be taken into account in defining the problem and consequent solutions, as well as to enable consultees to define ways in which they wish to be consulted. Dr Hunt then introduced the concept of 'framing' and invited participants not to limit themselves to responding to the questions specifically asked by the WSA, but to raise any issues they felt to be of concern.

The stakeholders divided in two groups, each with two facilitators, to discuss the relevant issues as they saw them. The WSA representatives did not participate in the group discussions. Participants were invited to make a brief introductory statement outlining their positions, main concerns and interests in attending the workshop. Two discussion sessions focussed on: firstly, the issues associated with options and siting; and secondly, the consultation process.

At the final plenary session, stakeholders were invited to present short summaries of the points they felt to be important.

Aim of the Workshop

The aim of the workshop was to generate and identify issues relevant to stakeholders. There was no intention to reach decisions, conclusions, or consensus. This is in line with the premises of Front End consultation.

This can be a difficult process for participants who are more familiar with discussion that is more tightly focussed around specific issues and/or decisions or proposals. Talking about

issues in a more generic sense, and attempting to determine underlying concerns, is a challenging process.

This report

This report presents and categorises the points raised at the workshop. In general, the points are paraphrased to aid readability. Where direct quotations are used, these are indicated by the use of quotation marks. The points have been grouped under the headings, which represent the themes that emerged from discussion.

In order to provide an accurate, comprehensive and accessible record, bullet points rather than narrative text is used. The headings that have been used and the sequences of points within those headings do not necessarily reflect the sequences of the two group discussions.

One-page summaries of the points individuals believed to be important were invited from all participants. These were used to prompt discussion during the workshop. Revisions subsequent to the workshop were invited. These summaries, where received, are included in Appendix 1.

A summary and analytical account of the workshops will be presented in the Stakeholder Workshop summary report in July, 2001.

The Workshop Discussions

Initial Statements

1. Issues and Concerns

Conservation of the knowledge and skills base

- The knowledge base is very fragile (with regard to reactor compartment technology). Once in-service submarine activity ceases as Rosyth, Babcocks will not retain the technological experts.
- There is a need for agreement before certain options, e.g. the skill base at Rosyth, are lost, as otherwise these may then need to be recreated in the future
- The major issue is that the skills are now available at Rosyth but may disappear in the future.
- The issue of skills is important. The nuclear industry is being deskilled and skills that are lost may have to be replaced from abroad (China, Russia, France). We therefore need to continue to develop these skills through maintaining the nuclear industry.

Risk, health and safety

- Legal dose limits should not be exceeded.
- There are worldwide health issues involved.
- The whole issue is very worrying and the government do not engender trust.
- Safety is the prime issue.

- The waste will need surveillance in perpetuity.
- We should select the best low risk solution but it is pointless to try to convince the public that there is *no* risk.
- In public perception there is a belief that cutting up reactor compartments is more dangerous than previous Naval nuclear activities; but it is not. We have an enormous hill to climb in order to overcome the public's misperceptions.
- Nuclear waste can be compared to other manageable risks, e.g. floods (badly prepared for) and oil spills (well prepared for). This shows that we can learn to manage the risks with nuclear.
- There is no safe defuelling facility in the UK. Although Devonport has higher standards it is in a city and therefore is unsuitable.
- We need to build on past and present experience of the problem, e.g. according to the Rosyth Safety Committee worker dose levels are falling, work is to highest standards.
- There should be concern as to what happens to the low level waste. It should not, for instance, end up in cutlery.
- Nuclear safety criteria have been used in the wrong way in the ISOLUS report. ALARA is fundamental but forms only 2% of the ISOLUS PEST analysis.

Regulation and Authorisation

- I trust in the regulatory agencies, e.g. Scottish Environmental Protection Agency (SEPA).
- There is a need for an independent arbiter in regulation, someone who is visibly unbiased, in order to gain public trust and confidence.
- A regulatory strategy for stored submarines as opposed to nuclear waste should be included.
- We need proper regular public monitoring – like a weather forecast. At present, if there is a leak at Rosyth 'a policeman comes round with iodine tablets and, maybe, an alarm goes off'.
- The (SEPA) would be more or less involved depending on what option is chosen.
- There is a potential problem with Article 37 of the EURATOM Treaty, whereby the UK has to submit information to EU. If this is required it "stops us dead". The process of authorisation may therefore be very long.
- The regulation of civil and military nuclear industries should be integrated.

Contractual issues

- There are important issues concerning private contractor involvement. I am sceptical about who will be ultimately responsible if this route is used.

2. Consultation, Openness and Decision Making

Transparency, openness, accessibility and clarity

- The decision making process should be transparent and communication improved
- The consultation process should be open and accessible.
- There is a need for greater honesty in consultation.
- The consultation document should be simple so that the public can understand it.
- Public hysteria over the intermediate level waste issue is a problem. There is a potential danger, but the public are not adequately informed about it.

- Any project relationship should treat the local population as neighbours. It should consult them and take account of their views.
- All data is open to interpretation and therefore manipulation.

Views of the consultation process

- As a local environmental protection group we do not feel that this is a proper public consultation because it has not been widely advertised. We only found out about the consultation at a late point (through the SNP during the general election). As a result of our late entry to the situation we feel disadvantaged in the discussion.
- The consultation process should have started earlier and there should be a public enquiry before any action is taken.
- The democratic political process of elected representatives is not adequately representing the people in this issue. This is a matter for concern.
- I approve of the consultation process.
- The MoD represents a different angle to nuclear industry workers but this is understandable.
- The MoD has the wrong perspective on this issue, as they are too concerned with other projects.
- The focus of the consultation is too narrow. We need to examine issues of operating, transport etc as well.
- The options need to be narrowed down if a decision is to be made.
- I have not come with any definite preformed view – I am here to listen.
- We *already* have the nuclear submarines, so this is a strange time to have the consultation. The MoD did not consult on these issues when the construction of the submarines was being planned.
- It is wrong to determine solutions for this kind of waste before a general UK nuclear waste policy has been worked out.

Ways forward

- The public should be given a choice of a range of alternative criteria.
- There is a need for public involvement in selecting the appropriate disposal method.
- As there will not be many final options for storage the focus of the consultation should be narrowed down.

The MoD and independent regulatory processes

- The processes of waste disposal, monitoring etc. should be *properly grounded in law* in contrast to the present situation where the MoD is *optionally* monitored by other government departments.
- The MoD should have to submit to more rigorous planning processes just like the general public.
- There is a need for an independent examination of the wastes. The MoD should not be exempt from regulation.
- I am concerned over the regulatory aspects. If the chosen site is MoD owned then there will be no regulatory control.

3. Scotland and Scottish locations with particular concerns

Scotland

- There is no sense of ownership of the waste. It is not really Scotland's problem as it has been forced onto the Scottish against their will.
- Scotland already has more than her fair share of the UK nuclear industry – NO MORE!

Rosyth

- I am particularly interested in the Rosyth situation and how things are going to develop there.
- Pressure is coming from Devonport because they are running out of space; but there is no such pressure at Rosyth. Why should the situation at Devonport determine what happens at Rosyth?
- The "hulks" should be removed from Rosyth: it is possible to do this.
- Rosyth is no longer a submarine refit site, so it would be wrong for any further submarines to come to Rosyth.
- I am concerned with the proposal to cut up Renown.

Loch Ewe

- The people of the Loch Ewe area have sent a 450-signature petition that will be passed to the MoD.

The Highlands

- Whatever happens, the waste site should not be in the Highlands.
- Highlands has done its 'fair share'.
- We have a definite policy on waste management – there should be no import or export from the Highlands area
- The Highlands is an environment Area of Outstanding Natural Beauty. I feel that the storage of submarines or reactor compartments here would destroy this.
- There are a number of areas that would be negatively affected by the potential storage of submarines in the Highlands area:
    1. Tourism – this is the lifeblood of Highlands. It is "almost all we have"
    2. The public perception of Highlands agricultural produce as 'clean' is our unique selling point in the world market. The storage of waste here would therefore damage the export industry.
    3. The knock-on effect on communities would be "horrendous".

4. Options

Decommissioning and storage

- There should be no half measures: the reactor compartments should be cut up into transportable packages. There is no point in only going half-way, and only cutting out the Reactor Compartment.
- Land storage is a safer and more monitorable option than floating storage.

- Dry, above ground storage is the 'least worst option'. Storage facilities should be designed in order for the waste to be monitorable, retrievable and such that we can change our strategy in the light of new technology.

Sites and site selection criteria

- Existing sites should be used.
- I support sending hazardous waste to selected sites.
- There are two further dry land plants that should be seriously considered.
- Existing sites will have to be used, as it will be very difficult to move the submarines and also to obtain licenses for new sites.
- Transportation of the waste should be kept to a minimum.
- I support the proximity principle. The waste should be as close to the centre of population as possible as this will mean highest standards of care will be applied.
- The UK does not have the US's luxury of very remote land storage options.
- There is no point in having good monitoring and retrievability if we cannot act immediately in the case of leakage. Therefore, the siting of land based waste stores must be close to the facilities and expertise necessary to deal with problems if they arise. This criterion implies that the site should be at or near to Devonport or Rosyth; but as the expertise will cease to exist at Rosyth, the only viable site is Devonport.
- The waste should be as close as possible to where it is produced. My recommended sites are therefore Rosyth, Devonport, Sellafield and Dounreay.
- A remote site would be the worst option. Any part of the UK would be better, e.g. dockyards on Thames.
- What are we talking about with regard to a long-term storage site? When will this come on line?

5. Perspectives

Fundamentals to guide solutions

- The best practical environmental solution should be used.
- The most important considerations are cost, safety and public perception.
- The best practicable means to reduce waste discharge should be used.
- Storage options should be determined by the best available techniques. Economics should not be a determining factor.
- We should look for the "best practicable option."
- The final solution should be technically sound and present the lowest possible risk
- Options should be used that do not foreclose future possibilities.
- There is too much emphasis on cost effectiveness.

Intergenerational equity

- We must keep the intergenerational equity issue in mind. Whilst keeping our options open for the development of better disposal technologies in the future, we should take full responsibility for doing the best that we can now.
- With regard to intergenerational equity: we are *already* the next generation. We are now having to deal with the effects of decisions that were taken in the 1960s.
- Disposal should not be left for future generations.

- In pursuing the ethical objectives of intergenerational equity we must avoid being arrogant in relation to future generations. Future generations might see the situations in the light of different technical knowledge and perspectives on nuclear risk. Consequently, we should avoid making decisions that will restrict future options. The Dounreay shaft is an example of decisions that seemed a good idea at the time, but that now is causing problems.

Submarines

- All submarines, existing, future and proposed should be considered.
- The contention that "no High Level Waste" is produced from submarines is ignoring the main problem [spent fuel].
- This study assumes the continued building of submarines. The consequences of this policy should be examined.
- If we continue with submarines we must manage them effectively and minimise the waste produced in order to enhance the public perception of them.

International issues

- Sweden is getting to grips with intermediate level nuclear waste, so we should be able to.
- We only have to consider Arctic Russia to see the horror of what can happen when things go wrong.
- The UK should take the lead and demonstrate we can manage our waste effectively. We have the best practice when compared with others, e.g. Russia, and we have much to teach others.
- Nuclear waste is a global issue.

Attitudes to nuclear waste

- We can only contain the problem rather than solve it. It is therefore stupid to keep producing more; we are "running to stand still". We are committing omnicide (species death) through pursuing nuclear technologies.
- Technology will not provide the answers to this problem.
- The perception of waste should change. It should be considered as a resource rather than as waste.
- There is a contradiction in our approach to nuclear. We will use it for medical purposes, e.g. chemotherapy, but we are concerned about nuclear "waste".
- There is a need for a balanced approach. We live in a contaminated (nuclear) environment but this is manageable if we learn to live with it and manage it.
- As we will have the problem anyway for thousands of years we should use the potential of nuclear energy.
- We should accept that we live in a waste society and look at nuclear waste in that context.
- We need to plan our lives based on the fact of nuclear waste.

Discussions

1. Perspectives

Issues of Responsibility

- We have to work with the technology that we have at the moment – we should not defer the issue in the hope of something better.
- Dealing with the submarines may not be a fashionable use of resources (as compared to spending money on hospitals), but it is still necessary.
- We need to be responsible: we must get the submarines out of the water and store them away.
- We should not target the nuclear waste on disadvantaged communities such as the Third World, rural communities in the UK, or people who are in any way underprivileged. A socially responsible attitude dictates that we should not dump on people who have less power than ourselves.
- In a democracy we should *share* responsibility.
- Unlike civil nuclear facilities, no locality actually feels that it *owns* the nuclear submarines.
- Responsibility for cost lies with the producers. Those who generate wealth from the nuclear industry should bear the moral, economic and social costs of waste disposal.
- Why should local populations who have accepted responsibility for nuclear programmes be given more nuclear waste to deal with? The nuclear submarines have protected the whole of the UK, so the whole of the UK should take responsibility for the waste.
- All liability and responsibility in case of a leakage accident must remain with the nuclear industry not with the local authorities.
- The possibility of compensation to local population was raised, with comparisons with the compensation awarded by the American government to the local Native American population at the Hanford reservation.

Contexts

- In the light of the present lack of a decision on a long-term repository, decision-making about intermediate storage options seems to be impossible. Consequently, we should do the least that we can get away with so that we do not foreclose options for the future.
- It seems likely that we will reclassify the different levels of nuclear waste. (Some of what we call intermediate level would be classified as high level in Sweden.) This could lead to a need to re-evaluate our packaging and storage options. Extra operations would expose people to further dangers.
- The way that we analyse risk will change as we understand radiation better.
- A well thought through solution to this problem could have positive spin-offs for nuclear waste storage technology as a whole.
- Ethically it is wrong to take the view that 'people are happier not being told.'
- The problem needs a life cycle, cradle to grave approach. Any solution should be considered in the long-term.
- We should remember that this is the interim not the final solution.

- The civil nuclear industry has a much greater nuclear waste problem.

Costs

- There is a need for a certain level of wealth in order to contain the waste appropriately. We must have economic and environmental sustainability so that we do not encounter the problems of, for example, Russia.
- The possibility of accurate costing is questionable, as the waste will have to be monitored for such a long period of time.
- The majority of the cost is incurred in the process of waste management. This is separate to the cost of monitoring.
- We cannot solve the problem, we can only manage it. We should therefore consider the future problems, including future cleanup costs, in any new decision whether to continue with nuclear as a power source.

'Best possible' solutions vs cost

- If we want the best possible solution then society must pay. Private companies are too profit orientated and irresponsible.
- The solution should be sold to the public on the basis of the best quality possible rather than the best value for money.
- Cost is subordinate to safety
- No expense should be spared because the environmental risks are so great.
- Every risk has a cost. The public would not thank the government for overspending on this issue at the expense of other national requirements.
- The money will be found to cover whatever is perceived to be required because this is such a contentious matter.

Development and conservation of skills

- Dealing with nuclear waste will become an industry in its own right, so the deskilling of the submarine maintenance workforce that will take place, for instance at Rosyth, is not a problem.
- There may not be enough training happening in technologies relating to nuclear waste disposal.
- Knowledge of current reactor technology may be lost.
- The deskilling issue is a big problem. Babcocks (BRDL) will not hold onto people who are not needed regularly. So the skills will not be present at Rosyth forever.
- It is private companies that have the necessary expertise and skill base.
- There is a need for international exchange of skills and information.

2. Grounds of Distrust

Reasons for public alienation from consultation

- There is confusion over exactly what the options are, particularly between the RC and the RPV and the capability of the Rosyth AWAF.
- There is confusion over the regulatory bodies – SEPA, NII etc. This arises from a lack of understanding over who they are, whom they represent and what their precise roles and remits are.

- There is a problem with the use of acronyms (SEPA, NII etc). This reduces public understanding and adds to the feeling of suspicion.

Perceptions of the Public

- The public may not understand the distinction between the type of risk associated with ongoing operational activities and that associated with accidents.
- We should not overemphasise the risks associated with this issue.
- How we evaluate the risk of a particular course of action depends on whether or not we have elected to follow that course (or whether it has been imposed on us) and whether or not the risk affects people who are close to us.
- It is important that the public understand the lack of risk associated with the reactor chamber once the spent fuel is removed

Distrust of the Nuclear Industries

- The level of public distrust is very high because of the poor safety history of the nuclear industries.
- The public fear is of the management of nuclear issues rather than of the nuclear issues themselves.
- The public perceive the nuclear industry as arrogant. A better degree of public communication and therefore understanding would help to overcome this

3. Considering the Options

General issues for decommissioning, site selection and storage

- Refitting and refuelling are far more dangerous than decommissioning.
- Decommissioning nuclear submarines is no more risk than refitting them.
- In the civil field they put decommissioning off for as long as possible. This is partly for health and safety reasons, but mainly because of money.
- The economic issues that affect decisions about decommissioning in the civil nuclear industry (such that it is done later rather than sooner) are not relevant to the decommissioning of nuclear submarines issue.
- It can be agreed that this intermediate level waste constitutes a lower level of relative risk (than high level waste): we should also be able to agree that we should do everything possible to minimise this risk.
- Future decommissioning has to be done at a licensed site; and that, in practice, means Devonport.
- The unknowns associated with old reactor compartments are greater then those associated with routine, but actually more dangerous, activities.
- It is not true that the unknowns associated with old reactor compartments are greater then those associated with routine activities.
- Is there a defence secrets issue with regard to the storage of the reactor components? Might someone want to examine them? If yes, then a remote storage location might constitute a security hazard.
- We cannot engage in a serous discussion of possible sites until we know whether we are talking about whole reactor compartments or cut up reactor compartments.

- The reactor compartment will remain where it is put for 30, 40, 50 or 60 years. So we should not take it anywhere where there is not the expertise to deal with it.
- We should not move the reactor compartments from their current locations.
- There would be strong political resistance to proposals to move the reactor compartments from their current locations.
- People who have not received any economic benefit from the submarines should not be made to accept the waste.
- The locations of the necessary expertise and the storage space do not coincide.
- Civilian nuclear installations such as Sellafield are not equipped to deal with the specific nuclear problems associated with submarine reactor compartments.
- If we can transport nuclear fuel, then we can transport intermediate level nuclear waste, so the site could be anywhere.

Design of storage facilities

- Storage options should take into account the needs for detailed monitoring, retrievability and the ability to respond immediately if there is a problem.
- Public perception, as a factor in decision-making about storage design, requires a form of containment that "looks like it was made for the job."
- If the intermediate level waste were cemented into ISO containers it would limit future possibilities.
- The waste must be physically segregated from the public.
- It is possible to design the correct containment facility.
- Surface storage is the best option as the waste must be monitored.

Monitoring

- Security must be strict.
- There must be a rigorous standard of environmental monitoring.
- Monitoring is sometimes done very badly by people who purport to be experts. Even with quite rigorous monitoring of a reactor compartment, a gaseous accident could build up unseen and things could go wrong very quickly.
- Any toxic elements produced or already present must also be monitored.
- Monitoring of radioactive pollution from Rosyth has become much more vigilant.

4. Transparency, Accountability and Regulation

Transparency and Public Accountability

- The debate should not be constrained.
- It is best to make the trades-offs of benefits and losses open and explicit in terms of a social balance sheet. In this way everyone can see what is being done and why.
- There is a need for more honesty and openness when dealing with the public. As soon as any decision is made it should be made public. For instance, if only already licensed sites are to be considered the public should be informed sooner rather than later in order to gain public trust.

- Local communities should be given the options to decide from. It is vital that they are consulted as they are the ones who will be affected.
- This kind of consultation raises issues about the process of democracy: we elect people to represent us and to make decisions, so why does the MoD organise a consultation of this kind?

Criticism and distrust of the MoD

- There is little point in this consultation if the MoD has already more or less decided to store the reactor compartments on land at the place of decommissioning.
- It is improper that the MoD should expect this consultative input for free.
- MoD exemption from regulation is seen as an anachronism that needs to be dealt with.
- If the MoD deals with the submarines it will be seen as a cover up, as secretive. If the public deal with them there will be a greater perceived level of responsibility.
- There is a great deal of scepticism as to how far the MoD will pay any attention to this consultation, due to its past history of secrecy.
- The MoD needs to allow the public access to their facilities in order to demonstrate both the safety levels and to enhance any feeling of trust. Visits such as these are informative and aid trust.
- The MoD needs to be constantly reminded about the Scottish Parliament aspect of the total political situation.

The credibility of the consultation process

- If the MoD is not prepared to pay for a proper consultation then they should not be doing it at all. For instance, they should have paid for national newspaper advertisements to inform the public that the consultation is taking place.
- The problem of the lack of public trust in safety and accountability must be overcome.
- The MoD are conducting this consultation so that they can learn the answers to difficult questions and then allay the public's fears over the final solution.
- The government are just going through this process so that they can say they have consulted; they will not actually pay any attention to the findings.
- There is a need for an independent arbiter in the consultation process. However, this is problematic as so many people are already involved.
- It is positive that Lancaster University are conducting this consultation as they are perceived as having "no axe to grind" – i.e. they are independent and unbiased.
- Consultation as a term has lost its value over the past ten years.
- How is (and should) 'stakeholder mapping' be done? What role has the MoD played in this?
- The consultation process is useful for those involved as it consolidates the knowledge that they already have.

Environmental monitoring agencies

- Public perception of the regulatory bodies is distrustful as they are often seen as political appointments.
- The monitoring agency must be independent. SEPA etc. are perceived as being not necessarily independent.
- It is impossible to control or regulate the management of nuclear waste as so many different agencies are involved. This leads to a passing on of responsibility.

5. Taking the Consultation Process Forward

The consultation: issues of breadth and focus

- We need to limit the options if a decision is to be made.
- There is the potential for over-consultation, for example those on community councils are given endless reports and invited to endless consultations. This may devalue the consultation process.
- The 'framing questions' are too structured; there is a need to look at the wider issues.
- It is possible to narrow down the issues; the only real questions for the public are "where" and "how dangerous".

The need for availability of independent scientific research to non-governmental organizations

- Ordinary people do not have access to expert consultancy. As a result their voices carry little weight.
- Environmental groups need the assistance of consultants with the right letters after their name because otherwise people do not listen. An individual environmental activist might be very well informed, but a lack of official qualifications can still cause their statements to be ignored.
- Prospective contractors are in a position to employ expert consultants and, thereby, to impress local planning authorities. By contrast, local environmental groups opposing a planning application are not in a position to employ an army of consultants. So even though they may be presenting very cogent arguments their voices count for less.
- Public opinion will not be listened to unless it is assisted by the weight of expert opinions.
- Public opinion does not need to be informed by expert nuclear knowledge in order to be able to voice a valid opinion as to whether of not the remnants of nuclear submarines should be stored in their locality.

Involving and informing the public

- The general public are not being given adequate access to information and knowledge so that they can understand the risks.
- It is absolutely vital that the MoD and the other organisations involved take the public along with them in understanding the low levels of risk associated with this intermediate waste when it is properly managed.
- The public do not even have the 'beginners guide' to the decommissioning of nuclear submarines.
- As soon as a particular location is named (to any degree) its population should be positively engaged in the consultation.
- In Scotland the Community Councils are an effective way to achieve wide dissemination of information.
- Lay people require payment in order to make it viable for them to participate in the consultation. It is neither fair nor realistic to expect people to take time off work or to use their holiday entitlement in order to be involved.
- It is important to try to include the views of those who are not usually represented, although acquiring those views is challenging and difficult.

- The consultation process is useless if there is no feedback to the public; it is to be hoped that the MoD make this information available.
- Not everyone wants to be involved in decision-making processes; this is a problem in our society today (e.g. low election turnout).
- The website is a good idea but people don't use it
- Very few members of the general public will care enough to be involved; only those directly affected.
- The emphasis should be on communication not consultation, as that would be a two way process with a need for feedback. Consultation implies that one's opinion is being listened to which is not necessarily the case.

The role of the mass media

- It would be good to be able to use the media to publicise this process. However, this is problematic as they do not present a balanced discussion.
- The media are of no use as they are no longer offering a public information service but are opinion formers and risk communicators.

Contractor issues

- How can there be a public sector comparator when there is no one in the public sector who does this kind of work?
- There is concern over the effect of private contracting on safety and security issues.
- Competition leads to poorer quality as is demonstrated by the railways. A consortium approach should be adopted. However, the consortium must be financially robust and have access to a skilled workforce
- There is a great deal of worry and cynicism over the costing process and likely outcomes, especially over the PFI/PPP route.
- The contract should not be awarded to the lowest tender.
- Any PPP will have to be cheaper than the Public Sector Comparator.

The Steering Group

- The degree to which the Steering Group reflects the geographical issues of where the waste is sited should be examined.
- It is steered by MoD interests.
- There are no Scottish representatives on the Steering Group.
- The Steering Group has a high level of expertise.
- The Steering Group should take ideas forward; it should manage rather than debate the issues
- The Steering Group members should be committed to the best possible solution.

Who should constitute the Steering Group?

- When it comes to the Steering Group it is just not economically viable for lay people to be involved unless arrangements are made for them to be suitably remunerated.
- There is a need for greater NGO involvement particularly from environmental groups; why is there no FoE or Greenpeace involvement?
- There should be representation of the nuclear industry employees, e.g. the Trade Unions.
- There should be representation from democratically elected bodies.
- There should be more local representation, e.g. local pressure groups

- There is a need for independent technical representation – not the MoD, not the universities; academics are not problem solvers.
- Those who are involved in the process and who are at risk should be represented.

Final Plenary

- It is important that all options are explored.
- Although these groups are held, the audience is limited. For instance, there is no one here from Faslane.
- The consultation process should include people from all of the possible sites.
- The place that refits the submarines should accept a moral responsibility to take the storage. Moral duty comes with economic benefit.
- The day has been a worthwhile and meaningful discussion.
- It is necessary to explore the issue of whether the reactor compartments should be cut up or left whole.
- One becomes a stakeholder immediately one is a potential site.
- There has been a lot of 'convergent thinking', but we also need to think more widely.
- It is necessary to think in terms of suitability, feasibility and acceptability. Then suitability and feasibility have to be translated into acceptability.
- There will be times in the overall consultation process when a local level of consultation will be necessary and others when it will not be appropriate. People should not be expected to cope with the large-scale national issue; but they should be consulted on matters that directly affect them.
- It is better that Lancaster University should guide the decision making than that the MoD should have this role.
- There should be effective communication about what the issues are.
- There is a need for clarity about the issues.
- There is a need for ongoing communication as the parameters of the discussion change and as decisions are formulated and firmed up.
- Discussion should be ongoing, widespread and advertised as such.
- Certain options can be discarded at this point. For instance, there should be no new sites. This will make people happy.
- We have to involve the 'big stakeholders' – that is to say, our elected representatives.
- Lancaster University should call the shots as to who is consulted.
- At today's workshop there have been lots of interesting discussions and some uninteresting discussions.
- The intermediate storage strategy depends on the final storage strategy, but the government may turn this round: a good intermediate solution may turn into the final solution.
- I am leaving the workshop more depressed about the issues than I was when I arrived. We are trying to solve a problem that cannot be solved. We keep generating more nuclear waste.
- The MoD seems to have a preferred strategy.
- The UK should take the lead on this issue and demonstrate best practices.
- The thirty-year intermediate period is a good idea. After that we should take out the reactor cores. However, we should experiment with decommissioning a core now so that we can develop the necessary knowledge and skill for the future.

- The MoD should *communicate* not consult. They should tell us what they want to do, then we will tell them what we think.
- Today has been a brain storming exercise and it has been useful in taking things beyond the 'them and us.'
- Half measures only defer the problem.
- Public perception is central to this issue. There should be communication and consultation in order to take the public along.
- The MoD need to be open, to educate, to communicate and to admit their weaknesses. They must build the confidence that the right decisions are being made.
- It is necessary to notify people that there *is* a consultation.
- It is necessary to decide whether we are talking about complete reactor compartments or about cut up components before we can think about sites.
- This is an international problem, so we should consult internationally.
- In seeking public acceptance is necessary to take on board the fact that public perceptions of nuclear technology are predominantly negative. For this reason there has to be parallel consultation on the ongoing production of nuclear submarines.
- The growth of this kind of dialogue and consultation is both healthy and welcome; but is must also be recognised that these activities are informal and not politically binding. The new government wish to curtail consultation on issues including that of radioactive waste.
- The MoD is exempt from civil legislation. Military waste should be subject to the same legislative rules as is civilian waste.
- This situation should be brought within a proper democratically accountable framework and should cease to be a matter of 'grace and favour.'
- Whatever option is chosen must have public acceptability
- We should deal with the problem now, not in the future. We will have to package the waste sometime so we should do it now.
- There is a need for more information before any decision can be made both in the discussion group and on the wider public level. People cannot make a choice if they don't understand the options.
- All options should be fully explored before any solution is chosen.
- In order to learn how to manage the process of cutting up the submarine, we must first go through it. One could be cut up as an experiment. This would leave us in a better position from which to make judgements about the viability of this option.

Appendix 1

Participants' One Page Statements

A SHORT OUTLINE OF ROSYTHWATCH'S COMMENTS TO THE STAKEHOLDER WORKSHOP HELD AT THE SUFFOLK HALL HOTEL, EDINBURGH, ON TUESDAY 26TH JUNE 2001 IN CONNECTION WITH PROJECT ISOLUS UNDER THE AUSPICES OF LANCASTER UNIVERSITY.

As expressed in other UK workshops, Rosythwatch is of the view that consultations on what to do with nuclear waste from submarines should have taken place at the initial planning stages when it was decided to place nuclear reactors on boats. We're locking the stable door after the horse has bolted, are we not?

We now appear to have a problem that can only be contained at best. That we continue to produce nuclear waste from civil and military sources on a global scale, with no plans to cease, means we will always be running just to stand still. Dr Helen Caldicott, the Australian paediatrician and protester at French atomic testing in the Pacific in the 80s, estimated that in the US alone there would be around 20M cubic feet of solid waste from military, commercial and research establishments in storage by 2000. Our liquid waste is equally frightening.

Nor will technology alone ever provide the answers we seek, according to some. For even if unbreakable, corrosive-resistant containers could be designed, the storage sites would need surveillance in perpetuity against man and nature. Already, according to Dr Rosalie Bertell, an American academic and Senior Cancer Research Scientist, "some 16M casualties due to escalating radiation levels produced by nuclear power and nuclear weapons" have been documented worldwide, and warns of "omnicide" – species death – if we fail to heed the warnings. So the message is startingly clear – no future building of nuclear reactors.

Nearer home, at Rosyth Dockyard, we are extremely concerned at Babcock's proposal to cut up HMS Renown's reactor compartment, store it on site near an area of high population and to break up the remainder of the boat for some unspecified use using nearby breakers yard at Inverkeithing. Our fears have only increased on learning that at Hanford, Washington State, the US subs have their compartments removed intact, buried in shallow graves awaiting final disposal at a repository under construction in New Mexico, with the remaining fore and aft welded together and stored in water at Puget Sound in NW Washington State. We need, and demand, a public inquiry BEFORE the Babcock Experiment is sanctioned.

Christopher Ealey
GMB
Rosyth Royal Dockyard

I believe that as submarine refitting is being 'centralised' on Devonport Dockyard with the associated benefits to the local community of that work programme, it follows that any perceived pain should be equally 'enjoyed' by that same community. Therefore, Devonport has the moral responsibility to look after the submarines once decommissioned.

I believe that cutting up the submarine and re-commissioning is the best option as this makes transport far more practical, especially if it is boxed and road or rail transportable.

I do not accept that there is lack of space in Devonport as the site is huge.

Christopher Ealey

Project ISOLUS – Front End Consultation – Stakeholder Workshop

Cdr Peter MERRIMAN RN, Head of Nuclear Safety Assurance, HMNB Clyde.
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Important Issues

- Whether it is credible (in terms of public and regulatory acceptability) that the dismantling of decommissioned nuclear submarines could be done at any site in the UK not currently licensed for nuclear submarine work. Sites are:
  - DML Devonport (NII Licenced)
  - Devonport Naval Base (MoD Authorised)
  - BAE Systems Marine Barrow (NII Licenced)
  - BRDL Rosyth (NII Licenced)
  - Clyde Naval Base (MoD Authorised)
- Whether it is credible (in terms of public and regulatory acceptability) that decommissioned nuclear submarines could be moved between the above sites for dismantling (i.e. vessels from Rosyth to Devonport or vice versa).
- That the MoD strategy should:
  - Take account of any limitations posed by the answers to the questions above.
  - Include existing decommissioned submarines and those currently in service. It should be noted that the only planned decommissioning yard in the future is DML Devonport.
  - Be technically sound and well argued, demonstrating that risk is as low as reasonably practical.
  - Be acceptable to the various regulatory bodies.
  - Be sufficiently transparent to allow local and national bodies to judge that any risk to the people they represent and the environment is acceptably low.
  - Be agreed in sufficient time to ensure no current options are lost.
  - Include proposals for the regulatory strategy for stored decommissioned submarines once the dismantling programme commences.

ISOLUS – IMPORTANT ISSUES
LT CDR R W BURDETT RN
BASE NUCLEAR SAFETY AGENCY – ROSYTH

ASSUMPTIONS

- The work will be conducted in the Dockyard that the submarines have been laid up in.
- The decommissioning will be conducted in the short to medium term.

AREAS OF CONCERN

BRDL RESOURCE BRDL will be shortly finishing the final nuclear submarine project that they are currently contracted to. Already the human resource and knowledge bank is being run down. On completion of the final project resource will be maintained for maintenance of key nuclear related facilities and to start the decommissioning (and de-licensing?) of the site. Unless some indication is given of a positive desire to decommission the submarines currently in Rosyth the teams will have to be rebuilt and retrained before the projects can start.

HALF MEASURES Currently the active components of the submarines are contained in a secure and safe environment. Previous proposals have just moved "the problem" ashore. Will the follow on project reduce the volume of active material to a minimum? Preferably to fill all intermediate waste in half ISO containers or a suitable alternative such that when a repository does become available the residues can be moved without further work. Either do it properly or not at all!

PUBLIC PERCEPTIONS During the renown public consultation it was evident (and still is) that the public perception of DDLP'd submarine decommissioning is way off the mark in terms of the risk to the public. The actual risk of submarine refit and refuel is probably lower, public perception is that decommissioning is a far riskier process.

ISOLUS Workshop Edinburgh: Response from the Nuclear Free Local Authorities

1. We do not believe policy towards the management of radioactive wastes from decommissioned nuclear submarines should be determined in isolation from policy towards the management of wastes in the UK as a whole. We therefore believe MoD should explain how its current consultative process connects with the consultative process and policy development to identify a publicly acceptable national radioactive waste management policy.

2. We believe that public confidence in any proposals and the implementation of any agreed proposals will only be possible if (a) agreement has been reached on the timed programme for the phase out of nuclear-powered submarines without replacements; and (b) the decision-making and regulatory framework is placed on exactly the same footing as for wastes from any civil source.

3. Unless exceptional circumstances demonstrate that the safety of the public and the environment would be better served by alternative practice, NFLAs believe:

- Storage of nuclear wastes should use the best available techniques for containment so they do not leak into the environment and to shield them from the public. NFLAs share the view that currently this requires dry above-ground storage as the "least worst" option.
- Storage should be managed, monitored and retrievable for an indefinite (i.e. currently unknown and undefined) period into the future, so that current and future generations can begin and continue to implement the best available techniques for waste containment.
- Existing sites should be used to manage radioactive wastes. No new sites should be contaminated.
- Radioactive wastes should be concentrated and contained, not diluted and dispersed. For example, radioactively contaminated scrap from decommissioned nuclear submarines should not be dispersed via the metals recycling industry.
- All information relevant to decisions on the management of all nuclear wastes should be made fully transparent and publicly available for consultation.
- An open transparent site selection process is required to identify the most suitable existing nuclear site(s) to store existing nuclear wastes arising from the decommissioning of nuclear powered submarines.
- Policy should be developed to avoid and eliminate transports of nuclear wastes.

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N-EW-K
NUCLEAR ENERGY WASTE KEEP-OUT

COVER NOTE

We wish to present to Lancaster University for the information of the Ministry of Defence approximately 430* signatures which were collected in the Mellon Charles/Aultbea/Loch Ewe area less than thirty hours between 21st and 23rd June 2001.

The petition has been signed mostly by local residents and stands to substantiate the MoD ISOLUS Report 1999/2000 Annex G paragraph 65 which states that whilst the siting of a store in this type of area has the advantage of being MoD owned it could come under pressure from the general public. "NIMBY" pressure could therefore be considerable.

Whilst the United Kingdom tends to be influenced by the United States and as the US has laid up its reactor compartments in desert wastes let us not suppose that the Highland "wastes" might be considered by those who work in Whitehall to be the UK equivalent – this is not the case. Mellon Charles is a residential and crofting community which falls within the Wester Ross National Scenic area and has an SSSI within a few hundred metres.

N-EW-K wishes it to be known that the highlands does not wish to be a receptacle for nuclear waste and that it is very concerned that the Governments, Scientists, etc, over the years since nuclear submarines were first built, have reached the alarming situation whereby how to dispose of them has been left all at sea. Surely four decades should have been enough to have prepared for this time?

As we, the general public, were only informed of the MoD Public Consultation during the election campaign at the end of May by one of the Scottish political parties, we have not therefore had time to call a public meeting to discuss more serious matter of how to dispose of nuclear submarine hulls or the question of how to store reactor compartments. We hope to be able to hold a meeting in Aultbea in July. We request that although the Public Consultation accessible *on line* only from 1 March to 30 June will be officially closed by then we would still like to have our comments recognised by the MoD. We would also like to continue to be informed/consulted about the interim storage of laid-up nuclear submarines until such times as they are.

TO SUMMARISE - THE HIGHLANDS MAY BE ISOLATED BUT WE DO NOT WISH TO BE CONSIDERED FOR ISOLUS.

* approximately 450 signatures at final count – 26.6.2001

Appendix 2

Workshop Participants

Stakeholders

Mr John Ainslie	CND Scotland
George Anderson	Rosyth Watch
Prof George Fleming	Envirocentre
Cdr Pete Merriman	Royal Navy
Mr John Park	Amalgamated Engineering and Electrical Union
Lt Cmdr Richard Burdett	Royal Navy
Mr Brian Downie	Highland Council
Mr Bill Fulton	Highland Council
Mr Stuart Hudson	Scottish Environment Protection Agency
Miss A A Passmore	N.EW.K
Mr Christopher Early	GMB
Dr Wheaton	ERC
Ms Julie Toolley	SEPA
Mr Malcolm Hamilton	
Sue Hamilton	Charlestown, Limekilns and Pattiesmuir Community Council
Mr J.K.Woolley	UK Nuclear Free Local Authorities
Louise Mann	Scotland Against Nuclear Dumping

MoD Representative

Mr Brian Hooper	WSA, MoD

Consultation Team

Dr Jane Hunt	CSEC, Lancaster University
Dr Simon Pardoe	CSEC, Lancaster University
Dr Kath Cross	CSEC, Lancaster University
Ms Emily Secker	CSEC, Lancaster University
Dr Bill Thompson	CSEC, Lancaster University