



- Kingston upon Thames
- Sheffield
- Westminster

NDA RADIO ACTIVE WASTE MANAGEMENT
DIRECTORATE SUPPLIER WORKSHOP

POST-EVENT REPORT

COMPILED BY THE LIVE GROUP PLC

9TH FEBRUARY 2009

WORKSHOP SUMMARY

The Live Group plc was contacted in September 2008 to support the NDA in designing and facilitating a workshop to engage suppliers. Further meetings were held between Live Group plc and the NDA to finalise arrangements.

The Live Group plc was also asked to arrange the logistics for the workshop, including sourcing and booking independent facilitators through the Live Academy to manage the table discussions. The RWMD Supplier Workshop took place on the 22nd January 2009 at the NEC in Birmingham.

The event was planned as an initial engagement exercise designed to provide potential suppliers with more details about the programme to implement geological disposal. It focussed on the likely phases of work which will need to be undertaken once the current site selection process, which is being led by Government, is completed.

The event sought the views of delegates to help develop the RWMD's Contracting and Commercial Strategy for surface based investigations and construction.

Delegates were divided between 15 tables and after initial presentations were asked during the day to consider four questions. The key points arising from the table discussions were recorded on 'tablets' and can be found in Appendix E.

APPENDIX E

SUMMARY OF KEY ISSUES

Question 1

Approach - What would be the most appropriate commercial/contracting strategy to help us achieve our objectives

Response
Not to be trapped at the beginning with a nuclear QA policy
Different contracting strategies for different stages of project
Need to break down time frame
Use a Programme management approach to procurement, with programme management staffed jointly early contractor engagement
Propose prime contractor to manage the site characterisation phase. This is because NDARWMD does not intend to have the commercial and programme management capacity to handle the scale of this programme. And/or develop a strategy to bring in that expertise to RWMD
Establishing relationship, common values and goals shared culture are key to successful partnering
Single delivery organisation standards control easier. Single project contractor brings advantage though. Counter view is lessons from NIREX say single organisation isn't adequate. Are we ready to decide this when so many variables yet to be decided - could a single org bid against the undefined scope? Would single contract allow for flexibility in expertise? Client plus partner organisation will be large. Concerns about NDA capacity.
Two types of contracts design and direct contracts need to be handled differently direct needs to be a call up Design and build option need to work with underground builder prime contractor and outsourcing (as used by MOD). Difficulties to define the scope Partnering arrangement cost plus? Need disallowable costs if not meeting standard depends on the number of sites need to spread what have we learned from nirex? Are there people in the country who have underground capability? NDA part of delivery team work with a consortium shared risk need to apportion responsibilities
Need a break between investigation and design. Define intelligent client - I'd like to see a Head of Science, Head of Engineering, in order to fulfil the function of pulling all the strands together. ECI risk if we don't have, that the specification which is produced is not buildable
Early contractor involvement re all the overlapping issues
Appoint delivery partner to work in alliance with RWMD to support programme delivery to engage with experts to actually deliver programme
Partnering relationship cannot work effectively, client not engaged Experience has shown that clients can become adversarial when problems need to be faced
Money needs to be put aside for consultancy for potential contractors.
Scoping question is should there be a separate front end contractor or an all inclusive approach. may need to put some money in at early stage to get engagement, delivery partner concept may be appropriate e.g. crossrail, Olympics
Appropriate to have supply chain engagement at the earliest stage .e.g. value could be project programme management. How intelligent is intelligent? How complicated does NDA want to make it what are the constraints? Can't define approach until you know NDA responsibility. Broadly talking about a three tier system. NDA an intelligent client, next tier could be integrated NDA programme deliverer, then the specialist contractors could have programme manager sitting over whole Don't want to be tied in to one party too early. Have several engagements pick one when you come to sharp work. This is a risk management programme needs to be built into the strategy - how much risk will be passed into supply chain?

Diff. types of risk. Safety is nondevolvable. Linked to integrity of facility.
Keep data acquisition and collection, giving RWMD chance to be intelligent customer.
The procurement strategy needs to address the fact that a needs driven intention to deliver the project through the supply chain conflicts with a current culture of micromanagement. Will those working on it be able to let go?
Formative stage reimbursable strategy implied because we don't know at this stage exactly what we're doing
This is a high risk project largely underground and to nuclear standard. We therefore need maximum possible definition of the project as it moves towards construction otherwise it will be a license to print money for the contractors because of confusion, changes etc. It could be done by RWMD setting out the requirements and then asking the contractor to define how it should be done
You need a big management input to manage a large number of suppliers. A flexible approach is required to bring in the appropriate specialists as required. Interface management is a potential problem does NDA have the capability/willingness to engage in that?
They need to have a flexible approach to intelligence over time, especially as time approaches for site licence
Contracting strategy is directly related to market forces and these are very uncertain at the moment
Non intrusive has to be well used this time. between the investigation and construction stage NDA needs to take responsibility for the ground model because there will always be geological uncertainties
Much more focus on delivery through programme management and integration. Ref Cross Rail project in London.
Flexible structure with a shared risk model has been seen to work. Long term approach required suppliers do not want to go through repeated procurement processes as this is expensive mechanism in approach to dev long term relationships
Staged commercial strategy.....move from reimbursable to fixed price strategy as you progress over time
Embed external technical and delivery "experts" within NDA or site licence company.
Be clear about the skills that define an "intelligent" client over a long period of time
Skills in niche market consultancies want free and flexible range of capability in an ideal world govt OGC contractual framework in operation limits flexibility (some experience that this isn't case managing contractors can get relevant expertise).Some capability known in the global supply chain competitive tendering is costly and waste of time lessons from Olympics DA as well as round the table. Cartel vs the group of experts known to each other
Flexible model where people come in and out of managing group as needs change; need to capture skills over time.
Single Management Contractor with a hierarchical structure underneath may not be the way forward - Can inhibit innovation creativity from smaller contractors specialists. Limitations on what can and cannot be bundled together need to separate the engineering element (e.g. tunnelling) from the science (e.g. safety case).Timescales Long timescales may make it appear we don't know what we are doing but recognition we need to get communities on board Some communities may want to go quicker. Danger of losing expertise as qualified staff retire or leave the industry. Whichever contracting strategy is adopted, everyone needs to buy into it (e.g. genuine partnership working).Contracting approach should be on needs (outputs) rather than the method (inputs).
There needs to be a stage in each phase of the project at which there is sufficient certainty to enable contractors to make a commitment
Requirements management will integrate the programme
There is a benefit in different approaches over a period of time and we also need to manage the knowledge over this long period
Very important that as little gap as possible between suppliers and NDA. Involvement essential.
How big will the contracts be? Continuity of the programme is key. Needs to be resilient to risks declaring now that NDA is a small organisation constraining the strategy?
A delivery team would be required to give continuity to project. Length of contract requires continuity but this must be careful that it does not stifle innovation commercial strategy should widen the net of ideas. Frameworks with bundled groups give more chance of keeping flexibility and innovation going.

NDA will have to come up with a risk transfer policy
Communication is key to the integration, effectiveness and success of this programme
Is SLC the right model?
Quality is paramount is there a conflict between that and competition? Reimbursability could help a pricing structure where NDA carries the risk until the specification is clearer
Acknowledge the reality that the supply chain is a large number of specialist organisations.
Approach must ensure small and often innovative suppliers are not excluded given the opportunity to present at regular intervals (water industry do this every 5 years) balanced with their ability to share risks involved.
Speed and timescales will affect the contractual relationship may lead to disillusionment why taking 30 years? Expectations are 5 to 10 years? Prolonged timescales may affect continuity of expertise between phases. Quality of equipment (e.g. best quality drilling equipment) v commercial considerations (profitability) may affect quality decisions. How to maintain quality between different contractors?
Trust in competitive tendering varies contractual arrangements will need different model for different parts of the programme.
Management of risk is always an issue in partnering arrangement could be mitigated through contracting process. Alarm bells will ring as people recollect Sellafeld Repository Design and Development Group model.
Be clear about who is a preferred supplier and the process to secure these and to ensure that all contractors are not exposed to excessive or unsustainable risk.
Approaches as the early risk minimises then we might move from option 2 to option 4 where a single org. can take it forward danger if no linkage then we will go the separate package route, where there would be a lack of integration.
Continuity and integration.
Commercial arrangements. Defence industry has moved back to cost + development and then fixed price construction model. This could be a good model. Also consider Terminal 5. BAA accepted that only they could take the risk of getting the terminal they wanted and then putting specific components to contractors, thereby minimising contractor's risks. Or GoCo could be a good way forward as in AWE Aldermarston and NNL.
Need contractual flexibility over the duration of the contract e.g. flex time scales? Pre qualify the contractors who can meet the technical and geological requirements.
Single packages would need very large staff to manage the packages - look at what Sweden did? Closer relationship with contractors. Partnering approach come together to share goals and risks start with forming a core group. How would NDA form that core group and use work that has already been done. Single management or integrating contractor with subcontracting specialist work from people who will not need long term involvement. But how do you approach that? But are they delivering a concept or a repository? Who develops it?
Need for coherent programme that addresses social/political and technical requirements.
The management of the continuity of risk keeping people involved over period of the project.
Funding - will it dry up? Security of funding for community. Engagement package. Need for ringfenced amount.
Timescales are worrying. It's so far out there.
The NDA needs to be supplemented by specific expertise from contractors at the early stage. Much better integration required.
Tell the story from the beginning - use pictures.
We MUST pick up on expertise and experience from wherever it comes. For credibility re engagement. Its value and quality that's crucial not price.

Question 2

**Barriers - What are the barriers that prevent us from achieving our objective and how can we overcome them?
What are the pros and cons?**

Response
Work packaged in such way that can meet European procurement rules whilst not tying hands for competition and innovation.
Employee Liability Insurance may become too expensive, or indeed not even available.
Current procurement of contracts through frameworks, no commitment and continuity the capability of the contractor's ability changes over time beholden to competition principle to the nth degree.
Communities and people will come to realise what is going into it who speaks on their behalf? How do you interpret polarised views? The Community leaders are still at primary school. Need to manage and educate community about NP.
Not being able to make the safety case to progress to build because of suboptimal geology.
There will be Technological advances over time when will be the cut off time to decide? From early contractor engagement you will get better feel for what is happening British geology varied so we are in a good position to learn from international experience. Need to build confidence of supply chain so that you get best suppliers (some have had fingers burned). Need confidence in long-term funding. Long-term govt policy. Stakeholders position at decision point. Ringfencing of funds.
A reliance on overseas skills resources is a barrier because they can't be relied upon in terms of engagement. Quality and their experience of UK geology is potentially an issue, as is political influence from the host country. An associated risk is that the host community does not gain the employment benefits which they had envisaged.
Some IP is held by individual companies avoid by having a panel?
Maintaining momentum/ understanding that once we start we MUST continue, Trust with the community will build confidence. Manage expectations and achieve them.
Timescales will be a real challenge to keep the supply chain engaged - involvement 3 - 5 years committing time will be hard to sell into the Board room. ECI is supported but costs must be recognised. Highways agency does cover these costs. Sellafield are making a step toward this but it is not there yet agrees a model similar to ECI may need to be developed to retain interest.
Availability of skill has UK plc got e.g. specialist geotechnical skills (this may be worldwide); this has an effect on cost. Or, alternative view we DO have the expertise. NDA need to recognise the skills we have.
How to set up structure to make large organisations make contact with small innovative ones?
Potential availability of suitably qualified and resourced contractors. Having the expertise and equipment available, say in 5 years time.
The quantity and quality of expertise and experience available in the UK.
Nuclear indemnities and insurance.
Would an accident at another site in the world negatively impact on us? Could EU policy change? New processes to manage waste? If too much weight is put onto finance rather than value incentives then it could mean that you do not meet the promise to the community.
We play by the rules do other countries? We need to get early commitment to partnership hard to do when funds not available and timescales are so long.
Economic business model generally requires short term profit. RWMD has to channel this over time to deliver long term objectives.
Getting all round acceptance of ground model.
Ground risk has to define - who carries the risk for significant changes in ground conditions? The party who carries the risk pays for it therefore, the more the contractor carries, the more expensive it will be. If the risk is too high, insurance may become not just too expensive, but unattainable.
R&D must be driven by the need in the context of the vision no "hobbyism". There needs to be discipline and focus in the science.
Difference in culture between the way in which the business community is able to operate, and the ways in which local authorities are able to operate (slowly) Timescales involved mean that expertise will be lost. There will be opposition to the project and the opposition will mobilise earlier and more effectively than we (the NDA, contractors and government) are able to. Local authorities are limited in how they can promote such projects. Opposition will be national /international and will connect to local issue.
PR and socioeconomic impact of the work on the community understood and managed.
No clear and transparent breakdown of the work stages to the project does not easily allow for

the identification of specific stages lack of clear project identification. Lack of knowledge of extent of the external variables how these externals will be dealt with.
Equipment to assess risk is outdated investment is required to update it, but contractors won't do it speculatively. ECI could help here. There has to be some way for the client to invest in capital. Partnering in development.
Data collection and/or interpretation over time.
Tendering/bidding costs need to be appropriately set, or small companies cannot compete. From an intelligent Client point of view, may stop them inviting large number to tender. Need more focused invitation process. E.g. in Spain, client pays tender costs for small number of invitees, process not cumbersome.
Acceptance of ground model has to be timely, robust and updated as changes occur and be able to be presented to bring community along.
Facility in the procurement process to accommodate external variables.
Barrier is transparency and lead time too long for bids. Pre qualification would build in more certainty. Long time tendering process is expensive and frustrating if not successful. Not all companies here will be successful. Barrier of keeping us involved and on board throughout this process, are there incentives available to keep us bidding? We can jointly spend more money bidding than the contract is worth? If so we might as well do it for free!
Momentum is important once we start we need to continue.
Risks need to be reviewed with thoroughness.
Early on to establish acceptable risk and get it accepted by community.
Bundles strategy can create barrier between NDA and contractors. Danger of overbureaucratising.
Standard contract terms and conditions e.g. unlimited liability, intellectual property rights, need looking at.
Integration with the regulators is very important.
Needs secure funding so that contracts won are not lost because of withdrawn funding.
Culture of the supply chain is a barrier, heavily tiered and hierarchical, and lack of innovation part of this is the lack of incentive for contractors to develop IP as this has to be surrendered to the client. Risk of recession affecting viability of contractors Govt spending on this project could help.
Insurance - who will carry it for e.g. potential ruin of a site?
Certainty of programme - if the community is not on board then the whole programme is put at risk would affect the smaller players especially better to have competition of multiple communities needs to be a contingency plan. Need to put effort into the relationship, need for education for future generations. Communities should have an economic stake in this from Day 1.
Experience of agencies working as team submitting proposal but no work follow. To reduce impact confirm opportunity is real, continuity of funding, procurement approval for set time periods
The lack of certainty confidence that this will go ahead and our ability to be clear about what we can manage and what we can't.
Project level insurance to indemnify supply chain.
Capital availability in the current climate?
Does early stage design involvement preclude contractors for later stage implementation involvement?
Skills need to be created and maintained over the duration of the project. This is a civil engineering project with safety cases, not nuclear, but nuclear engineers are running the project.
Economical advantageous means getting to the right answer quickly and not the lowest price.
Changes in H&S legislation mean that it is difficult for us to imagine how to protect the workforce in 15 or more years' time.
NDA flowdowns are not geared to this type of work because the project is investigative in nature.
Potential barrier. If only one community volunteers a site, the whole project could be held to ransom with unreasonable demands, with lengthy right to withdraw. There is a need to ensure that the project is built in optimal place. So the Government may need to reserve the right to change the rules if absolutely necessary.
To what extent do local authorities outside Cumbria see the potential there are several options

how to educate and encourage range of right volunteers Transporting waste through communities also a risk how to inform, engage and manage opposition?
No contractor will take on risk relating to ground conditions and scope of the investigation - knowing what regulators require from week to week is not easy - it is not likely companies can be underwritten. Risk might be more acceptable as the project moves on.
There is a real opportunity for the UK to become a centre of excellence in GDF if the procurement process drags on too long, there is a risk that we lose our developing and emerging expertise to other countries.
Who assumed what risk? Site investigation risk needs to be indemnified or clearly owned. If it's all on the supply chain it is not shared or equitable. Choosing the best contractor who takes on all the risks will be more expensive.
The Environment Agency independent body with own set of objectives.
Innovative thinking around funding long term availability of long term funding consider other possibilities working with supply chain given the worsening economic situation. Sweden took an additional tariff from the energy charges to invest for the future (something for new builds.
Can contracting processes be 'tailored' for smaller contractors? Danger of process stopping smaller organisations from applying and therefore risk of less innovation. Transport links to potential sites a significant barrier.
Connecting the current reality with the future e.g. transporting waste from Sellafield to a new facility and the implications of this.
Would any new concepts be a barrier? Could take us back. NDA credibility could be a barrier - need to re-establish through delivering.
Risks associated with ground conditions etc. It will never look like we expect. Mitigation depends on whose design it is. RWMD has to own it, whoever actually produces it.
Will UK coal mining reopen opportunities to train and develop experience? EU tendering/commercial issue complexity of the project -cost of the tendering process. Need to go for package approach.
Borehole short-term and long-term concern to the integrity of the project and the environment.
This has been a start/stop project it has that history. If it stops again (due Govt for example), that will impact people's motivation to get involved.
How do you assess community acceptance? What happens after construction starts and unforeseen conditions are found?
Public perception beyond the host community.
Funding method might change as we move through the process PFI for construction stage.
Useful to know what the contracting strategies are in other countries.
Risk of delays because of lack of community buy in or disruption because of political change. Needs to be mitigated in the contract with clear commitments which will remove social (?) uncertainties.
Is there a potential problem from other countries political positions (e.g. Ireland, Scotland)?
Insurance not available to some because of timescale and 'radioactive', for others it's a risk/reward shred risk and government as last resort may not be commercially acceptable.
Changes in legislation, and technological advances, could render current research findings and plans redundant.
Definition of "community" is intentionally vague in the White Paper. Others may come in later on claiming they are also a relevant community. So must nail down the communities concerned, and also ensure that the benefit packages are sufficiently attractive. This means ringfencing the community benefit packages.
The length of time. Solution is to compress earlier phases with bigger earlier funding to all components.
IPR contentious some will walk away from contracts where this is not safeguarded for supplier.
EU procurement rules are a barrier as they are inflexible.
Added value, open system approach to overcome the barriers not just evaluated on price or other limited criteria.
Getting agreement from regulatory authority to achieve a reasonable and acceptable safety case.
Compliance with EU rules.
Funding and affordability? 12Bn? Is this a barrier? Is funding agreed? Roll forward cost. Is the money secure? (NDA have identified and costed the steps and stages programme each of which may become a barrier).

NDA and working with supply chain flexibility vs. fixed ideas seems a bit open ended at moment.
Projects in the ground go wrong for a whole host of technical reasons risk strategy very important mitigate at each stage.
The Irish and Norway cross boundary impacts to the project.
Clearly defined deliverables for each contract.
R and D is fundamental research being given right priority re engineering aspect.
OGC procurement can be barrier see previous Question.
Political barriers keeping successive governments and local society engaged and supported and ensure continuity Sweden.
Lack of skills experience is a barrier we'll discuss this at next session.
Lack of information sharing between partners/contractors. All the information/data they produce must be in accordance with common protocols/standards. Therefore must ensure this is agreed upfront. It must also evolve over time in a well managed way.
Number of communities coming forward - are there likely to be more than 12? If new approach made- will it undermine current expressions of interest? National and local politics!
There may be conflicts between skills/resources required for New Build and the GDF some suppliers may select out as a result. Additionally, the work package may be too small for them to engage.
Alienating supply chain by setting up frameworks that don't come to anything, inappropriate risk allocation, stop/start, insufficient funding, uncertainty of funding. People will go off and do other things. Retaining availability of competency just in case the project happens e.g. might be a better opportunity elsewhere. It's happened before.
Predictable long term funding.
Time scale and time barrier. Re engagement, the NDA timescales do not necessarily 'grab' individuals and communities. There needs to be tangible, long term benefits for all local stakeholders.
Lack of long term political commitment enthusiasm. Ongoing stakeholder engagement work will be needed; ideally people will see the repository as a long term national asset.
Skills shortage.2025 competing with France and Japan et al for target date off 2025 when global skills shortage. Fossilising supply chain by current framework supplier agreements. What about future skills not on list maybe not yet known. Where is the investment in education and R and D Companies represented don't have time frame as long as NDA for talent and skills. Core capability needed and multi disciplinary skills. Build pipeline through universities, build capability and experience in education and sponsorship and placements in relevant projects.
RWMD culture. Risk of appointing contractors in your own image. Need to recognise the need to appoint contractors as delivery focussed, less academic. The need for high end scientific ones will remain, but need to open up to others.
Voluntarism is a barrier! We need government's proactive involvement to encourage other applications.
Political interference. Risk that programme will be stopped (past experience). Affordability In right context investment is peanuts communication must be better with politicians, public, national media. Sweden SKB example.
Timescales and political correctness/sensitivity main barrier we know technically what and where would be good enough already. The main barrier is community buy in so this project needs PR input as much as technical input. We could screen the whole country to find the optimal locations now, and then approach the community/communities with a technical argument that it is the best/safest. Volunteerism is a major barrier at what point is there a firm commitment from the community? Taking a volunteer sight introduces other barriers like transport infrastructure. Long timescales create a barrier of changing views in the community. Waste management policy is not just technical, also subject to changing solutions which may affect solutions and costs. Stop and think all over again.
Limited promotional capability is a barrier. Developing a nuclear savi community, that understands risk, is key and we need different approaches.
Getting the right site. 20 years work already. Getting community agreement. Incentives jobs, schools, work; roads need to be clear .Safety issues. Getting the right people. No UK skills available. Contractors brought in from abroad. How far outside UK. How do NDA meet EU Procurement rules? NDA don't know what they want. Long lead time items early ordering. Different contracts for deep drilling. Happened offshore. Would it need to be negotiated away? Rigs are already committed to other work.

Local govt political interference. Community benefits package needs to be substantive and real and relate to the local community over an extended period to ensure partnership is sustained. Site also has to be right and compatible with volunteer and neighbouring community agreement
Funding not issue in infrastructure development. In past has been lack of political will.
Need assured funding consistently applied- builds confidence.
The timescale for contractors is a barrier. Setting up in a quality way to meet the project needs, organising and maintaining that for long term, is tricky!
If supply chain sees too much risk being put on them, will be disincentive. NDA must own. Need to clarify the link with the new build programme - could be a barrier? Repository strengthens the link. What if the rock that is identified isn't suitable for colocation? Contracting strategy should take account of this possibility. Is there a possibility of 2 repositories??
If a procurement strategy is not established soon, there is a risk that potential suppliers contractors disengage, because it's all taking too long, or the packages of work are too small.
Lack of understanding about our approach - are we going for "best" or "acceptable""ALARA"COMMUNICATION1.
COMMUNICATION barriers re information channels. We must find very effective ways to set up maintain and improve communications processes.
NDA doesn't seem to know how to classify this programme- is it an engineering job, a mining job, or what? From a contractors point of view, we don't know who should be involved or whether we should be here, or continue to be involved.
RWMD current attitudes and outlook hangover from Nirex which got entrenched as R&D organisation not a delivery organisation. RWMD needs to get in e.g. programme management skills, cost control for major projects. Would be worth looking at e.g. Channel Tunnel organisation and do gap analysis.
Funding and affordability - how many boreholes does it take to check a site.

Question 3

Resources - What resources do we require to achieve our objective and how can we obtain them?

Response
Assured funding. Consistent with maintaining momentum once started.
Concerns about number and quality of geologists a lot of Universities are closing their geology department, and even those which are open have varying degrees of quality. There are probably only 50 specialists geologists in the country if NDA has them all.....
We can mitigate the need for resources by having clear project planning and funding. Once awarded a contract we can develop and deliver the technology required to complete the civil engineering contract. Give us a clear commitment and we can deliver.
An inventory of skills for the project and an assured pipeline to deliver these into the programme at the appropriate time.
The civil engineering resources are not a problem.
Geotechnical logging was previously carried out under BS5930, which will disappear in July 2010 to be replaced by a European standard which is different. NDA needs to specify its own standards.
Different expertise needed at different stages. So need to plan well ahead to have the relevant expertise availability in time for each stage. Contractors need to send staff on specialised courses and/or RWMD could fund relevant courses. Time frames are fine to allow this to happen the key is to ensure the training required is available and taken up in time.
There needs to be a global supply chain re expertise and capability.
Specialised equipment e.g. probes need to be available and there could be a significant lead time on them. E.g. issues with rig availability, analytical laboratories. Early resource commitment may need contracting early to secure resources.
Timing crucial - we will be competing for key skilled people e.g. Olympic Delivery authority bid without expertise and took from each other. COGENT and NSA need to look at what training qualifications are supported. Now is a good time as by the time people are trained they will have a project to work on! Skills strategy needed for this project.
There may be a long term problem of maintaining specialist expertise over 40 years. Globally, it's the same 3 or 4 companies across the world with the expertise on board to take on these specialist projects.
Extended timescales make it difficult to predict resource needs and availability more unknowns and potentially more risk.
We do not have deep drilling capability to provide sufficient competition. But we DO have enough shallow drilling companies (6).
Resources/expertise available in UK, of a certain generation as Alun said. RWMD senior staff have different career profile from European counterparts engineer programme management is valuable but not enough? Concerns about RWMD capability to be true intelligent customer in R and D to deliver GDF.
Relatively small body of very specialist skills which are key. The rest of the skills needed to build the repository are broadly mining, tunnelling and engineering skills, which should generally come through. Such long lead times that contractors should be able to put together the teams needed in time for each stage of the project.
A mechanism for learning from all industries and experiences.
Lead time for nonstandard equipment crucial. Will depend on how many sites to be investigated. Competition from new build projects.
Management ability to pull all this together both technically and practically going to have to pay for the best.
Work breakdown structure needs to be developed this year to allow effective identification of resources and gaps - resource loaded, time phased.
Unless we go global, we cannot meet the needs outlined in 3.10 of the discussion doc.
Physical resources. Sellafield had good luck getting a drilling from the oil industry. Bear in mind the equipment and the people you need the drillers, etc. Sweden found the solution using smaller drill holes... Set the parameters and then find these people and equipment - understand what are

transferable skills from other industries. Identify problem and engage early due to the long lead times style contracts to allow time to train and manage certainty of timescale helps overcome resource problems.
NDA could finance university programmes to ensure specialist education to create the necessary resources?
Repository design expertise - will it be there in the future. Need to identify where skill base is declining. Decide whether you do work earlier than optimum in order to reflect the extent of the existing skills base.
This project as a construction contract is a one of number of big potatoes it's not of a different order to other major projects.
Are there enough companies to ensure adequate governance, i.e. is there enough independence in the system? Even if there is, can we rely on them to be as high quality/capability as we need? This applies not just to the geoenvironmental industry.
Resources for drilling and mining technology out there (world wide). Issue of integration of info, data, interpretation and with other aspects of programme. Same site characterisation tools but use data in different ways. Does NDA propose to have integrated modelling team long term with capability of making assessment over v long time?
RWMD could put on courses (free) for the supply chain? RWMD Summer School?
Regulators all competing for same sort of people.
Need to build on strategic alliances around the world.
Ensure we gather the experience we need by developing policies and approaches that facilitate that e.g. lack of rock lab at Sellafield.
Be part of this brave new world for engineers! NDA needs to do PR to build interest and commitment, proactive resource management. Need to get involved with universities summer schools, funding, show interest. At the moment no incentive to invest in building talent. NDA needs a contacting strategy that involves long-term relationships. Need to get away from assumption that supply chain has infinite resource.
Uncertainty of resource requirement until such time as geology number of sites is identified.
Depends on number of sites to be investigated at the same time.
Skills and experience as well as price will be weighted defining factor in tender. Who (what expertise) will judge cost vs. value incorporating all aspects of the GDF.
There is a lack of trained people available in the design (scientific and surface), drilling, and construction fields. Work in other areas included. Site specific barriers/surface services/site investigation could be achieved for one site but problem if two sites at the same time. Solution could be to stagger them. Also shortage of plant for deeper shafts (shallower less than a problem. Rigs can be used from abroad. Lead time for rigs is key to successful procurement. Linking programme with availability of rigs and the identification of number of sites. Commissioning new rigs takes a year and cost 1020M. Could/should NDA buy them? Accreditation of onsite laboratories (six month) - are they available.
Need to be able to tap into experience worldwide in, e.g. mining, as required.
Be explicit about what skills and expertise are needed and when in the project as part of the contract, and the chosen contractor will provide the resources.
There may be some specialist skills e.g. in the regulatory aspects that may be in short supply and so will need to be identified and sourced in time. This applies to certain equipment too. But overall, the project is feasible. Resources should not be a major barrier.
Programme has to have continuity to facilitate the resource and its development.
The nature of procurement - longer term projects will be more attractive than stop/start projects. Need to do green shoots now to have the relevant skills available e.g. tie in PhD's now and build better links with universities scope to form a group of best practice and for PhDs to be done abroad. Will oil kick back in and say China's demand for energy mean a shortage of drilling rigs, people and machinery it's a global market.
Sustainability - need to sustain resources throughout life of project. Some will change over time, some new skills coming in.
Mechanism to retain resource during periods of hiatus.
EPSRC funding has dried up for education and PhD. Civil engineering degrees are defined by the Institute of Civil Engineers. There is no teaching of Rock mechanics in the UK, or in the development of underground space whether civil engineering or mining. Quantity and quality of laboratories do not exist in the UK in any one location; some of the universities can do some of the work. Not many geologists are produced, and those who are heavily influenced by the oil industry. Oil companies.

May be competition elsewhere in the world for resources from oil, waste disposal in other countries, gas storage, CO2 sequestration and geothermal.
Shortage of intellectual skills within the industry the resource and talent is out there but has been attracted more successfully by other industries our industry needs to at least match the offer available elsewhere. Shortage of blue collar resources lack of apprenticeships in recent years the resource available will move to the best offer e.g. when we come out of recession and there is more opportunity elsewhere. The nonperson resource (e.g. plant and machinery) should be available either from other industry within the UK or from where this has already been done overseas. Competition for resources with the nuclear new build programme, similar timescales involved. Need clarity over the volumes of waste which needs to be disposed of won't necessarily change the initial scope (site investigation) but may affect scale of construction.
Who will fund capital purchases, given the economic environment?
Needs joined up thinking with other major projects in the UK e.g. cross rail, to make sure that works are scheduled when skilled people are available.
This is not long enough a project for teachers and students to invest in GDF expertise.
Managing resource requirement of extended time spans and the influence of external viables.
Access to other GDF programmes around the world to increase our learning and understanding. Consider secondments to these programmes.
Strategy for skills (and equipment) should include opportunities for selling them on.
Recession could kill off some suppliers/expertise argument for spending money now to keep them going.
Consider how our requirements in transport impact on other rail transport users.
Robust information management system.
Message should be about career paths in the whole nuclear industry. Need more geoscientists will be in competition with oil and gas industries. Not many players in this specialised area. May need to build rig to meet requirements of this job and then get people to operate the rig.
We want a rock lab!
NDA needs the right skills and capability to manage the contract, beyond current practise. MNI is one of the options that should very seriously be considered.
Skills shortage and competition- affording the expertise of the type and volume as and when needed. Suppliers won't want to engage skills on standby during tender. Alignment of Universities, call off, Other sectors e.g. oil gas minerals can have faster draw down of skills this project needs. How to position this project as the once in a lifetime opportunity to skills supply and offering right rewards NDA with Universities could be premier supply of MSc qualified expertise.
There will be a need to ensure that there is sufficient expertise in engaging with local communities including within the communities themselves.
Site becomes unavailable - Plan B?
Skills and resource planning to ensure potential skills gaps can be filled. A National science laboratory to attract interest government funded "Jamie Oliver" approach to science.
Resources out with the project such as transport logistics need to be taken into account.
Secondment of key people into RWMD - it can be demoralising having best people cherrypicked - a doubleedged sword because it reduces your ability to deliver. Therefore, identify needs as early as possible so that suppliers can make effective advanced resourcing arrangements needs to be factored in. More than two possible sites being investigated in parallel would overstretch industry. Timescales are such that it is difficult to ensure resources available research students should be locked n and funded and career element recognised and rewarded now so that they are engaged at necessary time.
In France there is a facility where people can go and see an underground facility and a regular throughput of people. Something like this even if it's a virtual version would be a good resource to help communities get their heads round a potential repository.
NDA international presence and visibility and reputation. NIREX withdrew from EU and international projects UK has poor practical 'lab training technical base' for personnel. Site investigation, modelling, testing demo in UK.
Need the skills in house the market won't provide them need to recruit and grow your own?
No source of explosives in the UK it's a lot more difficult to transport, so that's a constraint.
Disposal of waste fluids and solids will be a big cost. Agree with stakeholders/regulators what their review groups will be. Forward plan. Give everyone a fifty percent pay rise! A short term big spend.
Supporting the development of relevant university programmes that deliver graduates with the Skills we need for the programme.

A need to draw on 'expertise' education is not enough need for experience.
Will size of the project bring people in from across the world? Parallel work on reprocessing from decommissioning programme. Schedules are manageable. Remote handling is this a resource issue? Need these skills for handling. Is science of containment in repositories sufficiently understood? (Believed to be). What new skills are needed use European experience (e.g. Finland, France, and Sweden). May need standardisation of approach. New build and MoD will pull away resources but depends on the climate in 10 years time. Impact of recession - will this free up resources or will capability be lost? Availability of Govt funding may become an issue.
Public perception - Sweden as model show cases facilities. UK doesn't have underground research lab - why not included in this project? What about surface based research site?
Developments in science and research need to be in parallel. NDA need to put funding into developing geological skills and research, not just nuclear skills. Need to establish where the data is from the previous research (Nirex etc) and whether it is still in an accessible format (e.g. stored on tapes etc). And the need to maintain and store data for the future.
Is a lab RCF required which could bring skills and training as a secondary benefit?
Will NDA be able to retain and develop its workforce?
Switzerland, Germany, Belgium, France, radioactive waste disposal expertise higher than UK this is a problem. Where to get right advice? CoRWM 2? Finland Japan has international peer review team.
We have here such a big 'window' at this stage of the project. At this stage there needs to be clear definition of what specifically is required.
Mining expertise is disappearing fast. Early engagement helps to plan ahead and increase suitable resources.
Fixed price regime for spent fuel will constrain NDA and strangle budget.
Fear that the regulators don't have sufficient resource to keep project on track Inspectorate, EA.
Risk availability of resources in drilling can be tied in with price of oil.
4 groups of resources. NDA, suppliers, stakeholders, physical resources. We are of a generation parallel new build and other programmes are going to suck a lot of resource.
There is a need to overview the knowledge and skill succession planning over the lifetime of the project. Continuity is key.
How much knowledge has been captured already? How much will be lost by time project starts? Overseas nuclear programmes at same time - international market will lead to shortages in available skills.
Expand PR to enrol those that could be a part of future success e.g. schools will provide the resources we need in the future.
Competition from other commercial projects that are more attractive.
Human resources - this is a global market and our regulatory resources are being headhunted. Very stiff competition from other countries for all the HR resources we need- consider the economic cycles for all the industries changes in oil industries, mining, etc may mean skills are no longer around or not indigenous to UK.. Mining experience now in EE, only 2 universities run mining engineering courses. Have to sponsor students as a way round this.
Geological underground expertise is scarce. At what point does NDA need to sign up contractors given the reality of the supply chain? This is important....
Access and availability to information previously gathered to prevent duplication. Security of this information.
There is real mileage in bringing people in from other industries e.g. from Terminal 5, the defence industry etc. To project manage the construction of the repository. There is no unique magic in the project management of a nuclear project.
Local resources in site area - are there enough hotels, hospitals, shops, roads? Focus training in local area?
Drilling rigs can take 1624 months to build. Compliant shaft sinking equipment doesn't exist in the UK overseas equipment may not comply with UK regulations, or EC regulations. The design and build of this type of equipment has a lag time which will impact on timescales.
Succession planning is an issue - senior people in place may retire before 2040. How are we going to replenish this expertise? Issue around the way younger people look at careers - change in culture and attitude, everything is shorter term. Need to manage this within a 40yr programme.
RWMD must take care not to poach skills from supply organisations and turn into a delivery organisation themselves.
Funding - it's a lean burn not a lot of money per contractor once it's shared out. Companies might

need to invest a lot to be able to contribute, but it might not be worth it for them commercially. There are other contracts competing for suppliers' input - there is a risk that NDA will lose out.



Question 4

Commercial Strategy - What should we cover in the commercial strategy, what are the issues we need to address and how should we engage with the supply chain in the future?

Response
The strategy should include how they can use in-house expertise.
Follow-up workshop - focuses on likeminded consultants and contractors around common interest themes e.g. drilling, surface, building and kitting out. Environmental impact.
Suppliers would like to receive a regular update on the progress of the project and their procurement route. What's coming up, how it will be handled etc. e.g. A bulletin in readable plain English.
Some consistence and integration.
Endorse the NEC 3 contract. OGC support it. EA is the stand off regulator.
How will the work be packaged? Establish the critical path for both NDA and contractors. Need info on the type, number of resources/contractors required within the supplier organisation.
Incentivising the contracts.
It would be good for the commercial strategy to include an indicative time line including more definition of the activities within the timeline indicative time line flow chart. A lifetime plan would be a useful supporting document to the commercial strategy.
Smaller suppliers need a clear plan of when our services will be needed and a clear commitment to having the budget available to pay us. Bigger organisations interested in the strategic plan and long term commitments and having a wider involvement in the scoping and responsibility for partnership delivery.
Some terms & conditions could usefully be looked at. One size does not necessarily fit all e.g. small outfits may need variations from large ones.
Options Framework contracts could be used for some repetitive activities but not for main build. Joint venture to achieve the repository.
Make a start a get a framework in place for procurement.....to vague at the moment. Give us a 'straw man' to start with. This could change of course as things progress.
Building alignment within all parts of the supply team. Create a collaborative culture. An 'open book' and transparent methodology.
T and C-be clear about what you expect from and of suppliers. Robust scope too open may work against this. Scope driven by needs is best Design of facility. SafetySite characterisation. Integration - particularly. Are these 4 distinct components lots. What different strategies need at different stages? And for different sites.
It would be good to have a broad timetable on when components are going to start and number of contractors needed.
Is a five-year planning horizon realistic? What is really being procured during this period? There are some things that need a long lead time and others that don't. Will contractors be prepared to commit to plans this far out?
The way risk is going to be dealt with needs to be clearly laid out.
The procurement process need to separate long-term strategic items and shorter term tactical contracts.
Partnership working will build confidence in that it's worth investing in the project and deliver. Don't want framework contracts, they have too many exits and create dissatisfaction in the supply chain.
Clarify whether supply chain needs to think about consortia or whether the focus will be on bringing in individual contractors with specific specialisms.
How do we get best clarity of scope in a changing environment? Strategy needs to cover. risk management needs based approach outcome driven identification of sorts of people in NDA to implement strategy behaviours and values expected of the supply chain Need to define decision-making boundaries between NDA and suppliers Real clarity on NDA responsibilities prior to SLC formation and with each phase.
Main partnering contract and then sub contracts with smaller providers via the partner.

Include in the commercial strategy a general spec for each of the technical areas likely to be involved. Think this would facilitate our discussions. Doesn't need to be set in stone but will help us scope things better in long run.
Identification of risk early engagement with the supply chain.
Relationship will depend on what RWMD plans to do and what plans to contract out? Will still be need for core skill to manage all services contracted out and degree of understanding data and contract behaviour? Concern that the very skilled experts aren't interested in managing a contract because they like doing! International lessons suggest can't contract out all of the services. intelligent customer has to have expertise
Spectrum of views on role of NDA in decision making and the degree of control.
Some suppliers would want to talk direct to NDA rather than through a management agent. Benefits would help NDA be an intelligent client and people doing the work understand why it is being done. NDA may need to equip itself with relevant specialists. Management contractor signing contracts would be a disaster.
Avoid prescriptive specifications this will encourage innovation. Delivery partnership is a good phrase one partner is driving the supply chain where is the risk operationally and financially then we would know what strategy to develop.
How to engage the supply chain in developing the commercial strategy - it might be good to work with a subset of the supply chain represented here on this (can't engage the whole lot!)
Need to split into different parts work back from stage 5. 1. Understand what you know and what you don't. 2. Establish principles. Commission design - work a small group of experts. Middle stage could be awarded to small group. Look at hazards - how procure deep drilling equipment, e.g. a series of discreet packages of work to support the design and planning. 3. Initially, client is very intelligent and manages and bears most of the risk. Technical specification needs to state first what are the contract award criteria? Can't just be cheapest bid. Work out the scoring system. Technical quality must be included.
Incentivisation depends upon what's being done. Consider shared risk approach.
Good practice - Supply chain would like advance warning of what's coming up. Procurement Strategy on website doesn't go far enough. There may not be a project plan but a time sequence of what looking for in what order and with an adequate lead time to form teams with right skill profile.
Re investigation divide into 2 top 30 m, then the deep drilling for the specialist working.
Phased strategy would enable us to provide timeline to contractor engagement and develop appropriate contractual terms.
It should clearly explain what the competition approach is and how it will maximise its effectiveness in support of the project end goal by publishing clear selection criteria. Place precedence of partnership over competition to gain BEST value. Strategy needs to ensure value for money. Price alone is not best value for money.
Contract out in whole lots to partner contractors who will supply on the contract and sub contract some parts and make sure everything is joined up.
Need to establish what sort of structures are needed, where, how to engage with community, colocated? How to avoid baronies silos. Agree with Alan, need to avoid setting up organisation in own image. Will structure at start reflect structure needed at end? Will need proper interfaces between contracts at different stages. Two definite points where RWMD can look at what it's got now and when it becomes manager of project, controlling mind. Look at project cycle; identify what will be needed at each stage - timeline. Need a Make/Buy decision, or an intermediate position, resource enhancement.
Assume that the model establishes NDA as in overall control - provides continuity has to go on indefinitely. So where should the risk of the operation of the site lie? Perhaps a mixture of NDA, contractors and they may have different types and sources of insurance.
Get better at Knowledge Management.
The strategy must be clear that based on a work plan what RWMD will perform and what will be delivered by the supply chain (this will change with time).
RWMD should be able to define "Value for Money" more clearly.
Who integrates the knowledge? Need to define communication routes. A Catch 22 question - until we specify the approach, we can't say what should be covered in the strategy.
The strategy must be clear about how it bundles packages of work together. Will RWMD take responsibility for constructing the integrated team or will they depend on the supply chain to do it.
Offering packages of work rather than secondees to the process. Design a carefully crafted questionnaire as a follow up together with a draft strategy to identify who wants and/or needs involvement.

There has to be context of time frame around the strategy. Important also to define specific scope for each section of the procurement ('big chunks').
Investigation stage needs a management contract - question is, should you appoint a consortium, which manages it as a part of the contract, or appoint a separate management contractor. Benefit of Programme Managers is that they can involve the small specialist expert contractor who wouldn't necessarily be available to the consortia. Need preferred suppliers for some critical processes, e.g. lab testing.
A user friendly web based system to allow suppliers to submit tenders.
Need for a technical managing group doesn't have to be inside NDA though it can be swings and roundabouts. On balance, prefer a managing agent who manages packages on behalf of NDA.
Terms and conditions should be passed down the chain.
Needs to be big enough to be flexible so don't need to micromanage separate contracts. Incentive - what will make it attractive? Needs to be performance and outturn based?
Size and scope of work packages should be tailored to suit the needs of the client and the resources of the contractor.
Degree of risk sharing varies according to size of contractor. Smaller specialised contractors may be precluded.
What might be the right model in 10 years time? It is not possible now to develop a strategy now to last the whole period/strategy always has to be reviewed need a refresh policy. Option is to review the commercial strategy at the end of each stage in the programme. Someone to manage the supply chain so NDA can focus on what it needs to do an integrator model acquiring and integrating the skills (not contracting) this needs a workshop all of its own?
Some thought CS should take a view on a balance between open bidding and prequalification smaller groups. Others felt open bidding has to be the rule and then contractors need to take a view. Framework contracts are a bit of a double edged sword - great if you are in, but a pain if you are not.
We know flexibility is required but we need to be able to plan. A heads up on say 3 year horizon. Share you're thinking the framework agreements don't show the strategic picture. The frameworks only handle part of the story and sometimes overlap. There is expertise not available through frameworks may have opted out. Not in any alliance with others in the supply chain. Framework suppliers have bid in ad hoc way, scopes not comprehensive reflection of capability. Sellafield ran supplier workshops and ombudsman so that the industry knew one another. Members of supply chain here do not know each other.
Knowledge management and value for money need to be adapted over time, there will be changes to the way business is done e.g. European law could change in 5 years. How to make RWMD the sort of organisation that can be this responsive? One of the key motivators is having clear objectives. Set out strategy in smaller chunks.
Regular face to face multidisciplinary meetings workshops to assist in the construction of the frameworks/tenders for the forthcoming period.
Need awareness of global picture, this project is just one part.
At site investigation phase the delivery partner should manage the integration between the site investigation, engineering design and performance assessment. At this stage we want a bundled approach. Bundle can include the small person don't run it like a committee. Expert panels and review groups could monitor.
More focus on consulting with specialist supplier groups for sections of the contract as the project proceeds.
Clear statement of aspiration as to what RWMD wants to deliver. Size of contract, balance of risk, continuity, interaction between supplier and NDA on contract terms, partnership ethos.
Liabilities associated with the contracts and where they lie should be clear. Who is responsible for mitigation of risk?
1. Option is tenders are invited for each discipline for whole of project. Method of payment, different from phase to phase. E.g. early phases reimbursable and later will be fixed. 2. Option - employ different contractors for each phase. 2 key issues. Protecting propriety information from one contractor to another, secondly, ensure that early contractors don't have unfair advantage when tendering in later phases.
The CS should take every opportunity for open, competitive tender. Contractors go for the ones they think they can win.
Look wider than OGC requirements for purchasing strategy.
How much money does NDA want to pay for risk transfer?
Assess competence during procurement.

Contracts should be fit for purpose rather than following a set path. Clear time lines for contracts is essential.
RWMD should address risk responsibility early in process not leave it for suppliers to pick up later.
If preferred suppliers are needed, then one way to identify them is to seek expressions of interest this seems to be something that the NDA does not do consistently.
Ensure work scope does not lead to dependence on one supplier because if they fail, the project will falter.
Commercial relationship. Make buy decisions. Balance issue 1 e.g. NIREX became competitor in its own market place. No fishing please. Balance 2 expertise to be intelligent customer but not so large that start interfering Everyone needs to know what research programme will be and irrespective of organisation size need to be confident that they can contribute. RWMD to have an inclusive and enabling approach to supply chain relationship. Must have innovation as part of strategy.
Framework agreements, problems are that only a few people can do the whole range they cut a lot of people out of the bidding.
Although the NDA is good at engaging in this sort of forum (large workshops), it does not generally encourage one to one engagement with contractors, which would be useful in this programme. Need to reflect that some areas of work can be clearly defined (using bills of quantities) but others can not therefore do not need to try to use the same approach for everything? Commercial strategy still dependent on what is being procured as this will determine whether e.g. fixed price or other mechanisms are suitable. The nuclear industry tends to define what is being procured very tightly leaving no room for innovation other industries are very different. NDA could learn from other projects such as the Jet project (Culham), Chemical Industry contracts. Should take into account the feedback from the earlier supply chain workshops which the NDA held in September 2008.
There needs to be someone responsible for the integrated implementation of the Work breakdown Structure.
Needs to reflect the reality of the supply chain What are the value for money criteria? 1.1 conversations about what comes out of this workshop. Let's have a look at the draft strategy. Engage supply chain with looking for solutions focus with smaller groups.
Look at oilfield contracts (crinologic) and others for diff. stages of the project.
Benefits of partnership contracts 1. We are experienced and good at joining up and coordinating sub contracts 2. We can then plan for and provide flexibility of resourcing 3. We know who to talk to and when so things happen in good time 4. We can remind you of what we need from you to make sure we can deliver for you 5. That frees RWMD to deal with the government, local politics and community issues 6. We can still use competitive tendering for significant subprojects 7. Sub contractors have a clearer understanding of what is required and when and can deliver more efficiently and effectively 8. We can also act in an advisory capacity and support you in making decisions.
Commercial strategy should be developed in conjunction with the communications and regulatory engagement strategy.
Further engagement needs to be transparent, fair and open.
Need 3 strategies - one thru site investigation, 2nd construction phase, 3rd for site operation phase.
Demonstrable cost reimbursable contract, e.g. similar to CRINE.
Peer review is essential throughout the procurement process and project implementation.
Consider the following organisational/governance structure. NDASLCPrime Contractor, with the PC letting all contracts. Then retendering the PC for each key stage of the project (site survey, construction, etc.) The advantage of this that NDA sets policy, SLC manages the prime contract, and frees up the PC (which as a commercial organisation is better placed to manage the supply chain) to get on with the job.
We recommend NDA adopts a commercial approach as basis for a further workshop.
One challenge is to include skills development in the commercial strategy somehow.
Continue consultation and there needs to be something in it for the suppliers.
For RWMD to facilitate information exchange and inter - agent understanding within and across supply chain will need to be open about strategy and plans we expected more on the commercial opportunities available. More openness about how use framework contractors. Sense of supplier pecking order based on past experience which we can understand but sometimes feels we are excluded especially when some contractors are former industry insiders!
Options Framework for repetitive elements. Help with funding the procurement process but get consortium on board first through expression of interest and then a very thorough PQQ, Could be separate design and construct or to have a combined contract. However, design first would need contractor involvement. JV for design and another JV for construction? Designer may not have

<p>enough public interest insurance to cover risk for construction, But it can be done. Preferred way forward would be the JV project for the whole project and would include major construction consortium of specialist contractors. Could be a design build and operate (equiv of PFI). PFI operating period is usually 30 years. Head team would need to have client members on it. How would this work if RWMD were part of the JV as well as overseeing the project. T5 is a good model to follow as a way of managing a major project. May need a greater team than currently planned. BAA had tested out contractors on smaller work before T5. NDA could apply a similar approach. Could be applied during decommissioning work. May not work for drilling/mining contractors. A question of packaging.</p>
<p>Three bundles to cover the site investigation. Geochemistry, investigating the ground and site preparation then everything within the site boundary is managed by the prime contractor. In addition to this. Engineering design could be split into a similar number of bundles such as surface facilities, underground excavation and underground facilities. And performance assessment which could also be split into approximately three bundles such as operational safety case and post closure safety case.</p>
<p>Others felt that the idea of a prime contractor not supported by all would not necessarily benefit others in the supply chain and may not work for the regulators.</p>
<p>We need to develop capability for celebrating success when things go well!</p>
<p>Integrate packages drilling logging testing.</p>
<p>Please, RWMD, provide more information and be more transparent still feel 'in the dark'. Sense of preparedness lacking. means we can't prepare</p>
<p>We need to know more about the NDA's procurement structure - we don't know if we are on the supplier list. Do we fulfil the criteria to be involved?</p>
<p>Quality management system needs to ensure the needs for the safety case are met. Verification and validation arrangements should be proportionate to the needs of the safety case, defined at the start and delivered on time. Suppliers should be accredited according to the requirement</p>
<p>Risks need to be well defined and clear, and then they are easier to take into account. Draw a base line of the different types of risks, using the risk register, and incorporate them into the contract strategy and assign them. Partners in the supply chain can identify the risks RWMD don't recognise or know about. Some risks will be incorporated into the contract, the rest remain with the client RWMD.</p>
<p>The expectation has been created we want to participate.</p>
<p>Ways to engage Supply chain in future? Let us see a draft strategy, for comment. But not all parts of strategy as relevant and interesting to all parts of the chain. Money on table would help how far can you push it, expecting good will to last? Might be better to pay a few people rather than get 150 to come. Phased process, early consultation then run it past a few companies who had got past first stage.</p>
<p>The CS needs to integrate the regulators' requirements. The CS must reconcile the regulators' needs as well as the RWMD's and the supply chains.</p>
<p>Project self insurance vs. contractor insurance</p>
<p>Suggestion. NDA to issue a discussion document taking account of experience which might take a view of commercial strategy options - what is NDA's understanding of credible commercial options reward needs to reflect risk, reasonable return on investment.</p>
<p>The strategy should recognise the significance of the institutional knowledge that is being generated and that this is an integral part of the procurement process.</p>
<p>NDA need to clearly define the evaluation criteria to be used in the contract award these need to be clearly communicated to bidders so they know where to focus also evaluation criteria need to reflect needs of each part of the programme e.g. price is not the sole driver. Focus engagement on the specific areas (site investigation, construction etc) rather than covering all areas together. Generally more communication, particularly face to face rather than electronic, and maintain visibility of team and project.</p>
<p>Make it short.</p>
<p>Events like this are good for seeking our opinion, but engaging with large numbers of people has its problems. There's lots of activities work packages that we wouldn't be interested in (our personal cost/benefit analysis - is it worth it?), There's also commercial risk to be managed there are some commercially sensitive strategies which I won't disclose here.</p>
<p>Different ways to pay for delivery to incentivise people to contribute? Bonus, fees, pain and gain share may be most appropriate at construction phase?</p>
<p>Give the innovative a chance to contribute e.g. on how to get community engaged - does current framework cover multi media web based engagement and communication strategy. Extend prequel</p>

into parts you haven't previously reached.
The strategy should assure access to existing information across the whole of the NDA organisation.
The NDA builds the SLC to be a competent licensee based on the skills to operate a disposal facility and buys in the intelligence via a managing integrator for key site investigation and build skills.
NDA has to be clear what it wants - degree of quality as this defines cost. Historically very few capital projects in nuclear have delivered on time and on budget due to client changing minds, a view that this must not happen this time. Flexibility and a good project do they go together? Many lesson learnt about preferential engineering.
Need risk transfer strategy for both design and construction.
Clarity ITT and prequel don't steer to trabant or rolls royce versions. We don't know where to pitch and what resource to invest in bid process. Tell us what you are looking for ad where idea sparks talk to us.
More focussed workshops on specific issues.
Government has reputation for fitting suppliers into a predetermined box but without disclosing dimensions don't fall into hat trap.
This is too early for us - it seems a long way away. The process of getting here excludes some key people; maybe involve professional associations/institutes. We'd be more likely to engage if there was an earlier prospect of a tender with some numbers on it.
Carry the strategy through.
NDA need to be involved but in a different way so they are part of the team. Partnering approach with delivery team a unified organisation with shared responsibility. (Like T5 and BAA) Success based on using existing proven tried and tested supply chain. Issues and how to engage with the supply chain in the future? What are the next steps? Not addressed.
KPIs to measure the performance of both parties and NDA for true partnership, proactive measuring leading rather than lagging, measuring the precursors You need enough capable people
Invest time up front to negotiate on the contract conditions to give an opportunity to allow the supplier to engage.
Can the RWMD manage the supply chain? Yes if the relevant skills are integrated into it - to add to and retain the skills and expertise it has developed i.e. make it work as an SLC.
Business agreement is base for good strategy.
Incentives to speed up the process need to be aligned with quality criteria; this will help with efficient delivery of the project. Run up and run down timescales are equally important to manage. Contractual agreements need to have flexibility in response to outcomes of the investigations themselves.
There needs to be some feedback around the development of this strategy. Today has been great provided there is valuable feedback there is merit in having another event like this at an "appropriate" time.