

Cross-Party Group on Civil Nuclear Industry

17th December, 6pm

Minutes – Nuclear Waste Policy Practice

Present

MSPs

Oliver Mundell MSP - Co-Convener

Stephen Kerr MSP

Colin Smyth MSP (Co-Convener)

Katy Clark MSP

Invited guests.

Non-MSP Group Members

- David Wallace - NDA (Secretariat)
- Charlotte Percival – NDA
 - Laura Hogg - NDA
 - Clive Nixon - NDA
 - Dale McQueen - NDA
 - James McKinney - NDA
 - Eve Pearson – NDA
 - Prof Michael Ward – University of Strathclyde
 - Malcolm Stone – University of Aberdeen
 - Mark Longland – ARUP
 - Bill Hamilton – NRS
 - Simon Napper – NWS
 - Ian Park – NRS

On Teams

- Claire Aitken – NRS
- Andrew Clarke – NDA
- David Calder – NRS Dounreay
- Derek Lacey - CoRWM
- Fiona Bruce – NRD Dounreay
- Gail Ross – NRS Dounreay
- Jennifer Green -
- John Grierson - NRS
- Emily Kearn - SEPA
- Richard McLeod – SEPA
- Niall Watson – NRS Dounreay
- Oli Smith – Scottish Government

- Pete Roche
- Pete Thompson – NRS Dounreay
- Peter Faccenda – Focus North
- Richard Murray - NRS
- Rick Wylie – University of Central Lancashire
- Rita Holmes – Hunterston SSG
- Sam Long - DecomMission
- Tor Justad - Dounreay SSG
- Colin Baxter – NRS Dounreay

Apologies

None received.

Agenda item 1 – Welcome and Introduction

Speaker: Oliver Mundell MSP (Co-Convener)

Welcome and apologies from Emma Harper and Paul S who cannot attend today.

Agenda item 2 – Approval of minutes

Speaker – Oliver Mundell, MSP

Key points:

No objections to previous minutes – unanimously approved.

Oliver Mundell introduced Clive Nixon, NDA Group Chief Nuclear Strategy Officer. OM explained that it is of particular interest and good timing to have Radioactive Waste Management as the theme of the main topic for consideration at the meeting, particularly as we look forward to the Scottish Government's public consultation on High Activity Waste Policy to be launched in 2025.

Agenda item 3 – 'Radioactive Waste – dealing with the legacy'.

Speaker – Clive Nixon NDA

Key points:

Clive Nixon introduced himself and colleagues from the NDA - Laura Hogg, James McKinney and Dale McQueen.

His aim was to outline the current position as regards radioactive waste within Scotland and how it compares to the rest of the UK.

Oliver Mundell highlighted for anyone online, they were welcome to put questions into the chat box or put your hand up to ask questions throughout.

Clive Nixon – The Nuclear industry has generated electricity since the 1950's and we are still in the business of doing this, including at Torness. In doing this, as well as creating positive outcomes, we have created a legacy of Radioactive Waste

around our sites. The NDA was created by the Energy Act in 2004, to deal with this legacy. We are funded by the UK taxpayer to safely, securely and cost effectively decommission our sites, and we are always looking at ways we can improve. We also must always look at the socio-economic impact on the communities we are working in, where the nuclear industry is a primary source of economic income.

We have 17 sites across the UK.

Dounreay, Chapelcross and Hunterston in Scotland. They are all very different sites with different challenges. Next to Dounreay, on our land, is also the Vulcan site which provided research test facilities for submarines. We have a range of facilities on those sites for us to clean up. As well as this, once reactors are fuel free, we will be taking on the AGR reactors in Scotland which are Hunterston B and Torness. This greatly widens the scope of our work in Scotland. We are working with MoD to look at synergies across sites (Vulcan and Dounreay) and consideration is being given to bringing them both together for decommissioning. We are working with our sponsor department (DESNZ) to look at how and when this could happen.

There are two other [MoD] defence facilities in Scotland that have considerable activities, and we are advising to help de-risk their future delivery of decommissioning work.

Circa £300m spent a year is spent on the three Scottish sites and we have 2.5k employees in Scotland. Around 10% of NDA spend annually is in Scotland.

What is radioactive waste? From the activities described we have produced materials that need to be treated. We work systematically to package and treat these products.

We have a wide range of products with different levels of heat, radioactivity, etc.

When things have no more use and are contaminated with radioactive material, they are radioactive waste.

NDA generates High level waste, Intermediate level waste, low level waste and very low-level waste. We refer to high level waste, intermediate level waste and some low-level waste broadly as higher activity waste.

Scotland has no high-level waste but a range of the rest.

Sites in Scotland include a range of waste including Liquors, resins, metals, papers, plastic, soil, rubble, concrete, graphite.

In terms of scale, if you can, imagine an Olympic size swimming pool, the volume of low-level waste in Scotland is around 110 Olympic size swimming pools. Higher activity waste in Scotland is 16 pools.

There is 40k cubic metres of packaged higher activity waste in Scotland compared to UK which is 500k cubic metres.

There are other radioactive waste generators in Scotland. The oil and gas industry create naturally occurring radioactive materials and as you decommission oil

platforms you produce that which is challenging and costly to manage. Hospitals also produce radioactive waste with scans, etc, and universities also produce radioactive waste. Police and fire services use radioactive sources. Fire alarms in your home have radioactive sources. The Oil and Gas industry are the second largest producer of radioactive waste.

Just because waste can be small scale, doesn't mean it can't be dangerous.

Radioactive waste policy is a devolved matter, a matter for Scotland. The UK Government and Devolved Administrations recently published a new policy framework for radioactive substances and nuclear decommissioning in May 2024. It looks at how do we manage waste through the lifecycle in a safe and secure manner.

Scotland uses UK facilities for low level waste, creating a one nation approach to low level waste. There is, however, a difference in management around intermediate level waste between the nations – Scotland look to near surface disposal – England/Wales agrees with this, but also believes that anything too radioactive for this should be contained within a Geological Disposal Facility (GDF) to make sure it's isolated from society and gives it a different level of security.

Around 30% of the intermediate level waste in Scotland described can't be disposed of in a near-surface disposal facility, and Scotland's policy is to store for 300 years above ground. Intermediate level waste being stored for 300 years is very expensive.

For low-level waste there are several management options – in Scotland it's transported regularly to England or Sweden for treatment or to be disposed of.

Fuel from Hunterston and Torness are regularly being sent to Sellafield for storage which is planned to be disposed of in the GDF.

This all raises challenges and questions around the current Scottish policy position – a third of higher activity waste, the majority residing at Dounreay, isn't suitable for disposal in the near surface environment. This is because it's too radioactive so needs a level of containment and isolation to be disposed of akin to that offered by a GDF. We work with our counterparts internationally and this GDF approach is international best practice. Scotland currently has no availability of a near surface disposal site for higher activity waste – and the current policy highlights it will be a number of decades when it is likely to exist. Scotland has a relatively small inventory – is the Scottish method the best and most efficient for the UK taxpayer? and now we have a new UK government, how do we take the new policy and framework, and work together with Scotland to get value for money for the taxpayer.

Hope this gives a good understanding of the challenges we face in decommissioning and waste management, including disposal and the difference in waste types.

Agenda item 4 – Q&A

Oliver Mundell – thank you so much for that, I think that gave a really good insight. Interesting to think about the swimming pools analogy.

Rita Holmes – thanks Clive, that was really interesting. ‘Scottish policy, as is, isn’t financially sustainable’ – I don’t follow this as the whole decommissioning process isn’t sustainable. Why would Scotland begin looking at a deep geological facility as it wouldn’t be ready in time to dispose of the waste? We would still need the stores. We need to keep building the stores and keeping things safe until we have agreement on geological disposal because it’s no closer than it was 10 years ago. Dealing with waste is so expensive now and so slow, especially Dounreay where things are more complex, but also in Hunterston. It’s taken 10-15 years to get waste out of vaults in Hunterston. We had a facility open at Hunterston that was closed by SEPA.

Oliver – thank you, Rita. This is why we have this group so we can ask these questions and it’s positive that we have this forum.

Clive – Thanks Rita, you’ve made some good points there. Are we serious about GDF? Yes, and we are making progress, it’s difficult, but we are making progress, and we are looking to select a community with acceptable geology soon. This is first of a kind challenge and it is difficult. We are sharing experiences throughout the NDA Group which is helping. It’s not easy, it’s a difficult mission and there’s no one to copy off, we are at the forefront of this challenge. We do endeavour for continuous improvement. We are not suggesting that Scotland has a separate GDF solely for its own wastes.

Oliver Mundell – I sound like a Guardian article, but I do think I’m conscious there are a number of things that have happened in the past in the nuclear sector over how waste has been stored and handled that is something you wouldn’t do now. Waste wasn’t really thought about when things were done previously and looking at the next policy we need to think about it in that context.

Katy Clark MSP – I would like a better understanding – I won’t pick up on the skills issue, which I know is an issue – just on the policy about above ground storage, can I get clarity? You mentioned 30% can’t be disposed of in the near surface and a lot of that is at Dounreay – is that being stored elsewhere? Also, the broader point about geological storage and having storage closer to the surface. I know in the past there has been cracks in storage nearer to the surface – are you saying that this should be something in Scotland? Are you happy with the policy or not? What is it you’re calling for? Are you asking us to export to England or to bring the disposal to Scotland? It’s a big debate that it’s safer to keep things nearer to site. The danger of having things below ground is if things go wrong, it’s hard to retrieve.

Clive Nixon – We agree with international best practice – in terms of the quantities of waste, it makes sense to have a facility in England and Wales and add to what’s there. All waste is stored safely, but some of the stores have no end dates. For some of the waste that can’t go into a near surface facility, it wouldn’t be an unreasonable suggestion that it could potentially be added to a GDF in England/Wales. Current policy suggests having waste in different places around Scotland close to the source which doesn’t necessarily make sense – the cost and regulatory requirements associated with this are a lot when we can have alternatives from an engineering and logical point of view.

Katy Clark – Is that the logical view given the history? And given the timescales and having cracks at Dounreay?

Clive Nixon – Making a safety case for the right geology is a really important part of UK policy for any disposal facility and we need the right geology to keep people safe.

James Mckinney – when it comes to GDF, there are international examples – the guidance for safety cases is an international standard.

Oliver Mundell – Coming back to Rita's point – if GDF didn't happen – is this waste going to be stored with other similar waste until that happens? Would we continue with this indefinitely, or would it join other waste at Sellafield?

Clive Nixon – I don't like the idea of indefinite, but it is something we'd have to look at. We're storing in England and Wales with a purpose with the ultimate step being disposal in a GDF. The programs are all uncertain to a degree, but there are elements we can control.

Oliver Mundell – On the cost – what kind of cost would be put on the different options? We are operating where difficult financial decisions are being made, with the spending review, when all government departments will see potential changes, including the NDA. Thinking of my own Chapelcross constituents and site, will there be a hold on decommissioning due to funding?

Clive Nixon – we are in a difficult financial situation; we have a near term affordability challenge. Our aim is to clean sites up and return them to a state for their next use. We have to look at long term goals and positives but there is the need to look at managing near term costs. It's expensive to run a nuclear site, where we can come up with ways to consolidate work that will come up for savings, we can all benefit from.

Oliver Mundell – Can you put a ballpark figure on how much it would cost to hold the waste for 300 years?

Clive Nixon – We suspect a couple of billion, but our programmes are quite uncertain the further out you go. Some of our programmes go on hundreds of years and that's not something we can be accurate about.

Oliver Mundell – Can we go to Pete Roche.

Pete Roche – Presumably if policy was changed in Scotland, you'd be expecting local authorities to volunteer like Cumbria and Lincolnshire to host a GDF.

Clive Nixon – I guess it depends on how the policy looks and whether it's a UK policy or not. I can see your point, but that is a policy question and not for me to answer.

Oliver Mundell – I wouldn't say it's fair when 90% of the higher activity waste in the UK is in England and Scotland is moving away from active generation - there are two fairly advanced GDF activities in the works in England, and I wouldn't see people signing up to send nuclear waste to Scotland.

Clive Nixon – we are quite advanced in our search for a location in England, so this isn't something that has crossed my mind.

Oliver Mundell – question from Tor.

Tor Justad – Great presentation Clive. I represent "highlands against nuclear" and Dounreay Site Stakeholder Group – waste going from Scotland down to Sellafield is what we began campaigning about 15 years ago with waste going by sea, rail and air to Europe, America and England, so we agree with low level storage. On the GDF question, I recommend people watch 'Into Eternity' which discusses a similar project in Finland where they were asked if something could last hundreds of years and they say no. Clive, can you tell me how long it'll be before a GDF opens in England? I understand you paid local authorities £3m to get them onboard which doesn't sound great. You mentioned waste from Hunterston and Torness, but you didn't mention Dounreay, but I know there is waste as I see it going on the train. You mentioned cost – I don't swallow that you need to find an engineering solution but surely risk and safety should be the main policy driver, not finance.

Oliver Mundell – thank you for your comment. Point on waste travelling was in terms of waste from active sites.

Clive Nixon – We are still moving waste from Dounreay to Sellafield, and we did move some nuclear material via ship historically, plutonium-based material, based on a national security imperative. With regards to GDF, policy includes working with local communities and the benefits to a community which works with Nuclear Waste Services requires socio-economic benefits. 2050's is when we'd be looking at GDF first waste emplacement – through various cycles we've been through we have had setbacks, but we are now making progress. There is lot of waste that would need to be dealt with over a number of years. We are certainly making progress.

Colin Smyth – What is the difference in timescales between Scottish Government 2070 management and where we could be with a GDF solution in England? What's difference in Scottish proposal of what's done in 2070 compared to what's being done now?

Clive Nixon – We are already looking at how we manage waste so that it's not continuously repackaged and is in a form that can be stored effectively and safely. Timings for GDF 2050's but also looking for opportunities for consolidated near surface disposal which would be 60-70% of higher activity waste, by volume, is looking to be done faster and sooner than that.

Colin Smyth – If waste is being disposed in Scotland in a way that's suitable for GDF – what would then happen to that waste if it doesn't go to GDF?

Clive Nixon – That's the open-ended question we're talking about – it will go into long term storage, but they don't last forever, and the containers don't last forever.

Colin Smyth – Why will it take until 2070? Is it financial?

Clive Nixon – That's government policy.

Oliver Mundell – There is some science behind it.

James McKinney - When it was developed at the time, the strategy for decommissioning was a period of care and maintenance and then active decommissioning, which supported the 2070s position.

Ian Park – I package intermediate level waste, I put it into packages that will sit there a while, but they won't sit there long enough for what you're saying. We've accepted the high-level waste (fuels) will go to Sellafield, we accept the LLW will go to Drigg – why aren't we consolidating the bit in between, why wouldn't we send everything of a specific level to one singular place. I've been to other sites, they have the same waste that I have, and we'll end up with bits all over the place, when we've accepted higher and lower go to a specific place, why wouldn't we agree for one place for it to go? It will be there a long time, and it will need to be looked after for a long time. I see it on a day-to-day basis, why wouldn't we do the sensible thing? I don't mind whether it goes to Scotland, England, Ireland, Wales, or the Isle of Man for that matter, but it should all go to one place.

Oliver Mundell – It's really important to hear that perspective – I do think the repackaging is the bit we don't talk about – we spoke about skills last time – are we going to have people at all these sites in 50 years time to still be repacking and looking after this waste? Will they have the knowledge of what's in the container? One of the risks of the policy is that it doesn't take this into consideration.

Stephen Kerr MSP – This is slightly off the wall – I have an interest in the 22 nuclear subs docked up at Rosyth and Plymouth – last month UK government announced plans to decommission 1 of the subs and to decommission the rest by 2035 – my question is, if we're discussing nuclear waste on the scale you're describing – is there cross-working with the submarine nuclear waste? Does that waste go to the same place as this waste? Do we work together on this? We can see them on google earth parked up with nuclear waste on board – is that not a threat to national security.

Clive Nixon - It is a good question, it has been brought to the NDA to discuss what can be done – the waste is in a relatively compact area of the submarine – some of them are still fuelled and once the fuel is out, they'll want to be moved out of the way and disposed of – we have supported MoD looking at options of how to dismantle – we have come forward with any decommissioning and nuclear waste related thoughts we have that can support in the decommissioning of these subs – dismantling of the submarine overall not so much our skill set but we have helped provide support.

Stephen Kerr – but where will the waste go?

Clive Nixon – the current plan is to send the Pressure vessels to Capenhurst for temporary storage pending disposal in a GDF – options are being looked at for different approaches including near surface disposal – looking at what is the best outcome and what is the optimal approach. There are synergies there that could be and should be explored considering the skill sets on the Rosyth site in my view.

Stephen Kerr - You talk about skills and availability – it's 500 jobs on this decommissioning project but I get the sense that it sounds like a really big ask on availability for skills.

Clive Nixon – this is why we need to work collaboratively so we don't end up working competitively – how do we keep using our skills in different ways – as AGR's come offline, how do we transfer these skills.

Katy Clark – I was wanting to ask about language used around the GDF to make sure I understand what's being said, particularly what Ian's saying – words such as permanent and irretrievable being used gives me concern – we can't guarantee what's due to come, especially given climate change – there are parts of the UK that could be underwater and a lot of these sites are coastal – with these words being used, I assume whatever storage is being used is being done in such a way that we aren't stuck with the solution forever? I find the literal understanding of the language alarming that is it actually permanent and irretrievable?

Clive Nixon – GDF policy is clear – I will let James explain.

James Mckinney – There is a difference between storage and disposal – with disposal, there is no intention to retrieve – GDF facility will operate for many, many decades, the waste will be put into vaults somewhere in a facility, in a safe environment – there isn't the intent to retrieve as it's a multi barrier safety case that is a permanent solution. When it comes to near surface, it's easier to retrieve – it's not like a GDF. It fills quickly and then you back fill. With disposal there is no intent to retrieve. With storage, waste goes in and will come back out, it's interim.

Katy Clark – the intention is that it's permanent, but if the science changes that could change.

Clive Nixon – everything is retrievable – it's like when you put waste in your bin, you don't plan to retrieve that from a landfill, but it is possible, just not something that's planned for – just because it's radioactive doesn't mean we can't get it back.

Oliver Mundell – go to Niall Watson online.

Niall Watson – Hello, I'm chair of unions at Dounreay – earlier point from Rita about length of time decommissioning is taking – being candid it's because a. it's challenging b. facilities weren't designed with decom in mind c. regulatory regime is different than when built – probably in the past there were overly ambitious decommissioning programs, long shot is we'd all like it to be easier and more straightforward and the reason I want to make the point is because skills, socio-economic, etc on sites like Dounreay, having realistic timescales is important in understanding how, when and what skills we require. It's good we have the CPG as I felt for a long time that we need government, regulators, NDA, opco's and communities to work together to decommission in an optimal way – decommissioning is hard, because it is, but thinking from the good of communities it's important we understand these timescales.

Oliver Mundell – Thank you – this is exactly what we're looking for – as an MSP representing a site, what you said around socio-economics, it's important because

we want to know what's happening in the future with the sites – ties into waste, around the timescales as it shows we want to have a plan.

Phil Matthews – first thing, we're delighted to say we're [NuLeaf] on verge of hiring someone to support SCORRS, our Scottish sister, and it shows there is a need for Scottish voice in this conversation. Comment and question on GDF – in England we support communities that are going through this process – it is consent based, and cannot go ahead without the communities agreement – in terms of international process, we're reaching tipping point of seeing progress where previously it said we could never reach a GDF on community consent, Finland, Sweden and now Canada have gone through this – engagement across different communities – Scotland is an outlier as globally everyone is agreeing to the same policy - GDF. We have a consultation in Scotland next year on how to dispose of waste in Scotland – do you know the parameters of this? When will it become clear on this?

Clive Nixon – this is a question for Scottish Government, but we have had secondees, including Laura, to help support them to understand their options and work through pros and cons of scenarios, but again, this is really a decision for Government.

Oliver Mundell – To be clear Clive does not speak for Scottish Government – Mairi McAllan [Minister responsible] is on maternity leave, but before maternity, I think there was a feeling that there should be a genuine conversation and have a proper discussion regarding the policy, not just a 'tick' box exercise that isn't returned to and we wanted to give this opportunity to ready people for this consultation – it's the right time to have this conversation and hear the different views of those in the CPG and hear the range of options available and what's working and what we can do – we can revisit a range of things – try to put, as a group, a range of these questions to Scottish Government and the consultation will be interesting as the SG has done research externally to look at attitudes and understanding around waste where strong feelings came out that communities wanted more of a say and a good portion of participants didn't have a good understanding so wanted to know more to make an informed decision – as a rep of one site, there are people in constituencies who feel they've already done their bit and there is a real mix of views – so there is genuine interest in this consultation.

Sam Long – good forum, I run a body called decom mission – even in renewables we need decommissioning as we transition from 20th into 21st century – can't build new infrastructure without dealing with the previous – underneath piece about circularity and what we do with materials, skills, etc. It is also an economic activity, and we need to retain skills – frustrating not a greater understanding of this – there's a lot of Scottish economy, jobs at risk – building a GDF is a real technical challenge – to build you'll need mining skills, which are on a big decline and are at risk, which means it'll be more expensive to do it in the future – I appreciate the financial constraints but it's important to keep note of this.

Pete Roche - I believe Hunterston B will be free of spent fuel fairly soon, but NDA not taking over until April 2026. Why the long wait?

Clive Nixon – fuel is still being sent to Sellafield and once it's declared fuel free there will be a period of transition of the site from EDF to NDA.

Bill Hamilton – on that point, we are looking at the transfer of the B site, a lot of work going on between us – NRS - and EDF on the transition, especially work force, hearing lots of good things, looking at around 500 days until the take over.

Pete Roche - Is that one third of High Activity Waste by volume or radioactivity not suitable for near surface.

Clive Nixon - volume

Tor Justad - Also 2070's has now become the interim state for Dounreay - up until recently was 2032, and the remaining cost is now £8.7 billion.

Oliver Mundell – there seem to be no further comments on this topic – I'm aware the Deputy Convener is looking to introduce a motion for debate in January/February in the Scottish Parliament on the subject of skills. On the back of this meeting, I'll be looking to draft a letter to send to Gillian Martin MSP [Interim Cabinet Secretary] highlighting the importance of taking account of this groups views but also the wider public around the HAW policy consultation. Once the consultation is published, and we understand the scope of the consultation, we could relook as a group around a joint submission.

Colin Smyth – agree we look at timescale around consultation will give us an idea of how and when to respond.

Oliver Mundell – they want consultation to be wide and engaging – for good, or bad, communities most impacted should be in the driving seat when it comes to this, including trade unions and workforce who have valuable insights – don't think anyone knows better than those in the position already. This takes us to end of the meeting.

Agenda item 5 – Date and time of next meeting

Oliver Mundell – future meetings planned – next meeting looking to be in March in Annan near the CPX site allowing MSP colleagues to visit the site who haven't already and to get the community and workforce to engage with CPG. If people have ideas for future meetings, please feel free to send these over.

Thank you very much, on the surface not the most exciting way to spend an evening, but once you get into it, you see the impact on communities and national security, you understand that the legacy of nuclear waste isn't something we can ignore.

- **Meeting close** -