

ITEM 5: UPDATE ON NATIONAL DEVELOPMENTS IN RADIOACTIVE WASTE MANAGEMENT



Report to RWPG, 8th November 2022

This report provides an update on recent developments in radioactive waste management. It covers:

- NDA Group update;
- UK Government update;
- Nuleaf news;
- AGR update;
- Regulatory update; and
- International news.

1. NDA Group update

1.1 Nuleaf planning officers will join the **Nuclear Industry Group for Land Quality – Planning (NIGLQ-P)** as part of the November RWPG meeting to continue discussion on nuclear industry engagement with local planning authorities. NIGLQ-P includes members of each of the NDA Group companies and is being expanded to involve EDF and AWE.

1.2 Nuleaf's Executive Director joined a **Critical Enablers (CE) Theme Overview Group (TOG)** meeting on the 7th October and a joint **Sustainable Decommissioning and Remediation (SDR) and Integrated Waste Management (IWM) TOG** on the 10th October. Key issues discussed were:

Site End States (SES): The SES for all NDA sites have been under review and a generic options paper for the Magnox sites was approved in 2020.

The preferred options for the end states at Winfrith, Trawsfynydd and Hunterston have been agreed and Berkeley is expected to be finalised soon. Magnox is still working through the sequencing of site decommissioning and how this might be achieved. As an example, it may be that a dedicated team could be established to decommission boilers at every site in sequence, rather than whole sites being decommissioned one after another.

NDA are currently looking at how to integrate sustainability and social value considerations into their plans. Finally, the Programme Business Case is with the Government awaiting approval. Given the current political situation it is not clear when this will occur.

The preferred Site End State for the LLWR was accepted in May 2022. Credible options for Sellafield were approved in late 2020 and work on assessment of the components of the SES is underway, accompanied by stakeholder engagement.

Proportionate Regulatory Control (PRC) Discussions have been ongoing for a number of years about the potential to move to a more proportionate approach to regulation of nuclear licensed sites, enabling earlier delicensing and offering scope for optimised site end states.

While, technically, in-situ disposal is possible under the current regime, it is unlikely that ONR will delicense a site without new primary legislation. The Energy Security Bill 2022 addresses this issue and is expected to gain royal assent in early 2023. PRC will also be supported by the Decommissioning and Radioactive Substances Policy as and when that is put out to consultation.

National narrative: The national narrative, intended to be an accessible document explaining the changes underway in the decommissioning of NDA sites is under further development. Nuleaf has commented on a recent draft, and it is hoped a further iteration will be produced for discussion in early 2023.

Climate change: The Environment Agency gave a presentation on the regulatory consideration of climate change impacts and adaptation in terms of waste management, landfill and land contamination, focussed on LLW. They have launched a project to look at these issues in detail. It will focus on coastal erosion and the vulnerability and response of engineered barriers to climate change.

Asbestos: Asbestos is present at all NDA sites and will need to be managed safely. The NDA met in May 2022 to consider radioactive and non-radioactive asbestos, create a clearer picture of the challenges and assess how this issue can be dealt with.

The NDA's goal is to remove as much asbestos as possible before placing sites into Care and Maintenance. It is also seeking to move from a reactive approach to one that is more strategic. One major challenge is that the UK capacity for asbestos disposal is limited, with many existing landfills having a finite lifespan. Also, the scale of the inventory is still unclear and probably won't be known until demolition occurs.

1.3 The NDA has published three new socio-economic reports covering Cumbria, Magnox and Dounreay:

The **West Cumbria**¹ paper concludes that in 2021 Sellafield and the LLWR, across Cumbria and Warrington, directly contributed £778million of GVA to the UK, of which around £600 million was in labour costs, with a workforce of 11,760. The West Cumbrian sites spent £1.36 billion on goods and services, around half of which was paid to firms located in West Cumbria or with local operations.

When multiplier effects are taken into account the estimate is that Sellafield and LLWR generated £2.52 billion of GVA and supported 40,360 jobs, around half of which was within the local economy.

The **Magnox**² study was undertaken by Economic Insight. It found that, across 12 sites, Magnox directly employed 2,043 staff in 2021. If indirect and induced employment is included, 7,277 job nationwide are supported. Magnox contributed £393 million in direct, indirect and induced GVA.

The study also highlights the significant differences in employment and spend between sites. While Harwell and Wylfa both employ over 250 staff directly, Bradwell, in quiescence, only has 15 staff on site. Direct GVA from Harwell is £17million while for Bradwell it is only £1million.

The **Dounreay**³ study estimates that the site contributes £77.5 million a year to the economy of the far north of Scotland and employs 15% more staff than 6 years ago. It also comments that the Caithness and North Sutherland Regeneration Partnership (CNSRP), set up to help the area transition as Dounreay employment declines, has been highly successful in attracting new industries such as the Beatrice Offshore Wind Farm and a space satellite launching facility.

Nuleaf held an online meeting with Jamie Reed of NDA to discuss the reports on the 2nd November. A verbal report of that meeting will be provided to the RWPG.

1.4 Magnox has published an infographic setting out the funding allocated over the last decade through the **Magnox socio-economic scheme**⁴. The most significant funds were provided to the Wylfa site (£2.2million) and the least to Winfrith (£66,000).

¹https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1106820/The_economic_contribution_of_the_NDA_to_the_West_Cumbria_economy_-_2022.pdf

²https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1106369/Magnox_economic_impact_assessment_2022.pdf

³ <https://www.gov.uk/government/publications/dounreay-socio-economic-report>

⁴https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1102644/Infographic_SSG_in_English.pdf

1.5 It has been announced that the NDA has established a three-year partnership with the **National Decommissioning Centre (NDC)**, which involves the University of Aberdeen, Net Zero Technology Centre (NZTC) and the oil and gas industry. The aim of the collaboration is to share learning on decommissioning between the nuclear and oil and gas sectors⁵.

Karl Sanderson, Head of Cross-Industry Learning at the NDA, said: *'The civil nuclear industry has engaged with other industry sectors on many areas of common interest in recent years, sharing lessons learned on over 15 topics, involving more than 150 organisations. This new relationship with the NDC will build on prior collaboration to enable joint projects and research to be conducted, that aim to underpin the UK as an emerging centre of global excellence in decommissioning.'*

1.6 It was announced on the 11th October that the NDA has signed a **Memorandum of Understanding** with Cwmni Eginio, intended to support the development of Small Modular Reactors (SMRs) in north Wales⁶. The MoU enables the NDA to share information and expertise on the characteristics of the land at Trawsfynydd, align decommissioning plans with the new nuclear project, and support Cwmni Eginio with stakeholder engagement and socio-economic plans.

NDA Chief Executive, David Peattie, said: *'We are engaging with several stakeholders to explore potential uses of our estate, using our capability and expertise to support the Government in delivering its energy security strategy. This is an important step, formalising our support to Cwmni Eginio, and enabling the NDA to deliver its mission to safely decommission our sites and free up the land for future use. The success of the project at Trawsfynydd will also benefit the community neighbouring our North Wales site.'*

Welsh Government Economy Minister Vaughan Gethin stated *'The MoU between Cwmni Eginio and the NDA is very good news. We established Cwmni Eginio to maximise the potential of the Trawsfynydd site to benefit the economy of the surrounding area. I'm pleased to see this further step forward in the project.'*

1.7 **Sellafield** has published its 2021/22 review⁷. It sets out the planned progress with the site mission up to 2040 and wider work designed to support the supply chain and create a positive social impact.

1.8 Professor Stephen Thomas, of the University of Greenwich, has claimed that the total bill for nuclear decommissioning in the UK could grow to £260 billion⁸. This contrasts with the NDA's current estimate of £149 billion. Prof. Thomas identifies the

⁵ <https://www.thechemicalengineer.com/news/nuclear-and-oil-decommissioning-sectors-join-forces/>

⁶ <https://www.gov.uk/government/news/agreement-to-progress-development-of-new-uk-small-modular-reactors>

⁷ <https://www.gov.uk/government/publications/review-of-the-year-202122-creating-a-clean-and-safe-environment-for-future-generations>

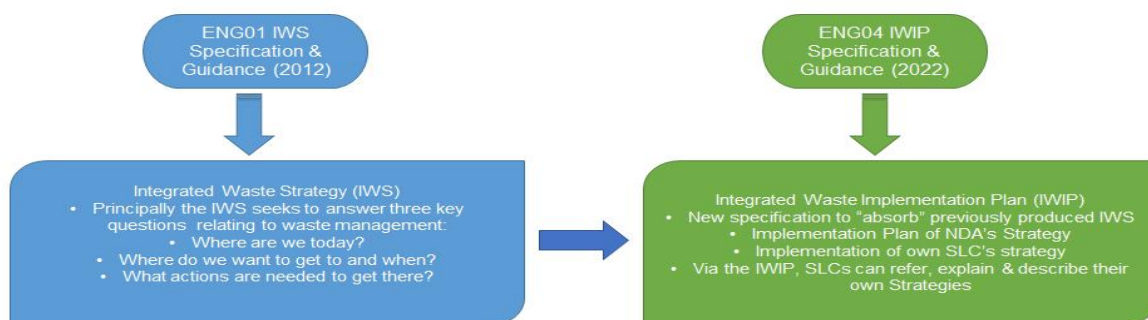
⁸ <https://www.theguardian.com/environment/2022/sep/23/uk-nuclear-waste-cleanup-decommissioning-power-stations>

need for remedial action on sites and the rising costs of geological disposal as two critical factors.

In response Nuclear Waste Services (NWS) stated *'While we are clear about the current legacy of waste which already exists, a GDF would have to handle additional waste from new facilities being developed. The actual cost will ... depend on the number of new nuclear projects that the UK develops in future and any additional waste from those stations.'*

1.9 The NDA has published **ENG04 Specification and guidance on the content and format of an Integrated Waste Implementation Plan (IWIP)**⁹. The aim of the guidance is to *'ensure that there is a clear thread from Her Majesty's Government (HMG) and Devolved Administrations (DA) policies, through NDA and site waste strategies, to the implementation of site waste management plans. Such a thread will enable the beneficial development of each to be influenced by the other, facilitated by a clear flow of information between relevant stakeholders and authorities.'*

The IWIP should be consistent with the **Integrated Waste Strategy** and the two may be combined to enable a consolidated presentation of the strategic and implementation planning aspects (see below). It includes all wastes covered by the NDA Integrated Waste Strategy, including non-radioactive wastes. Looking forward it should cover the AGR decommissioning sites as these will fall within future NDA planning.



The IWIP is intended to support an integrated approach across the NDA estate and identify where there is scope for collaboration between NDA and the wider nuclear sector.

⁹ <https://www.gov.uk/government/publications/eng01-specification-and-guidance-for-an-integrated-waste-strategy/eng04-specification-and-guidance-on-the-content-and-format-of-an-integrated-waste-implementation-plan>

In terms of engagement, the Guidance states that the production and presentation of the IWIP will be part of a wider communication and consultation process that will strengthen and improve communication between SLCs, the NDA, regulators and stakeholders and that this will be facilitated by information exchange at dedicated fora established by the NDA. Nuleaf will seek to clarify NDA plans for engagement, at a national and site level.

1.10 Nuclear Waste Services has published the latest edition of its magazine: One the Level¹⁰.

2. UK Government update

2.1 The **Energy Security Bill** was introduced into Parliament on the 6th July. It is designed to enable investment in a range of new, low carbon energy technologies and well as supporting an energy price cap. The Bill also:

- Supports the decommissioning and clean-up of legacy nuclear sites by clarifying that a GDF located beneath the seabed will be licensed.
- Brings forward the final delicensing and re-use of nuclear sites, allowing more proportionate clean-up. The Government estimates this will deliver savings of around £490 million over the first 20 years, with similar savings up to 2080.¹¹

2.2 BEIS has a new Secretary of State, the **Rt. Hon Grant Shapps MP**, just a few weeks after the previous one was appointed. **Graham Stuart MP** is Minister of State (Minister for Climate). The latter's responsibilities include nuclear and nuclear supply chains. Mr Stuart was previously Minister of State in the Foreign and Commonwealth Office and is MP for Beverley and Holderness. Born in Cumbria, he previously worked in publishing and was a member of Cambridge City Council.

2.3 It has been announced that the former coal fired power station at **West Burton** in Nottinghamshire has been chosen as the site for the **STEP fusion energy** programme¹². West Burton was one of five shortlisted sites along with Severn Edge and Moorside.

It is claimed that the STEP programme will create thousands of highly skilled jobs during construction and operations, and attract other high-tech industries to the region, furthering the development of science and technology capabilities nationally. A commitment has also been made to the development of apprenticeship training centres in Nottinghamshire, building on the success of the UK Atomic Energy Authority's (UKAEA) Oxfordshire Advanced Skills centre in Culham, which develops around 180 apprentices from 25 employers every year.

¹⁰https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1114107/On_the_Level_Sep22.pdf

¹¹ <https://www.gov.uk/government/news/plans-to-bolster-uk-energy-security-set-to-become-law>

¹² <https://www.gov.uk/government/news/west-burton-selected-as-home-of-step-fusion-plant>

2.4 The Science and Technology Committee has published all the written evidence¹³ submitted to its inquiry 'Delivering nuclear power'. A total of 51 submissions were made, including those from CoRWM, NDA, Copeland Borough Council and Nuleaf.

3. Nuleaf news

3.1 Nuleaf held an online meeting on nuclear **Emergency Planning** on the 11th October. The meeting heard from ONR on the current policy context and a range of other issues. There was a high level of interest, with both regular Nuleaf attendees and others, including Emergency Planning officers, participating. A draft note of the meeting will be circulated to all who attended.

3.2 Given the significant changes in the policy environment and NDA structures in the last two years, a comprehensive review of all Nuleaf **Briefing Papers** has been undertaken, and the new papers are now available on the Nuleaf website. The Briefing Papers have also been redesigned as part of a general revision of all communications materials.

Two further Briefings, on Transport and Engagement, are in preparation. Drafts will be presented to members for comment before finalising.

3.3 Over the summer Nuleaf commissioned Assystem to undertake an **Appraisal of Support for Nuclear Communities**. The report has now been finalised and will be circulated to Nuleaf members.

Assystem were asked to look at three issues – the extent to which the NDA 'adds value' to local communities around decommissioning sites; how community benefits for decommissioning sites compare with those of comparable industries; and how the added value provided by NDA compares with that offered by similar bodies in other countries.

The report will be presented to the December Steering Group meeting. It will be used to lobby Government and the NDA and inform future Nuleaf engagement.

4. AGR update

4.1 EDF, which operates the UK's AGR plants, is considering whether there is a case to enable the Hartlepool and Heysham 1 reactors to remain open beyond their current closure date of 2024. This will require discussion with regulators and Government. The review is expected to take a few months.

¹³ [Delivering nuclear power - Written evidence - Committees - UK Parliament](#)

4.2 The **Nuclear Free Local Authorities (NFLA)** has published a briefing on the AGR closure programme. The Briefing focusses on the issues around cracking of graphite in the reactor core and other issues that have led regulators to require the end of generation at the stations¹⁴.

5. Regulator update

5.1 ONR has published their **Chief Nuclear Inspector's report** on the nuclear industry¹⁵. It focusses on three areas: Management of aging facilities; conventional health and safety performance; and leadership for safety and security culture.

In terms of the first of these, the Inspector comments that 'we judge that, although safe and secure operations are being maintained, the adequacy of arrangements varies across licensed sites, as does performance against those arrangements. We found that licensees have improved their programmes for the management of ageing assets and continue to do so; each licensee remains on a journey of further strengthening their existing arrangements in this area.'

On conventional health and safety it is concluded that 'Performance remains variable, with some duty holders' performance remaining static or declining. Consequently, we are increasing regulatory oversight in targeted areas, and taking enforcement action where we consider it appropriate to do so.'

6. International news

6.1 Nuleaf's Chair, Cllr David Moore, along with Cllr David Wimble and Philip Matthews, participated in a GMF meeting in Borsele, Netherlands on the 4th and 5th October. The highlight of the trip was a visit to the COVRA (Dutch radioactive waste management organisation) facility at Nieuwdorp. The site contains a range of innovative storage facilities for nuclear waste. A presentation on the visit will be given at the December Steering Group meeting.

6.2 Nuleaf's Executive Director was invited to join an IAEA technical meeting in Vienna on the 31st October to 4th November. Due to the Covid pandemic, the meeting was the first on local and community perspectives to be held for three years. Presentations were given by local community representatives from a wide range of nations, from the USA to Uganda. A report on this meeting will be provided to the next Steering Group.

6.3 Nuleaf participated in a Swedish visit to West Cumbria in September. The delegation, from the Kavlinge nuclear site, visited Sellafield and also held meetings

¹⁴ <https://www.nuclearpolicy.info/wp/wp-content/uploads/2022/10/A364-NB250-%E2%80%93Update-on-the-AGR-closure-programme-%E2%80%93Oct-2022.pdf>

¹⁵ <https://www.onr.org.uk/documents/2022/cni-annual-report-2022.pdf>

hosted by Copeland Borough Council at which Cllr David Moore and Philip Matthews spoke.

6.4 Philip Matthews joined other members of the GMF Steering Committee in an online meeting with the **Canadian Association of Nuclear Host Communities** (CANHC)¹⁶ on the 21st October. Representatives of CANHC spoke of their interest in building connections with European networks. The systems of national and local government in the UK and Canada share many characteristics and it was acknowledged that both Canada and the UK could learn from the experience of the other.

More recently, Nuleaf joined the leadership of the CANHC and their American equivalent at a GMF hosted dinner held during the IAEA meeting in Vienna (6.2).

6.5 Nuleaf members may be interested in signing up for the **Nuclear Energy Agency's** (NEA) monthly news magazine. The latest edition includes articles on the funding of decommissioning and transport of nuclear waste¹⁷.

¹⁶ <https://www.canhc.ca>

¹⁷ https://www.oecd-nea.org/jcms/pl_72806/nea-news-39-1-39-2