

Meeting: Nuleaf Steering Group
Date: 15th September 2021
Item: 6
Subject: Update on Geological Disposal Facility (GDF) siting process
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Introduction:

This report provides an update on recent developments related to the process for identifying a site for a Geological Disposal Facility and activities at RWM. It covers:

- Geological Disposal Facility (GDF) Siting Process;
- RWM Update;
- CoRWM Update; and
- International situation.

Recommendation:

This report is for noting.

Background information:

The UK Government's policy on **Working with Communities – implementing geological disposal** was published in December 2018¹, with the equivalent policy for Wales published in January 2019². The **National Policy Statement**, governing the planning aspects of the GDF in England, was published in July 2019³.

1. Geological Disposal Facility (GDF) Siting Process

1.1 RWM has been in initial discussions with **Hartlepool Borough Council** and **Lincolnshire County Council** regarding the possibility of GDF Working Groups being established in these communities.

¹ <https://www.gov.uk/government/publications/implementing-geological-disposal-working-with-communities-long-term-management-of-higher-activity-radioactive-waste>

² <https://gov.wales/docs/desh/publications/190116-geological-disposal-of-higher-activity-radioactive-waste-working-with-communities-en.pdf>

³ <https://www.gov.uk/government/publications/national-policy-statement-for-geological-disposal-infrastructure>

In **Hartlepool** the Wharton Trust, a charitable community organisation, has identified itself as an interested party and has been in dialogue with RWM and the main political parties on Hartlepool Borough Council. The Chief Executive of the Wharton Trust, Sacha Bedding, argues that Hartlepool has a history of dealing with such materials, that there is a moral obligation to find a permanent solution to the waste question, and that the process would be 'wonderfully democratic'⁴.

Ben Houchen, the Tees Valley Mayor, has voiced his opposition to the scheme, as has the local Conservative MP Jill Mortimer. Both have criticised the engagement of the local authority in discussions, leading to the resignation of the Conservative Deputy Mayor, Councillor Mike Young. In addition, Mr Houchen and Ms Mortimer have submitted a Freedom of Information (FOI) request to the local authority to gain details of what discussions have been held with RWM. The local Labour group has also made an FOI request.

In Lincolnshire the interested party is **Lincolnshire County Council** with the site of the former Theddlethorpe Gas Terminal being proposed as the potential location of the headworks⁵. The leader of the County Council, Cllr Martin Hill, has stated that 'At the moment we have no opinion until we know more detail. It's about starting a conversation with local people, so they can understand what is involved and what the future opportunities might be'. **East Lindsey District Council**, where the Theddlethorpe site is located, has stated that 'Instinctively we would be against such a proposal. However, we would need to fully understand the community views on this...and we will, of course, support the local community.'

Nuleaf has written to the leaders of Hartlepool and the Lincolnshire Councils to highlight the support that this network can offer to any local authority interested in engaging in the GDF programme.

1.2 Nuleaf's Executive Director was invited to give a presentation and discuss the GDF siting process with Allerdale Borough Councillors on the 12th August. The meeting involved Councillors from each of the political parties, along with a senior official, and covered a range of issues of interest to the Members present.

1.3 The **Allerdale Working Group** hosted online community drop-in meetings on the 26th August and the 9th September⁶. The meetings, via Zoom, are being run by **Community Organisers**, a national charity independent of the Working Group. They last around 1 hour and include 'breakout rooms' where participants can ask

⁴ [Updates: Nuclear waste issue shouldn't be 'kicked into long grass', says charity boss exploring proposal - Teesside Live \(gazettelive.co.uk\)](https://www.gazettelive.co.uk/news/1611444/updates-nuclear-waste-issue-shouldn-t-be-kicked-into-long-grass-says-charity-boss-exploring-proposal-teesside-live/)

⁵ [Theddlethorpe site considered for radioactive waste disposal - BBC News](https://www.bbc.com/news/health-55844444)

⁶ <https://allerdale.workinginpartnership.org.uk/we-need-to-talk-about-geological-disposal-launching-our-online-events/>

questions and discuss issues of interest. A series of in person sessions have also taken place⁷.

1.4 In **Copeland** the Working Group is planning an exhibition roadshow that will tour 10 locations across the Borough between September 1st and 17th.

They have also published the results of research on the view of local people that RWM and their research partner Yonder have undertaken on their behalf. The research found that the most important considerations identified by residents were safety, economy/employment, transport, geology, the need for engagement and the local environment. The full summary is available here⁸.

1.5 A decision on the re-organisation of local government in Cumbria, North Yorkshire and Somerset was announced by Communities Secretary Robert Jenrick in July. In Cumbria it is proposed to create two new unitary authorities, one covering Copeland, Allerdale and Carlisle and the other covering Barrow, Eden and South Lakeland. In Somerset and North Yorkshire it is proposed to create single unitary authorities covering the whole area.

The decision, which has implications for the GDF siting process in west Cumbria, and potentially in the other areas undergoing re-organisation, has been criticised by Cumbria County Council. The Council has claimed the decision is illegal and is motivated by party political concerns. It is understood that they are considering a legal challenge.

2. RWM Update

2.1 The initial stage of RWM's research project on borehole sealing has been completed successfully⁹. The project is seeking to demonstrate that deep boreholes, required in the exploratory phase of the GDF siting process, can be permanently sealed. The first demonstration was done using an existing borehole at the Harwell site in Oxfordshire, with around 1 tonne of bentonite clay used as the sealant. The project is now being evaluated by the Environment Agency, who will need to be satisfied that such a system can work ahead of issuing an environmental permit.

Further demonstrations will now be undertaken in a range of rock types.

⁷ <https://allerdale.workinginpartnership.org.uk/allerdale-gdf-working-group-announces-series-of-public-drop-ins/>

⁸ https://copeland.workinginpartnership.org.uk/wp-content/uploads/2021/07/Yonder_Copeland_Summary_Local_Opinion_Research_July.pdf

⁹ [Borehole project tests seals for future disposal of radioactive waste | E&T Magazine \(theiet.org\)](https://www.theiet.org/news/borehole-project-tests-seals-for-future-disposal-of-radioactive-waste)

2.2 RWM published the latest **Inventory for Geological Disposal**¹⁰ in May. This sets out the inventory as of 2019 and is based on Government and industry plans.

It estimates the maximum packaged volume of material destined for a GDF at 773,000m³, assuming 16GWe of future new nuclear build. Around 90% of this is low heat generating waste (LLW, ILW and depleted, natural and low enriched uranium), though this only constitutes 5% of the radioactivity. Conversely, high heat generating wastes make up only 10% of the packaged volume but 95% of the activity.

2.3 Nuleaf's Executive Director met with Simon Hughes, Mike Brophy and Simon Napper of RWM on the 25th August to share updates and planned work. Both Simon Hughes and Guy Esnouf of RWM will be providing an update on progress with the GDF siting process to this Steering Group meeting.

3. CoRWM Update

3.1 The Committee has published its **Annual Report for 2020/21**¹¹ and its **Programme of Work**¹² for 2021/22. During this year CoRWM plans to:

- Publish position papers on the cost of GDF construction, the regulatory landscape and the challenges of developing an 'inshore' GDF.
- Undertake a review of the NDA's assumptions and strategy for managing the UK radioactive waste inventory, especially in terms of the use of a 'risk based' approach.

4. International situation

4.1 EURAD held an online webinar on the SITEX Network on Wednesday the 30th June. **SITEX (Sustainable Network for Independent Technical Expertise on radioactive waste management)** involves a range of technical expertise, regulators and civil society bodies. The event involved a number of presentations on the work of SITEX, including that on GDF safety cases, boreholes and on innovative techniques for dialogue. It can be viewed here¹³.

¹⁰ https://www.gov.uk/government/publications/2019-inventory-for-geological-disposal?utm_medium=email&utm_campaign=govuk-notifications&utm_source=7f22c747-c407-4af3-bc83-8a6c4ec4be0d&utm_content=immediately

¹¹ [Committee on Radioactive Waste Management annual report 2021 \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/100000/committee-on-radioactive-waste-management-annual-report-2021)

¹² [CoRWM Proposed Programme of Work 2021 \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/100000/co-rwm-proposed-programme-of-work-2021)

¹³ [Webinar: Lunch & Learn | The SITEX.Network by SCK CEN Academy \(bigmarker.com\)](https://www.bigmarker.com/SCK-CEN-Academy/Webinar-Lunch-Learn-The-SITEX-Network)

Further events are planned in October on the US Nuclear Waste Management and Disposal Strategy and the Italian GDF Siting Process, and these are open to any Nuleaf member. More information can be found here¹⁴.

4.2 On the 26th of August the Swedish Government announced that they had decided to increase the capacity of their interim storage facility for spent fuel (CLAB)¹⁵.

Continuing delays in making a decision on whether to proceed with a GDF and encapsulation plant, along with limited capacity at CLAB, had raised concerns that existing nuclear stations would be forced to cease operation beyond 2024. While that may have been averted, there has been criticism that the separation of the storage decision from that on the final repository may lead to further challenges down the line. The Swedish Government has stated that they hope to take a final decision on the GDF in the coming months.

4.3 Slovenia's radioactive waste management organisation, ARAO, has commissioned a study into the feasibility of developing a deep borehole repository for the disposal of used fuel from the nation's research reactor in Ljubljana¹⁶. The research is being undertaken by Deep Isolation, a US company which has undertaken similar studies in the USA and Estonia.

¹⁴ <https://www.sitex.network/events-and-news/>

¹⁵ [Swedish government delays repository decision : Waste & Recycling - World Nuclear News \(world-nuclear-news.org\)](#)

¹⁶ [Slovenia considers deep borehole disposal : Waste & Recycling - World Nuclear News \(world-nuclear-news.org\)](#)