

**Meeting:** Nuleaf Steering Group  
**Date:** 14<sup>th</sup> June 2023  
**Item:** 4  
**Subject:** Update on Geological Disposal Facility (GDF) siting process  
**Author:** Philip Matthews



## 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;
- Nuclear Waste Services (NWS) update;
- International news; and
- CoRWM Update.

**Recommendation:** This report is for noting.

## Background information:

The UK Government's policy on **Working with Communities – implementing geological disposal** was published in December 2018<sup>1</sup>, with the equivalent policy for Wales published in January 2019<sup>2</sup>. The **National Policy Statement**, governing the planning aspects of the GDF in England, was published in July 2019<sup>3</sup>.

### 1. Geological Disposal Facility (GDF) Siting Process

1.1 The creation of the new **Cumberland Council** on the 1<sup>st</sup> April 2023 means that 3 of the 4 GDF Community Partnerships are located within one local authority area. At least one principal local authority (County, District or Unitary) has to be involved for a Community Partnership to continue.

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

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

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

1.2 NWS has commenced initial work in **Mid**<sup>4</sup> and **South Copeland**<sup>5</sup> to help understand the areas suitability for hosting a GDF. This will entail desk-based studies to assess the feasibility of connecting a surface facility to suitable geology offshore.

Studies may take around 2-3 years and will look at a range of topics, such as geology, labour & skills, local power supply and transport. Another study will be on accessways i.e. potential options for underground tunnels linking a surface site to an underground facility.

1.3 It has been announced that **Andy Pratt** has been reselected as Chair of the Mid Copeland GDF Partnership. Local engagement in Mid Copeland has continued with over 100 people attending recent events on the safety and technical aspects of the proposals<sup>6</sup>.

1.4 **Allerdale Community Partnership** has exhibited a large-scale model of the surface facilities at a repository, something that has received positive feedback<sup>7</sup>.

Mary Bradley, Chair of the Allerdale Community Partnership commented '*These events provide an opportunity for local people to gain a better understanding about geological disposal and express their opinions. The concept of a GDF can be hard to visualise, so by using the new scale model and virtual reality technology, we can really bring the GDF to life.*'

1.5 East Lindsey Council, within which the **Theddlethorpe GDF Community Partnership** sits, held elections in May 2023. The Conservative group lost overall control, though Cllr Craig Leyland has remained as Leader. In Theddlethorpe, an independent candidate opposed to the GDF was returned.

The two Parish Councils covering Theddlethorpe have seen 8 of the 10 seats return anti-GDF members, these having been elected unopposed<sup>8</sup>. The new councillors are all from the Theddlethorpe Resident's Association and will take up their seats on the 4<sup>th</sup> May. Prior to these elections the majority of the Parish Council seats were unfilled and recent meetings had not been able to take place.

## 2. Nuclear Waste Services (NWS) Update

2.1 A new report commissioned by the NDA has concluded that boreholes can play a key role in dealing with the UK's nuclear waste inventory, including disposal of all the nation's heat generating waste<sup>9</sup>. At the same time the study, by Deep Isolation of

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<sup>4</sup> <https://midcopeland.workinginpartnership.org.uk/initial-work-under-way-in-mid-copeland-as-part-of-gdf-siting-process/>

<sup>5</sup> <https://southcopeland.workinginpartnership.org.uk/studies-begin-in-south-copeland-to-understand-feasibility-of-a-gdf/>

<sup>6</sup> <https://midcopeland.workinginpartnership.org.uk/over-100-people-attend-gdf-safety-and-technical-events/>

<sup>7</sup> <https://allerdale.workinginpartnership.org.uk/come-and-see-a-large-scale-gdf-model-at-dunmail-park/>

<sup>8</sup> [Nuclear storage dump opponents sweep into Theddlethorpe parish council \(thelincolnite.co.uk\)](https://www.thelincolnite.co.uk/news/nuclear-storage-dump-opponents-sweep-into-theddlethorpe-parish-council)

<sup>9</sup> [The Engineer - New study on borehole disposal for nuclear waste](https://www.theengineer.com/news/new-study-on-borehole-disposal-for-nuclear-waste)

the USA, is clear that such an approach cannot eliminate the need for a GDF or deal with the full diversity of the UK's waste inventory.

NWS has welcomed the report. They comment that they recognise *'the insight afforded by Deep Isolation's study and (that they) will continue to engage with such developments, while recognising that a GDF will still be required for the majority of the UK higher activity waste inventory, even when Deep Isolation's directional borehole technology is developed to sufficient maturity for potential implementation.'* The full report can be viewed here<sup>10</sup>.

2.2 Dr Rob Winsley of NWS will speak on the UK GDF process at a **EURAD Lunch-and-learn** online webinar held at 12 noon UK time on the 21<sup>st</sup> June. Anyone interested can register on the EURAD website<sup>11</sup>.

### 3. International news

3.1 The Canadian waste management organisation (NWMO) has published its **Triennial Report 2020-22** setting out progress in delivering a geological disposal facility<sup>12</sup>. The report details both their technical work and community and indigenous engagement over this period. Two sites, both in Ontario, remain in the siting process. The selection of the final site for their repository is expected in 2024.

3.2 Nuleaf's Executive Director participated in a **EURAD** meeting in Nancy, France held on the 18<sup>th</sup> to 20<sup>th</sup> April 2023. The event looked at dialogue and development of mutual understanding around a GDF with a focus on monitoring of waste and data management.

The meeting also involves a visit to Bure, the site of the French underground research laboratory. This is 500 metres deep and, since the 1990s has been looking at the capacity of local clay rocks to host a GDF. A presentation on the visit will be made to this Steering Group meeting.

3.3 The Belgian radioactive waste management agency, Ondraf/Niras, has been given permission to construct and operate a surface disposal facility for low and intermediate level waste at Dessel<sup>13</sup>. The proposals also include a new facility for non-conditioned waste. Construction will start in 2024 and the facility is expected to open before the end of the decade.

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<sup>10</sup> [Deep-Isolation-Report-for-NDA-20-March-2023.pdf \(deepisolation.com\)](#)

<sup>11</sup> [Lunch-and-learn session - UK GDF Programme update – a suitable site, a willing community and a maturing facility design and safety case | Eurad \(ejp-eurad.eu\)](#)

<sup>12</sup> [NWMO-Triennial-Report-2020-22-EN-Secured-4.pdf](#)

<sup>13</sup> [Permits granted for Belgian waste facilities : Waste & Recycling - World Nuclear News \(world-nuclear-news.org\)](#)

## 4. CoRWM Update

4.1 Nuleaf staff joined CoRWM meetings held online in March and May. The May meeting included a detailed presentation by Prof. Claire Corkhill on the issues around waste and AMRs. Prof. Corkhill will be speaking at Nuleaf's meeting on AMRs this afternoon.

The two plenary meetings provided a range of useful updates including the following:

- CoRWM are preparing a report on the use of robotics in a GDF. Such technologies could significantly affect the approach taken to GDF development and waste installation.
- The Committee is preparing papers on (a) the underground verification process, (b) retrievability and (c) the potential of alternative solutions to HAW management such as boreholes.
- They will also be looking in more detail at the implications of SMRs and AMRs for legacy wastes and the size of a GDF; and at the issues around Uranium management.
- In terms of Near Surface Disposal (NSD) they are considering the planning aspects. Current proposals are for any such facility to fall under the Town and Country Planning Act.
- The CoRWM website is being renovated.
- One new member is due to join the Committee shortly with another later in the year.

The Committee members also made some comments on NWS:

- They have some concerns about NWS' target of a 2026 date for the move to 2 communities.
- They are in dialogue with NWS on the potential need for a Underground Rock Laboratory (URLs) as part of the UK process. NWS are engaged in work in URLs elsewhere and will undertake further characterisation work as required, depending on the geology at the site finally selected.
- CoRWM believe that NWS need to develop their capacity in terms of humanities and social sciences.
- A new NWS advisory board has been established involving experts from France and Sweden.

4.2 In April 2023 the Committee published a work programme explaining their work over 2022/23<sup>14</sup>.

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<sup>14</sup> [Committee on Radioactive Waste Management \(CoRWM\): programme of work 2022 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/115444/Committee_on_Radioactive_Waste_Management_(CoRWM)_programme_of_work_2022_-_GOV.UK_(www.gov.uk))