

## Submission of Evidence Form – National Development Framework

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Title of evidence

Welsh Government Policy for Higher Activity Radioactive Waste

Summary of evidence

The Welsh Government has adopted a policy for geological disposal as the only viable long term method for managing the whole inventory of higher activity radioactive waste (HAW)<sup>1</sup>.

Although the Welsh Government has adopted a policy for geological disposal of HAW this does not necessarily mean that a geological disposal facility (GDF) will be built in Wales. The Welsh Government continues to support the policy of voluntary engagement where communities are able to seek discussions, without prior commitment, about potentially hosting a GDF. The Welsh Government considers that a GDF can only be built in Wales if a community is willing to host it and the physical environment is suitable. Communities in Wales may come forward and express an interest in hosting a GDF, and should have the opportunity to do so.

Geological disposal uses both engineered barriers and the hundreds of metres of rock overlying the disposal facility to isolate and contain the waste so that no harmful quantities of radioactivity ever reach the surface environment.

A GDF will have surface and underground facilities, linked by access tunnels and shafts. The surface site will receive waste packages and transfer them to the underground disposal facility. Underground, the facility may cover an area of approximately 10 to 20 square kilometres. The surface site will be approximately one square kilometre but it does not need to be located directly above the underground site and could be separated by several kilometres, including extending under the seabed for up to 20 kilometres offshore.<sup>2</sup>

After all of the waste has been placed in the facility and the tunnels and vaults backfilled, the access tunnels and shafts will be permanently sealed to provide safety without requiring further action.

Radioactive Waste Management Limited (RWM) is responsible for implementing geological disposal of HAW in the UK.

<sup>1</sup> Welsh Government, Policy on the Management and Disposal of Higher Activity Radioactive Waste. May 2015. <http://gov.wales/docs/desh/policy/150519-policy-on-the-management-and-disposal-of-higher-activity-radioactive-waste-en.pdf>

<sup>2</sup> Radioactive Waste Management, Making Sense of Geological Disposal. February 2017

## Summary of key issues/conclusions

In line with Welsh Government Policy for HAW, communities in Wales may come forward with an interest in hosting a GDF. In England both a GDF and borehole investigations of potential GDF sites are recognised as being Nationally Significant Infrastructure Developments.

Why have you submitted this evidence?

As the developer for a GDF, RWM is keen to ensure the development of the National Development Framework considers Welsh Government Policy for HAW.

How should this evidence inform the development of the NDF?

RWM believes the National Development Framework should recognise that, in line with Welsh Government Policy for HAW, communities in Wales may come forward with an interest in hosting A GDF.

How does this evidence and any actions it recommends help achieve the 7 well-being goals?

**A Prosperous Wales** – Construction and operation of a GDF will be a multi-billion pound project that will provide skilled employment for hundreds of people over many decades. Over that period a GDF would contribute greatly to the local economy. There are likely to be associated opportunities, infrastructure investments, benefits for local education or academic facilities, and positive impacts on local businesses supporting the facility and its workforce.

**A Resilient Wales** - Today, the UK's HAW is being packaged in specially engineered robust containers and stored at nuclear sites around the country. The stores are designed to be secure and to withstand severe weather, earthquakes and intrusion. However, these stores are temporary in relation to the length of time for which the waste requires protection and they will need to be rebuilt and replaced if a permanent management solution is not implemented. Once permanently emplaced in a GDF the waste will be better protected in the event of earthquakes, tsunamis and long term environmental changes such as future ice ages, without requiring ongoing intervention by future generations.

**A Healthier Wales** - Making provision for the safe disposal of the legacy of radioactive waste and also for the waste arising from new nuclear power stations will not only reduce the burdens on future generations, but will also provide for a safer future. The creation of both direct and indirect employment for generations can contribute to people's physical and mental well-being. The development of a GDF and the associated community investment may also support the enhancement of local health, sport and leisure infrastructure. The independent regulators (the Office for Nuclear Regulation (ONR), and Natural Resources Wales) will only allow a GDF to be built, operated and closed in Wales if they are satisfied that it will meet their demanding regulatory requirements. This together with the role of the relevant planning authority will ensure that any potential health impacts from the construction and operation of a GDF are effectively controlled and that public health is protected.

**A More Equal Wales** - A GDF can only be built in Wales if a community is willing to host it. If a GDF were to be built in Wales it would offer long term secure and high quality employment with the potential for considerable benefits to the wider

community. In addition to direct job creation a GDF and associated community investment has the potential to support wider supply chain and educational development and to the host community's role in the knowledge economy. . A GDF and associated community investment could also contribute to infrastructure and housing improvement, enhanced environmental resilience contributing to a long term lasting economic and social legacy. This could contribute to a more equal Wales and wider economic and social regeneration especially if a GDF were to be located a community where access to such opportunities is scarce.

**A Wales of Cohesive Communities** - Development of a GDF within a community will provide a range of opportunities supporting the host community. A GDF will be designed to be attractive and to integrate into, and even enhance, the existing environment so that the GDF, its infrastructure and associated community investment can enhance the cohesiveness of communities.

**A Wales of Vibrant Culture and Thriving Welsh Language** - Building, operating and closing a GDF would take over a century creating long term high quality employment. This will provide opportunities for both the current population, and those who may move into the area, to engage with and develop the many strands of Welsh culture, language and heritage. If this were to be in a Welsh speaking area it may facilitate people staying and working in that community rather than leaving to find employment. The GDF also has the potential to enhance and develop educational and social facilities and opportunities in arts, sports and recreation. There is therefore great potential for a long-term and vibrant community to develop around the facility.

**A Globally Responsible Wales** – It is internationally accepted that the safest and most sustainable option for long-term management of higher activity waste is through geological disposal. This position has been confirmed by the Committee on Radioactive Waste Management which provides independent expert advice to the Welsh Government on the long term management of radioactive waste. There is already a considerable volume of HAW, for which there is currently no available disposal route. While this waste can and is being safely and securely managed and stored at present and for the foreseeable future, it represents an ongoing burden for future generations. Taking action to implement geological disposal now avoids leaving responsibility for decisions on waste disposal to future generations.

Why is the evidence of national significance?

For over half a century, the United Kingdom has accumulated a substantial legacy of HAW. Some of this has already arisen as waste and is being safely managed and stored on an interim basis at nuclear sites across the UK. However, much will only become waste over the next century as existing facilities reach the end of their lifetime and are cleaned up safely and securely. This legacy waste will exist even if no new nuclear power stations are built. In Wales:

- HAW arises from and is stored at Wales' two nuclear power stations at Trawsfynydd and Wylfa. Decommissioning work at these sites will generate HAW at intervals for around 100 years
- Spent fuel from the two power stations is transported to Sellafield in Cumbria and reprocessed, so the HAW from this spent fuel is generated, and currently stored.
- HAW arising from decades of health related work with radiopharmaceuticals is stored at the GE Healthcare site in North Cardiff.
- HAW arises from the activities of businesses, hospitals and universities in Wales. Wylfa Newydd, and other new nuclear power stations, will produce HAW which will add to the legacy of waste mentioned above. There are currently no proposals to

reprocess the spent fuel from new nuclear power stations and therefore it will also need appropriate management, storage and eventual disposal as waste alongside the HAW that will be produced by new nuclear power stations.

The Welsh Government has established a policy for the disposal of HAW in Wales within in a UK context. Waste arising from activities in Wales forms part of the overall inventory for disposal which includes waste from Wales, England and very small amounts of intermediate level radioactive waste (ILW) from Northern Ireland.

While the Welsh Government has adopted a policy for geological disposal for HAW, this does not mean that a GDF will necessarily be sited in Wales. Nevertheless, should communities in Wales come forward with an interest in hosting such a GDF this would be a significant infrastructure development as described above.

Do you agree for your evidence to be made public? (Only evidence that can be made public will inform the development of the NDF)

Yes