

Detailed guide: Regulating the geological disposal of radioactive waste: environmental protection

Geological disposal means permanently disposing of the most hazardous types of radioactive waste in a specially designed facility between 200 and 1,000 metres underground. Harmful quantities of radioactivity will be prevented from reaching the surface by a number of barriers. These include the:

- design of the facility – sealed vaults and tunnels deep underground
- design of the containers (packaging) for the waste – secure, engineered containers of metal or concrete
- type of surrounding rock

The depth of the facility will protect the radioactive waste from the effects of:

- future climate change
- human activities

The UK government has not yet decided where a geological disposal facility (GDF) will be located. It will select a site in partnership with willing communities. Formal engagement with potential host communities is expected to begin shortly.

The Department for Business, Energy and Industrial Strategy is leading the process of implementing geological disposal in England. Find out more about the [UK government's policy on geological disposal](#).

Radioactive Waste Management (RWM) Ltd is responsible for developing the GDF. Find out more about work to develop [geological disposal](#).

Environment Agency's role in geological disposal

The Environment Agency regulates the disposal of radioactive waste from:

- nuclear licensed sites – for example, those carrying out activities such as nuclear power generation, nuclear fuel manufacturing and reprocessing or radioactive waste processing and disposal
- other premises that use radioactive substances – for example, hospitals and universities

Disposal includes:

- discharges into the air, surface water and groundwater
- disposals by transfer to other sites
- disposal to land – including geological disposal

The Environment Agency is responsible for making sure that the developer and operator of a GDF meet the high standards it has set to protect people and the environment. This includes during the design, development, operation and closure of the facility.

The Environment Agency considers that the geological disposal of long-lived radioactive waste can provide a safe and sustainable solution. It supports the implementation of geological disposal because radioactive waste stored at the surface would need to be managed for several hundred thousand years.

The Environment Agency will not be involved in the decisions to select a potential site for a GDF. Its regulatory role will start after a site (or sites) has been selected for further investigation. But, during site selection, the Environment Agency will be available to support discussions with communities, local authorities and others considering hosting a GDF. It will provide information and advice on environmental protection. It will also explain how its work will help protect people and the environment now and in the future – during the development, operation and closure of a GDF.

Joint regulation of RWM

The Environment Agency will regulate a GDF jointly with the [Office for Nuclear Regulation](#) (ONR). The ONR is responsible for regulating:

- civil nuclear safety
- radioactive material transport safety
- nuclear security

By working together, the two regulators will make sure that the developer and operator of a GDF meet the required high standards for:

- environmental protection
- safety and security
- waste management
- radioactive waste transportation

Before regulation starts, the Environment Agency and ONR are scrutinising RWM's work. They are doing this in the early stages of implementing geological disposal so RWM can understand what they need to do to:

- provide advice to waste producers so waste packaged at sites is suitable for disposal
- prepare applications for the permits and licences they will need

In addition, the regulators are reviewing RWM's [generic disposal system safety case](#) which identifies:

- the likely hazards and risks of a GDF
- how the risks will be controlled
- the systems that will make sure controls are applied to meet required standards

Scrutiny of the generic safety case will help inform RWM what they need to do to develop the site specific safety case once a site has been chosen for the GDF.

The Environment Agency and ONR provide more information about their joint scrutiny work through [regular reports](#) such as their annual scrutiny reports and regulatory scrutiny reports. These provide summaries of work carried out under the joint scrutiny programme.

Regulating each stage of development

Regulation will start when the developer wants to begin surface-based site investigations using boreholes.

A GDF will need to be regulated for many decades – possibly for more than a hundred years. After a GDF has closed, regulatory control will only end when the operator has met requirements to protect people and the environment in the long term.

The Environment Agency will regulate the development of a GDF using ‘staged regulation’. The purpose of staged regulation is to make sure that the facility is developed safely and securely. It must be done in ways that properly protect people and the environment and do not undermine the long-term performance of the GDF.

The developer will need Environment Agency approval before they can start each of these development stages:

- surface-based site investigation using boreholes
- underground investigation
- building the infrastructure for the disposal facility
- operating the facility – disposing of radioactive waste
- closing the facility

Throughout each stage the relevant regulators will inspect and check the operator has complied with the permissions granted. They will take any enforcement action needed if they identify non-compliances.

The regulators will review these permissions regularly to make sure they remain appropriate.

Surface-based site investigation

A developer will need to apply for an environmental permit when they want to drill boreholes, for example to find out about the geology and hydrogeology at a proposed location for the GDF. At this stage the Environment Agency would expect the developer to provide information about how they will:

- minimise any environmental damage that could be caused by borehole drilling
- remediate the site after drilling

The Environment Agency would also expect the developer to provide an initial site evaluation with information about:

- the feasibility of building a GDF at the potential site
- whether the GDF could meet regulatory requirements

The Environment Agency will only grant the permit if the developer meets the necessary regulatory requirements.

To comply with a permit, the developer will also need to:

- control any discharges to air and water
- protect groundwater and surface water
- prevent land contamination
- manage waste appropriately
- carry out an environmental monitoring programme

An environmental permit can cover a group of boreholes at a given location. If the developer decides to carry out investigations at different locations, they will need a separate permit for each location. They would also need to apply for a revised permit if more than one phase of borehole drilling is needed at a location.

Underground investigation

The next set of regulatory decisions will be made when the developer wants to carry out underground investigations at a possible site. This will provide further information, for example, about the geology and hydrogeology at the depth they plan to build the GDF.

As part of their underground investigations, the developer will need to build access shafts and tunnels. It's likely they will also need facilities on the surface, for example to provide ventilation and access.

Both the Environment Agency and ONR will make decisions about whether to allow underground investigation to begin. At this stage the Environment Agency would expect the developer to provide additional information from site investigations to support their application for a revised permit. This information may include assessments of the feasibility of building a GDF.

The Environment Agency will only grant a revised permit if the application meets its regulatory requirements. It would also expect a developer to be able to demonstrate that underground investigations will not affect the safety of the candidate site.

Building the infrastructure

Building activities could include excavating vaults to dispose of the radioactive waste and tunnels to access the vaults. Construction is also likely to start on the surface facilities where radioactive waste will be received and securely stored before it is transferred underground for disposal.

The developer will need an environmental permit to cover this stage of the construction activity.

At this stage the developer will need to provide the Environment Agency with a comprehensive and robust Environmental Safety Case. This must demonstrate that a GDF at the site would meet regulatory requirements for disposing of radioactive waste. This evidence will help the Environment Agency decide, in principle, if they could eventually grant an environmental permit to dispose of radioactive waste.

Operating the facility: disposing of radioactive waste

Before the operator of a GDF can receive the first waste packages they will need an environmental permit to dispose of radioactive waste and permissions under the nuclear site licence. They will need to provide evidence that:

- the operations will be safe and secure
- once the facility is closed, people and the environment will be protected in the long term

The environmental permit for the operational stage will include conditions that set the:

- limits on radioactive and non-radioactive discharges to air and water from storage facilities on the surface and underground operations
- requirements for disposing of radioactive waste appropriately – possibly including restrictions on the type of waste that can be disposed of

The operational stage is likely to last 100 years or more. During that time the operator will need to regularly review its safety, security and environmental safety performance. They will need to submit reports of these reviews to the Environment Agency and ONR. The regulators will look at the updated evidence and decide whether the operator is continuing to provide a high standard of protection for people and the environment.

If the operator is not meeting its regulatory requirements, the regulators can take enforcement action. This could include stopping disposal operations until the operator has taken the action needed to comply with their permit or other permissions.

Closing the facility

The operator will need to have plans in place for closing and sealing the GDF before it can start to dispose of any radioactive waste. The regulators will scrutinise these plans to make sure they meet regulatory requirements for the long term protection of people and the environment. The regulators expect the operator to regularly review and update these plans to reflect any new knowledge gained from research, development or demonstration studies.

Once the operator wants to close the facility, the plans will support their application for regulatory permission to close the GDF. This includes dismantling and removing the surface facilities.

The operator must demonstrate that the way the GDF has been closed and sealed meets the conditions of the environmental permit and nuclear site licence. If the operator can show that the safety and security requirements for closure have been met, their nuclear site licence can be withdrawn.

For some time after the nuclear site licence has been withdrawn, the operator will still have responsibilities under their environmental permit for the GDF. The Environment Agency will need to be satisfied that the site will meet standards to protect people and the environment before they will allow the operator to surrender (give up) their environmental permit.

Guidance for the developer

The Environment Agency has published [guidance on the principles and requirements](#) that the developer will need to comply with to be granted an environmental permit. The guidance covers the development, operation and eventual closure of a GDF for radioactive waste.

Evidence reports

The Environment Agency has also published [technical studies related to geological disposal](#).

Contact

For more information about the Environment Agency's role in the regulation of geological disposal email geological.disposal@environment-agency.gov.uk.

[News story: Girls Education: Call for Bids](#)

The UK is supporting girl's education across the world. While there is almost an equal number of boys and girls enrolling in schools in many countries, girls still face many barriers to learning and staying in school. And although lots of girls go to school, the number graduating and going on to join the job market is much lower. The same is true of climbing the career ladder: only 24% of senior management globally are women. As well as education and career challenges, many are subject to even more challenges: violence against women, and child and forced marriage practices continue.

Learning how to help girls learn:

First things first, we're supporting research that identifies the barriers girls face in accessing quality education, and provides suggestions for overcoming barriers to girl's education and building more inclusive

education. This includes understanding the numbers that stay in and drop out of school, and the learning outcomes, which show how students benefit from the time spent in school. There will be an opportunity to showcase the research.

Scope of Work: The Technicalities

Deliverables:

- An inception report highlighting methodology and subject covered should be submitted for approval before research is started
- A research report covering the barriers to girls accessing quality education in Egypt of minimum 20 – 30 pages
- Drawing on the research, a minimum of ten policy briefs should be written on specific areas, to be agreed with the donor upon completion of the research
- All material should be produced in English and translated into Arabic

Methodology

- Using academic and grey literature, open source statistics, and, where possible, primary research
- This document should cover different groups of girls where possible e.g. girls with disabilities, girls in rural/urban areas, girls from the poorest quintile. Methodology of research should be highlighted in inception report
- **Confidentiality: Products are the property of the donor and will only be used with the donor's prior approval.**

Bid Guidance:

- Projects are funded for a single financial year.
- Proposals and their budgets should be in the currency that the implementer banks in and therefore potential payments will be made in.
- Budget limit: (30,000 GBP) conversion rate to be set at contract signature.

Example of an Activity Based Budget (ABB), please note all the details below are for a demonstrative purpose only [Example of an Activity Based Budget \(ABB\), please note all the details below are for a demonstrative purpose only](#) (MS Excel Spreadsheet, 48.5KB)

Dates:

- Proposal: 25 September 2018
- Phase 1 Inception report: 15 October 2018
- Phase 2 Research report: 30 November 2018
- Phase 3 Policy Briefs: 15 January 2019

Assessment:

Proposals will be assessed against the following criteria:

- Alignment with the above mentioned thematic priorities and outcomes
- Outcomes are achievable within the funding period
- Project design includes clear monitoring and evaluation procedures
- Risk and financial accountability procedures
- The organisation's safeguarding policies that ensure protection of beneficiaries
- Overall value for money

Process:

1. Proposals must be submitted using the attached forms only (Project Proposal and Activity Based Budget)
2. Proposals must be submitted to [mai.abousamra@fco.gov.uk]
3. Project proposals selected will be notified on[30th September 2018]
4. The British Embassy aims to sign grant agreements with successful project implementers by [1st October 2018]

Project Proposal Form

[Project Proposal Form](#) (MS Word Document, 218KB)

Contacts:

Contact: Mai Abou Samra-Education Programme Manager, mai.abousamra@fco.gov.uk

Reporting and M&E

HMG will meet with the implementing partner at least once per month. It is expected that there will be continuous updates on all project activities as well as risks and mitigation steps in all meetings. Project reporting requirements are financial and narrative.

Financial Management and Payments

To be covered in contract

Performance Management

Implementing partner is to send quarterly monitoring reports, to be provided to the (IP) by the Programme Manager. Monitoring reports will include narrative and quantitative reporting on project indicators.

Donor to provide feedback and approval on inception report (Phase 1), for research report (Phase 2) to begin.

Donor to provide feedback and approval on research paper (Phase 2) for policy briefs (Phase 3) to begin.

Timeframe

Project is to begin upon contract signature and end on February 28th 2019.

Duty of Care

Tenderers must develop their Tender response on the basis of being fully responsible for Duty of Care. They must confirm in their Tender that:

- They fully accept responsibility for Security and Duty of Care.
- They understand the potential risks and have the knowledge and experience to develop an effective risk plan.
- They have the capability to manage their Duty of Care responsibilities throughout the life of the contract.

Guidance: M5 Monitoring of stack gas emissions from medium combustion plants and specified generators

This Technical Guidance Note provides a standardised approach to monitoring stack gas emissions from plants regulated under the Medium Combustion Plant Directive and Specified Generator Regulations.

World news story: Embajada Británica Santo Domingo suscribe acuerdos de cooperación

Updated: Added translation.

En el mes de julio de 2018, la Embajada Británica en Santo Domingo ha suscrito diversos acuerdos de cooperación en áreas prioritarias, tales como derechos humanos, cambio climático e innovación tecnológica financiera.

El primero de estos acuerdos se firmó entre el Embajador Chris Campbell y Alba Rodríguez, Directora Ejecutiva de Save the Children en la República Dominicana. Mediante esta alianza, Save the Children RD implementará un proyecto para aumentar la debida diligencia y los mecanismos de protección de

los derechos infantiles en la cadena de valor del cacao. Este proyecto, enmarcado en los principios de las Naciones Unidas relativos a los derechos humanos y los negocios, tendrá un alto impacto en una industria que es importante para ambos países: República Dominicana y el Reino Unido.



El Embajador Chris Campbell y la Directora Ejecutiva de Save The Children República Dominicana, Sra. Alba Rodríguez.

Luego, el Subjefe de Misión de la Embajada, Maxwell Irving, suscribió, junto con Rosa Rita Álvarez, Presidenta Ejecutiva de Fundación Reservas del País, un acuerdo de colaboración para el fortalecimiento de las capacidades del sector micro empresarial y productivo en favor de la mitigación y adaptación al cambio climático. Con la firma del acuerdo, se busca desarrollar jornadas formativas y proporcionar herramientas específicas para que los dueños y dueñas de microempresas beneficiarias de las prestatarias apoyadas por Reservas del País, puedan disminuir las emisiones de gases de efecto invernadero de sus actividades económicas y productivas. Además, en consonancia con las medidas tomadas a nivel internacional por el gobierno británico, los materiales a proporcionarse a las microempresas contendrán estrategias que buscan mitigar el uso e impacto de plástico en dichas empresas.



El Subjefe de Misión Maxwell Irving y la Sra. Rosa Rita Álvarez, Presidente Ejecutiva de la Fundación de Reservas.

Finalmente, la Embajada Británica en Santo Domingo suscribió dos acuerdos de cooperación en el área de innovación y educación en nuevas tecnologías financieras. El primero de estos, se suscribió con el Instituto OMG para un proyecto relacionado a desarrollar capacidades en educación financiera y nuevas tecnologías. El segundo, se firmó con Finext Labs para la realización de talleres para el desarrollo económico y social de la República Dominicana a través de nuevas tecnologías.



El Subjefe de Misión Maxwell Irving y la Sra. Belkis Guerrero, Rectora del Instituto OMG.

Con estos proyectos, la Embajada Británica en Santo Domingo desea continuar fortaleciendo los fuertes vínculos que existen entre Reino Unido y República Dominicana. Además, busca contribuir en áreas claves para el desarrollo económico y social de la República Dominicana.

Speech: UK national statement to the 62nd International Atomic Energy Agency (IAEA) General Conference

Madame President,

On behalf of the UK, I congratulate you on your election as President of the 62nd General Conference. May I say at the outset that we fully align ourselves with the statement, which has just been made on behalf of the European Union.

This year, of all years, my Government wanted to send a strong signal of support for the Agency. That is why, as the responsible Minister at the

Foreign Office, I have the honour to represent the United Kingdom today.

We live in an increasingly uncertain and dangerous world. We have seen the destabilising consequences when States pursue nuclear weapons. And we have worked together to prevent terrorists acquiring nuclear material.

This Agency plays a vital role in addressing such threats. It also helps States reap the enormous benefits of civil nuclear technologies.

One of the most important moments of diplomatic success was the Joint Comprehensive Plan of Action. It stands to achieve lasting advances for international security. The crucial work of monitoring and verifying the deal is a clear example of the Agency's role. The United Kingdom remains committed to the Iran deal. We welcome and applaud the Director-General's report confirming Iran's compliance with its nuclear commitments.

It is important that all remaining parties continue to implement the agreement in full, and that Iran continues to cooperate fully with the Agency.

With regard to North Korea, the United Kingdom welcomes progress made at the Singapore Summit, but we are clear that existing sanctions should remain until North Korea takes concrete steps towards the complete, verifiable, and irreversible denuclearisation of the Korean Peninsula and the removal of its ballistic missile capability.

Meanwhile Syria has failed to meet its safeguards obligations since 2011. We call on both Syria and North Korea to resume full compliance and cooperation with the Agency.

The UK supports the Agency's efforts to strengthen and develop its safeguards work including with the help of UK expertise and resource. Especially in monitoring and auditing a country's stocks and use of nuclear materials. This underpins the objectives of the nuclear non-proliferation treaty.

We call on all States to ratify an Additional Protocol, which is the gold standard of safeguards.

Madame President,

The United Kingdom is grateful to the Agency team and the Board of Governors for their support in our preparations for leaving the EU and Euratom. In June, the UK signed an agreement, the Voluntary Offer Agreement and an Additional Protocol with the Agency, which will maintain a cooperative framework within which we will meet our obligations as a responsible nuclear state when we are no longer a member of the EU.

We would like to build on the IAEA's valuable work to support the civil nuclear sector. This is the aim of the UK's Nuclear Sector Deal launched this summer, to make the construction and decommissioning of nuclear power stations more straightforward and less expensive.

The construction of Hinkley Point C will be the first of our next generation

of nuclear power plants. Construction is underway and we continue to engage with sponsors of other new projects.

Madame President,

Safety, security and non-proliferation go hand in hand with the peaceful use of nuclear technology. We cannot responsibly promote access to nuclear technologies without ensuring that they are safe, secure, and used for the right purpose.

Because this matters so much we are proud to remain one of the biggest contributors of financial and technical support, to the Agency across all of its programmes.

This week, it is my pleasure to pledge the UK's contribution of €3.7 million to the Technical Cooperation Fund for 2019. We will continue to pay on time and in full. We call on all Member States to do the same.

The UK has already contributed £4.1 million this year to the Nuclear Security Fund. I urge you all to support the Agency's work to help Member States implement robust nuclear security regimes. We will also continue our financial and technical support to nuclear safety and safeguards activities.

If something goes wrong, we have a duty to protect the public, and our neighbours. Effective emergency response must remain a global priority. We urge all Member States to use the information sharing channels between countries and the Agency on a regular basis, as well as in the event of an incident.

To conclude, Madame President,

The United Kingdom is a committed supporter of the IAEA. We want it to continue to meet its growing challenges, and the growing demands on its resources. We also want it to properly reflect the world it serves. For that to happen, we urge the Secretariat to ensure that the Agency is managed effectively and efficiently within existing resources and as always, we stand ready to help with this.

I thank the Director General for his leadership, and the Agency for its impartial work, which undoubtedly makes the world above all more safe and more secure.