

Site Evaluation

How we will evaluate sites
in Wales



Radioactive Waste
Management

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1 Introduction

Consultation

- 1.1.** This consultation document, Site Evaluation – how we will evaluate sites (“SE”), has been developed by Radioactive Waste Management Ltd (“RWM”) to bring together in one place the key relevant existing policy, legislative and regulatory requirements that will apply at various points throughout the Siting Process in order to support a consistent and understandable approach to the evaluation of sites which may be suitable to host a Geological Disposal Facility (“GDF”).
- 1.2.** This consultation document is structured in the following way:
- In this Section we introduce our consultation, discuss the background to the SE and explain the territorial extent of this document.
 - In Section 2 we explain the context of our SE and explain how a series of fundamental requirements have informed our choice of a series of Siting Factors and Evaluation Considerations that we will use in the evaluation of sites.
 - In Section 3 we discuss the purpose of the SE and introduce our Siting Factors and Evaluation Considerations.
 - Section 4 describes how RWM will implement Government’s Siting Process.
 - In Section 5 we explain how RWM will undertake Comparative Assessments between different sites if necessary. We set out how our work is subject to appropriate oversight and scrutiny in Section 6.
 - In Section 7 we explain how to take part in the consultation and present the questions we have asked in one place.
 - We also include two Annexes which provide additional details on various matters discussed in the SE.
- 1.3.** This consultation will be open until the 14th April 2019. For further information please see our website **gwaredu daearegol**.
- 1.4.** There are several topics within the SE that we would like to hear your views on and which are included as questions throughout this consultation document. In particular, we would like to receive feedback on how we have used the requirements to inform our identification of the six Siting Factors and underpinning Evaluation Considerations we will use to inform our evaluation of areas and sites.
- 1.5.** During the consultation period, we will be organising a number of events, for anyone interested to attend, where members of our team will be on hand to discuss the SE and to answer any questions about it. The details of these events will be published on our website at **gwaredu daearegol**.
- 1.6.** We will carefully consider all consultation responses and will use these to help develop our approach. Where permission is given, a summary of all responses received will be published on our website.

Background

- 1.7.** As a pioneer of nuclear technology, the UK has accumulated a legacy of higher activity radioactive waste and material. This is being stored safely on an interim basis at nuclear sites across the UK. More will be produced as existing facilities reach the end of their lifetime and are decommissioned and cleaned up, and through the operation and decommissioning of new nuclear power stations.
- 1.8.** In addition to existing wastes, there are some radioactive materials that are not currently classified as waste, but would, if it were decided at some point that they had no further use, need to be managed as wastes through geological disposal. These include spent fuel (including spent fuel from new nuclear power stations), plutonium and uranium.
- 1.9.** RWM is a wholly-owned subsidiary of the Nuclear Decommissioning Authority (“NDA”), and is the body responsible for implementing geological disposal of higher activity radioactive wastes.
- 1.10.** Welsh Government policy^{1 2 3} envisages that RWM will act as the developer of a GDF for such wastes. As such, RWM will be responsible for ensuring that the siting, construction, operation and eventual closure of a GDF are carried out in a manner which adheres to, and complies with, the UK’s high standards of safety, security and environmental protection, as well as applicable requirements which are set out in relevant policy documentation.

¹ Welsh Government Policy on the Management and Disposal of Higher Activity Radioactive Waste – Welsh Government [2015]

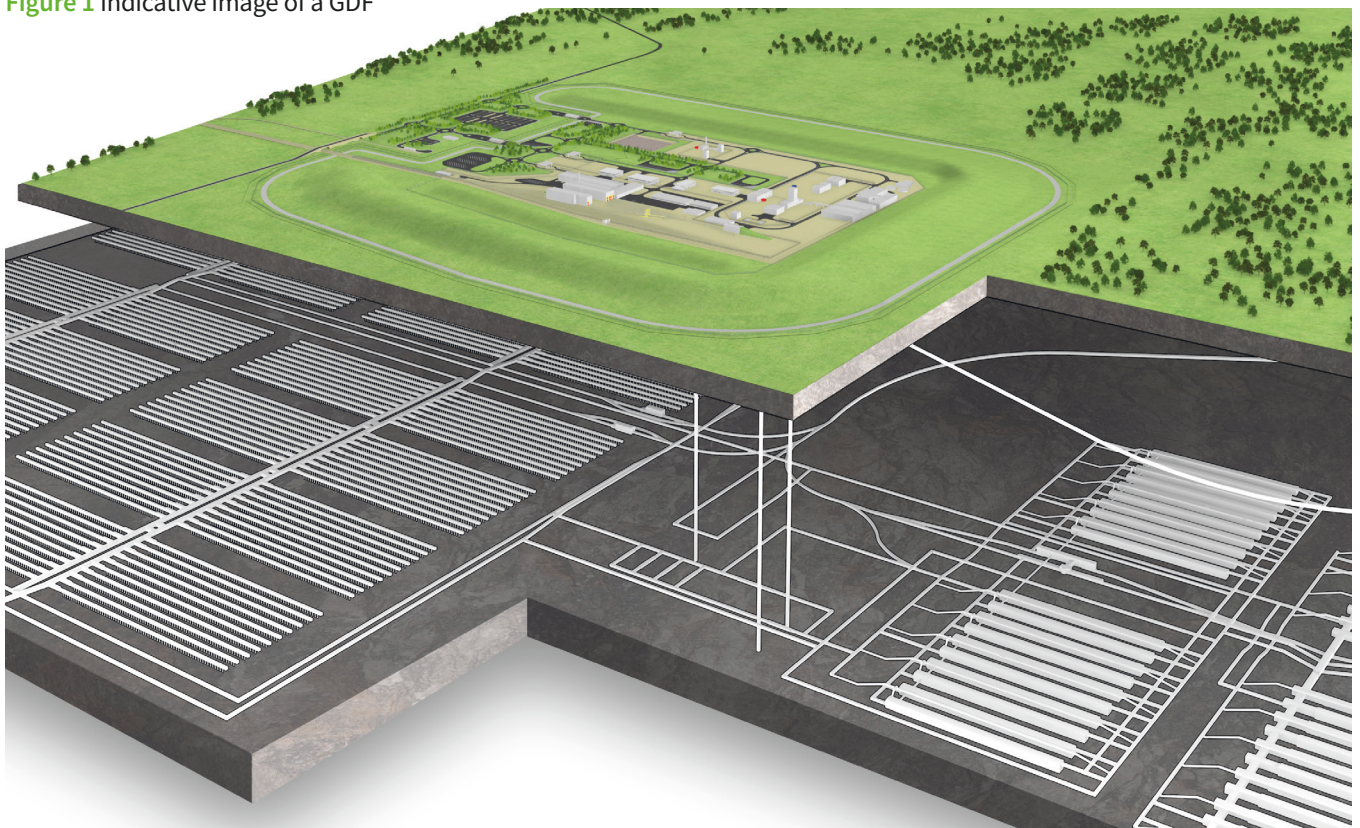
² Geological Disposal of Higher Activity Radioactive Waste: Community Engagement and Siting Processes – Welsh Government [December 2015]

³ Geological Disposal of Higher Activity Radioactive Waste: Working with Communities – Welsh Government.

1. Introduction

- 1.11.** Geological disposal involves placing radioactive waste deep underground to ensure that the hazardous materials are kept away from people and the environment, by isolating and containing the waste in a suitable geological environment for the time required for the radioactivity associated with them to naturally reduce. Figure 1 presents an indicative image of what a GDF to accept the UK's higher activity wastes may look like.
- 1.12.** The wastes that will be disposed of in a GDF are referred to as the inventory for disposal. The types and amounts of waste that make up this inventory for disposal are important because the layout and design of any GDF will need to be tailored to them, and also because communities considering hosting a GDF will want to be clear about what wastes are destined for it.

Figure 1 Indicative image of a GDF



- 1.13.** Government policy establishes a consent-based approach for RWM to engage and work in partnership with communities and the local authority⁴ or authorities of that community in Wales for the purposes of identifying a suitable location for the development, operation and eventual closure of a GDF. This policy-based process is referred to in this SE as the Siting Process and is discussed in further detail in Section 2.

⁴ The term local authority is used throughout this document - this refers to the 22 unitary authorities in Wales:
<http://www.gov.wales/topics/localgovernment/unitary-authorities/?lang=en>

Requirements

- 1.14. A GDF needs to manage the inventory of higher activity waste for disposal to protect people and the environment, both now and in the future.
- 1.15. This is achieved through the various requirements which are placed on organisational management, site selection and evaluation, design of a GDF and its construction, operation and closure.
- 1.16. These requirements are set out in RWM's published Disposal System Specification⁵ ("DSS").
- 1.17. The DSS is one of the key documents in RWM's generic Disposal System Safety Case⁶ ("gDSSC"). In Section 2, we explain further how RWM uses the DSS in its work, how the DSS draws together the requirements that a GDF will need to satisfy, and how this has also informed our choice of Siting Factors and Evaluation Considerations.
- 1.18. The SE draws on requirements from two principal sources which are already or will be captured in RWM's DSS. These are as follows:

Siting Process Requirements

- 1.19. These requirements are derived from Government policy, in particular from *Geological Disposal of Higher Activity Radioactive Waste: Working with Communities* (the Working with Communities Policy). These requirements relate to the overarching policy of geological disposal, RWM's role in implementing geological disposal, and the Government Siting Process that is to be followed by RWM in engaging with communities during the Siting Process. These requirements are referred to in the SE as the **"Siting Process Requirements"**.

Legal Requirements

- 1.20. These requirements are derived from the key legislative and regulatory instruments and regimes (as well as any relevant associated guidance regarding those regimes) which relate to the design and assessment, construction, operation and closure of a GDF, notably those requirements relating to land-use planning legislation, Environmental Impact Assessment⁷, Habitats Regulations Assessment⁸, nuclear site licensing⁹ and environmental permitting¹⁰. These requirements are referred to in the SE as the **"Legal Requirements"**.
- 1.21. In the SE, we refer to the Siting Process Requirements and Legal Requirements together as the **"Requirements"**.
- 1.22. The SE is designed to summarise, in simple and understandable terms, the broad types of issues that will need to be considered by RWM during the Siting Process for the purposes of complying with all relevant Requirements, and enabling RWM to gather the necessary information for the purposes of making applications for the key consents that will be needed to construct and operate a GDF.
- 1.23. The SE seeks to achieve this by using the Requirements to inform six broad Siting Factors, namely; Safety, Community, Environment, Engineering feasibility, Transport, and Cost.
- 1.24. These six Siting Factors have been chosen to reflect what RWM believes, on the basis of international GDF projects and of UK infrastructure projects of similar size and complexity, are likely to be the key areas of focus for discussion with communities participating in the Siting Process. The six Siting Factors are intended to assist communities in understanding the various matters that RWM will necessarily need to consider as it evaluates the suitability of sites for hosting a GDF in accordance with the relevant Requirements. In order to provide greater clarity on how RWM intends to approach its siting analysis and discussions with communities, the Siting Factors have been further broken down into a series of "Evaluation Considerations" which sit beneath each Siting Factor. These are explained in Section 3.

⁵ *Geological Disposal: Generic Disposal System Specification Part A: High Level Requirements 2016*

⁶ *The generic Disposal System Safety Case is a suite of documents that considers the safety and environmental implications of the geological disposal of radioactive waste. The suite of documents is described as a "generic" safety case: it is not site specific as no site has yet been chosen for a GDF. It sets out how a GDF can be designed constructed and operated safely, in compliance with regulatory guidance, in a range of geological environments*

⁷ *The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017*

⁸ *Conservation of Habitats and Species Regulations 2017*

⁹ *Nuclear Installations Act 1965*

¹⁰ *Environmental Permitting (England and Wales) Regulations 2016*

- 1.25.** The SE aims to draw together the Requirements which RWM will necessarily be required to comply with during the Siting Process, whether as part of its engagement and dialogue with communities or its applications to secure the necessary consents for the construction and operation of a GDF. It does not establish any new Requirements to be applied by RWM during the Siting Process. It does not remove, enhance, alter or create any of the existing Requirements. It simply brings together the Requirements in a manner that is designed to ensure that the wide discretion that is afforded to RWM by the relevant policy framework is applied in a transparent and consistent manner throughout the Siting Process.
- 1.26.** If the Requirements change in future, for example, following a change in the legislative or policy framework relating to geological disposal and/or the Siting Process for a GDF, the SE may need to be revisited and updated in order to properly reflect those changes. RWM will discuss any proposed changes to the SE with communities engaged in the Siting Process, and if it is appropriate undertake further consultations. To ensure an open and transparent siting process, any updates to the SE will be published.

Territorial extent

- 1.27.** Radioactive waste management is a devolved matter, meaning that each of the individual devolved administrations in the United Kingdom has responsibility for setting its own policy.
- 1.28.** This SE and the consultation cover Wales only.
- 1.29.** The Welsh Government has participated in the Managing Radioactive Waste Safely (MRWS) programme from 2001 and their current policy on implementing geological disposal is set out in two documents: *Management and Disposal of Higher Activity Waste*¹¹ and *Geological Disposal of Higher Activity Radioactive Waste: Community Engagement and Siting Processes*¹².
- 1.30.** The Welsh Government consulted on 'Geological Disposal of Radioactive Waste: Working with Potential Communities' between 25 January and 20 April 2018.
- 1.31.** The final policy: *Geological Disposal of Higher Activity Radioactive Waste: Working with Communities*. This policy sets out the arrangements for community engagement in Wales that will reflect specific Welsh circumstances whilst being compatible with the key elements of the UK Government's geological disposal programme.
- 1.32.** The UK Government is proceeding on the basis that only one GDF will be necessary to take the entire inventory for disposal, however it is recognised that more than one site might be required. Within the SE reference is made to the selection of a site for underground investigation, construction and operation, but it is appreciated that there may be more than one site selected e.g. if there is not a large enough volume of suitable rock to take the entire inventory for disposal.
- 1.33.** As radioactive waste management is a devolved matter, the different policy and legislative framework that exists in England, Northern Ireland and Scotland, is explained further in Annex A - Devolved Administrations of this document.

¹¹ Welsh Government Policy on the Management and Disposal of Higher Activity Radioactive Waste. WG23160

¹² Geological Disposal of Higher Activity Radioactive Waste: Community Engagement and Siting Processes December 2015

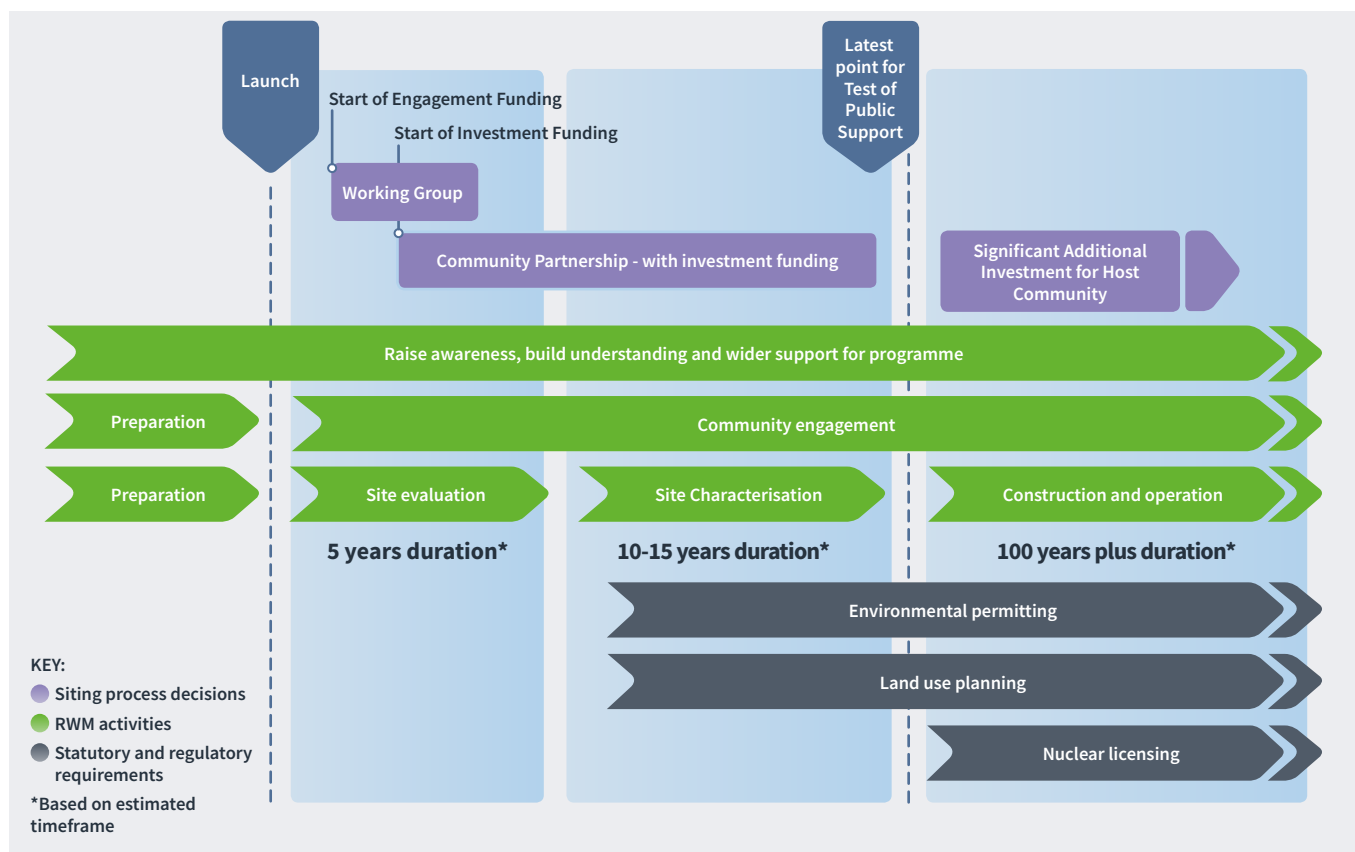
2 Responding to Requirements

- 2.1. As explained in Section 1, RWM's site evaluations will respond to Requirements from two principal sources. These are discussed further in the following sections.

Siting Process Requirements

- 2.2. The Siting Process Requirements are derived from Government Policy, in particular the Working with Communities Policy, which sets out how RWM will work in partnership with interested parties, communities and the local authorities that represent those communities to identify a suitable site for the development of a GDF.
- 2.3. The process to select a site for a GDF could take around up to 20 years. Figure 2 provides an overview of the Siting Process. It identifies the key activities that will combine to deliver a successful process, and the anticipated timescales associated with each key activity.

Figure 2 Overview of the Siting Process



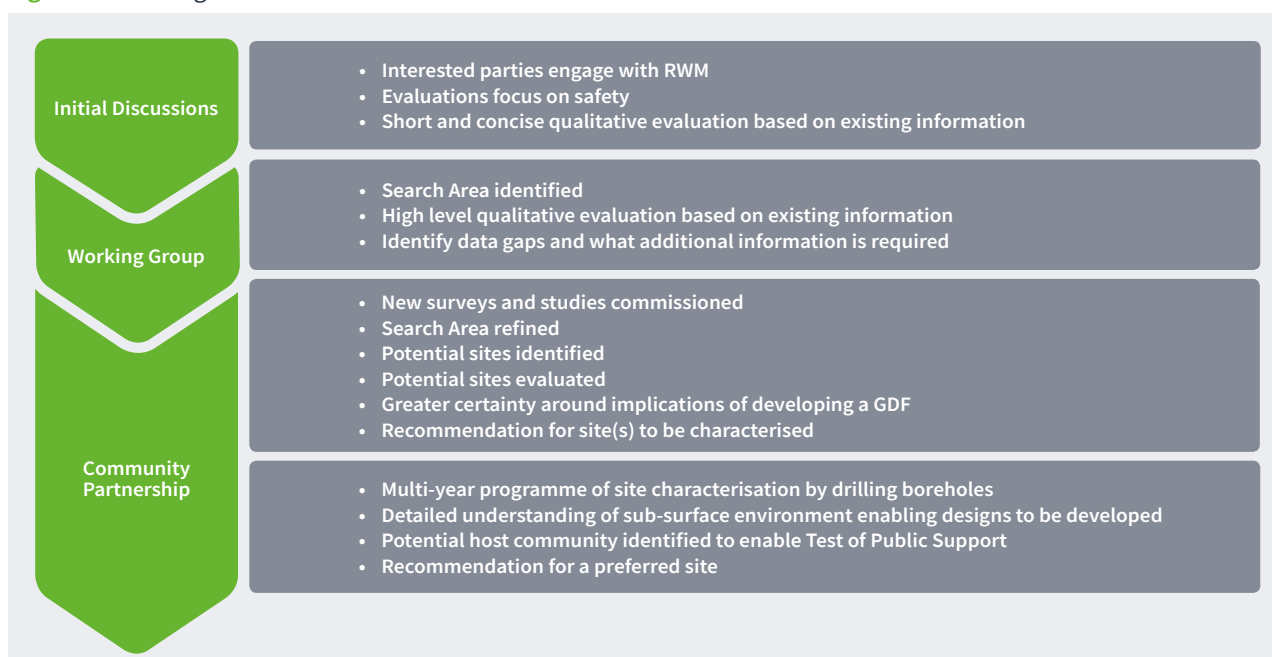
- 2.4. The Working with Communities Policy explains that discussions on a proposed location for a GDF can be initiated by anyone or any group of people with an interest in the Siting Process, and who wish to propose an area for consideration. These conversations are called Initial Discussions.
- 2.5. Once parties have had an initial exchange of information and agree that the proposal merits further consideration, the Interested Party/ies and RWM must inform all relevant local authorities before going public with the proposals and starting a dialogue with people in the local area.
- 2.6. In Wales, the relevant local authorities will be all of the unitary authorities that represent all or part of the area under consideration. A Working Group will be formed of the Interested Party, RWM, an independent chair and independent facilitator. Local authority membership on the Working Group is not a requirement, although it would be preferable to have at least one relevant local authority as a member.

2. Responding to Requirements

- 2.7. The Working Group will identify the geographical area within which RWM will be permitted to seek to identify potentially suitable sites to host a GDF. This is called the Search Area. The Search Area is derived by the area first put forward for consideration by the Interested Party and will be defined using community council area boundaries. The "relevant local authority(ies)" are all the local authorities that represent all or part of the Search Area. Some parts of Wales do not have a community council but are part of a community council area. The Search Area will, therefore, encompass all the community council areas within which RWM will be able to consider potential sites for a GDF.
- 2.8. The Working Group will start to gather information about the people and organisations in the area that are likely to be affected or have an interest in a GDF with a view to identifying members for a future Community Partnership.
- 2.9. This Community Partnership will include community members, organisations, RWM and those relevant local authorities that represent the community council areas within the Search Area. It will provide a vehicle for sharing information with the community and for finding answers to the questions the community may have about geological disposal, the siting process and how they, as a community, could benefit.
- 2.10. A Community Partnership can only be formed and continue to operate if the local authority(ies) in the Search Area agree to participate. Where there is more than one local authority in the Search Area, they must each be invited to join. Where a relevant local authority decides not to be member, then the community council areas within its boundaries will not form a part of a Search Area (or later on, once it has been defined, a Potential Host Community).
- 2.11. A community can withdraw from the Siting Process at any time up until it has taken a Test of Public Support (see below); this is called the Right of Withdrawal. Any relevant local authority will be able to bring the siting process to an end in the community council areas within its boundaries by either leaving the Community Partnership or enacting a Right of Withdrawal. The relevant local authority(ies) can either take the decision to withdraw the community from the process themselves or seek the views of the community on whether to withdraw from the Siting Process, in which case it would be the residents of the Search Area that would participate (or the residents of the Potential Host Community).
- 2.12. Although the relevant local authority(ies) will have the final say, they should involve other members of the Community Partnership in discussions on whether they intend to seek to withdraw the community from the process. Equally the other members of the Community Partnership should be able to make recommendations to the relevant local authority(ies) on the Community Partnership on invoking the Right of Withdrawal.
- 2.13. RWM can also withdraw at any time, for example if it determines that the Siting Process is unlikely to be successful in a particular community.
- 2.14. Before a decision is made to seek planning permission, or regulatory approvals for a GDF from Natural Resources Wales and the Office for Nuclear Regulation, there must be a *Test of Public Support* by the *Potential Host Community* to demonstrate it is willing to host a GDF.
- 2.15. The relevant local authority, or authorities, where there is more than one on the Community Partnership, will take the decision on if or when to hold a Test of Public Support in order to seek the community's views on hosting a GDF. A relevant local authority must agree that the Test of Public Support can take place in order for the community council areas within its boundaries to be included in the test.
- 2.16. RWM has produced Community Guidance which explains how it plans to work in partnership with communities throughout the Siting Process.
- 2.17. We summarise in Figure 3 how RWM envisages that it will implement Government policy and progress through the Siting Process; this is discussed further in Section 4.

¹³ Community Guidance – How we will work with Communities (Wales)

Figure 3 The Siting Process and Site Evaluations



Legal Requirements

2.18. Throughout the Siting Process, and for the purposes of constructing and operating a GDF, RWM will necessarily need to comply with a number of legislative/regulatory requirements, including securing a number of key consents from planning authorities and the UK's independent nuclear and environmental regulators. The key Legal Requirements in this context relate to:

- **Land use planning;** geological disposal infrastructure will require land use planning consent. Applications for planning permission would be made to the relevant local planning authority¹⁴.
- **Environmental Impact Assessment;** a detailed environmental statement will be produced supported by a project level assessment to be carried out by RWM as part of its applications for land use planning consent;
- **Habitats Regulations Assessment;** a detailed project level assessment to be carried out by RWM which assesses the potential impact (if any) of proposed GDF development on protected habitats and species;
- A **Nuclear Site Licence** for a GDF, granted by the Office for Nuclear Regulation (ONR) under the Nuclear Installations Act 1965;
- **Nuclear Industry Security Regulations** which require the production and approval of certain security plans, and
- **Environmental Permit(s)** regulating certain environmental aspects of a GDF, granted by Natural Resources Wales (NRW) under the Environmental Permitting (England and Wales) Regulations 2016.

2.19. The evaluations that RWM will carry out during the Siting Process, using the Siting Factors and Evaluation Considerations identified in the SE, will be used to gather information that will be required for the purposes of underpinning the applications that will be made for the key planning permissions and regulatory consents. It should be noted that the UK's nuclear and environmental regulators have no formal regulatory role in selecting a site for a GDF. Their regulatory role begins after sites have been selected for further investigation. NRW will have a formal role from the time when sites for deep borehole investigations are selected. The ONR will have a formal role from the time when a site for a GDF has been selected. The regulators will engage with stakeholders as requested to explain the regulatory processes and their role. They will only license or permit a GDF if it can be shown to meet the UK's stringent regulatory requirements for protection of people and the environment.

2.20. More detail on the Legal Requirements that RWM must meet is provided in Annex B – Legal Requirements

¹⁴ In Wales, planning issues are considered by the relevant local authority in whose area the surface infrastructure is located. The Welsh Government recently consulted on changes to the consenting of infrastructure in Wales. It is proposed that both deep investigative boreholes and the Geological Disposal Facility would be included as Welsh Infrastructure Projects in this process.

2. Responding to Requirements

RWM Disposal System Specification

- 2.21. RWM has already developed and maintains a gDSSC and a DSS which is based on the key existing Requirements relevant to organisational management, site selection and evaluation, design of a GDF and its construction, operation and closure. As such the gDSSC and DSS have been key reference points in RWM's development of the Siting Factors and Evaluation Considerations set out in the SE.
- 2.22. The gDSSC is a suite of documents that includes a specification, designs and assessments that consider the safety and environmental implications of the geological disposal of radioactive waste.
- 2.23. The gDSSC is described as 'generic' as it is not site-specific as no site has yet been identified for the construction and operation of a GDF. It sets out how a GDF could be designed, constructed and operated safely, in compliance with applicable Requirements, in a range of geological environments.
- 2.24. The gDSSC underpins the ongoing process for packaging waste in readiness for future disposal in a GDF.
- 2.25. The DSS, which is part of the gDSSC, describes the Requirements placed on the disposal system and forms the basis of RWM's existing generic design and assessment work. The underlying Legal Requirements (relevant in the context of what constitutes a suitable site) are therefore captured in RWM's published DSS.
- 2.26. There is agreement internationally that geological disposal provides a safe long-term management solution for higher activity waste. This is expressed in documents such as the *Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management and in the International Atomic Energy Agency (IAEA) Safety Standards Series document Disposal of Radioactive Waste*.
- 2.27. The IAEA safety series does not directly form part of the UK's regulatory regimes, although the UK Government and the UK's independent nuclear and environmental regulators do use them to inform the development and review of their guidance and requirements. RWM has therefore decided to treat the IAEA safety requirements for radioactive waste (SSR-5) as requirements in our DSS because they will necessarily shape RWM's assessment of the suitability of geographical areas and sites – but in the event of any conflict between international standards and UK legislation, the latter will take precedence.
- 2.28. The requirements set out in the DSS are not influenced by any particular site, and apply to the overarching consideration of areas or sites which RWM will evaluate. As such, the high level requirements identified in Part A of the DSS need to be complied with regardless of the area or site being evaluated such that if the requirements cannot be satisfied then it is unlikely that the area or site will be suitable for a GDF.

Consultation Question 1:

Are there any other sources of high level Requirements, other than the Siting Process Requirements and the Legal Requirements identified, that you think should be reflected in the Site Evaluation and why?

3 Site Evaluations - Factors and Considerations

Purpose of the SE

- 3.1. The SE, through the use of its Siting Factors and Evaluation Considerations, is designed to enable:
- a consistent and transparent approach to the evaluation of potential areas and sites;
 - an appropriate level of evaluation for each potential area and site against the existing and applicable Requirements, and to support:
 - RWM's future applications for permissions, including land use planning consents, environmental permits and a nuclear site licence.

Structure of the SE

- 3.2. The SE is designed to summarise, in simple terms, the broad types of issues that will need to be considered by RWM working in partnership with the community during the Siting Process for the purposes of complying with all relevant Requirements, and enable RWM to gather the necessary information for the purposes of making applications for key consents.
- 3.3. The SE seeks to achieve this by grouping the Requirements into six broad "Siting Factors". These six Siting Factors are designed to reflect what RWM believes, on the basis of international GDF projects and of UK infrastructure projects of similar size and complexity, are likely to be the key issues for discussion with communities participating in the Siting Process and the UK's independent nuclear and environmental regulators.

Siting Factors

- 3.4. The six Siting Factors that RWM has developed cover the broad topics of Safety, Community, Environment, Engineering Feasibility, Transport and Cost. These are set out in Table 1 below.
- 3.5. In order to guide and provide greater clarity to RWM's discussions with communities and site evaluations, the SE also breaks the six Siting Factors down further into a series of "Evaluation Considerations" that sit beneath each Siting Factor. These are set out in Table 2 below.
- 3.6. Siting Factors or Evaluation Considerations cannot always be considered in isolation, and so they are therefore designed to be used holistically throughout the Siting Process to enable RWM to form a qualitative view, based on the information available and acquired, of a prospective area's potential to host a GDF.
- 3.7. To the extent that there is any duplication of, or overlap between, the Siting Factors the SE does not require that the Requirements be applied or interpreted differently, or in any particular manner. The Siting Factors are simply designed to group the Requirements into broad areas to enable a consistent and transparent approach to the evaluation of potential areas and sites.

3. Site Evaluations - Factors and Considerations

Table 1 Siting factors

Legal Requirements and Siting Requirements	Siting Factors
	Safety – the characteristics of both the surface environment and sub-surface geological environment at any given geographical location and the safety implications on construction, operation, closure and post-closure of a GDF at that location.
	Community – the potential socio-economic implications of constructing, operating and closing a GDF at any given geographical location, including potential opportunities to enhance the wellbeing of the Potential Host Community.
	Environment – the characteristics of both the surface environment and sub-surface geological environment at any given geographical location, and the potential environmental impacts of constructing, operating and closing a GDF at that location and the ability to mitigate those potential impacts.
	Engineering Feasibility – the characteristics of both the surface environment and sub-surface geological environment at any given geographical location, and the feasibility of constructing, operating and closing a GDF at that location.
	Transport – the potential implications for national and local transport networks of constructing, operating and closing a GDF at any given geographical location, including any enhancements to local networks that may be required at that location and the ability to mitigate those potential impacts.
	Cost – the characteristics of both the surface environment and sub-surface geological environment at any given geographical location and the implications of those characteristics on the potential cost (including value for money assessment) of implementing a facility at that location.

Consultation Question 2:

Do you agree with the Siting Factors we have identified?
Are there any other Siting Factors that should be included and why?

Evaluation Considerations

- 3.8. The six Siting Factors provide the broad areas for evaluation – they are the overarching subject headings which will be used to help guide and shape RWM’s site evaluations and discussions with communities.
- 3.9. In order to help focus those evaluations and discussions further, particularly when evaluations become more detailed later in the Siting Process, RWM has used the Requirements to identify a number of Evaluation Considerations which underpin each of the Siting Factors. For the purposes of consistency, the Evaluation Considerations are aligned closely with the DSS.
- 3.10. Table 2 to Table 7 set out the Evaluation Considerations that RWM has developed for each of the six Siting Factors. The footnotes in these tables described as “Table x” refer to Tables in RWM’s DSS.

Table 2 Evaluation Considerations for the Siting Factor - Safety

The characteristics of both the surface environment and sub-surface geological environment at any given geographical location and the safety implications on construction, operation, closure and post-closure of a GDF at that location.
Safety Case Requirements¹⁵ - The ability to respond to the High level Management Requirements for a GDF to ensure that it can be designed, constructed, operated and closed in accordance with those Requirements.
Construction Safety¹⁶ - The ability to construct a GDF in accordance with all Requirements relating to safety (i.e. in accordance with a design described in an appropriate safety case).
Operational Safety¹⁷ - The ability to operate a GDF in accordance with all Requirements relating to safety.
Post Closure Safety¹⁸ - The ability to close a GDF in accordance with all Requirements relating to safety (i.e. the potential of a site to isolate and contain radioactive waste away from people and the biosphere for the time required for the radioactivity to naturally reduce).

¹⁵ Table 2 of the DSS
¹⁶ Table 3 of the DSS
¹⁷ Table 5 of the DSS
¹⁸ Tables 2, 6 & 10 of the DSS

3. Site Evaluations - Factors and Considerations

Table 3 Evaluation Considerations for the Siting Factor - Community

The potential socio-economic implications of constructing, operating and closing a GDF at any given geographical location, including potential opportunities to enhance the wellbeing of the Potential Host Community.

Community wellbeing¹⁹ - The wellbeing of the relevant community will be considered in line with all Requirements relating to, for example, potential socio-economic, health and equalities impacts²⁰.

Cumulative effects of potential infrastructure projects within a region and potential impacts of pollution and noise in respect of any adverse effects on equality groups will be considered.

Host Community Vision²¹ - The consideration of whether the proposed development of geological disposal infrastructure can be aligned with the Potential Host Community's objectives or vision.

¹⁹ Table 13 of the DSS

²⁰ In this context, RWM may consider matters such as: employment, property values, economic development, tourism, the agricultural economy, social services, existing infrastructure, social stability, community cohesion, housing and accommodation, direct and indirect health implications of developing a GDF, potential to enhance community well-being, prospective host community's 'capacity' to host the project such as the availability of a suitable workforce and the potential wider and longer term benefits to the economy, capacity and need for educational and visitor facilities, the impact of the proposed new facility on equalities groups and the impact on local services.

²¹ Table 13 of the DSS

Table 4 Evaluation Considerations for the Siting Factor - Environment

The characteristics of both the surface environment and sub-surface geological environment at any given geographical location, and the potential environmental impacts of constructing, operating and closing a GDF at that location and the ability to mitigate those potential impacts.
Environmental impact²² – The potential impact of proposed geological disposal infrastructure on the environment will be considered in line with Requirements relating to environmental impacts ²³ .
Protected Habitats and Species²⁴ - The potential impact of proposed geological disposal infrastructure on designated conservation sites will be considered in line with Requirements relating to protected habitats and species.

²² Table 7 of the DSS

²³ RWM will consider matters such as air quality, noise, climatic factors including climate change and adaptation, historic environment, flood risk and coastal change, human health, landscape and visual impacts, land use, waste management, water quality (including ground water) and potential sources of nuisance.

²⁴ Table 7 of the DSS

3. Site Evaluations - Factors and Considerations

Table 5 Evaluation Considerations for the Siting Factor - Engineering Feasibility

The characteristics of both the surface environment and sub-surface geological environment at any given geographical location and the feasibility of constructing, operating and closing a GDF at that location.
Sustainable Design ²⁵ - The ability to apply 'good design' to produce sustainable infrastructure.
Constructability ²⁶ - The ability to design, construct, operate and close a GDF in line with Requirements.
Security ²⁷ - The ability to design, construct, operate and close a GDF in accordance with all Requirements relating to security.
Safeguards ²⁸ - The ability to design, construct, operate and close a GDF in accordance with all Requirements relating to nuclear safeguards.
Waste conditioning and packaging ²⁹ - The consideration of whether there are any particular characteristics of a potential area or site which may prevent wastes that have already been packaged from being accepted. This will include the consideration of whether there are any particular characteristics of a potential area or site that are likely to require significant changes to current waste packaging advice.
Inventory for Disposal ³⁰ - The consideration of whether there is sufficient volume of available competent rock at repository depth to host GDF infrastructure and to manage the agreed waste inventory, and how flexible to potential changes in waste quantities the potential site could be.
Retrievability ³¹ - The consideration of whether a GDF could be designed, constructed and closed in accordance with Requirements, recognising that during the operational stage waste could be retrieved, if there was a compelling reason to do so

²⁵ Table 7 and 10 of the DSS

²⁶ Tables 3, 4 & 5 of the DSS

²⁷ Table 8 of the DSS

²⁸ Table 9 of the DSS

²⁹ Section 2.2 of Generic Disposal System Specification Part A: High Level Requirements December 2016

³⁰ Table 1 of the DSS

³¹ Table 14 of the DSS

Table 6 Evaluation Considerations for the Siting Factor - Transport

<p>The potential implications for national and local transport networks of constructing, operating and closing a GDF at any given geographical location, including any enhancements to local networks that may be required and the ability to mitigate those potential impacts.</p>
<p>Transport Safety³² - The ability to design, construct, operate and close a GDF in accordance with all Requirements relating to transport safety. This will include consideration of Requirements relating to the safety of transport of both radioactive materials (regulated by the Office for Nuclear Regulation) and non-radioactive materials.</p>
<p>Transport Security³³ - The ability to design and operate a GDF Transport System in accordance with all Requirements relating to security.</p>
<p>Transport impact³⁴ - The potential impact of proposed transport infrastructure and associated traffic movements will be considered in line with Requirements relating to transport impact, including the ability to avoid, mitigate or compensate for those impacts.</p>

³² Table 4 of the DSS

³³ Table 8 of the DSS

³⁴ Table 7 of the DSS

Table 7 Evaluation Considerations for the Siting Factor - Cost

The characteristics of both the surface environment and sub-surface geological environment at any given geographical location and the implications of those characteristics on the potential cost (including value for money assessment) of implementing a facility at that location.
Construction costs ³⁵ - The potential costs of characterising and constructing a GDF and its associated transport system at a given geographical location will be considered in line with Requirements relating to, for example, public expenditure and value for money.
Lifetime costs ³⁶ - The potential costs of operating and closing a GDF and its associated transport system at a given geographical location will be considered in line with Requirements relating to, for example, public expenditure and value for money.
Schedule of Waste Receipt ³⁷ - The ability to meet an appropriate schedule of waste receipt throughout the lifetime of the programme.

³⁵ Table 11 of the DSS

³⁶ Table 11 of the DSS

³⁷ Table 12 of the DSS

- 3.11. It is acknowledged that some overlaps and interactions between the six Siting Factors and Evaluation Considerations will occur and will need to be understood and accounted for so as not to overstate aspects of the evaluation. For example, it is acknowledged that enhancements to the transport network may generate environmental impacts and have cost implications that need to be considered as well as impacts or benefits for the community.
- 3.12. Our evaluations will always consider whether a GDF is deliverable within the geographical constraints of the area(s) and site(s) under consideration. The evidence gathered to evaluate areas and sites against any of the Siting Factors and Evaluation Considerations may potentially identify reasons for RWM to withdraw from the Siting Process in the area under consideration, even in the event of a community being willing to continue.
- 3.13. The site evaluation approach to be used will not involve ranking or scoring of the Siting Factors and Evaluation Considerations. It will be a qualitative, evidence-based and iterative process.
- 3.14. The information gathered under the six Siting Factors, and the relevant underlying Evaluation Considerations will provide the overall structure for our site evaluations and, at the relevant time, the siting recommendations that we will make to Government. Information gathered will also be used to support, at the relevant time, RWM's applications for the necessary permissions, consents and licenses that are required for the construction and operation of a GDF.

Consultation Question 3:

Do you agree with the Evaluation Considerations we have identified?
Are there any other Evaluation Considerations that should be included and why?

Consultation Question 4:

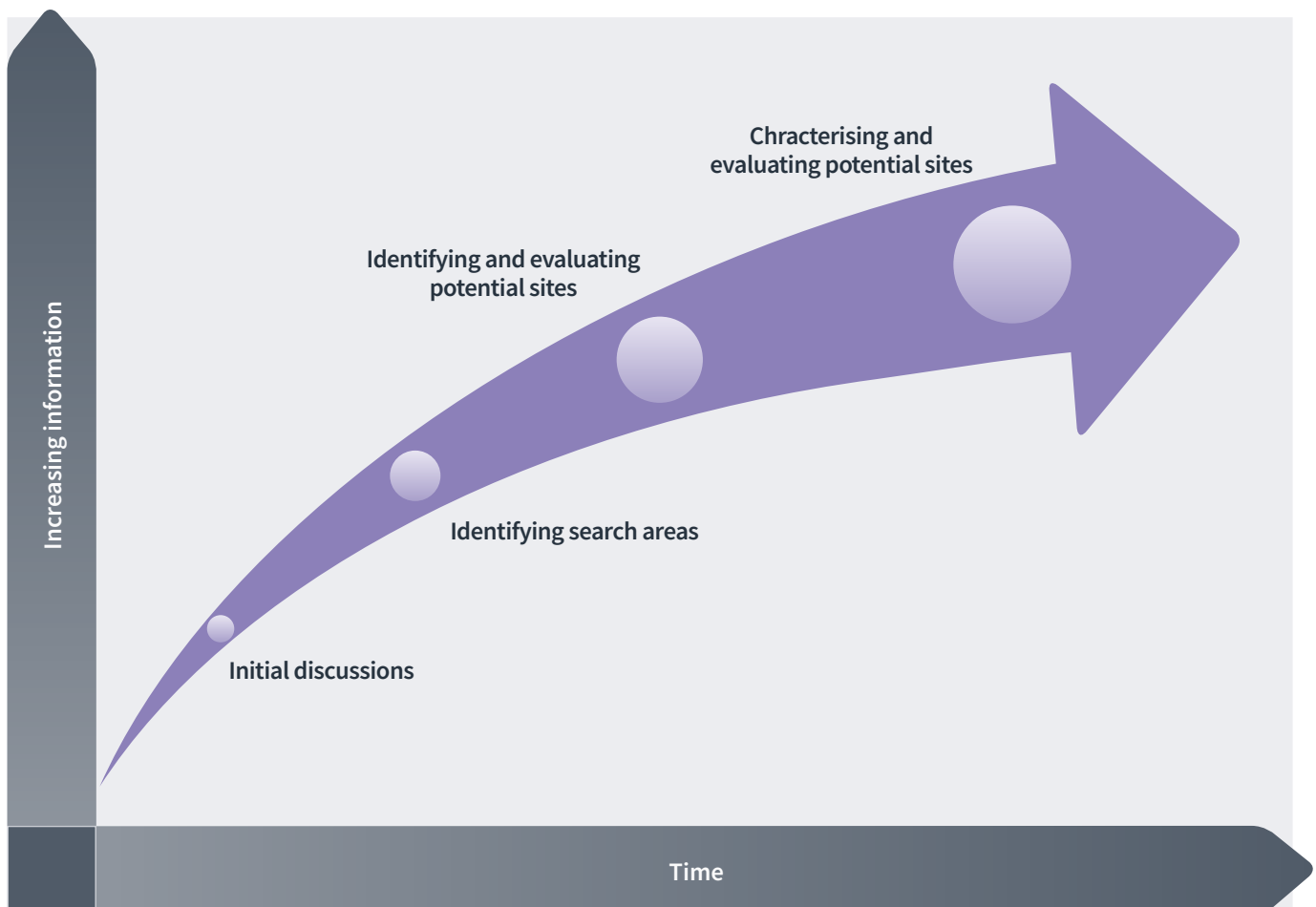
Is there anything else that you think we should consider in our site evaluations and why?

4 Implementing Government Policy

Moving through the Siting Process

- 4.1. As discussed in Section 2 and summarised in Figure 3 RWM will work in partnership with Interested Parties, communities and the local authorities that represent those communities to implement Government Policy to identify a suitable site for the development of a GDF.
- 4.2. During this time, RWM will undertake increasingly detailed evaluations, as the information and data available in respect of the relevant area increases.
- 4.3. It is recognised that the level of information available will vary between different areas and sites being evaluated. In general, it is assumed that available and relevant information will increase as potential areas and sites progress through the Siting Process. Figure 4 presents an overview of how the level of relevant information about a given geographical area will increase over time.

Figure 4 Information Gathering during the Siting Process





- 4.4. As such, our evaluations early in the Siting Process will necessarily recognise higher levels of uncertainty, with those areas of uncertainty being used to inform the type and scope of necessary future work and studies. Later on in the Siting Process, as the levels of information, knowledge and data increases, RWM will be in a position to undertake increasingly detailed evaluations and provide robust siting recommendations to the Government. These recommendations will be used by Government to inform the decision on which areas or sites to progress to Site Characterisation, underground investigation, construction and operation.
- 4.5. Up until the beginning of Site Characterisation, it is anticipated that most of the information being evaluated by RWM (both existing and newly-commissioned surface based surveys) will be focused on the surface sites with sub-surface information limited to existing desk based information such as that provided through the National Geological Screening or potentially newly commissioned non-intrusive geophysical surveys.
- 4.6. We anticipate that the majority of new sub-surface information from techniques, such as seismic surveys, shallow and deep boreholes, down-hole testing and sampling etc. will be generated during the Site Characterisation work that we undertake. It will be at this point where the evaluations will significantly increase in detail and complexity with a much greater degree of information being made available including through the site-specific safety assessments which RWM would undertake.
- 4.7. The remainder of this section explains at a high level how RWM envisages it will implement the Working with Communities Policy and progress through the Siting Process.

Initial Discussions

- 4.8. Early evaluations are likely to focus on safety, making use of the National Geological Screening information to inform discussions about the potential for finding a suitable site in the area under consideration. Alongside this, RWM will also consider at a very high level the information available under each of the Siting Factors.
- 4.9. At this stage in evaluations, RWM will only use existing readily available information to understand whether the area may be potentially suitable to host a GDF.
- 4.10. If the area suggested by the Interested Party is small, the evaluations during initial discussions may need to extend beyond this area in order for RWM to take an informed view on the surrounding geological conditions.

Working Group

- 4.11. RWM will gather a range of information to understand the character and notable features of the relevant local area, together with any local issues and to answer questions the community might have.
- 4.12. As part of the Working Group RWM will support identification of a Search Area in accordance with the Working with Communities Policy.
- 4.13. RWM will also explain the key information gaps that will inevitably exist at this early stage which would be used to inform a future work programme to be agreed by the Community Partnership.

Community Partnership - Non-intrusive Investigations

- 4.14. This is the first time in the Siting Process when surveys will be commissioned and RWM will start to acquire new information about the Search Area. For example, surveys on ecology, transport, noise, air quality, etc. may be commissioned.
- 4.15. Evaluations at this point in the Siting Process will necessarily start to become more detailed using the Siting Factors and Evaluation Considerations, but will still be very much focused on surface features of the Search Area.
- 4.16. If considered beneficial and necessary at this point, RWM may also decide to undertake non-intrusive geophysical survey work in order to help shape understanding of the area.
- 4.17. Much of the information produced at this stage will also be used to support land use planning applications and the environmental permit applications for boreholes if a site is recommended to progress into Site Characterisation.
- 4.18. It may be necessary to undertake a comparative assessment if several communities are still actively engaged in the process. A recommendation will be made to Government on the site or sites to be characterised – this means deep borehole investigations. This is discussed further in Section 5.

4. Implementing Government Policy

Community Partnership - Deep Borehole Investigations and Construction

- 4.19. RWM will need to apply for land use planning permissions and environmental permit(s) to carry out deep borehole investigations. Information gathered up until this point, informed by the Siting Factors and the Evaluation Considerations, will be used for the purposes of RWM making the relevant applications for planning permission and an Environmental Permit(s).
- 4.20. These investigations will test the geological conditions at potential site(s) to assess whether a GDF could be designed, constructed, operated and closed safely in accordance with the Requirements.
- 4.21. RWM will begin to generate the majority of new sub-surface information. It will be at this point where the evaluations will significantly increase in detail and complexity with a much greater degree of information being made available including the site-specific safety assessments which RWM will undertake.
- 4.22. When sufficient information is available, a Potential Host Community will be identified. As set out in the Working with Communities Policy, the Potential Host Community will include all of the community council areas in which the following are located:
- proposed surface and underground elements of a GDF;
 - any associated development which is relevant to the GDF facility and any land required to mitigate impacts;
 - transport links/routes from the GDF site to the nearest port, railhead or primary road network (i.e. out to where minor roads meet the nearest A roads);
 - direct physical impacts associated with underground investigations, construction and operation of the GDF (identified through environmental impact assessment work carried out to support RWM's engagement with communities and its planning permission applications).
- 4.23. Based on the information gathered through the deep borehole investigations, and the on-going discussions within the Community Partnership, RWM will evaluate the geographical area comprised by the Potential Host Community and its potential suitability to host a GDF.
- 4.24. A Test of Public Support will have to be carried out to confirm whether the relevant community is willing to host a GDF.
- 4.25. Depending on the outcome of the Test of Public Support, RWM will prepare a recommendation to Government as to which site to select for a GDF.
- 4.26. At the appropriate time, RWM will use the information gathered to inform its applications for planning permission, environmental permits and a nuclear site licence required for the construction, operation and eventual closure of a GDF.



5 Comparative Assessments

- 5.1. Periodically, comparative assessments may be required to select from a number of competing areas or sites to progress through the Siting Process.
- 5.2. RWM's approach to comparative assessments, if required, will be one premised on an open and transparent approach based on the holistic consideration of the Requirements through the Siting Factors and underpinning Evaluation Considerations.
- 5.3. When undertaking comparative assessments, we will also consider the extent to which the community is engaged.
- 5.4. RWM will undertake qualitative evidence-based evaluations using the available information of how the potential sites being evaluated compare. In line with our evaluation approach this will not involve ranking or scoring of the Siting Factors and Evaluation Considerations that have been considered.



6 Oversight and Scrutiny

- 6.1.** The health and safety of RWM's employees, contractors and the public, the protection of the environment, and the security of our assets are of paramount importance in all that we do. Achieving high standards in these areas is critical to the delivery of our vision and mission.
- 6.2.** Our goals are simple:
- no accidents;
 - no harm to the health of our staff or others affected by our work;
 - no damage to the environment;
 - no loss, theft or sabotage of our assets, including information; and
 - no breach of regulation.
- 6.3.** RWM is committed to achieving high standards of performance and consistently delivering on our commitments to customers and stakeholders. In order to achieve the standards critical to the delivery of our vision and mission, RWM maintains an integrated management system which includes the application of independent oversight of the programme to support improvement and learning.
- 6.4.** Assurance of the evaluations undertaken within the SE will be provided by RWM internal oversight.
- 6.5.** RWM may also utilise further lines of independent assurance and advice (e.g. RWM's Advisory Council and peer review by representatives from overseas waste management organisations) as appropriate.
- 6.6.** RWM may also make use of benchmarking with overseas programmes, other UK infrastructure projects, and projects with community involvement, to inform its evaluation approach.
- 6.7.** The consent-based Siting Process set out in the Working with Communities Policy applies in addition to the land-use planning and regulatory processes that will apply to a development of this nature and complexity; all of the usual opportunities for the public to scrutinise and have a say in the development of such a major infrastructure project will remain.

7 How to take part

- 7.1.** We have published this consultation online at **gwaredu daearegol**. It can also be downloaded as a printable PDF from the website.
- 7.2.** If you prefer, we can send you a printed version through the post by request to:

**Site Evaluation Team
Radioactive Waste Management
Building 587
Curie Avenue
Harwell Campus
Didcot OX11 0RH**

Telephone: **0300 0660 100**

How to respond

- 7.3.** Your response will be most useful if it is framed with specific reference to the questions posed at the end of this section, though further comments and supporting evidence are also welcome. We also actively welcome the submission of evidence to support your response and RWM will give greater weight to responses that are based on argument and evidence, rather than simple expressions of support or opposition.
- 7.4.** Please make it clear whether the views you submit are those of an individual or if they represent those of an organisation. If you are responding on behalf of an organisation, please tell us who the organisation represents and, where applicable, how the views of members were assembled.
- 7.5.** If you would prefer to respond by email or letter, it would be very helpful if you could use our response template. It can be downloaded as a PDF or a Word document at: **gwaredu daearegol** or we can supply an electronic or paper copy on request. However we will consider all responses, whether provided on the template or not.
- 7.6.** Please email your response to: **gwerthusosafleoedd@nda.gov.uk** or write to us at the address above.
- 7.7.** You can submit your response to this consultation online, via the link on the RWM website **gwaredu daearegol**
- 7.8.** If you have any queries about this consultation or would simply like more information about the Site Evaluation, please contact us via any of the channels shown above.

Confidentiality and data protection

- 7.9.** When the consultation ends, we will publish a summary of the key points raised. Members of the public may also ask for a copy of responses under the freedom of information legislation (primarily the Freedom of Information Act 2000, the Data Protection Act 2018, the General Data Protection Regulation (EU) 2016/679 and the Environmental Information Regulations 2004). If you do not want your response, including your name, contact details and any other personal information to be publicly available, please say so clearly in writing when you send your response to the consultation. Please note, if your computer automatically includes a confidentiality disclaimer that will not count as a confidentiality request.
- 7.10.** You do not have to give us any information, and details of our Privacy notice³⁸ can be found on our website. The Notice explains how we will store and use your personal data and how you can request a copy of any information we hold about you.

Consultation conduct

- 7.11.** Any comments about the way in which this consultation has been conducted should be set down in writing and sent, marked 'Site Evaluation Consultation', to:

**Radioactive Waste Management
Building 587
Curie Avenue
Harwell Campus
Didcot OX11 0RH**

Or by email to: **gdfenquiries@nda.gov.uk**

³⁸ www.gov.uk/government/publications/radioactive-waste-management-privacy-notice



Consultation Questions

Consultation Question 1:

Are there any other sources of high level Requirements, other than the Siting Process Requirements and the Legal Requirements identified, that you think should be reflected in the Site Evaluation and why?

Question 2:

Do you agree with the Siting Factors we have identified? Are there any other Siting Factors that should be included and why?

Question 3:

Do you agree with the Evaluation Considerations we have identified? Are there any other Evaluation Considerations that should be included and why?

Question 4:

Is there anything else that you think we should consider in our site evaluations and why?

Glossary

Comparative Assessments An assessment of the similarities and differences between two or more sites. RWM's approach to comparative assessment will be premised on an open and transparent approach based on the holistic consideration of the Siting Factors and underpinning Evaluation Considerations as well as the extent to which the community is engaged.

Community Partnership The partnership between the members of the community, at least one relevant local authority and RWM, which will provide a vehicle for sharing information with the community and for finding answers to the questions the community may have about geological disposal, the siting process and how they, as a community, could benefit.

Disposal System Safety Case (DSCC) A 'generic' and non-site-specific document produced by RWM to set out the high-level and technical requirements on RWM's organisational management, site selection and evaluation and GDF design, construction, operation and closure, so that the disposal system can meet its fundamental need.

Disposal System Specification (DSS) A document produced by RWM to set out the high-level and technical requirements on the RWM's organisational management, site selection and evaluation and GDF design, construction, operation and closure, so that the disposal system can meet its fundamental need.

Evaluation Considerations The evaluation considerations that underpin each of the six Siting Factors and which will be used to guide our site evaluations and discussions with communities.

Geological disposal A long-term management option involving the emplacement of radioactive waste in an engineered underground Geological Disposal Facility or repository, where the geology (rock structure) provides a barrier against the escape of radioactivity.

Higher activity radioactive waste Higher activity radioactive waste includes the following categories of radioactive waste: high level waste, intermediate level waste, a small fraction of low level waste with a concentration of specific radionuclides sufficient to prevent its disposal as low level waste.

Initial Discussions Early contact with an Interested Party to help them to find out more about: the Siting Process; to understand whether a site/area put forward has any potential to host a GDF; and, to help them to decide whether they want to take their interest further.

Inventory for disposal The specific types of higher activity radioactive waste (and nuclear materials that could be declared as waste) which will be disposed of in a geological disposal facility.

Legal Requirements The requirements derived from key legislative and regulatory instruments and regimes (as well as any relevant associated guidance regarding those regimes) which relate to the design and assessment, construction, operation and closure of a GDF.

National Geological Screening (NGS) An exercise undertaken by RWM that brings together high level geological information from across the county relevant to the design of a GDF.

Nuclear Decommissioning Authority (NDA) A non-departmental public body established by the Energy Act 2004. It is a strategic authority that owns 17 UK nuclear sites.

Relevant Local Authorities Relevant local authorities are the unitary authorities that represent all or part of the Search Area or Potential Host Community

Radioactive Waste Management Ltd (RWM) The developer of a GDF and a wholly owned subsidiary of the Nuclear Decommissioning Authority.

Requirements Together, the Siting Process Requirements and the Legal Requirements.

Search Area The Search Area is the geographical area encompassing all the community council areas within which RWM will be able to consider potential sites to host a GDF. For areas which include potential for development under the seabed, the Search Area will comprise only that area on land.

Siting Factors The six Siting Factors chosen to reflect what RWM believes, on the basis of international GDF projects and of UK infrastructure projects of similar size and complexity, are likely to be the key areas of focus for discussion with communities participating in the Siting Process. The six Siting Factors are intended to assist communities in understanding the various matters that RWM will necessarily need to consider as it evaluates the suitability of sites for hosting a GDF in accordance with the relevant Requirements.

The Siting Factors are:

- Safety
- Community
- Environment
- Engineering Feasibility
- Transport
- Cost

Siting Process The consent-based approach established by Government Policy, in particular the Working with Communities Policy for RWM to engage and work in partnership with communities and relevant local authorities in Wales for the purposes of identifying a suitable location for the development, operation and eventual closure of a GDF.

Siting Process Requirements The Siting Process Requirements are derived from the Government's Working with Communities Policy, which sets out how RWM will work in partnership with interested parties, communities and the local authorities that represent those communities to identify a suitable site for the development of a GDF.

Working Group The Working Group is formed in the early part of the process in order to gather information about the community and provide information to the community about geological disposal before a Community Partnership is formed. It comprises the Interested Party, RWM, independent facilitator, independent chair and any local authorities that wish to join.

Working with Communities Policy *Geological Disposal of Higher Activity Radioactive Waste: Working with Communities* – Welsh Government.



Annex A - Devolved Administrations

- 8.1. In England, the overarching policy framework for the implementation of the geological disposal programme is set out in *Implementing Geological Disposal – Working with Communities, An updated framework for the long-term management of higher activity radioactive waste*.
- 8.2. The Northern Ireland Executive has responsibility for ensuring that any proposed Geological Disposal Facility will not have an adverse impact upon the environment, health or safety of Northern Ireland. Any future policy decisions in relation to geological disposal in Northern Ireland would be a matter for the Northern Ireland Executive, which is currently suspended.
- 8.3. The Scottish Government is not a sponsor of the geological disposal programme, but does remain committed to dealing responsibly with radioactive waste arising in Scotland. In January 2011, the Scottish Government published its Higher Activity Waste Policy³⁹. Scottish Government policy is that the long-term management of higher activity radioactive waste should be in near-surface facilities. Facilities should be located as near to the sites where the waste is produced as possible. While the Scottish Government does not support deep geological disposal for Scotland, it continues, along with the UK Government and other devolved administrations, to support a robust programme of interim storage and an ongoing programme of research and development.

³⁹ *Scottish Government's Higher Activity Waste Policy, 2011*

Annex B - Legal Requirements

- 8.4. As noted above, the Legal Requirements will be of fundamental importance during the Siting Process. RWM will need to ensure that its site evaluations are consistent with Legal Requirements, and the evaluations gather the necessary information for the purposes of informing and shaping its subsequent applications for the relevant consents. In this context, this Annex gives a brief overview of what RWM considers to be the key Legal Requirements that will need to be considered throughout the Siting Process, and which have therefore informed the development of the Siting Factors and Evaluation Considerations.
- 8.5. It should be noted in the context of the Legal Requirements discussed below that the UK's independent nuclear and environmental regulators have no formal role in selecting a site for a GDF. Their regulatory roles will begin only after a site(s) has been selected for further investigation. Natural Resources Wales (NRW), for example, will have a formal role from the time when sites for deep borehole investigations are selected, and the Office for Nuclear Regulation (ONR) will have a formal role from the time when a site for a GDF has been selected and the nuclear site licensing process has commenced. The regulators will engage with stakeholders as requested to explain the regulatory processes and their role. They will only license or permit a GDF if it can be shown to meet the stringent regulatory requirements for protection of people and the environment.

Land use planning

- 8.6. Geological disposal infrastructure will require land use planning consent. Applications for planning permission would be made to the relevant local planning authority in whose area the surface infrastructure is located.
- 8.7. The general planning policy framework in Wales is provided by Planning Policy Wales (PPW)⁴⁰ and is supplemented by a series of Technical Advice Notes (TANs) and Minerals Technical Advice Notes (MTANs) and the Welsh Government provides procedural guidance in circulars. Together, these set the context for the preparation of Local Development Plans (LDPs) and for decision making in relation to all types of development proposals in Wales. Section 70(2) of the Town and Country Planning Act 1990 provides that, in dealing with an application for planning permission, a local planning authority must have regard to the provisions of the LDP, so far as is material to the application and to any other material planning considerations. Section 1 of PPW "Managing New Development" provides more information on material considerations.
- 8.8. The Planning Act (Wales) 2015 introduced a modernised framework for the delivery of planning services in Wales, including the principle of a new category of development for the largest and most technically complex devolved planning applications in Wales in which Welsh Ministers would assume responsibility. The new category of development for the largest infrastructure planning applications is called developments of national significance (DNS).
- 8.9. Policy on the application of the new planning regime Wales is still under development. In April 2018, the Welsh Government consulted on changes to the consenting of infrastructure in Wales^{41 42}. The consultation proposes that "development which involves the construction of one or more boreholes, and the carrying out of any associated excavation, construction or building work, for the main purpose of obtaining information, data or samples to determine the suitability of a site for the construction or use as a radioactive waste geological disposal facility with a depth in excess of 200 metres" will be classed as a Welsh Infrastructure Project (WIP) and subject to the Welsh Infrastructure Consent (WIC) process. In this process Welsh Ministers would act as the consenting authority.

⁴⁰ Planning Policy Wales (Edition 10, December 2018) is the land use planning policy for Wales. See: <https://beta.gov.wales/sites/default/files/publications/2018-12/planning-policy-wales-edition-10.pdf>

⁴¹ Welsh Government, Consultation Document, *Changes to the consenting of infrastructure: Towards establishing a bespoke infrastructure consenting process in Wales*, 30 April 2018. The consultation closed on 23 July 2018.

<https://beta.gov.wales/sites/default/files/consultations/2018-04/180430-changes-to-the-approval-of-infrastructure-development.pdf>

⁴² Paragraph 4.62 of the consultation provides "...given the scale, longevity and national importance of any such facility [GDF], it would be appropriate for the consenting for such a site to be a WIP, covered by the WIC arrangements".

Environmental Impact Assessment (EIA)

- 9.0. The EIA regime is designed to protect the environment by ensuring that the likely significant environmental effects of proposed development are properly assessed and considered during the consenting process.
- 9.1. The relevant legislation sets out procedures for identifying which projects should be subject to EIA, and subsequently for assessing, consulting and coming to a decision on those projects which are likely to have significant environmental effects.
- 9.2. In circumstances where proposed development is subject to EIA, the applicant for consent must prepare and submit an Environmental Statement to the relevant consenting authority. The relevant legislation sets out what information must be included in an Environmental Statement.
- 9.3. The environmental impacts of any development proposed by RWM will be assessed in accordance with the relevant legislation and the application for development supported by an EIA as required.

Habitats Regulations Assessment (HRA)

- 9.4. The requirements of the Habitats Directive⁴³ and Habitats Regulations⁴⁴ apply to plans and projects that are likely to have a significant effect on European protected sites.
- 9.5. Article 6(3) of the Habitats Directive provides that, where a proposed plan or project would be likely to have a significant effect on European protected sites, whether individually or in combination with other plans or projects, an appropriate assessment must be carried out to determine the extent to which European protected sites would be affected.
- 9.6. In circumstances where the appropriate assessment determines that the plan or project would not adversely affect the integrity of a European site(s), the plan or project may be approved.
- 9.7. In circumstances where the appropriate assessment determines that the plan or project would adversely affect the integrity of a European site(s), the plan or project may only be approved:
 - in the absence of alternative solutions; and
 - the plan or project must nevertheless be carried out for imperative reasons of overriding public interest; and
 - compensatory measures are put in place.
- 9.8. RWM will necessarily need to have close regard to the requirements of the Habitats Directive and Habitats Regulations throughout the Siting Process, in order to determine whether the proposed development of GDF infrastructure at a given geographical location would be likely to impact on a European site(s). RWM will engage closely with Natural Resources Wales in this regard.
- 9.9. Where appropriate, an HRA will be prepared by RWM to support its applications for development consent. The HRA will analyse the potential impact of the proposed development on any relevant European site(s).

⁴³ Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora

⁴⁴ Conservation of Habitats and Species Regulations 2017, S.I. 2017/1012

Nuclear Site Licensing

- 9.10.** The ONR licenses nuclear sites, and is responsible for regulating safety and security on licensed nuclear sites in Great Britain. The ONR also regulates the safety of transporting radioactive materials and plays a key role in ensuring that the UK's international safeguards obligations are met.
- 9.11.** The UK Government has confirmed that a GDF will be a prescribed nuclear installation under section 1 of the Nuclear Installations Act 1965. This means that a nuclear site licence will be required during both the construction and operational phases of a GDF. Compliance with the licence conditions will ensure that all aspects of a facility adhere to strict safety and security requirements, including its overall design. The nuclear site licence for facility GDF located in Wales (or England) would be granted and subsequently regulated by the ONR.
- 9.12.** The ONR and NRW work together in regulating the management and storage of higher activity radioactive waste on nuclear licensed sites to ensure that decisions about the management of that waste take into account the disposability of conditioned waste alongside the nuclear safety considerations.
- 9.13.** The ONR is also responsible for regulating conventional health and safety requirements on nuclear licensed sites. The Health and Safety Executive will however be responsible for regulating the conventional health and safety aspects of certain activities which are carried out during the Siting Process (i.e. prior to the grant of a nuclear site licence) – for example, in respect of surface-based investigations where deep boreholes are being drilled to investigate the geological characteristics of a given geographical area.

Environmental Permitting

- 9.14.** NRW is responsible for implementing and enforcing environmental protection legislation in Wales. Its areas of responsibility include environmental pollution, waste management, flood risk management, water resources, fisheries and conservation. NRW also regulates disposals of radioactive waste from nuclear licensed sites as well as from other premises that use radioactive substances. Disposals of radioactive waste include radioactive discharges to air and water and disposal of solid waste to land, including disposals at the Low Level Waste Repository as well as geological disposal.
- 9.15.** Guidance on Requirements for Authorisation sets out the requirements for a long-term environmental safety case for a GDF; this guidance is relevant in England and Wales. Under the Environmental Permitting (England and Wales) Regulations 2016, 'intrusive investigation work' requires an Environmental Permit; this means that the boreholes required to investigate a site will require an Environmental Permit, and there will be a staged authorisation process following this as RWM develops its safety assessments for underground investigations, construction and operation.
- 9.16.** In the context of environmental regulation, it should be noted that the development and operation of a GDF in Wales will also involve NRW and, if a coastal site is selected, the Welsh Government. NRW has specific responsibilities for making sure that the natural environment, including its land, flora and fauna, freshwater and marine environments, geology and soils are protected and improved. NRW is responsible for marine licensing in the Welsh inshore and offshore regions.
- 9.17.** Pursuant to Part 3 of the Marine and Coastal Access Act 2009, the Welsh Ministers are the Marine Planning Authority (MPA) for the Welsh inshore and offshore areas. The Welsh Ministers have the power (and in some cases a duty) to prepare a marine plan for an area consisting of the whole or any part of their planning maritime regime. The Welsh Government consulted on its first Welsh National Marine Plan (WNMP) in 2017. Once approved by the Welsh Ministers, the aim is to publish the first WNMP in 2019. As such both the MPA and Welsh Government is responsible for implementing and developing the first Welsh National Marine Plan and have a role in the licensing, regulation and planning of marine activities in the seas around Wales.

⁴¹ Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora

⁴² Conservation of Habitats and Species Regulations 2017, S.I. 2017/1012

Getting in touch

To learn more about the UK's mission to deal with radioactive waste

Email **gdfenquiries@nda.gov.uk**

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