



**HM Government  
of Gibraltar**

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**Framework Document:**

*Supplementing and informing the implementation of Regulations 5(1)(b) to (h), 7, 8, 9, 10 and 11 of the Responsible and Safe Management of Spent Fuel and Radioactive Waste Regulations 2013 and establishing a Nuclear Management Programme.*

**May 2021**

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**HM Government of Gibraltar**



## 1. Introduction.

The area comprising the territory of Gibraltar is 6.8km<sup>2</sup>. The available land is split between urbanised and non-urbanised land. The non-urbanised land consists almost entirely of sites that have been designated as Special Areas of Conservation and Special Protected Areas under EU Directives or other international instruments. The economy is based on tourism and services as there is no arable land and no manufacturing industry. The remaining urbanised land is populated by circa 30,000 persons and is one of the most densely populated urban environments in Europe.



There has never been any nuclear plant in Gibraltar and there are no fuel processing plants that would give rise to the generation or the importation/exportation of spent nuclear fuels. Further, it is Her Majesty's Government of Gibraltar ("HMGGoG") policy, as stipulated in the **Policy Document**, that any activity that would produce or



which may involve spent nuclear fuel would not be permitted. These circumstances make it unviable to locate a facility which handles nuclear fuels either as a source of power or as a reprocessing facility in Gibraltar.

The foregoing notwithstanding, Gibraltar is not covered by the derogation afforded to certain Member States under Article 15(2) of Council Directive 2011/70/Euratom of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste (the “**Directive**”).

In addition to not having a nuclear sector, there is no agriculture or domestic, industrial manufacturing activity in Gibraltar. Activities which take place in Gibraltar do not, therefore, produce radioactive waste which would be classified as high, intermediate or low level radioactive waste (see section 6.3. of this **Framework Document** where different waste categories are defined). There is only an extremely limited amount of very low level radioactive waste present in Gibraltar. HMGoG’s policy with respect to the management of such waste, and the general principles guiding such policy is stipulated in the Policy Document.

Therefore this **Framework Document**, which forms part of Gibraltar’s **Nuclear Waste Management Framework**, applies to both spent nuclear fuel and radioactive waste and, in their engagement with this document, the public are asked to consider the background information set out above.

The Nuclear Waste Management Framework referred to above is effectively the legislative, regulatory and organisational framework which Gibraltar has established in order to ensure the correct and proper implementation in Gibraltar of the Directive.

Through its Nuclear Waste Management Framework, HMGoG has ensured that, if in future it becomes the case that spent fuel results from any civilian activities taking place in Gibraltar, or if an application for a licence to engage in an activity involving radioactive waste or the operation of a waste management facility in which radioactive waste is handled is made, Gibraltar has in place adequate arrangements to:

- Safeguard responsible and safe management of spent fuel and radioactive waste in a way which avoids imposing undue burdens on future generations; and
- Guarantee a high level of safety in spent fuel and radioactive waste management to protect workers and the general public against the dangers arising from ionising radiation.



This **Framework Document** has been devised to *inter alia* secure the above-mentioned objectives.

## **2. Summary of Gibraltar’s Nuclear Waste Management Framework.**

Transposition of the Directive is achieved through the production and implementation of an effective regulatory framework consistent with the Directive’s general principles and obligations. This regulatory framework is comprised of a number of instruments which together make up Gibraltar’s Nuclear Waste Management Framework for spent fuel and radioactive waste management. Gibraltar’s Nuclear Waste Management Framework has been established in accordance with Regulation 5(1) of the Responsible and Safe Management of Spent Fuel and Radioactive Waste Regulations 2013 (as amended). These instruments are the following:

**Transposing Legislation:** The Responsible and Safe Management of Spent Fuel and Radioactive Waste Regulations 2013 as amended (the “**Regulations**”).

**The Policy Document:** This being the **Policy Document** which establishes and maintains policies for Gibraltar on spent fuel and radioactive waste management on the basis of the principles set out in Regulation 4(3) of the Regulations.

**The Framework Document:** This being this document which both supplements and informs the implementation of Regulations 5(1)(b) to (h), 7, 8, 9, 10 and 11 of the Regulations and establishes a **Nuclear Management Programme** for the management of spent fuel and radioactive waste in accordance with Regulation 5(1)(a) and Regulation 12 of the Regulations.

**The Competent Authority:** This being the **Gibraltar Environmental Agency** (the “**Agency**”) in its capacity as the designated competent regulatory authority, for the purposes of Article 6(1) of the Regulations.

The Nuclear Waste Management Framework therefore includes legally enforceable controls implemented through the Regulations and other relevant elements of Gibraltar law.



### **3. Key aspects of Gibraltar's Nuclear Waste Management Framework.**

Regulation 5(1) of the Regulations states that the Nuclear Waste Management Framework shall provide for the aspects listed in subparagraphs (a) to (h) therein. This section of the Framework Document explains and informs how the Nuclear Waste Management Framework implements those aspects of Regulation 5(1).

#### **3.1. *“A national programme for the implementation of spent fuel and radioactive waste management policy”.***

This is the Nuclear Management Programme for the management of spent fuel and radioactive waste included in section 6 of this Framework Document and which is established in accordance with Regulation 12 of the Regulations.

#### **3.2. *“National arrangements for the safety of spent fuel and radioactive waste management”.***

The national arrangements fall under the Agency in view that it is the designated competent regulatory authority for the purposes of Article 6(1) of the Regulations with responsibility for implementation of those Regulations and this Framework Document.

#### **3.3. *“A system of licensing of spent fuel and radioactive waste management activities, facilities or both...”.***

In accordance with Article 5(1)(c) of the Directive, HMGoG has established a system of licensing of spent fuel and radioactive waste management activities, facilities or both. This system is in place notwithstanding that spent fuel and radioactive management activities or facilities which would require a licence do not currently exist in Gibraltar.

The key provisions of this licensing system are as follows:

Regulation 6A of the Regulations makes the requirement to hold a licence mandatory and a person undertaking an activity without a licence or an unlicensed facility can result in criminal proceedings. In addition, Regulation 6A makes it clear that a licence which may be issued under the Regulations is cumulative to any other licence or permit requirement. So, for example, a licence issued under the Regulations would not affect the need for a permit under the Town Planning Act 2018\* where the erection of a facility may be contemplated.



*\*Note: The construction or adaptation of an existing structure for the purpose of waste management will also require authorisation under the Town Planning Act 2018 and associated subsidiary legislation, in particular the Town Planning (Environmental Impact Assessment) Regulations 2019 which transposes Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (“the EIA Directive”). Proposals for new nuclear power stations and installations for the processing, storage or disposal of spent fuel and radioactive waste will most likely fall within the provisions of List 1 or 2 developments under the EIA Directive. This means that applications for planning consent will include their accompanying environmental statements. Further, such applications are subject to publication and consultation requirements that provide opportunities for public participation. Given the small geographical footprint of Gibraltar should any project potentially have transboundary effects transboundary consultation with the neighboring Member State will be required.*

Regulation 7 of the Regulations provides that every licence will be issued on condition that the prime responsibility for the safety of spent fuel and radioactive waste management facilities and/or activities rest with the licence holder. That responsibility cannot be delegated.

Regulation 8 of the Regulations sets out a number of matters that the Agency must address in each licence, having regard to the purpose of the licence, these include:

- Licence holders, under the regulatory control of the Agency, will be required to regularly assess, verify and continuously improve, as far as is reasonably achievable, the safety of the radioactive waste and spent fuel management facility or activity in a systematic and verifiable manner. This will be achieved through the production of an appropriate safety assessment, other arguments and evidence as will be required by the Agency. Therefore, the Agency will require licence holders to have in place robust arrangements for the safe and compliant operation of any radioactive waste and spent fuel management facility or activity. As stated above, a safety demonstration demonstrating that any facility can operate in a safe and compliant manner will in every case be required to be provided to the Agency for review and endorsement.
- As part of the licensing of a facility or activity the safety demonstration will need to cover the development and operation of an activity and the development, operation and decommissioning of a facility or closure of a disposal facility as well as the post-closure phase of a disposal facility. The extent of the safety demonstration will need to be commensurate with the complexity of the operation and the magnitude of the hazards associated with the radioactive waste and spent fuel, and the facility or activity. This will ensure that the licensing process contributes to safety in the facility or activity during normal operating conditions, anticipated operational occurrences and design basis accidents. The



safety demonstration will provide the required assurance of safety in the facility or activity and this must be to the Agency's satisfaction.

- A licence will not be issued by the Agency unless it is established to the Agency's satisfaction, that the licence holder has appropriate measures in place to prevent accidents and mitigate the consequences of accidents, including verification of physical barriers and the licence holder's administrative protection procedures that would have to fail before workers and the general public would be significantly affected by ionising radiation. This approach will identify and reduce uncertainties.
- A licence will not be issued by the Agency unless it is established, to the Agency's satisfaction, that the licence holder has established and implemented integrated management systems, including quality assurance, which give due priority for overall management of spent fuel and radioactive waste to safety. This requirement shall be regularly verified by the Agency.
- Licence holders must provide for and maintain adequate financial and human resources to fulfil their obligations with respect to the safety of spent fuel and radioactive waste management as laid down in the preceding points of this list of points.

Furthermore, Regulation 20 of the Regulations makes it a general condition of every licence issued under the Regulations which would require licence holders to at all times, when undertaking an activity to which the licence relates, have regard to the Policy Document and this Framework Document. This being the case, Regulation 21 of the Regulations allows the Agency to amend any licence issued under the Regulations where that licence is permitting conduct that is not conducive to the implementation of the Policy Document of this Framework Document.

Ultimately, the Agency also has powers, under Regulation 22 of the Regulations, to suspend, vary or revoke a licence if it is satisfied that the licence holder has not complied with any of the terms under which the licence was issued.

It is *inter alia* for all the reasons stipulated in this section 3.3. of this Framework Document that any operators, whose activities would fall under the scope of the Regulation, should thoroughly inform themselves of these licensing requirements before looking to establish themselves in Gibraltar.



**3.4. “A system of appropriate control, a management system, regulatory inspections, documentation and reporting obligations for radioactive waste and spent fuel management activities, facilities or both, including appropriate measures for the post-closure periods of disposal facilities”.**

The licensing system, established as described in section 3.3. of this Framework Document, has incorporated within it systems of appropriate control, management, requirements with respect to regulatory inspections, documentation and reporting obligations, including appropriate measures for the post-closure periods of any disposal facilities which may be established in future. These systems are incorporated in the conditions which the Agency will attach to any licence issued.

**3.5. “Enforcement actions, including the suspension of activities and the modification, expiration or revocation of a licence together with requirements, if appropriate, for alternative solutions that lead to improved safety”.**

With respect to licences, these are the enforcement actions explained in the final paragraphs of section 3.3. of this Framework Document as those which relate to Regulations 20, 21 and 22 of the Regulations. The Agency has powers under the Regulations to pursue such enforcement actions with respect to any licences which it may issue in future.

In addition, the Agency has the power, under Regulation 17 of the Regulations, to issue enforcement notices to any operator or person whose conduct is not, in the opinion of the Agency, in compliance with the Policy Document or this Framework Document. Any enforcement notice will stipulate what action is required to ensure compliance with the Policy Document of this Framework Document and the time by which such action must be taken. Failure to comply with an enforcement notices is a criminal offence under Regulation 18 of the Regulations.

In aid of the measures identified in the preceding paragraphs the Agency may request information from a licensee and has powers of entry (see Regulations 24 to 26 of the Regulations). These powers enable it to get information that is relevant to the discharge of its duties in addition to being a possible precursor to enforcement measures being undertaken.





**3.6. *“The allocation of responsibility to the bodies involved in the different steps of spent fuel and radioactive waste management...”***

The Agency will, prior to issuing a licence under the Regulations, assign responsibilities to any stakeholder involved in an activity or operation to which a licence relates. Such assignment of responsibilities will be clearly set out in any licence issued.

Separately, Regulation 7 of the Regulations makes it clear that the prime responsibility for the safety of spent fuel and radioactive waste management facilities and/or activities rests with the licence holder and that that responsibility cannot be delegated under any circumstances.

**3.7. *“National requirements for public information and participation”***

Regulation 5(1)(g) of the Regulations makes it a requirement for the Nuclear Waste Management Framework to provide for mechanisms for public information and participation with respect to the policies included within the Framework.

The Agency’s website hosts the Policy Document and Framework Document so that the public may consult it at no cost.

In line with best practice and the legal obligations regarding proper and effective public information and consultation on the draft Policy Document and the draft of this Framework Document, HMGoG informed the public, by means of a press release, of the availability of the draft documents on the website of the Agency and invited the public to participate in the development of the policies contained in those documents through the provision of feedback and recommendations. The Agency is in the process of examining the feedback received as a result of that process and it will advise HMGoG with respect to any policy developments which it may recommend ought to be considered based on any feedback from the public.

The current versions of the Policy Document and this Framework Document will be hosted by the Agency on the webpage described above permanently so it remains the case that the public can still provide further comments or feedback.



HMGoG has implemented the requirements for public participation in decision-making established under the Aarhus Convention, and reflected in Directive 2011/92/EU (see note to this effect in section 3.3).

### **3.8. “A financing scheme for spent fuel and radioactive waste management”.**

Regulation 5(h) of the Regulation makes it a requirement for the Nuclear Waste Management Framework to include a financing scheme for spent fuel and radioactive waste management commensurate with the requirement in Regulation 10 for adequate financial resources to be made available when needed for the implementation of the Nuclear Management Programme in section 6 of this Framework Document.

The Agency has advised HMGoG of the estimates of the costing of the Nuclear Management Programme. The estimates include an assessment of the costs of the Nuclear Management Programme and the underlying basis and hypotheses for that assessment. These estimates include an assessment of costs required to be spent with respect to the training of staff, the engagement of specialist consultants or any costs which would be associated with respect to the management of spent fuel or radioactive waste in potential anticipation of any activity linked with spent fuel or radioactive waste taking place in Gibraltar.

## **4. Expertise and Skills.**

HMGoG is, under Regulation 9 of the Regulations, required to ensure that the Nuclear Waste Management Framework requires all parties to make arrangements for education and training for their staff, as well as research and development activities to cover the needs of the national programme for spent fuel and radioactive waste management in order to obtain, maintain and to further develop necessary expertise and skills.

With this objective in mind, licences issued to operators shall prescribe that only workers who have undergone adequate radiation protection training shall carry out work with radiation sources or radiation environments. The standard of training shall be measured up, as appropriate, against [Guidance](#) issued by the United Kingdom’s Office for Nuclear Regulation.

Moreover, HMGoG shall require designated staff members of the Agency to have sufficient understanding of the safety and security aspects related to the management of radioactive waste. In particular, the Agency shall ensure that a sufficient number of its staff members undergo training. In addition, the Agency shall be provided with sufficient financial resources to draw on expertise provided by external consultants where necessary.



## **5. Financial Resources.**

Regulation 10 of the Regulations makes it a requirement for HMGoG to ensure that adequate financial resources are available when needed for the implementation of the Nuclear Management Programme.

With this in mind, the Agency has provided HMGoG with estimates of costing of the Nuclear Management Programme as described in section 3.8. above.

Separately, potential licence holders will be required to provide for and maintain adequate financial and human resources to fulfil their obligations with respect to the safety of spent fuel and radioactive waste management. This is line with the “polluter pays” principle.

## **6. The Nuclear Management Programme.**

Pursuant to Regulation 12 of the Regulations, HMGoG is required to implement a programme for the management of spent fuel and radioactive waste covering all types of spent fuel and radioactive waste under the jurisdiction of Gibraltar and all stages of spent fuel and radioactive waste management from generation to disposal. This section of the Framework Document sets out the Nuclear Management Programme for Gibraltar.

This Nuclear Management Programme shall apply to the management of spent fuel and radioactive waste should spent fuel become available or present in Gibraltar in future and for radioactive waste.

This Nuclear Management Programme shall be reviewed within ten years’ time from the date of issue at the latest and it will be updated as and when that becomes necessary, taking into account technical and scientific progress as well as recommendations, lessons learned and good practices from peer reviews.

Regulation 13 sets out the legally required content which should be included in this Nuclear Management Programme and it is against the requirements of Regulation 13 that this Nuclear Management Programme is structured.



**6.1. “The overall objectives of HMGoG’s policy in respect of spent fuel and radioactive waste management”.**

The overall objectives of HMGoG’s policy in respect of spent fuel and radioactive waste management are designed to ensure that, if in future it becomes the case that radioactive waste or spent fuel results from any civilian activities taking place in Gibraltar, Gibraltar has in place adequate arrangements to:

- Ensure responsible and safe management of spent fuel and radioactive waste in a way which avoids imposing undue burdens on future generations; and
- Ensure a high level of safety in spent fuel and radioactive waste management to protect workers and the general public against the dangers arising from ionising radiation.

This policy shall be based on the general principles listed in Regulation 4(3) of the Regulations as further particularised in the Policy Document. HMGoG strategies in place to achieve those policies are also set out in the Policy Document.

**6.2. “The significant milestones and clear timeframes for the achievement of those milestones in light of the overarching objectives of the Nuclear Management Programme”.**

The Agency shall be responsible for monitoring that the following significant milestones have been achieved within the timeframes stipulated below:

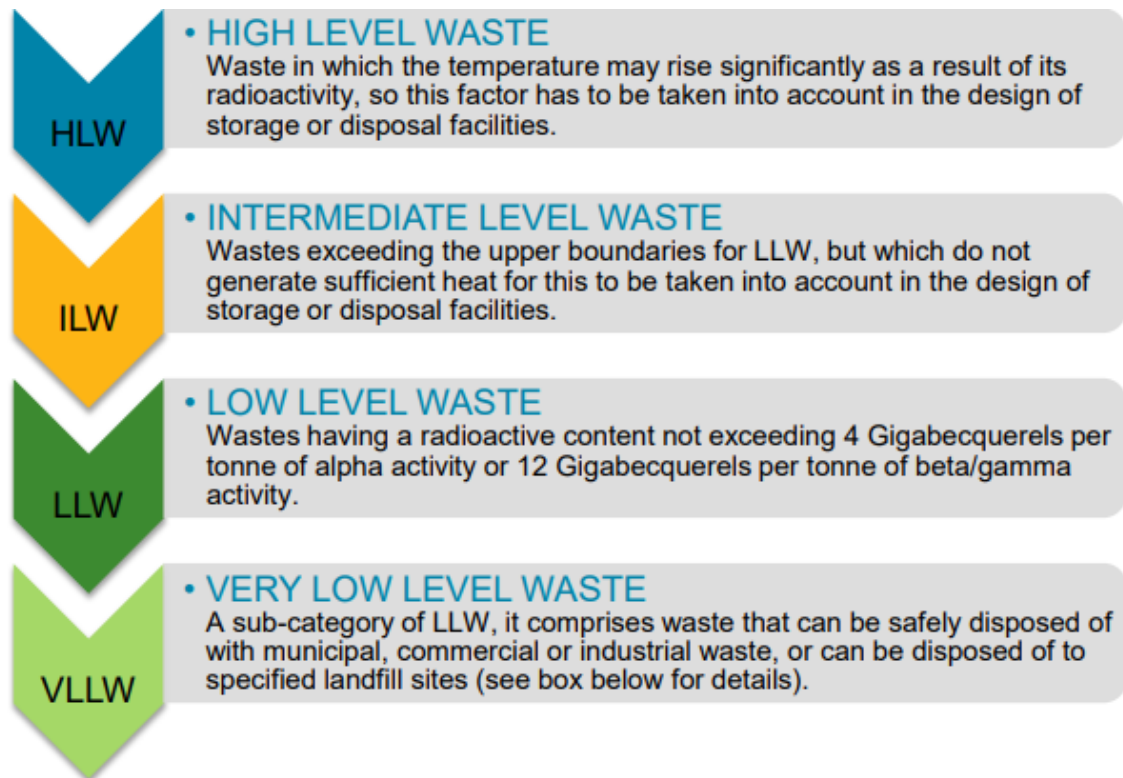
<b>MILESTONE</b>	<b>TIMEFRAME</b>
<b>A review of the licensing system described in section 3.3. of this Framework Document.</b>	<b>Every 5 years.</b>
<b>An assessment of competences within the Agency.</b>	<b>Every 4 years.</b>
<b>The carrying out of an emergency exercise.</b>	<b>Every 3 years.</b>
<b>A review of the budget made available to fund the Nuclear Management Programme.</b>	<b>Every 3 years.</b>



<b>A review of potential sources in Gibraltar of radioactive waste.</b>	<b>Annually.</b>
<b>A review of the systems to record sources of radioactive waste in the Agency's inventory.</b>	<b>Annually.</b>
<b>An evaluation of the potential to establish a radioactive waste storage facility in Gibraltar and a consideration of operational and budgetary requirements with respect to the same.</b>	<b>Within a year.</b>
<b>Orphan source recovery emergency plan to be reviewed and tested.</b>	<b>Within a year.</b>
<b>An evaluation of Gibraltar's existing capacities and frameworks to export radioactive waste.</b>	<b>Within a year.</b>
<b>An evaluation of systems in place to prevent the importation into Gibraltar of radioactive waste for treatment, processing and/or disposal.</b>	<b>Within a year.</b>
<b>An evaluation of systems in place to monitor training undertaken by the Agency and an assessment of expertise available within the Agency.</b>	<b>Within a year.</b>

- 6.3. *“An inventory of all spent fuel and radioactive waste and estimates for future quantities, including those from decommissioning, clearly indicating the location and amount of the radioactive waste and spent fuel in accordance with appropriate classification of the radioactive waste”.***

The Agency must maintain an inventory of all spent fuel and radioactive waste and estimates for future quantities, indicating the location and amount of the radioactive waste in accordance with appropriate classification of the radioactive waste as required. This will record the list of radionuclides present, activity levels, volume and waste category. The Agency categorises radioactive waste according to the type and quantity of radioactivity they contain and how much heat is produced. These are the different waste categories:



Very Low Level Waste comprises:

- *High Volume VLLW (bulk disposals) – wastes with maximum concentrations of 4 MBq (megabecquerels) per tonne of total activity that can be disposed to specified landfill sites. There is an additional limit for tritium in wastes containing this radionuclide.*
- *Low Volume VLLW ('dustbin loads') - wastes that can be safely disposed of to an unspecified destination with municipal, commercial or industrial waste, each 0.1 cubic metre of material containing less than 400 kBq (kilobecquerels) of total activity, or single items containing less than 40 kBq of total activity. There are additional limits for C-14 and tritium in wastes containing these radionuclides.*

Figure 1: UK Waste Categories, NDA (UK) RW Inventory Report 2017

The Agency follows the same classifications for radioactive waste as those which apply in the UK and it has adopted and applies the same process to collect inventory data as that stipulated in the [2019 UK Radioactive Waste & Material Inventory](#) prepared for the UK Government's Department for Business, Energy & Industrial Strategy ("BEIS") and the Nuclear Decommissioning Authority ("NDA"), subject to the necessary amendments taking into account the circumstances prevailing in Gibraltar.



#### 6.4. *“The concepts or plans and technical solutions for spent fuel and radioactive waste management from generation to disposal”.*

##### 6.4.1. General description of the radioactive waste management process.

Radioactive waste management involves a series of stages, including planning and preparation, treatment, packaging, storage and disposal.

Most radioactive wastes are managed in the following way:

- **Planning and preparation:** Wherever possible, sites aim to reduce the amount of waste they produce. They also plan how to manage waste before it arises.
- **Waste treatment:** Waste treatment typically occurs in some form soon after it arises. Waste treatment techniques depend on the type of waste and the intended disposal route. Examples of treatment include decontaminating, shredding, compacting, drying and solidifying the waste.
- **Packaging:** Most radioactive waste requires packaging in specially engineered containers for safe storage and disposal. This also allows for easier handling and transport.
- **Storage:** Interim facilities will store certain waste types until a suitable disposal route becomes available. Storage may last from a few months to many decades.
- **Disposal:** This involves placing wastes into engineered facilities where they will remain permanently.

All wastes will be transported for treatment, packaging, storage and disposal to duly authorised facilities outside Gibraltar. Transport is subject to strict conditions and in compliance with applicable rules on international movement of waste. Some waste may not require packaging or disposal; it may be possible to treat the waste for reuse or recycling in facilities outside Gibraltar.

Radioactive waste management policies and strategies for Gibraltar, bearing in mind the very low level waste present in Gibraltar, will be in line the UK Government’s [Policy for the Long Term Management of Solid Low Level Radioactive Waste](#) established by Defra, DTI and the Devolved Administrations and the UK Government’s [Strategy for the Management of Solid Low Level Radioactive Waste from the Non-Nuclear Industry](#).



#### 6.4.2. Application in Gibraltar.

- Application of the Waste Hierarchy.

The Agency applies the “waste hierarchy” established in HMGoG’s [Waste Management Plan](#). The waste hierarchy sets out the priority order for managing waste materials based on their environmental impacts. Through the application of the waste hierarchy, the Agency ensures that the priority is always to avoid producing waste in the first place and that opportunities to safely reuse or recycle materials are preferred over disposal of those materials.

This is the waste hierarchy applied by the Agency:



- Optimisation of the Waste Management Process.

Optimisation of the management and mitigation of radioactive wastes is a fundamental requirement of both the application of Best Available Techniques (“BAT”) and ensuring that radiological exposures are As Low as Reasonably Achievable (“ALARA”). The Agency is responsible for controlling the impact of any potential discharges as a result of the generation or disposal of radioactive waste in accordance with the International Commission on Radiological Protection (“ICRP”) as being:



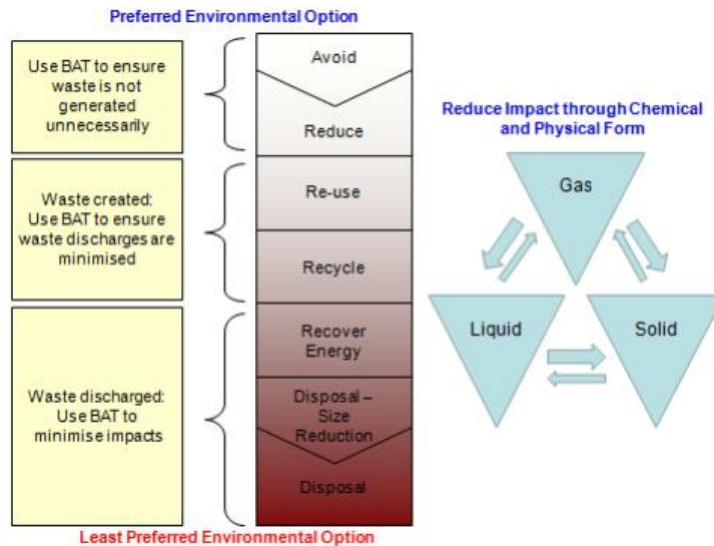


- Justification of a practice
- Optimisation of protection
- Limitation of doses

The Agency employs controls to reduce the volume of waste generated and the total activity of that waste through optimisation of the waste generation process. A number of measures assist this process such as the design of facilities to contain radioactive waste, resist radiological contamination and reduce potential secondary wastes.

Technology will also be employed to reduce the radiological impact to the environment through such measures as waste containment and abatement of discharges.

The following process-flow diagram illustrates how these collective measures, through an optioneering approach to identify the best solution, can help ensure optimisation of the waste management process and minimisation of environmental impact.



- Radioactive Waste Management Strategy.

As explained in section 6.3. above, the Agency applies the same radioactive waste classification system as that which applies in the UK. Any wastes generated or discovered in Gibraltar will be managed in accordance with the principles particularised in this Framework Document and the Policy Document.



HMGOG has transposed Council Directive 2013/59/Euratom laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, through the implementation of Gibraltar Health Protection (Ionising Radiations) Act 1995, as amended in 2018. This implements the ALARA principle for the protection of workers and members of the public.

The Agency also maintains an emergency response capability, as tested by periodic emergency exercises.

- Sources of waste

As highlighted in section 2.1 of the Policy Document, in addition to not having a nuclear sector, there is no agriculture or domestic, industrial manufacturing activity in Gibraltar. Activities which take place in Gibraltar do not, therefore, produce radioactive waste which would be classified as high, intermediate or low level radioactive waste (see section 6.3. of the Framework Document where different waste categories are defined).

There is an extremely limited amount of very low level radioactive waste present in Gibraltar. This is limited to smoke detectors (Americium-241 as a sealed radioactive source), radioactive waste produced by medical, dentistry and veterinary sectors in the form of sealed radioactive sources (X-rays) and full-body scanners used at Gibraltar Airport (X-rays). With respect to radioactive waste produced in the medical sector, it should be noted that Gibraltar does not have facilities to treat cancer patients with radiotherapy and such patients are referred to healthcare providers abroad to receive this treatment. Neither do Gibraltar healthcare providers treat patients with other forms of nuclear medicine.

As stipulated in the milestones set out in section 6.2. the Agency will review on an annual basis whether there have been any changes to identified sources of radioactive waste.

Specific strategies, guidance and management plans with respect to sources of radioactive waste identified in Gibraltar are contained in the document annexed to this Framework Document as Annex 1.

- Waste inventory

As explained in section 6.3. above, the Agency has established an inventory of all radioactive waste.

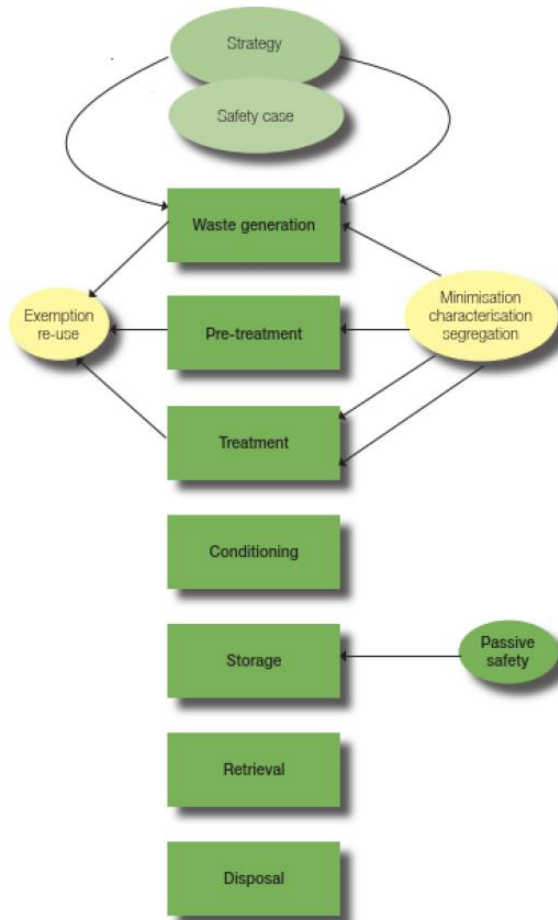


- Waste disposal optioneering

Waste disposal routes will be dependent on the waste category. Identification of the optimal waste route and final disposal site will be determined by an optioneering process supported by a BAT assessment. This process and assessment shall be carried out by the Agency and will be informed by the quantity and type of waste that is identified as likely to be produced as well as the location and availability of suitably authorised receiving facilities outside Gibraltar.

- Identification of Suitable Waste Routes.

The Agency follows the process set out below in order to identify the optimal waste management option:



- Waste Management Facility.

Prior to the issue of any licence in respect of any activity relating to radioactive waste, the Agency must be satisfied that there is a dedicated waste store available in Gibraltar. The design of the store must include



engineering controls such as provision of adequate shielding to ensure that the measurable external dose rate from the store is no higher than the local background. A dedicated HEPA filtered ventilation system will be considered as part of the design review and the fabric of the building will be so designed as to resist becoming radiologically contaminated whilst preventing the spread of contamination.

Appropriate security measures such as a site security fence, secure locks, a CCTV monitoring system and alarms routed through to security personnel must be installed.

Any licence granted by the Agency relating to the construction and operation of the dedicated store must include appropriate and legally enforceable conditions. The Agency will review and approve the plans prior to construction commencing.

The Agency will have access to appropriate hand-held instruments to be able to determine the levels of radiation and contamination present within the facility. Training in the use of the instruments and support in maintaining the instruments, (annual calibration), will be provided by suitable experts from the UK.

An inspection of the dedicated waste store will be carried out at appropriate intervals, as identified by a risk based assessment. The frequency of inspection will increase having regard to the radioactive wastes being stored within the facility.

**6.5. *“The concepts or plans for the post-closure period of a disposal facility’s lifetime, including the period during which appropriate controls are retained and the means to be employed to preserve knowledge of that facility in the longer term”.***

Prior to the granting of the licence referred to in the preceding subsection, the Agency must be satisfied of the plans that are proposed with respect to the closure of the facility and as to the controls that would be required following closure. Such plans must include the proposed steps that ensure that knowledge of the facility is retained.



**6.6. *“The research, development and demonstration activities that are needed in order to implement solutions for the management of spent fuel and radioactive waste”.***

HMGOG will, when updating Gibraltar’s Nuclear Waste Management Framework in future, and the Agency will, when discharging its obligations under Gibraltar’s Nuclear Waste Management Framework, ensure that international “Best Practice” is followed in the field of radioactive waste management. This will be achieved through establishing a close working relationship with relevant UK Government departments, agencies and authorities and through benefitting from the membership of those offices to a wide range of international bodies and the contributions which they make to them.

International membership bodies include:

- The International Atomic Energy Association, IAEA
- The International Commission on Radiological Protection, ICRP
- The World Association of Nuclear Operators, WANO
- Western European Nuclear Regulators Association, WENRA
- The International Radiation Protection Association, IRPA

This close relationship with the UK’s leading regulatory and technological bodies will help ensure that the Agency receives sufficient, up to date education, training and information to ensure that it meets its requirements under Regulation 13(1)(f) of the Regulations.

**6.7. *“The responsibility for the implementation of the national programme and the key performance indicators to monitor progress towards implementation”.***

Responsibility for the implementation of this Nuclear Management Programme rests with the Agency in its capacity as the designated competent regulatory authority under Regulation 6(1) of the Regulations.

Key performance indicators to monitor progress towards implementation of this Nuclear Management Programme are detailed in section 6.2. of this Framework Document.



**6.8. “An assessment of the national programme costs and the underlying basis and hypotheses for that assessment, which must include a profile over time”.**

The financing scheme, referred to in section 3.8. of this Framework Document, includes an assessment of the national programme costs and the underlying basis and hypotheses for that assessment. Once an evaluation of the potential to establish a radioactive waste storage facility in Gibraltar has been undertaken in accordance with the milestones set out in section 6.2. above, the scheme will include an assessment of the costs which would be associated with establishing, in Gibraltar, a waste management facility.

**6.9. “An assessment of the national programme costs and the underlying basis and hypotheses for that assessment, which must include a profile over time”.**

As stated in one of the milestones listed in section 6.2. of this Framework, national programme costs will be reviewed every 3 years.

**6.10 “A transparency policy or process”.**

HMGoG and the Agency acknowledge that transparency is important in the management of spent fuel and radioactive waste. Transparency is provided by ensuring effective public information and opportunities for all stakeholders concerned, including the public, to participate in the decision-making processes in the implementation of Gibraltar’s Nuclear Waste Management Framework.

It is for this reason that HMGoG and the Agency have in place the mechanisms for public information and participation described in section 3.7. of this Framework Document. These mechanisms, and the transparency policies and processes for participation within them, are hereby incorporated into this Nuclear Management Programme.

In addition to the foregoing HMGoG transposed the requirements of Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC by the Freedom of Access to Information on the Environment Regulations 2005. This affords members of the public with the opportunity to seek information on matters related to the environment as environmental information includes “information on radiation or waste, including radioactive waste, emissions, discharges and other releases into the environment”.



**6.11 “If any, the agreement(s) concluded with a Member State or a third country on management of spent fuel or radioactive waste, including on the use of disposal facilities”.**

There are presently no arrangements with any authorised treatment facilities (“ATFs”).

Gibraltar is not a party to any international framework that would allow for the safe export of spent nuclear fuel and radioactive waste (such as the *IAEA Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management*) to an ATF outside Gibraltar. In the circumstances, until Gibraltar is a party to an international agreement which provides the legal framework for export, the Agency will not issue any licences for activities which result in spent fuel or the generation of higher levels of radioactive waste compared to those which exist at the time of publication of this Framework Document.