



Ministry  
of Defence



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JEREMY QUIN MP  
MINISTER OF STATE FOR DEFENCE PROCUREMENT

MSU/4/2/4/1/is

12 May 2022

Dear Tobias,

I write to inform you that the MOD Nuclear Liabilities Management Strategy (NLMS) has been updated, and published on Gov.uk, following its last publication in 2011,<sup>1</sup> and to take the opportunity to provide you with a written update outlining some key areas of interest. The Defence Nuclear Organisation (DNO) has since been established, being responsible for: procurement and disposal of submarines; nuclear warheads; nuclear fuel; skills; related infrastructure; and day-to-day nuclear policy. The Strategy clearly sets out how we will continue to manage our nuclear liabilities in a safe and responsible manner. It also re-affirms our commitment to the safe, secure, and cost-effective management of those liabilities, and to the protection of people and the environment.

We continue to progress the Submarine Dismantling Programme. The fourth boat has entered dismantling and is currently docked at Rosyth for the removal of its Low-Level Waste (LLW). We are committed to delivering our programme to be able to re-start defueling submarines in Devonport by 2023, and Swiftsure sent off-site to undergo recycling by 2026, once all the Low-Level and Intermediate Level Waste has been removed. We continue to drive the implementation and further development of this strategy, working together with our nuclear liability project delivery teams, with the Nuclear Decommissioning Authority (NDA), and with wider government.

The strategy provides an update on each of the five strategic themes: Submarines; Irradiated Fuel; Nuclear Materials; Sites; Facilities; and Radioactive Waste. A sixth theme also describes the key strategic enablers that are essential to delivery of the strategy. I have outlined key progress made against each of these themes.

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<sup>1</sup> To note, the NLMS was updated in 2016 but remained internal only due to prioritisation of other significant announcements and publications.

The Rt Hon Tobias Ellwood MP  
Chair  
House of Commons Defence Committee  
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**Submarines.** After our submarines have left service with the Royal Navy and have been defueled, we are adopting an approach to completely dismantle them, recycling around 90% of the submarine. This approach is unique to the UK and minimises the liabilities left for our future generations. Our strategy for submarines is reasonably mature, but there are unique challenges to develop a first of a kind dismantling capability. Therefore, we continue to challenge our assumptions to ensure we are employing the most appropriate methods and an optimised approach for dismantling and disposal of radioactive wastes.

**Irradiated Fuel.** Irradiated fuel comprises submarine reactor fuel that has fulfilled its purpose for submarine propulsion and is either in a reactor awaiting defuel or is stored underwater in a purpose-built storage facility. Irradiated fuel includes prototype and research fuel and reuse cannot be discounted at this stage, development of a disposal concept for our irradiated fuel is being undertaken to provide a basis against which we can compare reuse options and decide on a disposition route.

**Nuclear Material Liabilities.** Our nuclear material liabilities will continue to be stored safely and securely on non-defence nuclear programme licenced sites under contractual arrangements. We continue to explore and realise opportunities for the coherent long-term management of materials with similar characteristics in line with UK government policy. Where appropriate, it is our intention to transfer ownership of some of our nuclear material liabilities to the NDA at a time when all relevant authorities agree, and specific criteria have been met demonstrating transfer is in the best interests of the UK. These materials would then be managed by the NDA in line with its strategies for nuclear materials, consistent with government policy.

Since the publication of the last strategy, we have been working with the NDA and the Department for Business, Energy & Industry Strategy (BEIS) on strategy implementation.

In 2020, we signed an agreement with BEIS and the NDA describing the generic process for title transfer of our nuclear liability materials and radioactive waste to the NDA and setting out the conditions that would have to be met. Following the agreement, we have successfully completed the transfer of our uranium hexafluoride tails to the NDA, along with the funding allocated in our spending review.

**Sites and Facilities.** ‘Sites’ refers to nuclear licensed or authorised sites that support the defence nuclear programme. ‘Facilities’ are buildings on sites (production and maintenance facilities etc.) and machinery, tools, equipment and ancillary items. The first two defence nuclear programme sites that will require site decommissioning and remediation are:

- VULCAN Naval Reactor Test Establishment (NRTE) in Caithness, once it reaches the end of operations supporting in service submarines; and,

- Rosyth Royal Dockyard at the end of its submarine dismantling mission. Rosyth Royal Dockyard has already met the 'no danger' criterion for large parts of the site that have already been decommissioned and remediated.

The rest of the defence nuclear programme sites have a varying amount of decommissioning facilities as part of site rationalisation and the provision of new and replacement facilities. We will continue to characterise and catalogue nuclear site and facility liabilities. The early characterisation of nuclear liabilities enables us to plan effectively and collaborate with the NDA and other nuclear operators to explore and realise opportunities, share best practices and techniques and align programmes where practicable. We will work closely with site operators and the NDA to ensure the approach to decommissioning and disposal leads to a reduction in overall radiological and environmental risk at the best value for money for the UK taxpayer. Site plans have the potential to affect local communities and we understand the importance of engagement with local authorities and communities.

**Radioactive Waste.** We have a relatively small proportion of the UK's legacy waste and anticipated future arisings. As a responsible and proactive nuclear operator this is more than simply storage and disposal, it covers a spectrum of activity to understand the wastes and identify the options available for managing them from generation to disposal. It includes demonstrable application of the Waste Hierarchy (detail can be found in the Strategy) and the selection of best available techniques to manage wastes and discharges considering a range of factors.

Since the last NLMS, there has been progress attaining confidence in the disposability of our liabilities through the Radioactive Waste Management Limited (RWM) disposability assessment process. Some legacy Higher Activity Waste (HAW) packages are being re-analysed with current equipment to determine the radioactivity of the contents more accurately and some packages have now been proved to be LLW.

A significant amount of material has been diverted from Low-Level Waste Repository (LLWR) and managed using more appropriate routes. Work is underway with LLWR Ltd and waste producers to identify further operational wastes that could be diverted from LLWR.

**Enablers.** Successful delivery of this strategy is supported by enablers which are critical to all areas of our business and not specific to managing nuclear liabilities. They will underpin the key themes which can only be implemented if the enablers are effectively delivered. The strategy for enablers is to rely upon our organisational processes and policy for the provision and development of the enablers and not to develop them specifically for managing nuclear liabilities.

Overall, we are making good progress despite the global challenges we face. Since the last strategy we have funded an increase in the capacity of national facilities to prepare some of our Intermediate Level Waste for long term storage, pending geological disposal. We are working across government, at the highest levels, to collaborate effectively and have signed agreements with other departments to enable us to work together more effectively managing nuclear liabilities within the UK.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Jeremy Quin', with a long horizontal stroke extending to the right.

**JEREMY QUIN MP**