

Waste Management



Waste Management

Manager: **Alex Anderson**

Completion date: **2025**

Cost: **£292M**

Supported by: **JCL, Veoila**

Completion date and cost are current estimates, subject to NDA approval

Cleaning out and dismantling old facilities generates significant quantities of radioactive waste.

“Exempt” waste - solid

This is produced in areas where radioactive materials have been handled. Levels of radioactivity are so low they cannot be detected even with the most sensitive monitoring devices. This waste can be sent to industrial landfill.

Low Level Waste - solid

This is above the limit for disposal to industrial landfill but is below the level at which special precautions, such as thick shielding, are required.

- Decommissioning is expected to generate a further 64,000-109,000m³.
- Waste from the clean-up is drummed, checked and supercompacted to a fifth of its size prior to interim storage.
- Planning application lodged with Highland Council for construction of a shallow disposal facility adjacent to site.
- Currently scheduled to commence removing waste from disused low level waste pits in mid 2019.



Intermediate level waste - solid

This waste has higher activity levels which require special shielding to protect people and the environment from more harmful radiation.

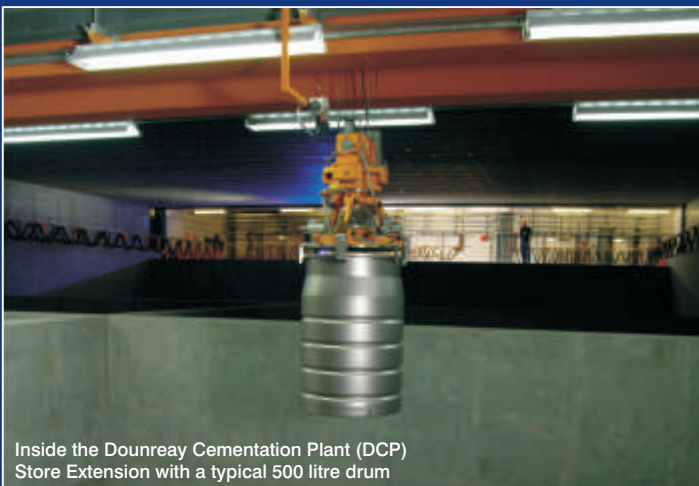
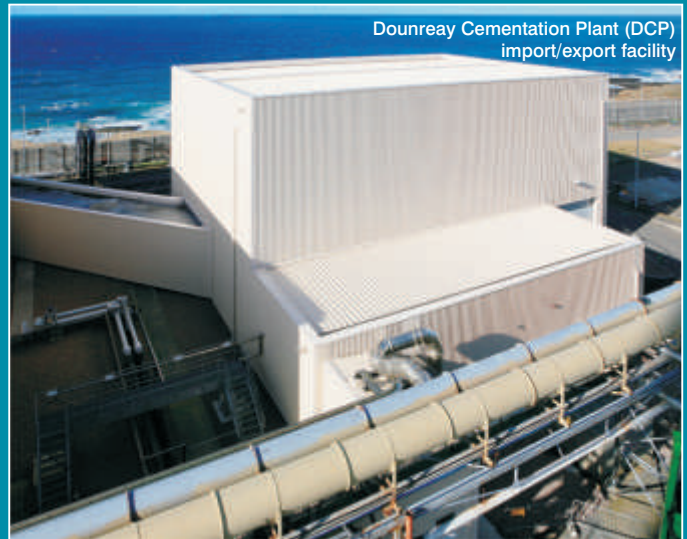
- Waste is checked and drummed before being immobilised in cement in proposed new plant.
- Historical waste sent to shaft and silo will be retrieved and treated this way, too.
- Most of the hazard exists in liquid form as “raffinate” from reprocessing of reactor fuel – this waste is being solidified in cement inside drums.
- By 2025, all this waste will be stored at site in a form that is safe for long-term storage at Dounreay or disposal.

Low active waste – liquid and gaseous

- Results from routine plant maintenance and ventilation, decommissioning practices and cautionary collections of rain and groundwater.
- Site authorised by Scottish Environment Protection Agency to discharge controlled quantities to sea and air.
- Impact of discharges measured through environmental monitoring and results published.

Nuclear materials

Dounreay has stocks of leftover plutonium and uranium that could be re-used or sent for disposal. This material will be stored securely at Dounreay pending its removal.



Artist's impression of the proposed new cementation plant



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