

DOUNREAY SITE RESTORATION LTD**DOUNREAY STAKEHOLDER SITE RESTORATION SUB GROUP REPORT, JULY 2021**

Current as of 6 July 2021

Introduction

Dounreay Site Restoration Limited (DSRL) formally became a subsidiary of the Nuclear Decommissioning Authority on 1 April 2021.

As part of the new structure, two new appointments have been made to the DSRL Board with effect from 1 July 2021.

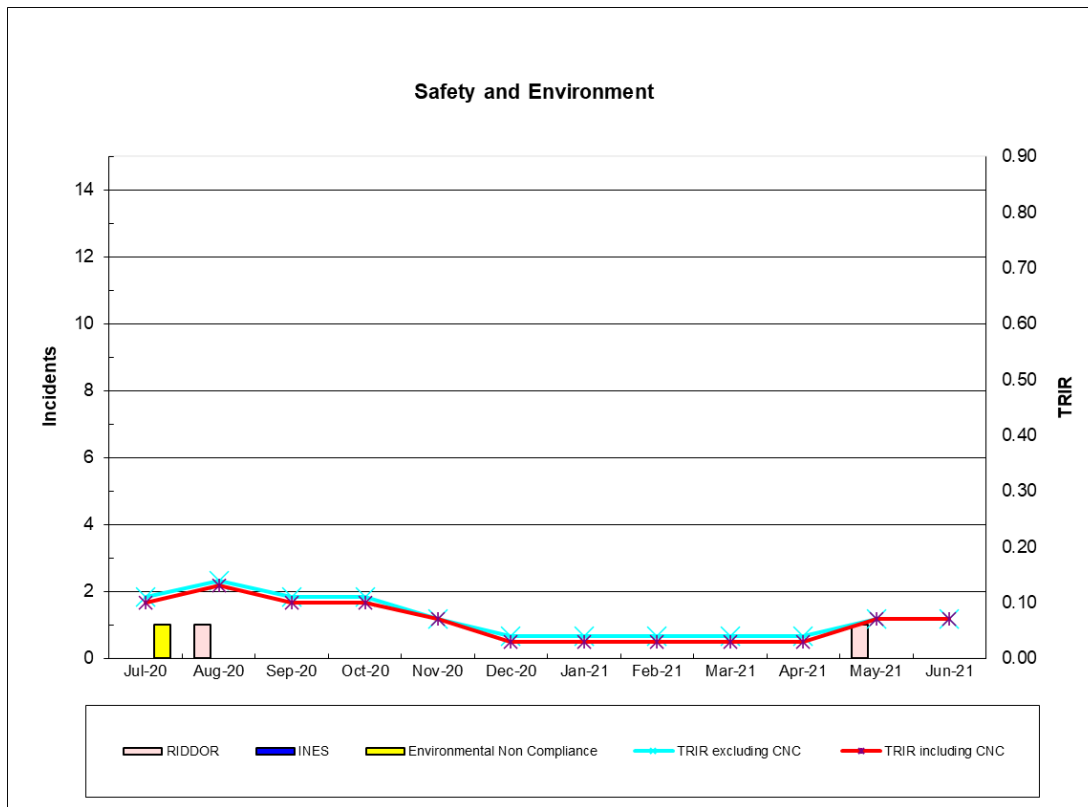
Gwen Parry-Jones OBE is the CEO of Magnox with a wealth of experience in the nuclear industry. She started with the company in 1989 and returned in 2019 after a spell at Horizon Nuclear Power as Executive Director of Operations Development. Gwen was the first woman in the UK to run a nuclear power station when she became Station Director of Heysham 1 power station in 2008.

Paul Vallance has been Group Chief Communications and Stakeholder Relations Officer with the NDA since 2016. He also brings a huge amount of knowledge and expertise having worked in the past with both Rolls-Royce and BNFL.

Operations during COVID-19

- DSRL continues to operate under Covid-19 restrictions. Around 750 people are back working on site full time and enhancements continue to be made to ensure adherence to Covid guidance. Those who can work remotely are being encouraged to continue to do so and this is expected to continue until August 2021 although this is kept under constant review.
- On 24th June, there was a noticeable increasing in the national and local community case rates and DSRL had 2 positive cases reported with a number of individuals reporting potential symptoms. Both individuals who had tested positive had not been on site prior to confirmation of symptoms.
- The temporary office facility at Ormlie has been operational for over 2 months and those who require occasional access can now book 4 hours slots and can cater for around 30 staff. Dounreay.com is also opened on Tuesday to Thursday to allow DSRL staff to print large documents if required.

Health, Safety, Environment, Security



- A RIDDOR/TRIR injury was reported in May 2021 in relation to Hand and Arm Vibration Syndrome.
- DSRL has returned to full compliance with the Environmental Authorisations (Scotland) Regulations (EASR) (and other) permits issued by SEPA while implementing the COVID secure working environment. This means that there is no longer a reliance upon the Temporary Regulatory Position Statement issued by SEPA and marks the culmination of a significant amount of work to develop COVID secure methods of working (e.g. in laboratories). SEPA have been notified of this position.
- The D3100 team has submitted an application to SEPA to vary the EASR (Environmental Authorisations (Scotland) Regulations) permit for the LLW disposal facilities. The application is requesting that SEPA set risk-based radionuclide limits within the permit. This revised approach to setting limits will facilitate the ongoing disposal of LLW, produced by the decommissioning and remediation of the Dounreay site, while ensuring safety. The application is supported by a revised Environmental Safety Case which demonstrates that the public and the environment will be adequately protected from the waste disposed within the facilities, both now and in the long-term.
- The annual site wide security demonstration exercise took place over the evening of 8 June and morning of 9 June. The exercise was observed by DSRL Independent Challenge and Oversight (ICO) and ONR. ONR deemed the exercise as Adequate which demonstrates a strong performance by all exercise participants.
- As reported on the 9 June, the site was closed on 7 June due to an overnight power outage. An investigation was convened and is ongoing.

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- During 8-9 June, Dounreay carried out an annual security counter-terrorism demonstration to the Office for Nuclear Regulation. Due to the essential nature and extensive area covered by the demonstration, the site was closed during the exercise. The regulatory grading of ADEQUATE was awarded as a result of a strong performance by all exercise participants.
- Ian Innes, a human factor specialist, gave a presentation to the IMechE Fit for Purpose Safety Cases for the Nuclear Industry Seminar. The topic was on lessons learned from integrating human factors into engineering design and safety cases at Dounreay.

Dounreay decommissioning update

- The PFR heel pool project has been running for the last 4 years from initial design through to the installation and operation of the sodium transfer pump. The pump was used to transfer the sodium heel from the reactor vessel to the sodium receipt tank, which is a bespoke design to hold the sodium. The transfer took approximately 40hrs to complete, which removed approximately 1810kg of the alkali metal hazard from the reactor. The next phase will be to decommission and remove the pump from the reactor by the end of June and to progress with the installation phase of the Water Vapour Nitrogen (WVN) system skids and pipe work for the treatment and passivation of the remaining sodium residues. Well done to the team on this achievement.
- In D1200 labs, airline suit working has restarted after more than a year. A lot of work was carried out prior to commencement of this work to update procedures, training and safety documentation to allow this work to restart safely.
- Construction of Dounreay's new radioactive waste store is reaching new heights. A video is available to see how the work is progressing on the shield walls of the vault storage area which will hold drums of waste in safe long term storage. Video can be found [here](#).
- The D1204 team recently spent some time off site at a training facility completing remotely-operated BROKK training. Because of the hazards on the Dounreay site this type of equipment is key to continue the decommissioning activities.
- The D1204 team came up with an alternative way to carry out a heavy repair when one of the building ventilation extract motors broke down. They employed a small trailer mounted Hiab from Northern Marine Services, which is specifically designed with projects of this nature in mind as well as for general handling and movement of equipment and materials. The Hiab was able to lift the heavy motor out of the building and install the replacement part quickly and efficiently, and the method removed any manual handling risks for the workers.



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- The D1206 team hosted a visit in early June for some of the NDA site facing team on the plant. The whole of the D1206 project team is now back to site full time.
- On 5 March 2021, DSRL sought planning permission to import backfill material (5250 m³) as part of the interstitial grouting project for the LLW Disposal Facilities. Permission from The Highland Council was granted on 15 June 2021 conditional on providing details of backfill source (quarry) and a routing plan for vehicles (to be carried out prior to any material being imported), to ensure the development does not exceed the quantities applied for and continues to comply with the terms of the approved permission.

As part of the disposal process, the spaces around the LLW containers in the D3120 LLW vault are to be filled with grout. The first grouting campaign is planned for later this year. In order to develop the grouting methodology a team from D3100, D2179, Waste Transport and the technical trades has undertaken some trials at the D2179 grout plant. These trials confirmed that the grout would readily flow between the LLW containers and also tested the membranes that will be used to seal the grout shutters. Further trials are planned in the near future, within the vault to test the method of fixing the shutters to the containers.

- In D1217 the walls of the remaining cell are being prepared for cutting up. The decommissioning team is coring the outer walls in an 8 week programme. Approximately 240 cores will be cut to aid the future diamond wire sawing of the walls. The photo shows an operative coring the south cell bay 3.
- Last year DSRL awarded the £7.5 million contract for the advanced transition works at the shaft and silo to Nuvia and Graham Construction. The work includes the rerouting of existing services as well as construction and demolition works, preparing the waste facility to be emptied of higher activity waste.
- At DMTR, deplanting work continues with the removal of the heavy water pipeline.



The Interim End State Delivery Team

- Options are being reviewed to replace the meteorological (weather) station currently in use.
- Work is ongoing on the Site End State Review. DSRL is being supported by the COSMIC+ consortium of companies (NSG, Quintessa and Golder Associates). As part of the review the site has been split in to fifteen 'Components' – these are areas of the site whose individual end state will have an influence on the overall Site End State. Desk studies and workshops for each of these Components are being undertaken, with the aim of determining potential end states for each one. All fifteen workshops are on schedule to be completed by the end of July.

The next phase of work will involve integration of the outputs from each of the fifteen Component workshops in to a set of whole-site options, which will then be evaluated to determine an overall preferred Site End State. The integration phase of the project will

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include a stakeholder workshop to which representatives of DSG will be invited. The workshop is currently planned for late September and is likely to be done via MS Teams over a period of 2-3 days.

- The LLW Pits (closure options assessment) have been defined as one of the fifteen site Components for the Site End State review described above. A separate piece of work has been undertaken by Jacobs to develop both waste retrieval and in-situ disposal closure options for the LLW Pits. An Options Assessment workshop was undertaken in January, with DSG representatives present, to evaluate the pros and cons associated with each of the options.

The Options Assessment workshop attendees expressed a preference for an in-situ disposal option, but this was based on the key assumption that an Environmental Safety Case (ESC) could be made for in-situ disposal, and that the arguments presented in an ESC would be accepted by the Regulator.

As part of the Site End State review, work is underway to review the uncertainties associated with making an ESC for an in-situ closure option for the LLW Pits. This review will feed in to the overall Site End State review workshop in September.

Particles update

- Information on recovered particles is kept up to date online at [Radioactive particles in the environment around Dounreay - GOV.UK \(www.gov.uk\)](http://www.gov.uk)
 - Monitoring continues on Sandside, West Foreshore, Strathy and Murkle beaches have continued during Covid restrictions. Since January 2021 particles have been detected and recovered from:
 - 4 minor particles from Sandside beach
 - 1 relevant particle from west foreshore
- A trial of an enhanced detector system for beach monitoring (FIDLER (which has enhanced detectors for increased sensitivity for Americium-241 signature) will be trialled at Dounreay (Sandside and Foreshore) during 19 July to 6 August. The trials will be undertaken by Nuvia Ltd. These trials will involve a side by side comparison of the existing groundhog monitoring system and the enhanced detector system during a routine beach monitoring survey to evaluate the outcomes.
- All intended analysis of the unusual particle detected in 2016 is now complete and discussion around the possible provenance of the material will continue at the next ERMTT (Environmental Radioactivity Monitoring Task Team) meeting. The ERMTT is a body of experts (SEPA, Food Standards, Public Health) to review the monitoring programme and ensure it continues to be fit for purpose.

Dounreay Heritage


- **Collection of objects:** No objects were collected throughout the year. A total of 448 objects have been collected since 2008 with numerous donated to the Caithness Horizons museum, the National Museum of Scotland and the Science Museum. Highlife Highland is now responsible for the collections in the Caithness Horizons museum, which is due to re-open in 2021 as the North Coast Visitor Centre.
- **Recording history:** A process to capture the memories of those leaving the site is in place and 3 forms were completed and returned. The guidance note for recording oral

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history has been revised in line with the latest guidance given by the UK Oral History Society. There are particular issues associated with the latest data protection regulations.

- **Knowledge sharing presentations:** Talks about the early history of Dounreay were given to:
 - Dounreay staff
 - Thurso Camera Club
- **Educational studies:** Dounreay, along with Sellafield and the NDA, has pledged support to an international research project on nuclear heritage to be led by Dr Egle Rindzeviciute, Associate Professor, Kingston University, London. This will involve sharing/learning knowledge with representatives from Sweden, Lithuania and the UK, over a 3 year period starting in 2021.
- **NDA Heritage Initiative:** James Gunn continued in the role as the NDA Heritage Officer and managed the NDA's heritage initiative alongside his Dounreay duties as Information and Knowledge Manager. Each organisation is required to write their site history for inclusion into the NDA's overall report on the history of the UK civil nuclear industry. James has started to draft sections with review and comment by experienced staff. In addition, James wrote a conference paper about the NDA heritage initiative for an international conference organised by The International Committee for the Conservation of Industrial Heritage (TICCIH). It was accepted and the paper is due to be presented at the conference in Montreal in August 2022.

Staffing

- During week beginning 21 June, the new chair of the board, Lawrie Haynes visited site for the first time. He was given a tour of the facilities and managed to meet with the various people to find out more about their work and about the site more generally. He was very impressed with everything he saw and said afterwards: "I particularly found it useful to be briefed on the wide ranging work being conducted by the site and to witness first-hand the professional people we have and the remarkable work they manage and deliver."

- Two new Executive Directors will join DSRL in September. William Lindsay takes over the role of Delivery Project Director from David Hubbard who will leave site on 16 July (interim arrangements to cover this post have been identified). Frederic Stalin has been appointed as Strategic Programme Director and will take over this role from Sam Usher who will leave site at the end of September.
- During May the latest health physics surveyor trainees started their 2 year training programme. Their training includes a Level 2 NVQ Diploma in Radiological Protection along with many other training courses and hands-on training in Dounreay facilities

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alongside fully qualified surveyors.

- This year 17 summer students worked around site in a variety of departments. While undertaking their placements they also got the opportunity to take part in a series of meetings with the 2020 intake of graduates.
- DSRL's Nicole Tait came third in the final of the Nuclear Institute Scotland Branch speaking competition in June. The event was held in collaboration with the Young Generation Network with professionals from across the industry speaking on the topic of Nuclear for Net Zero.

Procurement

- Two design contracts have been awarded through the decommissioning framework to Nuclear Decommissioning Ltd (NDL) and its consortium partner James Fisher Nuclear Ltd. One is to develop integrated concept and scheme decommissioning plans for the site's high active liquor storage and evaporation facility and the other is to develop scheme designs for a facility which will allow us to safely package and transfer spent fuel from the Prototype Fast Reactor for long term storage.

Dounreay Site Restoration Ltd
2 July 2021