



**HUNTERSTON A**  
**SITE STAKEHOLDER GROUP REPORT**  
**SITE DIRECTOR – MARK BLACKLEY**  
**DECEMBER 2021**

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**SITE DIRECTOR'S REPORT TO THE SITE STAKEHOLDER GROUP**  
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**Hunterston A continues to make good progress on our programme of work to Care and Maintenance. We continue to be adequately funded by the NDA and remain committed to addressing the nuclear liabilities at Hunterston A in a safe, secure manner with care for the environment.**

**1 SITE DIRECTOR OVERVIEW**

Hunterston A site is part way through its Care and Maintenance Preparations (C&MP) phase of decommissioning which, subject to NDA approval and funding, is currently forecast to complete by October 2030 based on the current decommissioning strategy.

The NDA has approved a proposal to develop new Site-Specific Strategies (SSS) and these decommissioning strategies support a fleet-wide assessment for an optimal sequencing of reactor dismantling under a Continuous Reactor Decommissioning (CRD) programme; in order to ensure that lifetime costs, technical challenges and risks are minimised, while opportunities are maximised. A credible revised site configuration for the new decommissioning strategy at Hunterston is currently in development and is expected to be presented later in the year.

The site continues to manage challenges posed by the Covid19 pandemic and we continue to have a few cases, at any one time, where people are positive or have been told to self-isolate. There have been no work-related transmissions in the period. Whilst our focus continues to be the safety of our personnel, the site has relaxed some of the Covid secure arrangements whilst still exceeding the requirements of Scottish Government and Magnox legislation and guidance. The site testing facilities closed in October, after carrying out more than 2500 tests, because test kits have become so readily available which makes home testing the preferred option.

There were no nuclear or conventional safety issues over the reporting period, however, during re-assurance monitoring checks prior to the demolition of the Learning & Development building we have found radioactively contaminated soil at the rear of the building. The activity levels in the soil samples taken so far are low and are below the levels where the Environmental Authorisations (Scotland) Regulations 2018 apply.

There has been some excellent progress in a number of areas during the reporting period. The Higher Activity Waste team have now transferred more than 46Te of Intermediate Level Waste to the Store since 1 April 2021. This exceeds the original target for the financial year and a new stretch target of 57Te has been set. Work to remove the cradle rails from both Reactor buildings has now been completed and the contract to carry out roof repairs to both Reactor buildings will start in the Spring.

ONR and SEPA carried out separate inspections during the period. In addition, there was a ONR-CNSS witnessed exercise which was rated Green.

I am pleased to report that in addition to other vacancies that are being filled for the first time in a number of years, we are currently recruiting four trainees into Radiological Protection roles.

More details on some of these highlights are within the appropriate sections of this report.

## **2 SAFETY OVERVIEW**

### **2.1 Safety Review Performance**

The Total Recordable Incident Rate (TRIR) for Site is 0.48. This figure is reflective of the Lost Time Accident (LTA) that occurred on Site during March this year. Since the LTA in March, the Site has continued to demonstrate a good safety performance throughout all areas on Site. During this reporting period there have been no events that required First Aid Treatment and it has been eight months since the last LTA.

The Site COVID 19 Arrangements SR1246, HNA Arrangements for implementation of the Requirements of S-192 – Health Protection Guidance During the Covid-19 Pandemic have proved effective in keeping the site safe with very little impact experienced on site through infection or contact tracing. The site rigorously supports Lateral Flow Testing (LFT) with arrangements in place that encourage home testing as per current Scottish Government guidelines. In addition, the site has facilities to provide LFT as required, and Site Facilities Management Contractor undertakes LFT on all third party Contractors attending site and again has proved effective in identifying infectious persons before they enter the Site.

The requirements of SR1246 in relation to Social Distancing and High level of personal Hygiene is expected of all who attend site has been reviewed and minor amendments have been made to reflect the relaxation in the community. This review is carried out in conjunction with our Safety Representatives.

Target Zero Campaigns proactively continues to support the site safety culture and generally prompts a level of discussion at meetings and pre or post job briefings. The use of personal experience is encouraged and supported.

Fire Safety Management Group, Event Review Team and Safety Representatives continue to meet as planned. These group meetings/committees meet at planned frequencies to ensure the required standards are maintained and areas of concerns discussed and resolved.

Our reporting Culture remains strong. The site receives approximately >100 Q Pulses each month for various events whether negative/positive with the object of capturing and sharing experience. All these Q Pulse reports are screened at the daily Safety and Compliance meeting to ensure the appropriate actions are arranged and implemented in a timely fashion.

The Site demonstrated its Counter terrorism Capability with a challenging exercise that was witnessed by the ONR CNS inspection team. This successful Exercise was deemed "Adequate" by the Regulators that attended.

## 2.2 Emergency Preparedness

The Off Shift Transition (Security Guards present on site during silent hours) has been successfully implemented with minimal impact to Site. The Security Guards have embraced the change and have proved to be efficient in maintaining security of the site. There have been occasions when the Off-site Duty Controller has been contacted due to events that arise during silent hours. These events were foreseeable such as alarms real or spurious, though the Contingency Arrangements were implemented and were appropriate in each case.

The Site Contingency Team continue to undergo refresher training in rescue from height, places of Restricted Access, casualty management, Nuclear Occupational First Aid Training and search techniques in support of maintaining required skill sets. The latter was instrumental in the successful witnessed Counter Terrorism Exercise referenced earlier.

Security Guards and Duty Controllers are in the process of completing refresher training in First Aid at Work, in support of the Site Accident and Emergency Contingency Arrangements in Silent hours.

Contractors working on site generally are required to provide their own Contingency arrangements with support from Site Duty Controller and Security guard force. This has been evident in the recent successful removal of the Cradle Rails from both Reactors working from a MEWP at a height of approximately 200ft. The Contractor demonstrated their contingency capability to the Emergency Preparedness Officer and deemed adequate by Site prior to commencements of work.

## 4 DECOMMISSIONING PROGRESS

### 4.1 Hunterston Reactor Project / Plant & Structures

The Reactor Remedial Repairs works programme is continuing and all cradle rails (approx. 530m/15 tonnes) have been successfully removed from both reactor structures. A process of painting exposed brackets following the removal of the rails with Galvafruid is ongoing. This is anticipated to be completed early December, although this is weather dependent.



Works to replace water damaged open floor gratings and Durbar walkways in both reactors (approx 90 separate locations) is due to start in December and this work will continue through to February 2022. There are also 27 column bases which will require to be repaired and this work is also expected to be complete by February 2022.

The Reactor Interim Roof Remedial Works is due to start on site in January 2022 and initial works will be non-weather dependent enabling activity inside both reactors to secure a netting system inside the reactors under the roofs as a fall arrest measure. The main works to arrest water ingress to the roofs will start in the Spring and is due to be completed by August 2022.

Plant and Structures are also undertaking enabling activities currently at the Learning and Development Centre (L&D) comprising ecological and asbestos enabling surveys and works to electrically isolate the building supported by the site teams. A bat licence has been applied for via Nature Scotland and demolition of the building is due to be completed this financial year.

#### 4.2 Solid Active Waste Bunker Retrieval (SAWBR) Project

*The SAWBR facility was constructed to recover solid HAW (Higher Activity Waste) from within the site's five HAW bunkers. This is achieved by using remotely operated vehicles (ROV's) to fill hoppers that are then tipped into RWM (Radioactive Waste Management Ltd) approved 3m<sup>3</sup> stainless steel boxes. The initial breakthrough into Bunker 5 was achieved in March 2014 and Bunkers 5, 4, 3 and 2 have been sequentially emptied to date.*

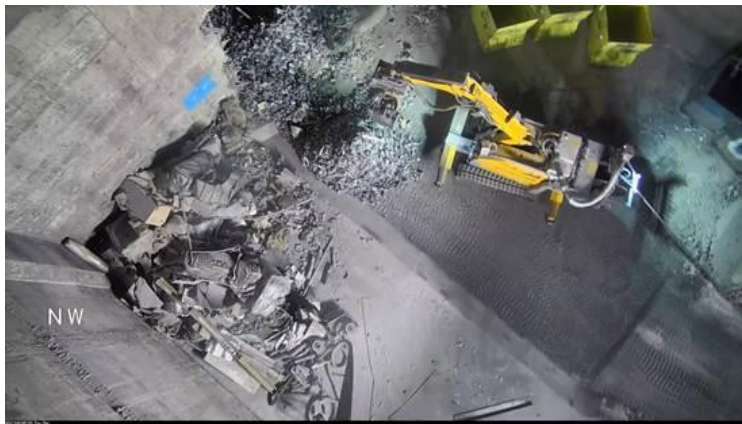
The SAWBR facility continues to operate, processing waste from Bunker 1, with good progress being made in the period between September and November. To date, the SAWBR team have safely exported a cumulative total of **175 3M<sup>3</sup>** boxes from Bunker 1 to the ILW Store, this equates to 104.4te of Bunker 1 waste. This brings the total of 3M<sup>3</sup> boxes exported from SAWBR (all bunkers) to **1068 Boxes**.

In this financial year, over 44.6 tonnes of waste has been processed through SAWBR, with the site ahead of its annual target of processing 46 tonnes of waste. Additional hours are being worked in SAWBR to help the company achieve its overall HAW targets for the year, hence the earlier than originally planned achievement of the site target. It is now forecast that the bulk retrieval of waste from Bunker 1 should be completed by Summer 2022.

Routine planned maintenance shutdown in SAWBR commenced on Monday 2 August 2021 for approximately three weeks.



***A view down into Bunker 1 showing waste just inside the penetration from Bunker 2***



***Bunker Waste Recovery Operations, showing a Brokk sorting waste from Bunker 1***



#### 4.3 Wet Intermediate Level Waste Retrieval & Encapsulation Plant (WILWREP)

*The WILWREP facility was designed and constructed to recover and encapsulate Intermediate Level Waste (ILW) sludges, resins and acids stored in site tanks. The plant is now undergoing a reconfiguration to allow the processing of ILW Nitric acid, stored within the Acid Storage Facility. WILWREP operations personnel are assisting with these works and are also providing support as required to Waste Projects work on the Pond Purge Sump Retrieval and Encapsulation Plant (PPSREP) – which is being installed for retrieval of sludges at a different location on site.*

When possible, the WILWREP team are continuing to consolidate the residual sludge from three Sludge Retention Tanks in WILWREP.

Some solid items of debris have been removed and processed in the SAWBR facility. The three tanks now contain a relatively thin layer of sludge mixed with small items of debris. This has proven difficult to retrieve with the existing equipment and therefore new equipment has been sourced.

*One item of this new equipment is shown in the picture on the **left below**, which is a remotely operated, combined digger/loader/tipper, which once positioned in the tanks will allow the separation of the sludge from the debris.*

*The picture on the **right below** is residual sludge and miscellaneous debris in Sludge Retention Tank 3 in WILWREP.*



#### 4.4 Solid Intermediate Level Waste Encapsulation (SILWE) Project

*The SILWE facility exists purely to encapsulate the 3M<sup>3</sup> packages containing the solid waste retrieved / recovered from SAWBR with a grout mix. This is expected to take up to three years to encapsulate approximately 1500 stainless steel boxes. Once encapsulated, the containers will then be in their disposable state.*

The SILWE Project continues to progress well with preparations for starting Phase 2 in January 2022. Phase 2 will see the operation of the plant from the control room to test the interface of the separate sub-contractors' equipment with the control software.

In preparation for this next phase the project will grout one 3M<sup>3</sup> box and one 3M<sup>3</sup> drum to build learning in the operational conditions of the plant before starting formal phase 2 testing. Also, in advance of starting phase 2 the project has recruited two local plant operatives to begin training in the process and normal operation of SILWE.

With the robotic and ventilation packages of work nearing completion the project will be able to transition into phase 3 on completion of phase 2 with all systems up and running.

Active Commissioning is forecast to commence in the fourth Quarter of 2023.



#### 4.5 Ponds Programme

##### Delay Tank Valve Chamber Foam Filling

A main source of water ingress into the pipe trenches was through the valve chambers at the Cartridge Cooling Pond Delay Tanks. The valve chambers have now been successfully drained and de-planted. The degraded concrete and gaps into the resin trench have been sealed with concrete. Magnox engaged specialist sub-contractor Steve Vick to foam fill the inlet chambers and this work is now complete thus preventing any further ingress of water. Steve Vick were highly complementary of Magnox with regards to how well they were supported whilst onsite allowing their swift mobilisation, completion of the work and demobilisation.



*Rainwater filled chamber*



*Foam filling of chamber*

## New Effluent treatment Plant (NEffTP)

Design and installation of a new effluent treatment plant to be housed within the Low Level Waste Transfer Facility (LLWTF) is currently underway. This new system will facilitate the decommissioning of the existing miscellaneous effluent treatment system by providing an alternative means of processing miscellaneous effluent during the wider decommissioning of the AETP. The design of the new system has helped minimise future active waste as it incorporates a redundant filtration skid from Chapelcross.

Two sub-contractors have been engaged to deliver this scope with Barr and Wray completing the Design and Manufacture elements of the system and JGC Engineering contracted to complete Installation and Commissioning. Design and Manufacture is complete with Factory Acceptance Tests concluded and the equipment is now on site. JGC are nearing completion of their integration and commissioning design work and are set to commence physical integration of the system on-site in early 2022.

*(Picture above shows NEffTP Tank and bund and repurposed Chapelcross skid).*



## **5 PEOPLE**

### **5.1 Site HR**

We have now been working to our revised working pattern of a 4-day week for over six months. A review of the working pattern has recently taken place and from a Site perspective the revised working pattern is working well and we are hoping to shortly gain Magnox Executive approval to continue with the 4-day week.

Recruitment continues to be a key focus and several opportunities are currently being advertised external to the Company. This will continue for some months as we work through recruitment and selection to fill roles in a priority order.

Our initiative to recruit a small number of Radiological Technician apprentices at Hunterston did not come to fruition due to difficulties in securing an appropriate training provider. We are now in the process of recruiting Radiological Technician Trainees that will be trained in house to supplement our resources in this area and for future succession.

The Company have just recently introduced a Smarter Working initiative. This is a business led approach which includes use of better technology and flexibility to carry out work more effectively, improved welfare arrangements / workspaces and working practices that through agreement with line management, allow greater flexibility for employees to work where they are most productive. This initiative is in its infancy and progress is expected through further discussions over the forthcoming months



## 5.2 Occupational Health

We have had fluctuating numbers of COVID cases during the period, none of which have been serious or of a long-term duration, and we continue to work to Government advice on health precautions to reduce this risk. Our long-term sickness cases have continued to reduce and there are no trends that gives us any cause for concern

Mental health and wellbeing continue to be promoted through our various communication methods and our Wellbeing Group and Mental Health First Aiders.

## 6 RADIOLOGICAL SAFETY

*Explanatory note: The maximum permissible dose to a radiation worker in the UK is 20mSv (milliSieverts) in a calendar year. The average annual radiation dose to the UK population from all sources is 2.6mSv. Collective dose is usually measured in man.milliSieverts. For example, if ten people were each to receive 0.1milliSieverts during a particular task, then the collective dose for the task would be 10 people x 0.1mSv each = 1 man.milliSievert.*

*Doses for the calendar year 2021, to the end of October, are as follows;*

- Approximately 171 employees and visitors received a total collective dose of 10.328 man.mSv between them*
- Approximately 328 contractors received a total collective dose of 12.603 man.mSv between them*
- The highest individual dose received by an employee was 1.289 mSv*
- The highest individual dose received by a contractor was 0.888 mSv*

The majority of dose accrued in 2021 has been from a combination of the pond decommissioning project and other site projects. All doses in these projects have been prior assessed, planned and are tracked throughout the project duration to ensure that no limits are exceeded and that doses are kept as low as reasonably practicable.

## 7 ENVIRONMENT (October 2020 - September 2021)

### 7.1 Radioactive Discharges

#### Solid

Low Level Waste (LLW) disposals to the Low Level Waste Repository (LLWR) continue. 41.27m<sup>3</sup> of LLW and VLLW with a total activity of 0.46 GBq was disposed of during the twelve month period from October 2020 to September 2021. There is no limit on the volume or radioactivity content of LLW and VLLW being disposed of under the site EA(S)R Permit. The main contribution to these waste consignments was decommissioned plant, equipment, and materials generated during decommissioning operations.

#### Liquid

The main sources of liquid radioactive discharges during the period October 2020 - September 2021 were decontamination of various areas within the cartridge cooling ponds building, liquors generated through wet waste recovery and encapsulation processes, and routine waste water arisings from the site active drain system.

Radionuclide or Group of Radionuclides	Annual Limit	Activity discharged (Oct 2020 - Sept 2021)
Tritium	30 GBq	0.009 GBq
Caesium-137	160 GBq	0.057 GBq
Plutonium-241	2 GBq	0.002 GBq
All alpha emitting radionuclides not specifically listed taken together	2 GBq	0.003 GBq
All non-alpha emitting radionuclides not specifically listed taken together	60 GBq	0.055 GBq

#### Gaseous

The main contributions to gaseous radioactive discharges were ventilation systems operating in contamination controlled areas and reactor vessel 'breathing'.

Authorised Outlet, Group of Outlets or other discharge route	Radionuclide or Group of Radionuclides	Annual Limit	Activity discharged (Oct 2020 - Sept 2021)
All authorised outlets taken together.	Tritium	100 MBq	0.3 MBq
	All other radionuclides (excluding tritium)	3 MBq	0.364 MBq
Discharges made as a consequence of reactor breathing	Tritium	3000 MBq	479.42 MBq
	Carbon-14	200 MBq	56.61 MBq

## 7.2 Non-radiological Environmental update (October 2020 - Sept 2021)

Treated sewage effluent from the plant is not currently being independently assessed by SEPA due to SEPA Covid restrictions on visiting Site. Results from an independent off-site laboratory analysis verify that the sewage treatment works reed beds continue to work efficiently to maintain good quality effluent in compliance with the sites CAR discharge licence.

Monitoring and trending of data for resources such as water, electricity and fuel continues to determine where use can be minimised, in line with the site Environmental Management System. Over the period October 2020 to September 2021 the site used 17.50 Terra Joules (Tj) of energy; 16.81 Tj attributed to electricity consumption and 0.69 Tj attributed to fuel use in site vehicles, equipment, and generators. In the same 12 month period the site water consumption was 10,923m<sup>3</sup>. The site continues to report carbon equivalent emissions data as per the new company process.

New reporting requirements have been put in place for waste disposal and recycling with new reporting groups being established for use in the company unified dashboard. Over the period October 2020 to September 2021 a total of 84.08 tonnes of waste was collected for consignment from site. This comprised 82.35 tonnes consigned for recycling, recovery, or composting, and 1.73 tonnes consigned for disposal to landfill. This gives a recycling rate of approximately 98%.

## 7.3 Environmental Events

There were no significant environmental events between July 2021 and September 2021.

## 8 SOCIO-ECONOMIC / STAKEHOLDER UPDATE

The electronic application form for the socio-economic scheme can be found on our external website at <https://www.gov.uk/government/collections/magnox-working-with-our-communities>

### Garnock Visitor and Community Hub, Lochshore - £500K Award

Construction began on site 17 May; installation of the substructure and foundations now complete across site. Installation of the steel frame is complete which will now allow the installation of wall zones and roof linings followed by external finishes such as brick and roof beginning in this winter period. A further suite of works completed includes utilities, namely internal drainage connections, followed by the ground floor slab and upper floor structures.

A meet the buyer event was held to engage with local SME's. 70% of businesses invited to tender will be from the local area. J&D Pierce, local steel fabricator provided all steel work for the building.

CCG have begun to deliver a programme of community benefits which includes visits for local school children and members of sports clubs active at the site. The visits for school children include talks on careers in the construction industry and provides information and guidance on how to pursue these.

Next key milestones are external walls and roof, with aim of being watertight by the end of December 2021. Completion date still on target for August 2022.



### North Ayrshire Council - £23K

The funding from NDA / Magnox is to produce a research report to assess the potential short, medium, long term, direct, indirect and induced impacts that the decommissioning of Hunterston B Station will have upon North Ayrshire and the wider economy to inform opportunities arising through a coordinated approach to the Hunterston Strategic Development Area.

## 9 SITE VISITS AND KEY DATES

Hunterston A Site continues to attract the right kind of interest through our good safety and business performance. Below is a selection of visitors / key dates during the period.

DATE	EVENT / VISIT
Tuesday 7 September	David Peattie CEO NDA, Gwen Parry Jones CEO Magnox and John Grierson NOD Magnox
Thursday 9 September	Scottish Site Stakeholder Group Meeting ( <i>Microsoft Teams meeting</i> )
Thursday 9 September	Hunterston Decommissioning Teleconference Update by Site Director, Mark Blackley to Hunterston SSG Chair, Rita Holmes and SSG Vice Chair, Stuart McGhie. ( <i>Microsoft Teams meeting</i> )
Tuesday 14 – Thursday 17 September	ONR Inspection Visit – Bill Kings Principal Inspector
Monday 4 October	Nuclear Executive Directors visit
Thursday 28 October	Lawrie Haynes – Chair of Magnox visit
Wednesday 3 November	Hunterston Decommissioning Teleconference Update by Site Director, Mark Blackley to Hunterston SSG Chair, Rita Holmes and SSG Vice Chair, Stuart McGhie ( <i>Microsoft Teams meeting</i> )
Thursday 11 November	Ross McAllister – Programme Delivery Director visit
Tuesday 16 November	Mark Johnston – Regional Waste Manager
Thursday 18 November	Cyber Security & Information Assurance team
Tuesday 23 November	Cross Site meeting HNA meet HNB
Thursday 25 November	North Ayrshire Council - Update /Stakeholder Engagement
Thursday 25 November	SEPA / NDA meeting at HNA