HUNTERSTON A

SITE STAKEHOLDER GROUP REPORT

ACTING SITE DIRECTOR – ALASTAIR WALKER

MARCH 2021

HUNTERSTON A
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 has had to deal with a small number of positive Covid cases and a number of personnel self-isolating for various reasons (all non-workplace related). The focus remains the safety of our personnel and the site continues to monitor any changes in guidance and/or legislation e.g. working from home where possible. The site has implemented learning from other sites and company guidance in order to enhance and improve our existing control measures. Indeed, Magnox has decided to establish on site testing facilities across all of their sites and Hunterston is in the final stages of re-purposing one of the existing buildings to accommodate a testing facility. The expectation is that this facility will be up and running by the beginning of March 2021.

There has been some excellent progress in a number of areas during the reporting period. In particular, after a considerable period of time and after a number of failed attempts, the site has been able to mobilise the lattice frame within the Pond Purge Sump. This was a great success for the site as this now allows the frame to be finally removed and the next programme of work to remove the material in the sump to commence. After an unfortunate run of consecutive plant failures and outages, the HAW programme was able to return to operation in February and are now back to retrieving wet and solid wastes using the WILWREP and SAWBR plants respectively.

Work to introduce a number of changes on the site has been progressing well. The first is a change to the Accident and Emergency arrangements and the site is on track to have these implemented by the end of March 2021. The changes enable monitoring and surveillance by the site Security Guard Force in silent hours and removal of the Duty Controller from the silent hours on-site staffing. The second is a change to the weekly working pattern. As of Monday 1 March 2021 the site will be working a 4 day week, Monday to Thursday.

Hunterston ran a number of successful Target Zero safety campaigns between December and February on the topics of 'Seasonal Safety' and Life Critical Events'.

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

Finally, this will be my last report as Acting Site Director. It has been an absolute pleasure representing the site and I wish the SSG continued success in the future. Mark Blackley will be the new Site Director as of 1 April 2021.

2 SAFETY OVERVIEW

Safety Review Performance

Safety Performance on site continues to be good and it has now been **82** months (at end of February 2021) since the last Lost Time Accident (LTA). The Total Recordable Incident Rate (TRIR) remains at 0.00.

The consistency in our safety performance is a product of a continuing good Safety Culture at HNA underpinned by the company-driven Target Zero campaigns which are designed to raise awareness and maintain safety focus whilst delivering the decommissioning of Hunterston A Site. These targeted campaigns are aimed at all persons who work on Magnox sites and continue to be well received as we strive for Zero Accidents, Zero Incidents and Zero Harm. The latest campaign has been on life Critical Activities – those activities which if not completed safely could result in injuries that would be life changing for the individual as well as for their family friends and colleagues. This topic was well received with many interactions and recollections of first hand experiences.

COVID is still to the fore of our activities with over 170 people on site daily at this time. Safety of our staff remains a high priority and our COVID Secure arrangements are continuously reviewed and changed to meet current and changing situations. This review has seen the planned introduction of on-site testing which will go live at Hunterston A on Monday 8 March. This will not be mandatory but early feedback is that it is being positively recognised as a step towards a safer environment both at work and at site.

In addition our Environmental performance remains focussed and we continue to maintain an open relationship with SEPA, supported by weekly meetings through the COVID pandemic.

4 DECOMMISSIONING PROGRESS

4.1 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^3 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. Progress to recover the wastes from Bunker 1 continues albeit at a slower rate than the wastes from Bunkers 5-2. This is due to the higher probability of fuel fragment carry over from the station's operational phase. Detailed sorting of the waste is carried out using high definition cameras installed on the ROVs and in the facility before loading into waste buckets which are each weighed, then put through a Fuel Detection System to provide assurance that the waste can be safely discharged into the stainless steel storage box and be compliant with the RWM packaging criteria.

Since returning the plant back into service after the Christmas shutdown, Bunker 1 waste recoveries in SAWBR have been slowed by a series of technical issues, followed by a routine, planned maintenance shutdown. Following the maintenance outage the SAWBR facility was returned to full operations in February and Bunker 1 waste retrieval works recommenced *(see picture opposite).*

Good progress has been made in the second half of the month and to date the SAWBR team have now safely exported **Seventy Five** 3m³ boxes from Bunker 1 to the ILW Store, this equates to 47 Tonnes of waste recovered from Bunker 1.

This brings the total of 3m³ boxes filled with ILW waste and exported from SAWBR facility to **967 Boxes.**

The project expects to complete against a forecast out-turn total of **1148** 3m^3 boxes by Summer 2022, factoring in the slower rate of processing in Bunker 1 and the impact of the COVID-19 pandemic.

4.2 Wet Intermediate Level Waste Retrieval & Encapsulation Plant (WILWREP)

The WILWREP facility was constructed to recover liquid HAW (Higher Activity Waste) from associated sludge, acid and resin tanks around the site. Following retrieval into a RWM (Radioactive Waste Management Ltd) approved 3m^3 stainless steel drum the waste contents are mixed with encapsulant powders with a sacrificial paddle to achieve an immobilised waste form within the drum.

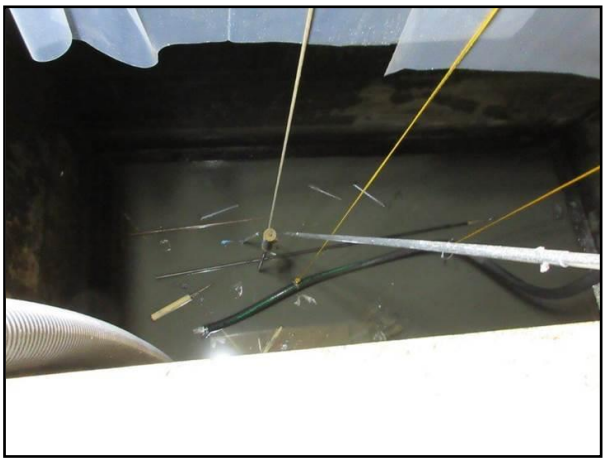
The WILWREP Sludge Retention Tanks (SRT) Nos 3, 2 and 1 have now been cleared of 'bulk' sludge with a cumulative total of **132** 3m^3 drums achieved during this stage.

The team have been working on recovering the residual sludge from SRT3 to SRT1 to allow for drum processing to recommence. This was achieved in February with Drums 133 and 134 processed and exported to the ILW Store. Now that the process is removing the thin layer of sludge at the base of the tank, items of debris are being uncovered, lying on the bottom the tank. These items can be High Activity Waste (HAW) or Low Activity Waste (LAW) depending on how radioactive they are. They all have to be picked out of the sludge using remote tools, lifted from the tank, cleaned of sludge, dried and packaged for transfer. HAW is transferred to the HAW Bunkers where they are fed into the SAWBR process, LAW is transferred to the most suitable on-site Low Level Waste processing facility. The team are now running drum processing and SRT clean up in parallel with drums 135, 136 and 137 within the canyon.

One other element of the WILWREP process is the retrieval and encapsulation of ion-exchange resin, which was used to treat Pond water during the site's operational period.

Due to the sequencing of the WILWREP plant and the Covid-related delays, the resin recovery equipment has not been operated for two years, so a slow, steady approach to restarting this plant is being undertaken, which will lead to recovering the small quantity of remaining resin into WILWREP drums.

The picture below left, shows residual sludge progress in SRT3 ; the picture below right, illustrates uncovering of debris items in SRT3 once the majority of the residual sludge has been removed.



4.3 Solid Intermediate Level Waste Encapsulation (SILWE) Project

The SILWE facility exists purely to encapsulate the 3m3 packages containing the solid waste retrieved / recovered from SAWBR with a grout mix. This is expected to take up to 3 years to encapsulate approximately 1500 stainless steel boxes. Once encapsulated, the containers will then be in their disposable state.

Inactive commissioning continues at a steady rate following on from last year's disruptions.

The grout plant continues to throw up challenges as we now have to manage operations whilst socially distancing.

Active commissioning is now forecast to commence in the last quarter of 2023.

4.4 Hunterston Reactors Care & Maintenance Preparations

The following essential activities are required on both reactors

1. *Column Base Repairs*
2. *Removal of redundant cradle rails from exterior of buildings*
3. *Replacement of open tread and Durbar type flooring and treads at various locations within both buildings*

The above work is on track to commence in June 2021 with an approximate completion date of January 2022.

There is to be a separate contract to be awarded for Reactor Roof Interim Repairs which consists of waterproofing for a period of not less than five years. The work is due to go out to tender in February 2021 and we are on course to award contract in May, with work planned to begin in July with a construction period of around three months.

Both contracts will deliver a package of works for the essential safety critical remedial repairs to avoid further structural degradation of the assets and provide safe access routes throughout both reactor buildings.

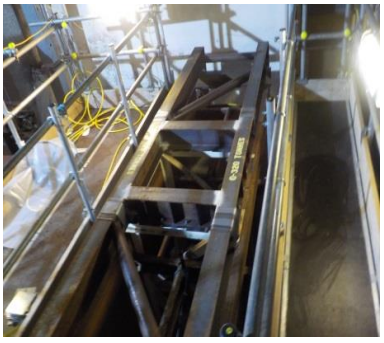
4.5 Ponds Programme

Pond Purge Sump (PPS) - *Removal of the Lattice Frame from the PPS*

In early December the jacking frame was lifted and bolted into position on top of the lattice frame with shim packers fitted between them as required to level the assembly for the hydraulic jacking operations. Once the hydraulic jacking equipment was set up and inspected, the jacking operations commenced and the lattice frame was successfully raised 100mm from the sludge in the PPS to complete the first stage lift prior to the Christmas break.

Since returning in the New Year, the jacking operations re-commenced raising the lattice frame through the second and third stage lifts (raised nearly 400mm). At this level, the hydraulic pressure force required to lift the frame reduced by over 50% therefore the Pond Team changed over from the jacking operations to the lifting operations by setting up and utilising the 5Te porta-gantry A-frame and appropriate rigging equipment.

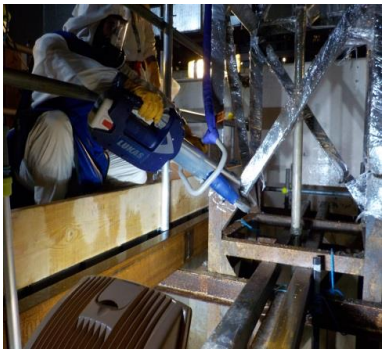
The lattice frame now continues to be raised out of the sludge by approximately one metre at a time, propped, washed down and then cut off using the Lucas hydraulic cutting equipment. The removed sections are then pvc wrapped and transferred via the monobox crane from the PPS to the PWTP roof where they are size reduced. Currently six sections (overall approx. 65%) have been removed from the lattice and the frame wasted.



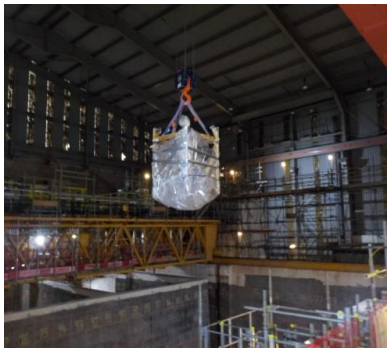
Jacking frame bolted to top of the lattice frame

Hydraulic jacking operation underway

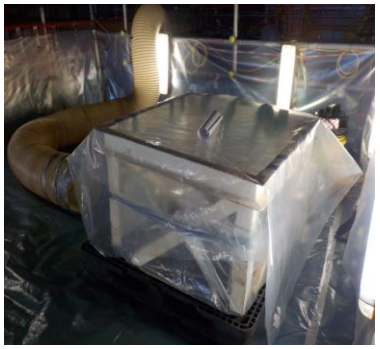
Lattice frame raised using the porta-gantry



Hydraulic cutting operations in progress



Transfer from PPS to the PWTP roof



Section on PWTP roof for size reduction

5 PEOPLE

5.1 Site HR

Following approval from the Magnox Executive Team to move to a 4 day working week we are currently making the final preparations to implement the revised working pattern with effect from Monday 1 March 2021. This is good news for the site with the vast majority of staff having balloted in support of this change. The pattern is subject to a six month trial period to ensure the benefits identified, both for the Company and workforce, materialise as expected.

Significant progress has been made with the organisational change to remove the 24/7 shift operations presence at the site and introduction of a Lead Guard role to be the main point of contact for any incidents during silent hours. We have now completed the redeployment exercise to identify future roles on days for our Shift Team and filled all our Lead Guard roles. Lead Guards and Deputy Lead Guards are currently undergoing appropriate training to ensure we have sufficient competent Lead Guards in place before implementation. The scheduled date to implement these new arrangements, subject to necessary approvals, is 29 March 2021.

Following the introduction of Magnox New Starters' Contracts, which now has allowed the opportunity to recruit individuals into Magnox Ltd as employees; we have now commenced utilising this recruitment method for ongoing roles that meet the business case criteria. Some of the roles that meet this criteria are currently filled by Agency Supplied Workers and will be filled by either direct conversion of an Agency Worker incumbent or be filled through competitive interview with some advertised externally with any new vacancies, that cannot be filled by internal candidates, advertised externally.

Hunterston are still intending to recruit a small number of Radiological Technician apprentices who we expect will be offered continued employment upon satisfactory completion of their apprenticeship. In support of this, a Scottish Apprenticeship - Radiological Protection Framework has already been developed and conditionally approved for use. An appropriate provider is still required to be identified to support the nuclear industry with delivery of this programme and we are hoping this will soon be resolved, with discussions currently ongoing with a potential provider.

We have many people continuing to work from home, where possible, in line with the Scottish Government advice following significant effort being made last year to acquire appropriate IT equipment. This has led Magnox into thinking about how we work and a Smarter Working Group has been formed to look at smarter working practices that increase productivity, including more freedom of choice on work location. Progress so far includes work streams identified and a cross section of staff at each site have been involved in workshops to gain ideas and feedback on the concept.

5.2 Occupational Health

Since the last report we have had three individuals who have contracted COVID19, all who have returned following the required self-isolation period. One individual who contracted COVID19 several months back still remains absent and is recovering from long term effects.

We are continuing to support individual's mental health and wellbeing throughout this 'lockdown' period. To assist with reduced social interactions with social distancing and working from home we have thought creatively and have encouraged 'Wellbeing Conversation Chains' by giving someone a call that you would not regularly speak to and having a chat and encouraging them to do similar.

We are also promoting and encouraging all the workforce to taking part in **Mind's Workplace Wellbeing Index.** This is designed to benchmark and celebrate the good work employers are doing to promote and support positive mental health. It will also help Magnox to find out where we are doing well and where we can improve our current mental health policies / procedures and our approach to mental health in the workplace

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 2020, to the end of December, are as follows;

- *Approximately 170 employees and visitors received a total collective dose of 6.454 man.mSv between them*
- *Approximately 194 contractors received a total collective dose of 6.736 man.mSv between them*
- *The highest individual dose received by an employee was 0.956 mSv*
- *The highest individual dose received by a contractor was 0.740 mSv*

The majority of dose accrued in 2020 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 (January 2020 to December 2020)

In late March the Hunterston A site was put into a safe and secure state. Between late March and July, when the restart of physical operations recommenced, there were no solid, liquid or gaseous discharges with the exception of gaseous discharges made as a consequence of reactor breathing. This environmental summary includes reporting figures for the period when the site was put into an "operational pause" in reaction to the national Covid-19 lockdown.

7.1 Radioactive Discharges

Solid

Low Level Waste (LLW) disposals to the Low Level Waste Repository (LLWR) continue. 24.02 m^3 of LLW and VLLW with a total activity of 0.71 GBq was disposed of during the twelve month period from January 2020 to December 2020**.** 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 January 2020 to December 2020 were decontamination of various areas within the cartridge cooling ponds building and routine waste water arisings from the site active drain system.

Radionuclide or Group of Radionuclides	**Annual Limit**	**Activity discharged (Jan20 to Dec20)**
Tritium	30 GBq	0.013 GBq
Caesium-137	160 GBq	0.038 GBq
Plutonium-241	2 GBq	0.001 GBq
All alpha emitting radionuclides not specifically listed taken together	2 GBq	0.004 GBq
All non-alpha emitting radionuclides not specifically listed taken together	60 GBq	0.036 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 (Jan20 to Dec20)**
All authorised outlets taken together.	Tritium	100 MBq	14.23 MBq
	All other radionuclides (excluding tritium)	3 MBq	0.271 MBq
Discharges made as a consequence of reactor breathing	Tritium	3000 MBq	525.22 MBq
	Carbon-14	200 MBq	59.20 MBq

7.2 Non-radiological Environmental update

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 January 2020 to December 2020 the site used 14.42 Terra Joules (Tj) of energy; 14.00 Tj attributed to electricity consumption and 0.42 Tj attributed to fuel use in site vehicles, equipment, and generators. In the same 12 month period the site water consumption was 7,430 m3. The company have introduced a new process for the reporting of carbon equivalent emissions data.

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. In line with this, reporting figures for waste disposal and recycling rates are only available going forward from April 2020. Over the period April 2020 to December 2020, 31.56 tonnes of waste was collected for consignment from site, 27.00 tonnes was consigned for recycling, recovery, or composting, 4.45 tonnes consigned for disposal to landfill and 0.11 for incineration (with no energy recover). This gives a recycling rate of approximately 86%.

7.3 Environmental Events

There were no significant environmental events (with a significance category above ES99) between November 2020 and December 2020.

8 SOCIO-ECONOMIC / STAKEHOLDER UPDATE

During the first few months of the Coronavirus pandemic, a number of non-essential staff at Hunterston A were deployed to support frontline services in the local community.

Also, through the NDA funded Magnox Socio Economic Scheme, £25,000 was provided to North Ayrshire Council to support the North Ayrshire and North Coast Food banks.

For 2020/21 onwards Magnox has changed the application processes for socio-economic funding requests from the communities around our sites. The change brings Magnox, and the other NDA site licensed companies, together in a streamlined online grant application process.

The new electronic application form can be found on our external website at **https://www.gov.uk/government/collections/magnox-working-with-our-communities**

The format for grants remains the same however – we have a small grant scheme for funding of up to £1,000 (Good Neighbour level), while larger requests, and those for multi-year funding, of up to £200,000 are expected to comply with a range of criteria aimed at creating resilient economies, thriving communities, sustainable incomes and growth for our communities. Grant requests for amounts larger than this need to be discussed with either **Mair Jones** or **Haf Morris** in the first instance. All contact details are on the website.

If you are involved with, or know of, a group who you think could benefit from socio-economic funding then please highlight the scheme to them.

To date there has been one successful Good Neighbourly award being processed in the Hunterston region and a couple of larger projects which have been submitted.

To date there has been one successful application and one pending for Good Neighbourly awards of less than £1K for the Hunterston region. Below are details on two larger applications that are in the system.

<u>Community Regeneration of Millport Town Hall, Isle of Cumbrae</u>

A funding application was received for £330,000 last year towards the £2.9m project. The project is to regenerate the derelict town hall for a Community Hub, Heritage and Arts Centre.

Unfortunately, as Magnox received a number of applications in Scotland whereby the building was obtained by the community via asset transfer from the Council, Magnox and the NDA agreed to cap such requests to a maximum of £50,000 as funding is limited.

Although this is a disappointing outcome for the group, since securing £1.5m from the Scottish Government Regeneration Fund, they have now submitted a new request for £50,000 which will be considered in the coming weeks by the Magnox Executive panel for a decision.

North Ayrshire Future Skills Hub update

The timescales for the Hub have been significantly disrupted by the COVID-19 pandemic. The project has had to amend timeframes, including the appointment of a design team. This team will develop the project from a high level feasibility study into a more detailed design which includes a comprehensive cost plan.

In addition, the project timelines were revised to allow the College to take up an opportunity to acquire adjacent land from North Ayrshire Council. The additional land will make a significant improvement to the overall project and was approved by the Council at the end of January 2021.

Magnox funding has not yet been released to the college.

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 – this has obviously been restricted due to Covid19 restrictions.

DATE	EVENT / VISIT
Wednesday 2 December	Magnox Safety Reps Conference 2020 **(remotely by Zoom)**
Thursday 3 December	Hunterston Quarterly SSG Meeting **(remotely by Zoom)**
Tuesday 1 – 4 December	ONR-CNS Intervention FSYp7 - SYAPS
Tues 5 / Wed 6 / Thur 7 January	Return to Work Stand downs
Thursday 21 January	John Grierson – Magnox Nuclear Operations Director
Wednesday 3 February	Hunterston Decommissioning Teleconference Update by Acting Site Director, Alastair Walker to Hunterston SSG Chair, Rita Holmes and SSG Vice Chair, Stuart McGhie.
Wednesday 24 February	Paul Winkle – Magnox Chief Operating Officer
Wednesday 3 March	Hunterston Decommissioning Teleconference Update by Acting Site Director, Alastair Walker to Hunterston SSG Chair, Rita Holmes and SSG Vice Chair, Stuart McGhie.