



HUNTERSTON A

SITE STAKEHOLDER GROUP REPORT

SITE DIRECTOR – MARK BLACKLEY

SEPTEMBER 2022

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.

Conventional Safety Performance on site remains good. The site has continued to safely deliver work on site with no Lost Time Accidents (LTA's) since March 2021.

There were no significant Nuclear / Radiological Safety or Security issues over the reporting period.

A revision to the Security Plan for Hunterston A which was submitted in accordance with the Nuclear Industries Security Regulations (NISR) 2003 has been approved by the Regulator.

The discovery of a defect on one of the sites authorised gaseous discharge stacks during a planned inspection was reported at the last meeting. The defect was a small hole caused by local corrosion on a thin wall section of the metal duct after the HEPA filter abatement. SEPA has investigated this event and have determined that a warning letter is appropriate in this instance given that the site has shown that there has been no direct harm as a result of the event, and given that there is no evidence of deliberate, repeat, or continued offending.

The Solid Active Waste Bunker Retrieval (SAWBR) Project **team** have safely exported a cumulative total of **244** 3M³ boxes from Bunker 1 to the ILW Store, this equates to **146.7** Tonnes of Bunker 1 waste. This brings the total of 3M³ boxes exported from SAWBR (all 5 bunkers) to **1137** Boxes. It is forecast that the bulk retrieval of waste from Bunker 1 should be completed by Winter 2022 – this has been extended because there is more waste in the bunker than was forecast and because of a slightly slower rate of processing and some minor plant reliability issues.

The Solid Intermediate Level Waste Encapsulation (SILWE) Project continue with preparations for the commencement of Phase 2 Commissioning. The Kuka robots continue to experience issues with plug insertion sequences, although it is expected that the most recent implemented solution will yield positive results.

Good progress has been made on transferring the Magnet Screen from the Pond to SAWBR. This device was used during pond clean and drain activities and it is one of the few remaining higher radiation dose items within the pond. Its purpose was to remove small ferrous orphan materials from the sludge which had accumulated on the pond floor. It is anticipated that the Magnet screen will be transferred to SAWBR by the end of August where it will subsequently be transferred to the ILW Store.

EDF and Magnox are working collaboratively to seamlessly transfer and transition EDF's seven AGR sites to Magnox. A decommissioning strategic baseline workshop involving representatives from EDF Generation and Magnox recently met to consider the case for changes to the current AGR decommissioning strategic baseline reflecting on Magnox operational experience.

Resourcing continues to be a key focus and we are continuing to address resource gaps and reduce vulnerabilities through use of the Magnox New Starter contracts. It is pleasing to note that three of our four new Radiation Protection Monitor trainees have started on Site and our two new Maintenance Apprentices will start in September.

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

2 SAFETY OVERVIEW

2.1 Safety Review Performance

The Day Away Case Rate (DACR) & Total Recordable Incident Rate (TRIR) for Site is 0.00. The Site has continued to demonstrate a good safety performance throughout all areas on Site. During this reporting period there has been one first aid case injury and 16 months have passed since the last Lost Time Accident (LTA) on Site.

The first aid case injury involved a mechanical Fitter whilst using a torque wrench. The torque wrench slipped and struck him grazing his forehead. The Site Emergency Arrangements were enacted via a call to the site control room on 2222 and Nuclear Occupational First Aider sent to provide the appropriate level of attention. The mechanical fitter continued with his daily tasks.

The site was less impacted by positive cases of Covid 19 and in general is unaffected as we continue to deliver safe decommissioning work.

Target Zero campaigns continue and are well received and create discussion, raises awareness, builds knowledge base, and proactively maintains focus on safety, environment, security, waste management and compliance dependant on the topic of the month. In the past three months the topics have been June - *Electricity*, July - *First Aid & Contingency Arrangements* and August - *Controlled Waste*.

The site was visited by NDA representative to inspect the site's arrangements for managing work at height. The NDA representative was also provided with a site familiarisation tour. No issues were raised concerning the site's arrangements relating to the inspection.

The site's Fire Safety Management Group continue to meet bi-monthly to monitor and ensure the fire life safety general arrangements are maintained and effective.

The site receives a consistent number of Learning from Experience Forms or Q Pulse reports of events on site. These reports are assessed at the daily safety and compliance meeting and effective actions placed when appropriate. These reports include good practice where it has been recognised that good practice or preventative actions have been taken, that may have prevented an event from occurring. The site Event Review meeting meets weekly as a minimum and each event reported on site is screened for suitability, correct categorisation and effectively actioned.

The site safety representatives meet fortnightly at the Local Safety Forum and bi-monthly HESAC meetings. These meetings are well supported by Magnox and contractor Safety Representatives.

2.2 Emergency Arrangements

The Accident and Emergency Contingency Arrangements remain in a ready state to respond to foreseeable events that may or could occur through the undertaking of work activity on site.

The Site is actively looking for a new Emergency Preparedness Officer to join the team.

Recent training in Nuclear Occupational First Aid has been undertaken by the site Contingency Team members.

The Contingency arrangements are frequently tested to ensure they remain in a state of readiness- this includes Contractors Contingency Arrangements.

The Security Guards continue to test the silent hours contingency arrangements.

The wellbeing group ran more Defibrillator and Resuscitation awareness training sessions. These sessions were well attended. This awareness training will be delivered on a request basis moving forward.

The Site will endeavour to introduce and train other persons on site with the skills required of a Site Contingency Team member. This is to ensure that we have a suitable number of trained candidates that can step into the role and join the team as others express a desire to leave or retire from the business. An article will be placed in the team brief raising the awareness of the site contingency team and ask for volunteers who would be interested in joining the team. We expect a decent level of interest.

3 DECOMMISSIONING PROGRESS

3.1 Hunterston Reactor Project / Plant & Structures

Reactor Interim Roof Remedial Works

Works started on site in January 2022 with reassurance surveys and installation of safety netting to secure a system inside the reactors under the roofs as a fall arrest measure.

The reassurance monitoring and internal safety netting is complete and work to access the fragile roof via a system of 'Easi-deck' walkways and installation of perimeter handrails by rope access is ongoing.

Application of a SIKA waterproof coating to the facades of Reactor 1 via a MEWP has also commenced.

The main works to arrest water ingress to the roofs by applying a SIKA protection system is weather dependent and will continue on following completion of the fall arrest and edge protection works and is due to be completed by end of October 2022.

The roof remedial repair project has come up against a number of challenges. Work to install safety nets did not commence as planned due to reassurance surveys taking place to rule out contamination issues in the area and unfavourable weather conditions have impacted the programme.

The contractor has submitted a new programme which sees them working until the end of a weather window in October 2022 and then returning in Spring 2023 to conclude the works.

Reactor Remedial Repairs

The Reactor Remedial Repairs works programme has completed removal of all external cradle rails from both reactors and painting of exposed brackets, following the removal of the rails.

Works to replace water damaged open floor gratings and durbar plates is now complete in both reactors.

The remaining scope, which is to repair 27 column bases across both reactor buildings is continuing and is expected to be completed by September 2022.

Learning and Development (L&D) Centre Demolition Works

Plant and Structures has completed a small-scale demolition project of the Learning and Development centre (L&D) at Hunterston A on time and to budget.

The work consisted of demolishing the main L&D building and a number of small outbuildings, in addition to excavating and removing a buried septic tank.

The project is currently in the close down phase.

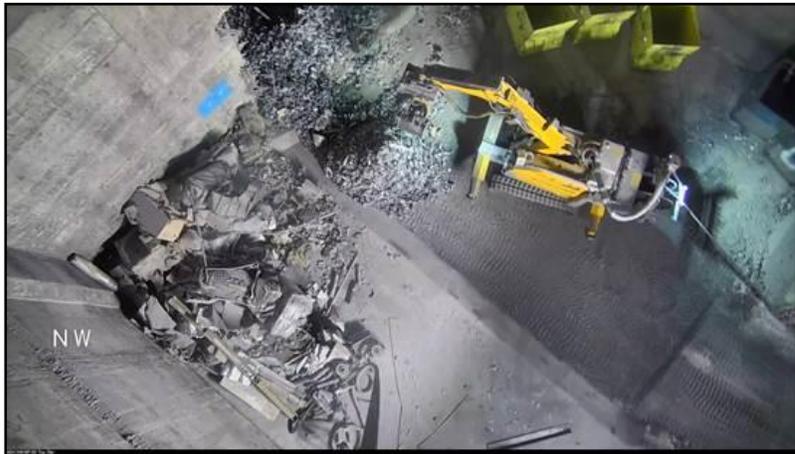
3.2 Solid Active Waste Bunker Retrieval (SAWBR) Project

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 3m³ 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 plant was shut down to facilitate a routine planned, maintenance outage in SAWBR week commencing Monday 1 August for a duration of two weeks. This outage was completed, and the plant has since been returned to service and continues to export filled boxes of waste.

Out-with the period of the outage the SAWBR facility continues to operate, processing waste from Bunker 1, with good progress being made between June 2022 and August 2022. To date, the SAWBR team have safely exported a cumulative total of **244 3M³** boxes from Bunker 1 to the ILW Store, this equates to **146.7** Tonnes of Bunker 1 waste.

This brings the total of 3M³ boxes exported from SAWBR (all 5 bunkers) to **1137** Boxes. It is forecast that the bulk retrieval of waste from Bunker 1 should be completed by Winter 2022 – this has been extended (when compared to dates previously reported) because there is more waste in the bunker than was forecast and because of a slightly slower rate of processing and some minor plant reliability issues.



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

3.3 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. Having completed the first stage of sludge recoveries the plant is being reconfigured to retrieve and encapsulate radioactive Nitric acid. This work to reconfigure the plant is currently paused due to other site priorities.

There is some residual sludge remaining from the first stage of sludge recoveries and, when possible, the WILWREP Waste Operations team are continuing to consolidate the residual sludge from three Sludge Retention Tanks in WILWREP into one tank to make future retrievals easier. One of the methods of consolidating the sludge, whilst segregating the debris, is with the use of the “Dumper Bot”. Operations have now commenced on Dumper Bot recoveries in SRT3 (see picture opposite), moving the remaining sludge within the tank to a single location. The Bot will then be used to separate solid items of debris from the remaining sludge, allowing the team to clear the base of the tank. This work should take around two months - the Dumper Bot will then be transferred to SRT2 to continue the process.



Routine planned Maintenance shutdown in WILWREP commenced Monday 1 August 2022 for a duration of approximately two weeks. This outage has now been completed.

3.4 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. It is expected to take up to three years to encapsulate approximately 1500 stainless steel packages. Once encapsulated, the packages will be in their disposable state.

The SILWE Project continue with preparations for the commencement of Phase 2 Commissioning in October of 2022. Following this phase of the project, plant operations will be managed via the SILWE control room.

The Kuka robots continue to experience issues with plug insertion sequences, although it is expected that the most recent implemented solution will yield positive results. The system performance demonstration documentation is currently undergoing client review in readiness for running a fully sequenced demonstration of robot operations.

The project plan is to transition into Phase 3 Commissioning in January of 2023, with Active Commissioning forecast to commence in the fourth quarter of 2024.



3.5 Ponds Programme

ILW Retrieval - Magnet Screen

The Magnet Screen (*see picture opposite*) currently resides within A-Blockhouse within the Cartridge Cooling Pond enclosure.

The device is a legacy piece of equipment which was used during pond clean and drain activities. Its purpose was to remove small ferrous orphan materials from the sludge which had accumulated on the pond floor as it was deposited into hoppers. The Magnet Screen is one of the few remaining higher dose items within the pond and as such a project exists to package it for transfer to SAWBR with its eventual destination being the ILW store at Hunterston.



Throughout the reporting period there has been significant progress in the permissioning of the scope as detailed below:

- The Decommissioning Proposal has been approved
- The F-224 options assessment which informs decisions on how best to manage and dispose of active waste has been approved
- An Engineering Advice Notice concerning the packaging methodology has been written by Magnox technical centre and approved.
- A Disposability Panel has been held attended by the Magnox Disposability Case Manager, Waste Strategy & Permissioning Manager and Waste Programme Chief Engineer amongst others. The review resulted in a successful outcome.
- A project report regarding the magnet screen debris composition has been written and approved.
- The Waste Authority Review 3 has been held with a successful outcome.

Trial runs of the transfer of the magnet screen from the Pond to High Active Waste have been successfully completed and the team are on track to complete the transfer before the end of August 2022 to support the associated NDA milestone.

New Effluent treatment Plant (NEffTP)

Work to install and inactively commission a New Effluent Treatment Plant within the Low-Level Waste Transfer Facility (see *picture opposite*) at Hunterston completed within the previous reporting period.

This system will facilitate the eventual diversion of current miscellaneous effluent streams which will in turn enable wider decommissioning of site by creating redundancy in the systems and tanks currently still in use.

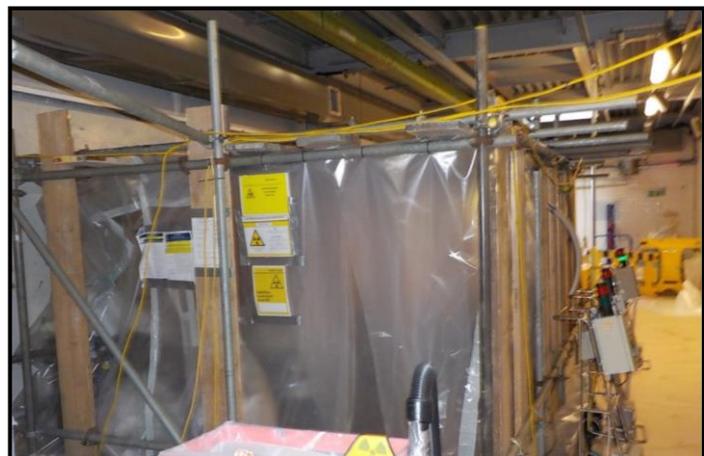


Within the current reporting period the focus has been on ensuring readiness for active commissioning later in the year. The commissioning schedule has been produced and Work Instructions and Plant Operating Instructions are currently being written. Additionally, JCG who were the design integrators shall return to site at the end of August 2022 to integrate the system with the additional delay tanks and to provide high level trip functionality with the wider plant and systems onsite.

ILW Retrieval – West Stop Log Harbour Workshop waste

Within the period the Pond team in collaboration with High Active Waste made significant progress in achieving radiological hazard reduction within the Pond facility by exporting a large volume of ILW to the Solid Active Waste Bunker.

Twenty-seven bags of ILW which had previously been sorted and segregated within a dedicated C4 containment within the Skip Refurb Plant (see *picture opposite*) were handed over to the HAW team for depositing into the bunker in a well-planned and safely executed operation on 30 June.



With the Solid Active Waste flask having left the Pond for the last time earlier in the year and the magnet screen imminent, this leaves only a very small further volume of ILW to be processed, which is currently being planned for export in the near future.

4 ASSET MANAGEMENT

Asset Management forms a cornerstone of site operations to ensure the ongoing integrity of site assets during the lifecycle plan. The work also involves the disposal, remediation and repurpose of assets across the site. The aim is to work in partnership with others on Site to provide and maintain a safe and secure working environment. Areas on Site that fall within the scope of asset management include:

- *Physical infrastructure*
- *Installed and temporary plant and equipment*
- *Facilities*
- *Utilities*

The Asset Management Team are pleased to confirm positive progress for a number of work packs:

1. External water wall removal has made excellent progress with preparations progressing to remove the metal frame – (see pictures directly below).



2. Road repairs and snagging now complete.
3. Gas duct supports in Reactor 1 and 2 inspections complete and concludes no urgent work is required.
4. Two 11kV/415V transformers procured and delivered to site to replace the aged units outside Reactor 1 and 2. The Team are now looking at opportunities to install the new transformers this Financial Year (see picture opposite).
5. Welfare improvements have been delayed as the original contractor is no longer available. Positive progress has been made to secure an alternative provider and plan to complete the work in February 2022.
6. Admin Building Distribution Board replacement has received sanction and expect the unit to be ordered imminently ready for replacement in the next month.
7. Replacement of the Ste Waste Monitoring equipment has been deferred to Financial Year 2024/25 due to effective repairs and previously planned upgrades now progressing.



5 PEOPLE

5.1 Site HR

Over the period resourcing continues to be a key focus and we are continuing to address resource gaps and reduce vulnerabilities through use of the Magnox New Starter contracts with only a very few new vacancies being filled by supply workers, where appropriate.

We do still have some Agency Worker/Contract Supply Worker positions that we wish to fill through a New Magnox Contract either through current incumbents taking up these position or new candidates.

Our trainee positions within health physics disciplines have now commenced and structured training plans in support of their development have been established.

Plans are also in place for our new Craft Apprentices who commence their apprenticeship early September with a Company face to face induction with all variety of apprentices across the Company, followed by site induction, and then a combination of college placement and on-site training.

5.2 Occupational Health

Our Wellbeing Group continue to provide various information and initiatives in support of promoting Good Health. Our Hunterston Step Challenge in June was well supported with 5 teams competing to gain the most steps over a week in support of the 'Move Well' pillar as part of Good Health with a massive 2,649,711 steps completed in total.

Our Hunterston Fitness suite (Gym) is re-opening. The Gym is available to all who work at Hunterston regardless of whether they are a contractor, staff, or a supplied worker. A physical activity questionnaire and completion of a short induction on equipment is required before being able to hit the Gym Safely.

Our Mental Health First Aiders continue to provide a valuable support to our workforce. We have however been looking to increase the number of employee Mental Health First Aiders (MHFA) at Hunterston to ensure we are providing an adequate level of cover and support across all areas of the site. Our MHFA's themselves have recently been providing insight into their involvement as a MHFA and what they enjoy about the role to encourage others to find out more and consider putting themselves forward.

We recently have contracted a new framework Medical Officer (MO) to support Hunterston. He has held his first clinic on site and also been on a site tour to familiarise himself with the working environment and provide greater insight into occupations of the workforce. The new MO will provide the same scope of service as was previously provided attending site once a month.

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 2022, to the end of July, are as follows:

- *Approximately 193 employees and visitors received a total collective dose of 7.688 man.mSv between them*
- *Approximately 314 contractors received a total collective dose of 9.767 man.mSv between them*
- *The highest individual dose received by an employee was 1.340 mSv*
- *The highest individual dose received by a contractor was 1.467 mSv*

The majority of dose accrued in 2022 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 (April 2021 - March 2022)

7.1 Radioactive Discharges

Solid

Low Level Waste (LLW) disposals to the Low Level Waste Repository (LLWR) continue. 86.94m³ of LLW and VLLW with a total activity of 1.5 GBq was disposed of during the twelve-month period from July 2021 to June 2022. 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 July 2021 - June 2022 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 (Apr 2021 - Mar 2022)
Tritium	30 GBq	0.008 GBq
Caesium-137	160 GBq	0.058 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	0.051 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 (Jul 2021 - Jun 2022)
All authorised outlets taken together.	Tritium	100 MBq	0.3 MBq
	All other radionuclides (excluding tritium)	3 MBq	0.448 MBq
Discharges made as a consequence of reactor breathing	Tritium	3000 MBq	466.43 MBq
	Carbon-14	200 MBq	51.64 MBq

7.2 Non-radiological Environmental update (July 2021 - June 2022)

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 July 2021 to June 2022 the site used 17.35 Terra Joules (Tj) of energy; 17.07 Tj attributed to electricity consumption and 0.28 Tj attributed to fuel use in site vehicles, equipment, and generators. In the same 12-month period the site water consumption was 8,401m³. The site continues to report carbon equivalent emissions data as per the new company process.

Waste disposal and recycling is recorded in the company unified dashboard. Over the period July 2021 to June 2022 a total of 412 tonnes of waste was collected for consignment from site (401 tonnes for recycling, recovery, or composting, 6 tonnes sewage waste and 5 tonnes for disposal to landfill). This gives a recycling rate of approximately 97%.

7.3 Environmental Events

There were no new significant environmental events during the reporting period. However, the discovery of a defect on one of the sites authorised gaseous discharge stacks during a planned inspection was reported at the last meeting.

The defect was a small hole caused by local corrosion on a thin wall section of the metal duct after the HEPA filter abatement but before the inlet to the stack sampling instrument.

Upon discovery of the defect the associated ventilation plant was switched off and a repair to the stack was carried out.

An assessment has concluded that the small hole resulted in an increase to the measured discharge from the stack of 0.3%. This does not alter the monthly discharge information reported to SEPA.

SEPA has investigated this event and have determined that a warning letter is appropriate in this instance given that the site has shown that there has been no direct harm as a result of the event, and given that there is no evidence of deliberate, repeat or continued offending.

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>

There are a number of Good Neighbour Applications that have been submitted and are being progressed for the Hunterston area and to note that these applications now have a limit of £2000 from financial year 2022/23 as opposed to the previous limit of £1000.

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
Thursday 2 June	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 7 June	ONR IRR Inspection – Mark Coleby / Graeme Burt
Wednesday 8 June	SEPA Inspection- Melanie Hayes / Andrew Gallagher
Tuesday 14 June	ONR CNSS Inspection – John Duffy / Martin Reid
Wednesday 22 June	ARROSSE <i>(Microsoft Teams Meeting)</i>
Thursday 16 June	Susie Lind EDF Nuclear Decommissioning Director
Monday 21 June	Dave Whitnall / Gary Swift Senior TU Reps
Wednesday 6 July	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 19 / Wednesday 20 July	NDA Asbestos Management Assurance Health Check (Paul Fewtrell)
Wednesday 20 / Thursday 21 July	Independent Asbestos Assurance Review (Collette Willoughby - Ind & John Arnold - Magnox)
Wednesday 20 July	MSO Security Audit
Wednesday 27 July	Laurent Lacroix - EDF
Thursday 28 July	Magnox Monthly Interface meeting Paul Winkle, Magnox / Gareth Thomas, NDA
Wednesday 10 August	David Nixon NDA – Conventional Safety Inspection