Nuclear Decommissioning Authority

NRS Nuclear Restoration Services

HUNTERSTON A

SITE STAKEHOLDER GROUP REPORT

SITE DIRECTOR – MARK BLACKLEY

SEPTEMBER 2024

HUNTERSTON A
SITE DIRECTOR'S REPORT TO THE SITE STAKEHOLDER GROUP
SEPTEMBER 2024

Hunterston A continues to address the nuclear liabilities at Hunterston A in a safe, secure manner with care for the environment.

1 SITE DIRECTOR OVERVIEW

There has been one reportable injury. A Radiological Monitor bumped his head in C3 conditions and sustained a minor (less than 1cm) cut. The Monitor did not return to work but did not require medical attention. The Monitor subsequently obtained a note from a doctor which said he had been unable to work because of a work-related head injury.

During the planned calibration of the WILWREP Manual Stack Train (MST), which is used to sample gaseous discharges, it was discovered that the calibration period had expired. The planned calibration was successfully undertaken, which confirmed that the MST was operating as expected with no drift from the previous calibration. This gives confidence that any discharges have been accurately measured. All other MSTs have been checked to confirm that they are within calibration.

SEPA have confirmed that the Permit variation application for Radioactive aqueous discharges has been duly made. This application will be subject to public consultation.

The SAWBR team have been working to a 'back out plan' for the SAWB Bunkers with the aim of achieving Post Operational Clean Out status. Recovery of the fine dusts has been slower than expected and Brokk 1 has experienced several unrelated faults. Upon receipt of some specialist parts, we expect to return the facility to operation in late August / early September.

WILWREP has been re-configured to start retrieving and encapsulating acid. A re-assessment of the aerial discharge monitoring techniques and reporting arrangements has been carried out. It is anticipated that recovery, neutralisation, and encapsulation of the acidic waste will commence in early September.

It has been previously reported that we will process ILW packages in SILWE manually without the KUKA robots. This package of work (manual swabbing / plug removal and installation) has recently passed design approval. Focus has now switched to the procurement, manufacture and installation of the operator shielding platform, in conjunction with software updates to the package management system.

Progress on the Reactor roof repairs has been slower than expected due to poor weather conditions. This work should be complete in September weather allowing.

The Project to determine what is BPM for dealing with the bunker waste is progressing well. Phase 1 of the Project which produces a ‘long list’ of options for desktop-based refinement of the package inventories, options for waste stream fingerprint refinement through physical sampling and analysis and options for final package measurement is nearing completion. The output from Phase 1 will be provided to SEPA and ONR for comment when completed.

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

2 SAFETY OVERVIEW

2.1 Safety Review Performance

The Site Total Recordable Incident Rate (TRIR) is 0.45 and the Days Away Case Rate (DACR) is 0.45. 10 months have passed since the last Lost Time Accident (LTA) and there have been 2 First Aid Cases (FAC's).

The FAC's resulted from an employee bumped his head on a section of steel angle iron resulting in a minor cut to his head. Secondly an employee caught a finger on a door as it closed. The wound was cleaned and dressed by the First Aider.

Both events are currently under investigation so that we can fully understand how the events occurred and what learning we can capture, make improvements and share to prevent recurrence.

The Risk Assessment workshops have been delivered as planned and will now be delivered as and when required.

The Site will now be focussing on delivery of Hazard Awareness and Risk Perception workshops. These workshops are delivered by the EHSSQ Manager and Head of Safety, are interactive and encourage the attendees to participate in both discussions and exercises. It is intended that by raising hazard awareness and risk perception we are nurturing our site safety culture by providing increased knowledge to our workers to empower them to identify hazards, recognise the risk those hazards present and take appropriate avoiding actions.

The number of QPulses received on site during this reporting period are slightly down from the previous 3 months. It is considered that this is due to the holiday period, though we are monitoring the numbers we receive and are seeing the number of QPulses starting to rise again. The QPulses received are reviewed at the daily safety and compliance meeting to ensure that each event is fully understood, and appropriate actions are placed where required and each QPulse is appropriately categorised in accordance with NRS procedures.

The Site EHSS&Q Manager and Operational Experience Feedback Engineer (OEFE) run the Event Review Team meeting weekly to review progress of investigations, challenge QPulse actions where required, monitor closed and open actions and undertake trending to capture wider learning. The Site OEFE provides our Regulators with a weekly summary of all events that have been reported on site.

Target Zero campaigns continue with topic changing each month. June – Observations & Conversations App launch, July – Standards & Expectations and August – Situational & Spatial awareness. These specific topics are discussed daily at meetings, setting to work, pre and post job briefs and are seen as a proactive measure to raise awareness

and increase knowledge of the topic of the month and assist the site in reaching target zero which is zero Accidents, zero incidents and zero harm

The Local safety forum is a meeting that is held fortnightly and attended by Site Safety Representatives and Site management. The safety Representatives discuss and raise concerns to Site management. Topics can range from Received QPulses, actions placed and other topics that the site workforce have raised with the Safety Reps. The Site HESAC meets bi-monthly and is well attended by Site Safety Representatives and Site Management.

2.2 Emergency Arrangements

The Site Accident, Emergency and Security Contingency Arrangements are rehearsed and tested frequently to ensure the site is equipped to adequately respond to and recover from an emergency. The site is on target to accomplish our 2024 Emergency Training and Exercise Programme with over 10 live emergency exercises and several table-top scenario-based discussions being successfully delivered to date.

Themed training and exercise scenarios are designed and targeted to ensure the site contingency arrangements, staff and contractors are fully prepared to mitigate the consequences of both existing and emerging risks on site.

Recent exercises include responding to an acid spill in a contamination-controlled area in preparations for Wet Intermediate Level Waste Recovery Encapsulation Process (WILWREP) acid reconfiguration, and fire water run-off management.

Planning and preparations are well underway for the site annual Security Exercise which will be assessed by the Company Internal Assurance Team (CIAT) on Tuesday 1st October. Exercise "Purple Moose" has been designed to fully test the site Security contingency arrangements to effectively manage a foreseeable security threat on-site and demonstrate compliance of Nuclear Industries Security Regulations and Principles. Additionally, the site is continuing to develop and test resilience in the emergency management recovery with key staff currently undertaking Event Recovery and Business Continuity training which will be tested during exercise "Black Start" on Wednesday 11th September.

The site continues to strengthen emergency resilience locally, both internally and externally by collaborating with Category 1 Responding partners to enhance the sites Contingency Plans and improve processes to ensure an efficient and coordinated multi-agency response is in a state of readiness if called upon.

3 DECOMMISSIONING PROGRESS

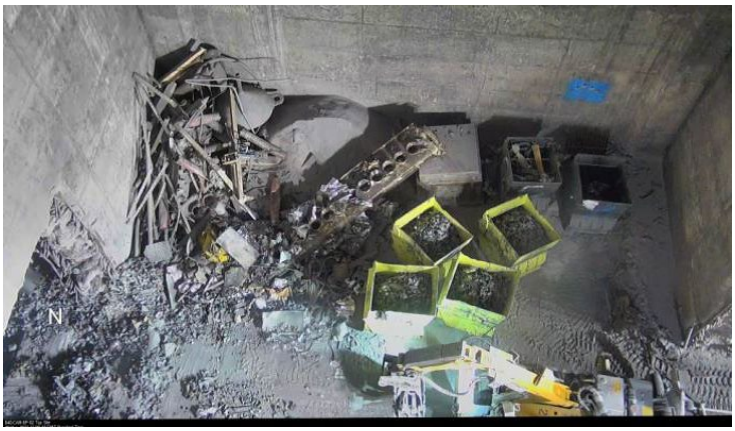
3.1 Solid Active Waste Bunker Retrieval (SAWBR) Project

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 3M³ stainless steel boxes. The initial breakthrough into Bunker 5 was achieved in March 2014 and has now been completed which is a significant milestone for Hunterston and NRS.

The SAWBR team have been working to a 'back out plan' for the SAWB Bunkers with the aim of achieving Post Operational Clean Out (POCO) status. This includes a detailed strategy for the processing of the identified orphan wastes, the Fuel debris items and the retrieval of the fine's dusts.

Progress against these activities has been slower than expected with recovery of the fine dusts providing additional technical challenge as well as plant reliability issues. Brokk 1 has experienced several unrelated faults that have delayed activities associated with POCO. Upon receipt of some specialist parts from Brokk Sweden we expect to return the facility to operation in late August and continue with clean-up activities.

During August, Routine Maintenance shutdown in the HAW facilities was successfully completed.



Picture below of Bunker Waste Recovery Operations showing fuel assy/skip guide and part of the De-splitter machine.

3.2 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 bulk sludge recoveries the plant was being reconfigured to retrieve and encapsulate radioactive Nitric acid before being paused in Summer 2022 due to other site priorities.

Work is progressing on environmental monitoring related to WILWREP operations, including assessing/setting up monitoring techniques and reporting arrangements.

- Several weeklong vent system samples have been analysed by the site lab and a new verified spread sheet to calculate the results is awaited from our central team. This will allow us to agree a baseline for the vent system prior to active commissioning.
- Operator refamiliarization has been completed by transferring water, already in the buffer tank, to the drum in the canyon and back to the tank whilst further baselining of the ventilation system is undertaken.

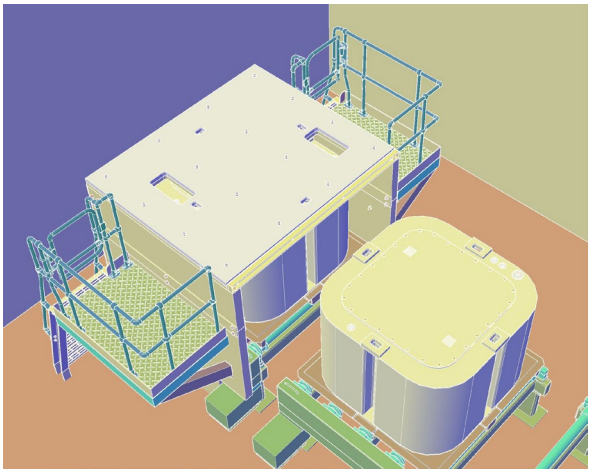
Due to the holiday period key resources have been low but the team still hope to have all the required environmental requirements complete within the next few weeks.

It is expected that WILWREP active commissioning will recommence towards late August/early September.

3.3 Solid Intermediate Level Waste Encapsulation (SILWE) Project

The SILWE facility exists to encapsulate the 3M^3 packages containing the solid waste retrieved/recovered from Solid Active Waste Bunker Retrieval (SAWBR) with a grout mix. Once encapsulated, the packages will be ready for long term storage.

The "Plan B" package of work (manual swabbing / plug removal and installation), has recently passed design approval. Focus has now switched to the procurement, manufacture and installation of the operator shielding platform, in conjunction with software updates to the package management system. The common objective is to facilitate a change to manual operations. This package of work has now been renamed as "Plan A".



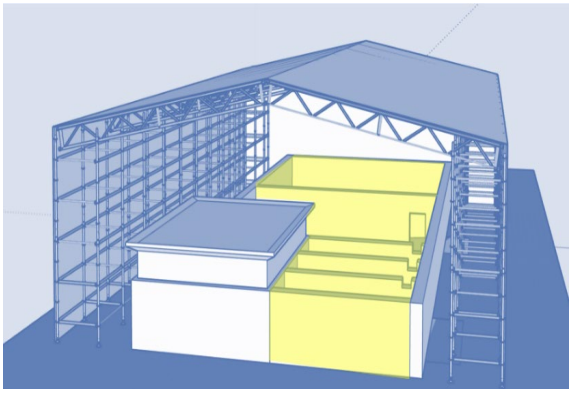
SILWE "Plan A" Operator Shielding Platform

Recently an Assurance Team from NDA/NRS, attended SILWE to carry out an annual check on SILWE processes and procedures. The feedback has been positive, with all previous actions now closed. The Project Team's priority is to become fully resourced to meet the "Set to Work" phase, early next year.

3.4 Ponds Programme

CCP Delay Tanks

The Pond team continue to work in the Misc and CCP delay tanks performing decontamination and de-planting activities. Completion of these works will reduce the radiological hazards onsite and create a passively safe state for the tanks to be handed over to our Plant and Structures team for future demolition.



3D Model showing location and configuration of delay tanks
(highlighted yellow)

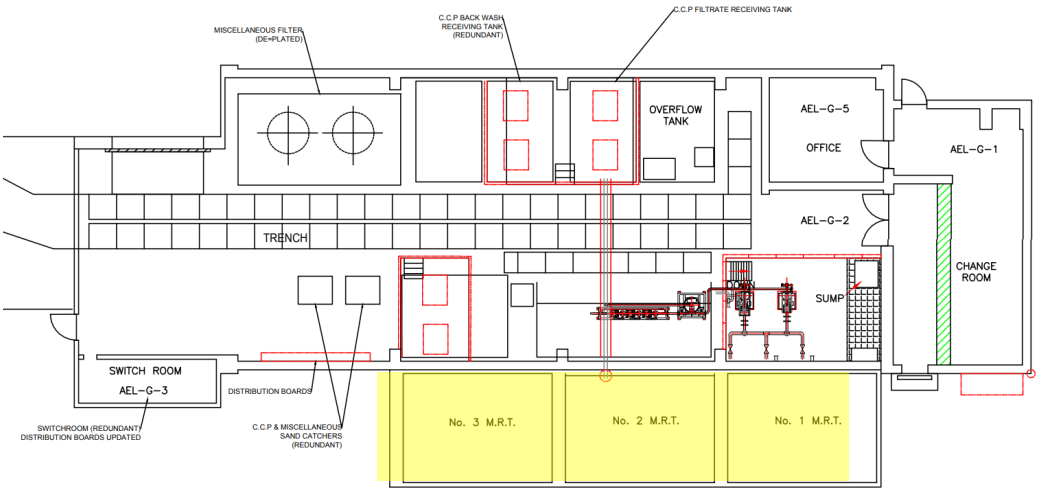
Internal photos of Delay Tanks

Miscellaneous Receiving Tank decommissioning

The Miscellaneous Receiving Tanks (MRTs) form part of the wider AETP facility and are concrete underground tanks approx. 25 m^3 in capacity. The access to these tanks is within an external C2 area in the AETP compound. The MRT's are currently operational and used in the treatment of miscellaneous effluent. They receive miscellaneous arisings which are passed through to the Miscellaneous Cartridge Filtration Plant (MCFP) providing removal of suspended solids. The Pond programme is responsible for diverting the existing effluent streams away from the MRT's thus facilitating the

decommissioning of the tanks which will comprise of desludging, decontamination and de-planting.

The team are making strong progress having recently had the options assessment for desludging of the tanks approved. Characterisation activities are ongoing, and the engineering focus shall now shift to detail design of sludge retrieval and encapsulation.



Miscellaneous receiving Tanks (highlighted yellow)

C3 Shower Pumping Station

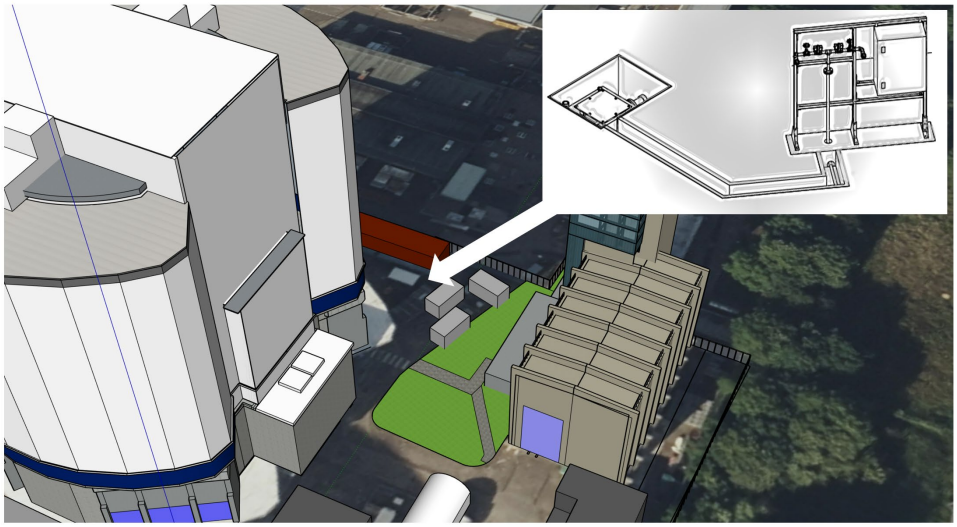
The Pond programme have a live project to divert all sources of miscellaneous effluent on site to the New Effluent Treatment Plant (NEffTP). This will be achieved through local collection and transfer to the plant by bowser and will free up the site Active Drains, Misc Filtration Plant and Misc Receiving Tanks for decommissioning.

As part of this wider project a pumping station is being designed to collect arisings from the C3 showers on site. The small plant will pump shower water from the sump adjacent to the C3 showers directly to the Misc. effluent bowsers effectively isolating this source from the Active Drains.

Progress to date is as follows:

- Site survey conducted.
- Mechanical, Civil and Electrical designs completed and submitted for approval by NRS.

A design review will be held imminently following which the contractor will be looking to mobilise to site for installation.



Location of New Pumping Station for C3 showers

PEOPLE

4.1 Site HR

Resourcing activity continues as we work to fill the 23 vacancies which we currently have on the site. Many of the vacancies have arisen from internal candidates being successful in applications for promoted posts either at site or within other departments in the central support office. Resourcing is at various stages, with some roles undergoing approval to recruit, some at offer stage with candidates undergoing onboarding, whilst others are at advert or interview stage. We continue to recognise difficulties in the resourcing of a few of the vacancies, due to the specialist skillsets required and current market conditions.

We recently welcomed two new Graduate Apprentices to the site, who are undergoing degree level apprenticeships supported by Glasgow Caledonian University.

The Employee Engagement survey for 2024 closed on 31st May and we are currently reviewing the results and feedback received. Across the company, all sites are working to develop an action plan for the coming year to address any areas of improvement that have been identified. The survey results will also shortly be shared with the workforce across all sites.

4.2 Occupational Health

Sickness levels continue to remain high compared to the company target, however continued support from Line Management, Occupational Health and HR with long term sickness cases and pro-active management of cases is having a positive impact with a downward trend in the overall sickness levels.

The site Mental Health First Aiders recently organised a Step Challenge for staff with a number of teams competing to get the highest number of steps. The challenge encouraged those involved into healthier walking habits during the working week to increase their level of movement, which is directly linked to mental health.

5 ASSET MANAGEMENT

To enable safe operation, we proactively review our systems, processes and facilities via our Systems Engineering Department. This enables us to look at future investment requirements to maintain a safe operational status.

Following delays, primarily associated with bad weather, the second phase of road line markings is approximately 95% complete. This brings significant improvements to the site with regards to traffic management.

Initial specifications for the replacement shower facility have been refreshed in conjunction with Engineering and are now progressing through the procurement process. Several options are being considered and progressed currently.

A contract is due to be placed with a local contractor in early September for further welfare upgrades across site. This will focus on Contractor's changeroom and toilet facilities on site.

Progress of this year's work packs is ongoing through production of specifications, quotation requests and contractor engagement.

A portfolio of work packs for 2025/26 and 2026/27 is being developed.

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 2024, to the end of July, are as follows:

- Approximately 203 employees and visitors received a total collective dose of 6.284 man.mSv between them.
- Approximately 321 contractors received a total collective dose of 4.154 man.mSv between them.
- The highest individual dose received by an employee was 1.130 mSv.
- The highest individual dose received by a contractor was 0.432 mSv.

The majority of dose accrued in 2024 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

7.1 Radioactive Discharges (July 2023 - June 2024)

Solid

Low Level Waste (LLW) disposals to the Low Level Waste Repository (LLWR) continue. 27.01 m^3 of LLW and VLLW with a total activity of 0.07 GBq was disposed of during the twelve-month period from July 2023 - June 2024. 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 2023 - June 2024 were 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 (July 2023 - June 2024)
Tritium	30 GBq	0.007 GBq
Caesium-137	160 GBq	0.047 GBq
Plutonium-241	2 GBq	0.000 GBq
All alpha emitting radionuclides not specifically listed taken together	2 GBq	0.001 GBq
All non-alpha emitting radionuclides not specifically listed taken together	60 GBq	0.045 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 (July 2023 - June 2024)
All authorised outlets taken together.	Tritium	100 MBq	0.3 MBq
	All other radionuclides (excluding tritium)	3 MBq	0.191 MBq
Discharges made as a consequence of reactor breathing	Tritium	3000 MBq	398.74 MBq
	Carbon-14	200 MBq	59.57 MBq

7.2 Non-radiological Environmental update (July 2023 - June 2024)

Treated sewage effluent from the plant is currently being independently assessed by SEPA on a quarterly basis. 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.

Waste disposal and recycling is recorded in the company unified dashboard. Over the period July 2023 - June 2024, a total of 128.06 tonnes of waste was collected for consignment from site (124.02 tonnes for re-use, recycling, recovery, or composting, 29.58 tonnes sewage waste and 4.04 tonnes for disposal to landfill). This gives a recycling rate of approximately 96.85%.

7.3 Environmental Events

West Kilbride Development Group benefitted from £840 towards producing 500 copies of an updated 3rd edition leaflet of the successful 'Guide to West Kilbride'. The guide is targeted at visitors and directs them to local attractions such as Portencross Castle, the Barony Centre and the Craft Town venues. The leaflet helps to sustain the economy of the area by encouraging visitors to support these facilities and so contribute to the economic wellbeing of the town.

Winton Rovers CIC have been awarded £10,000 towards a £788,000 transformational project. Ardrossan Winton Rovers raised the capital funding to install a 3G pitch, upgraded floodlighting and new changing room/meeting room facilities.

Ardrossan Winton Rovers have committed to developing a Community Sports Hub by creating a partnership with two other local organisations. Various sports and community initiatives will benefit, providing sufficient income to help ensure the financial sustainability of the facility.

A Facility Development Officer will be employed to operate the hub, along with part time roles, generating pitch hire fees and securing further grant funding towards staffing and overhead costs and support activity programmes at the facility.

The club currently has 16 teams with more than 325 registered players under the umbrella of Ardrossan Winton Rovers Youth Academy.

The first phase of reconstruction to replace the grass pitch with a synthetic surface and replacing the floodlights and will be complete by late September. The new modular changing rooms are due to be in place by the end of October, followed by a new stand roof in the summer of 2025.

Work commenced replacing the pitch

The Outdoor Partnership, an organisation originally formed in North West Wales, has secured £300,000 NRS socio-economic funding over the next three years to continue with the delivery of the successful 'Opening Doors to the Outdoors' project in North West Wales and North Ayrshire as part of a £630,000 project.

Founded in 2004, now operating across the UK, The Outdoor Partnership (TOP) has been successfully 'Enhancing People's Lives through Outdoor Activity" for 18 years, creating real employment opportunities for people in the outdoors; empowering communities and removing inequality of access to outdoor activities for underrepresented and disadvantaged groups, with over 25,000 people benefiting annually.

Having secured significant Lottery funding to emulate their success in similar, high areas of deprivation in the UK, in 2020, TOP consulted with many groups and organisations in North Ayrshire and created partnerships with schools, colleges and clubs and local council departments. A Development Officer is now in post and has built a close working relationship with many outdoor clubs in the area from canoe / kayak clubs, hillwalking clubs, uniformed groups, schools and outdoor centres. Club surveys and consultations conducted since 2020 have identified many gaps which TOP are working to close and develop further to "Open the doors to the outdoors" to targeted disadvantaged groups in North Ayrshire.

The aim is to emulate the fantastic work already carried out in North West Wales by improving community cohesion by accessing outdoor activities for people in the outdoor sector, by providing affordable, accessible, sustainable and fun outdoor activity programmes:

- Increase opportunities for new volunteer leaders in community based clubs and groups, improving physical and mental well-being for up to 300 people across the region through the provision of sustainable life-long outdoor activities.

- Increase annual training, volunteering and employment opportunities for unemployed people living in poverty through the provision of supported training programmes in hillwalking, climbing and paddle-sports skills.

- Increase number of opportunities for people from disadvantaged and under-represented groups to engage in outdoor activities for lifelong physical and mental wellbeing (women and girls, people with pan disabilities, ethnic minority groups, etc).

- Increase number of social prescribing opportunities for 200 people suffering mental ill health and/or physically inactive to engage in outdoor activities for lifelong physical and mental wellbeing.

One of the clubs at Above Adventure in Kilmarnock.

9 SUSTAINABILITY

9.1 Sustainability Strategy

NRS's sustainability strategy centres around five goals: governance, environment, supply chain, employees, and communities. Goal 5 recognises NRS's responsibility to deliver value to its communities and this goal aims to strengthen local engagement, invest in local community assets and share our expertise.

9.2 Volunteering Portal

After a successful soft launch with 3 Sites including Hunterston A, NRS has established a new Volunteering Standard. The Standard describes how to find opportunities to volunteer in local communities and how to request paid time off for volunteering activities.

Our company agreement states ''The company may at its discretion grant additional paid leave of up to one week, and additional unpaid leave, to enable employees to undertake voluntary work in the local community'.

Further volunteering opportunities for volunteering are being promoted to staff as well as encouraging local charities and organisations to register with Neighbourly.

10 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
20 June	Paul Winkle NRS Sites Managing Director - Talks delivery
25/26/27 June	Radiological Protection peer group – Ian Goldsmith HoP Radiological Protection
10th July	University of Glasgow - hosted by Paul Malloy NRS Professor Dimitrios Pezaros, Professor of Computer Networks and RAEng Research Chair and Dr Marco Cook – from Computing Science Dept at the University of Glasgow - hosted by Paul Malloy NRS
18 July	NDA Board- David Peattie Chief Executive Officer NDA
5/6/7 August	SILWE/NDA Review- Dave Rushton Lead Programme Manager, Caron Weaver NRS Programme Delivery Director
13/14 August	SEPA Inspection – Melanie Hayes - Principal Inspector (Radioactive Substances)
29 August	University of Glasgow - hosted by Paul Malloy NRS C&I Nuclear Industry Forum (CINIF) work.
28/29 August	ONR Inspection – Peter Hughes (Nominated Site Inspector)