



HARWELL SITE STAKEHOLDER GROUP 102ND MEETING

Date: Thursday 2nd November 2023
Time: 1000 hrs for refreshments, meeting starts at 1030 hrs
Venue: Jupiter Room, The Satellite Applications Catapult, Electron Building, Fermi Avenue,
Harwell Oxford, OX11 0QR

AGENDA

1. Chairman's remarks:
 - Welcome guests
 - Chairman's Notes – Chris Broad (10)
 - Apologies for absence and changes in membership
2. Minutes of the 101st meeting
3. Matters arising:
4. **Magnox Harwell Licensed Site Matters**
 - (a) Site Director's Report – Paul Brennan (15)
5. **Reports**
 - (a) Nuclear Decommissioning Authority – Simon Napper (not in attendance)
 - (b) Office for Nuclear Regulation – Neil Doggett (not in attendance)
 - (c) Environment Agency – Rebecca Cleverley (10)
6. Magnox corporate update – Bill Hamilton (not in attendance)
7. Magnox site update –
Radiochemistry Research Laboratory
Building 220 – update - Gary Reid (15)
8. **Campus Matters**
 - (a) Harwell Campus Joint Venture Partnership – Duncan Rogers (TBC) (10)
 - (b) Science and Technology Facilities Council – Joe Kelleher (TBC) (10)
 - (c) Diamond Light Source – Amy Griffin (10)
8. **Any other business - election**
9. **Next Meeting 18th April 2024 (TBC)**

Emma Burwood – Communications and Socio-economics Lead

Jess Dawson - SSG Secretariat

Jessica Peart - Minutes Secretary

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HARWELL CHILTON CAMPUS LOCAL STAKEHOLDERS MEETING

Minutes of the 101st meeting held at The Satellite Applications Catapult Centre, Harwell on Thursday 30th March 2023

ATTENDEES:

Chair	Chris Broad, Chilton Parish Council
Deputy Chair	John Sharp, East Hendred Parish Council
Secretary	Emma Burwood, Magnox, communications lead
Minutes	Zoe Mare, Magnox
Paul Barty	Oxford City Council
Mark Pledger	Jacobs
Andy Beynon	Magnox
Neil Doggett	ONR
Bill Hanks	Member of the public
Andy Brett	UKHSA
Stuart Watson	Magnox
Stuart Clark	Magnox
Laura Street	Magnox
Duncan Rogers	Harwell campus
Andy Beynon	Magnox
Stephen Druce	Chilton Parish Council
Christine Williamson	MLC at MRC Harwell
Simon Napper	NDA
Joe Kelleher	ISIS/STFC
Derek Whitmell	Upton Parish Council
Rebecca Cleverly	Environment Agency
Michael Fox-Davies	Harwell Parish Council

● **Apologies for absence –**

John Wilkins - Member of the Public, Jon Blackmore - Senior Project Manager Magnox, Bill Hamilton - Director of External Affairs Magnox, Dik Third – Prospect Magnox

- **Chair's Remarks – Chris Broad**

- Chris Broad welcomed everyone to the meeting.
 - Chris confirmed changes at Harwell including Andy Munro having moved on.
 - The chair / deputy had a tour of Harwell, which was valuable and useful, this included a tour of B150.
 - Chris holds regular meetings with John and the campus. It is clear 23/24 will be very busy years on the campus.
 - A review of the memberships and attendance for the SSG meetings has been completed. Please let Chris or Emma know if you need to change any details.
 - A meeting was held 29/3 with Department for Energy, Security and Net Zero (used to be called BEIS), a consultation has been launched for decommissioning on waste policy. Closing date 24th May. We will be following any implications for Harwell and are considering setting up a subgroup to follow this consultation, please let Chris know if you are interested in joining this subgroup.
- The debate continues as to whether the SSG continues as a physical or online meeting, however the next meeting will involve the election of the chair and vice chair and will be a physical meeting.

- **Minutes of 101st meeting**

The minutes were accepted as a true and accurate record.

- **Matters Arising**

No matters arising.

- **Magnox Harwell Licenced Site Matters**

Director's Site Report – presented by Site Integration Manager Laura Street.

- Laura confirmed she is giving the presentation as Andy Munro has moved on and we are in the process of identifying his successor.
- There has been one minor injury at site since the last SSG.
- Site Improvement plan 22/23 consists of Human Performance Training/ Psychological safety, control and supervision, project safety reviews and hand safety.
- No significant regulatory issues raised since last SSG. All inspections rated adequate/ no non-compliances. Learning points raised and being actioned.

Programme Update

- Nuclear Materials Transfer (NMT) Consignment target – 80% shipped offsite.
- B351 demolition complete.
- Continued preparation for remediation and delicensing of West Meashill.
- Liquid Effluent Treatment Plant (LETP) – completion of survey and sampling to support delicensing.
- Offsite Discharge Pipeline - sent for treatment with approx. 99% recycling rate.
- Legacy waste reduction by approx. 1000 cubic m.
- BEPO and concept design for decommissioning completed.
- B418 contract awarded for Post Operational Clean Up (POCO) and characterisation.

- Great progress on Remote Handled Intermediate level waste (RHILW) retrievals.
- Waste Encapsulation Plant active commissioning complete.

Nuclear Materials Transfer (NMT)/Remote Handled Intermediate Level Waste/Legacy Waste

- 5361 (5123) drums shipped to date.
- 80.8% (7.71%) of total drums.
- 39.6% (31.2%) of activity removed.
- Forecast 86% drums complete by Mar/Apr2024.
- Project completion stable in 2025.
- Gemini active moves making great progress.
- Rate independent on receiving plant availability.
- Offsite discharge Pipeline commenced in June 21 due to complete Mar 23.
- Material is being recycled back into the metal market with a current recycling rate of 99.2%.
- 97.6% 1611 sections of the total number of pipes consigned from site for ultra-high pressure washing.
- 24 other low/ very low-level waste consignments made this FY.
- Waste route opened for redundant site vehicles.

Compliance and End States Programme

LETP and Land remediation

- Enabling works completed for minor remediation work – fencing works and electrical cable diversions.
- Survey and sampling in and around (Liquid Effluent Treatment Plant (LETP) – Summer 23.
- Minor remediation works in the (Liquid Effluent Treatment Plant (LETP) – Autumn 23.
- SUDS lagoon Construction and (Liquid Effluent Treatment Plant (LETP) reinstatement – Summer & Autumn 202.

Downs Way East Area

- New gate installed for access from within Magnox site.
- Ecological surveys underway.
- Possible ecological mitigation work later in 2023.

West Measehill

- Characterisation identified three areas requiring minor remediation.
- Minor remediation works – Summer 23.
- Drain and other minor surveys – Spring 23.

Decommissioning (Plant & Structures) Programmes

B220 – Radiological characterisation and asbestos survey documentation prepared (expect award of contract Dec 23). Strategic outline business case complete. Strategic outline business case complete. Internal governance reviews complete. Presentation to NDA board in April. Opportunity for early start of works has been incorporated into the strategic outline business case.

B459 - Research facility project commenced Apr 21. Concept design for decommissioning and characterisation plan – complete Sept 22. Current phase – updating knowledge of building through engineering and ecology surveys. Opportunities 23-24 – dispose of non-active plant & equipment; isolate n/r services. 26/27 – main contractor lead decommissioning and demolition.

B418 - Post Operational Clean Up (POCO) and characterisation contract placed June 22. Contractor mobilised Aug 22. Non-intrusive works commenced Sept 22. Intrusive works delayed due to presence of protected species.

B351.15/.28 – Contract placed Jun 22. Contractor mobilised Sept 22. Asbestos and soft strip commenced Sept 22, completed Nov 22. Demolition commenced Nov 22, completed Dec 22. Contractor reinstated and demobilised Feb 23.

Other

- Various visits hosted on site.
- Various land clearance surveys and delicensing activities underway on-site.
- Recruitment: 8 roles have been filled since January 2023 (3 Internal and 4 External Currently 5 candidates onboarding process).
- 3 apprentice vacancies for September 23 intake.

Socio-economic Funding

- 4 successful applications for Harwell £304,184 including Hendred Environment Group. Community Larder (£638), East Hendred Parish Council (£1927), Harwell Community Primary School (£900) and South Oxfordshire Food and Education Alliance (SOFEA) (£608,952 over 3 years)
- Good neighbourhood funding up to £2000 per application, however £6000 allocation per site remains unchanged.

Questions

Q1: What is the latest update on the diversion of the Bridleway?

A1: The diversion will stay in place for now, completion is estimated end of 2024.

REPORTS

NDA Report – Simon Napper

- Whole team of civil servants concerned with nuclear in BEIS have moved into the Department for Energy Security and Net Zero (DESNZ).
- Secretary of State is Grant Shapps, who was SoS at BEIS.
- New minister for nuclear has been announced. He is Andrew Bowie who has been appointed Minister for Nuclear and Networks.
- Perm Secs Clive Maxwell (previously in BEIS) and Jeremy Pocklington (previously DCMS but before that DECC).
- NDA commissions an independent organisation to survey stakeholders every two years
- 800 people took part, 200 more than the last survey. Mix of key stakeholders and those on our mailing list to receive updates electronically.
- Key indicators all up since last time –trust, transparency, and openness.
- We also asked people where we could improve: one of the key findings was that they wanted to know more about mission delivery and how we solve technical challenges, so we will address that.

- After the event in Edinburgh last September, NDA has decided that the next in-person Stakeholder Summit will be held in Cumbria in 2024.
- There will be an online, virtual summit this year, likely to be October.
- During the year, we will be holding a series of in-person, regional meetings for stakeholders. It is planned these will be linked to universities with a nuclear science department, to showcase the links between NDA, research, and innovation.

Government consultation on decommissioning and waste management has been published. This updates, consolidates and introduces new options.

- This is a full 12-week consultation, closing on 24 May. Government is leading engagement. Requests for meetings about the consultation can be made by email to: RSNDPolConsult@beis.gov.uk

The challenge of ensuring NDA and its operating companies have sufficient highly skilled and motivated personnel over several generations as it fulfils its mission is one of its priorities. In January it launched a new group-wide graduate programme to help ensure a continued flow of young people into the business.

- Applications are now open for roles in around 20 different professional disciplines at various locations in all corners of Britain.
- The new programme, supported by NDA subsidiary Energus, will offer three placements in different parts of the group. It will operate alongside the graduate schemes run by other operating companies.

NDA update from around the estate

- As an alternative to the established steel boxes, the first concrete to be filled with radioactive waste has now been transferred into the purpose-built waste store at Berkeley site.
- The project involved the development of a brand-new waste storage package and innovative waste retrieval techniques.
- A robot designed with help from Dounreay to safely inspect hazardous environments is in Time Magazine's top 200 innovations of 2022.

Questions

- Q1: You mentioned the innovation of the concrete boxes, concrete is permeable to water, how do you overcome that?
- A1: Simon advised he would have to get back to the group on this but added that when it goes into the vaults, they would be sealed and back filled and they will use some sealants and clays that expand when exposed to water, anything being used for the GDF will have to go through the safety case to make sure it will last.
- Q2: But would the concrete boxes be used on the near surface disposal?
- A2: At the moment the consultation is just starting so this is up for debate but clearly it will not if it is going to be permeable or any radiological waves could escape. There will be a range of solutions.
- Q3: Several of the sites you mentioned that will be coming into NDA ownership are also big identifiers on sites for small and medium reactors, how will this work with the NDA?
- A3: We are a government agency, we follow government policy if someone were to come along and say they would like to put a new reactor here, that would be a decision for government and not for us. We are just decommissioning the current site. If there is land available and

the government wants something built there and the community wants it, it makes sense then that may well go ahead however this is in terms of when the land becomes available.

Office for Nuclear Regulation (ONR) – Neil Doggett

The ONR Report had been issued before the meeting.

- Neil Doggett introduced himself as the Site inspector for Harwell and Winfrith.
- There were three inspections in the last quarter, two in August and one in November, there were some minor areas for improvement.

Environment Agency – Rebecca Cleverley

- A report had been issued before the meeting.
- Over the last year the EA has been reviewing and trending discharge returns from the site and environmental monitoring it is noted there were no non-compliances with the permit and discharges remain.
- Keep in touch meetings held every week with Magnox, these are done jointly with Winfrith as the team covers both sites.
- Quarterly meetings are held with all the project leads across the site so we can keep in touch with progress and planning, they also attend nuclear materials project performance meetings.
- Meetings have been attended to do with looking at aspects of the West Meashill decontamination project.
- 4 inspections have been completed on site, no non compliances identified.
- All the projects, consideration for waste and environment are built in early at the site, pleased to see this.
- Focus for the coming year – West Meashill is going ahead, we will be reviewing assessments as required and are on hand to discuss any permitting requirements, how to upload forms, what forms need to accompany the application to ensure a good application straight away to eliminate hold ups.
- There will be a focus on environmental culture and leadership across the Magnox fleet next year, inspection will be conducted at Harwell.
- We are expecting sites across Magnox to produce site wide environmental safety cases and waste management plans which will assist with future decommissioning and planning for end states. Harwell is due to submit these documents in December 2023.

Q1: Going back to the public consultation on the decommissioning and waste management, surely the Environmental Agency policy department has had a significant input into this.

A1: We will have, responding to the consultation is key and the environment business team are working on it.

6 Magnox Update (Read out on behalf of Bill Hamilton)

- We have launched a new website for SSGs. It contains details of all SSG meetings, agendas, reports, and presentations along with information about each site and details of the chair and vice Chair. There is a feedback form for people to get in touch and ask questions. We hope this new communication channel will help in reaching out to the wider community around our sites who do not come to SSG meetings and encourage them to attend.
- Since the last meeting, the NDA have published their Draft Business Plan which, for the first time in several years, contains target dates in the form of decades when we aim to achieve final site clearance. For Harwell that is the 2050's. The ILW store would remain until such time as the geological disposal facility is able to receive the material.

- As was reported at the last meeting, Magnox is changing:
From 12 to 20 sites and 3 to 6 thousand staff
- Annual budget increasing from £500 million to £1 billion
- Dounreay joining Magnox on 1st April and preparations underway for the arrival of the seven AGRs as they are defueled over the next decade.
- The NDA has provided £250,000 to Magnox as an emergency cost of living fund in support of our communities. At Harwell we are providing £1,150 at each of 14 foodbanks within a 13-mile radius.

6 Magnox Site update – 462 waste retrievals and processing update (Stuart Watson)

Retrieval machine 2

- 783 below ground waste storage tubes in total – 657 cleared / 126 remaining
- 84% complete

Retrieval machine 1

- 536 below ground waste storage tubes in total – 509 cleared / 27 remaining
- 95% complete
- RM1 return to service is complete
- Radon abatement installation in progress

Long can size reduction

- Hydraulic cropper concept design complete
- Proof of concept preparations in progress

Gamma Gate Retrievals

- 328 below ground waste storage tubes in total – 209 cleared / 99 remaining
- 70% complete

Head End Cell Operations

- 12105 waste cans processed to date
- Polymer encapsulation waste treatment process in operation on the Head End Cells to maximise utilisation during array moves

Waste encapsulation plant

- Active commissioning complete. Extended Active Commissioning In Progress
- 117 of a total 1000 500l drums encapsulated to date

Q1: Were any of the cans/ tubes documented at all?

A1: We have the original waste consignment certificate and enhanced electronic record for almost every waste can.

Q2: How accurate did that information prove to be?

A2: There is a sliding scale – fissile material is very accurate however others whilst accurate are not very detailed, hence why we are fully characterising the waste as part of the process.

Q3: Did corrosion cause an issue getting the tubes out?

A3: Yes, with regards to the cans, corrosion can make it a lot more difficult to retrieve, it can take 4.5 hrs to recover a corroded can versus 1hr for an intact can.

Q4: Is the waste encapsulation plant being planned or used for any waste from outside of 462?

A4: Other than a very small volume from Winfrith it is not planned, however there is spare capacity.

7. CAMPUS MATTERS

Harwell Campus Joint Venture Partnership – Duncan Rogers.

- Currently building on site behind Building 329 – multi-story car park which will include a travel hub which includes storage for bicycles, changing, showers, drying facilities as well as transport facilities such as taxi collections and information about local transport services.
- Couple of schemes starting on site as well as the office building for the NDA, which is making good progress, this is in the procurement phase. Planning stage is imminent.
- Moderna reduction facility also imminent planning decision.
- Building 168 – Dentist will be relocating, and development is planned for this area 23/24
- Looking at land around Fermi Avenue entrance, access arrangements / Quantum of development / layout etc, driven by demand.
- ESA – near completion of new conference centre.
- Seeing progress and monitoring the travel, how people get to the campus. Bus use, discount scheme increasing from next year.
- Looking at making more buildings more efficient across the campus and sharing information to Landlords. Solar panels, electric charging facilities information etc
- Landscaping biodiversity schemes have been delivered and schemes in planning.
- Installation of Space-Scapes art installation across the campus and heritage trail in development

Q1: The Parish Council has been concerned about loss of biodiversity, many building projects create a loss of biodiversity, we would like to see that offsetting considered around the campus or nearby.

A1: It is very much that offsetting is regarded and widely recognised.

Q2: With all the developments across the campus, any idea what the future numbers on the campus will be in the next 5 to 10 years.

A2: There are some assumptions, it is expected to reach approximately 10 000 in the next 5 to 8 years.

Q3: Are there any plans to increase public transport to the campus?

A3: We are frequently having conversations, we need to future proof this.

Science and Technology Facilities Council – Joe Kelleher

- Joe presented on the James Webb telescope located at the L2 Le Grange point where the Earth orbits the sun and its operation.
- Main construction project on the Rutherford Appleton site itself is the National Quantum Computing Centre is underway.

AOB

No other business.

Date of Next Meeting – 19th October – which will include elections of the Chair and Deputy Chair.

Chairperson Chris Broad

OFFICIAL

OFFICIAL

Secretary	Emma Burwood
Minutes	Zoe Mare



Office for
Nuclear Regulation

ONR Site Report

Magnox Ltd – Harwell

ONR Site Report

Magnox Ltd - Harwell

Report for period: 1 January – 30 June 2023

Authored by: Nominated Site Inspector

Approved by: Delivery Lead, DFW Subdivision

Issue No.: 1

Publication Date: Jul-23

ONR Record Ref. No.: 2023/43263

Foreword

This report is issued as part of ONR's commitment to make information about inspection and regulatory activities relating to the above site available to the public. Reports are distributed to members for the Harwell Site Stakeholder Group and are also available on the ONR website (<http://www.onr.org.uk/llic/>).

Site inspectors from ONR usually attend Harwell Site Stakeholder Group meetings where these reports are presented and will respond to any questions raised there. Any person wishing to inquire about matters covered by this report should contact ONR.

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1. Inspections

1.1. Date(s) of Inspection

The ONR site inspector made inspections on the following dates during the report period 1 January to 30 June 2023

- 23 February 2023
- 12 April 2023
- 18 May 2023

2. Routine Matters

2.1. Inspections

Inspections are undertaken as part of the process for monitoring compliance with:

- the conditions attached by ONR to the nuclear site licence granted under the Nuclear Installations Act 1965 (NIA65) (as amended);
- the Energy Act 2013
- the Health and Safety at Work etc Act 1974 (HSWA74); and
- regulations made under HSWA74, for example the Ionising Radiations Regulations 2017 (IRR17) and the Management of Health and Safety at Work Regulations 1999 (MHSWR99).

The inspections entail monitoring the licensee's actions on the site in relation to incidents, operations, maintenance, projects, modifications, safety case changes and any other matters that may affect safety. The licensee is required to make and implement adequate arrangements under the conditions attached to the licence in order to ensure legal compliance. Inspections seek to judge both the adequacy of these arrangements and their implementation.

In this period, routine inspections of Magnox Ltd Harwell site covered the following:

- management systems, quality assurance and records;
- conventional (non-nuclear) health and safety in projects;
- emergency arrangements and preparedness;

Members of the public, who would like further information on ONR's inspection activities during the reporting period, can view site Intervention Reports at www.onr.org.uk/intervention-records on our website www.onr.org.uk.

Should you have any queries regarding our inspection activities, please email contact@onr.gov.uk.

2.2. Other Work

Throughout this reporting period ONR's nominated site safety inspector has held regular telephone meetings with the ML Harwell leadership team representatives to maintain situational awareness of matters related to nuclear safety. No significant issues were highlighted by ONR.

The ONR project inspector for the delicensing projects continues to meet with the project staff at Harwell, supported by ONR specialist inspectors and UKHSA. Engagements are being aligned with the Harwell campus priorities.

The site inspector held a meeting with safety representatives, to support their function of representing employees and receiving information on matters affecting their health, safety and welfare at work.

On the 12 April 2023 the ONR site inspector undertook a review of safety oversight and walk arounds by the Harwell management team. No significant issues were highlighted by ONR.

3. Non-Routine Matters

Licensees are required to have arrangements to respond to non-routine matters and events. ONR inspectors judge the adequacy of the licensee's response, including actions taken to implement any necessary improvements.

There were no such matters or events of significance during the period.

4. Regulatory Activity

ONR may issue formal documents to ensure compliance with regulatory requirements. Under nuclear site licence conditions, ONR issues regulatory documents, which either permit an activity or require some form of action to be taken; these are usually collectively termed 'Licence Instruments' (LIs) but can take other forms. In addition, inspectors may take a range of enforcement actions, to include issuing an Enforcement Notice.

- No LIs, Enforcement Notices or Enforcement letters were issued during this period.

Reports detailing regulatory decisions can be found on the ONR website at <http://www.onr.org.uk/pars/>.

5. News from ONR

For the latest news and information from ONR, please read and subscribe to our regular email newsletter 'ONR News' at www.onr.org.uk/onrnews.

6. Contacts

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Environment Agency report

Harwell Site Stakeholder Group

November 2023

This report covers the Environment Agency's regulation of the Harwell Nuclear Licensed Site and related issues for the period between March and November 2023.

Radioactive substances regulation

We regulate radioactive waste disposals to the environment. We do this through environmental permits that contain limits and conditions aimed at minimising wastes and protecting people and the environment. We check compliance with the permits through routine interaction with the operator, and by making regular inspections at Harwell.

Working with colleagues across the Environment Agency, we also regulate and control other activities through our environmental permits, including surface and groundwater discharges. Through our corporate objectives, aims and general duties, we also provide advice and guidance to protect or enhance the wider environment and support sustainable development.

We record our regulatory compliance interactions in Radioactive Substances Compliance Assessment Reports (RASCARs). These summarise the type of work we have undertaken, describe any non-compliance or observations of good practice, and include actions or recommendations from our findings. They are public register records and can be provided on request. Please see the 'further information' section at the end of this document to find out how to request public register records.

Permitting

Magnox holds two radioactive substances activity permits under the Environmental Permitting Regulations (EPR) at the Harwell site: one covers the nuclear licensed site (PB3598DX, the 'nuclear' EPR permit); the second covers smaller areas outside the nuclear licensed site boundary (PB3198DJ, the 'non-nuclear' EPR permit).

No changes have been made to either permit since the last SSG meeting. We are providing regulatory advice and guidance on our requirements to support Magnox's plans to apply for partial surrender of its permit in the West Meashill area and at the Liquid Effluent Treatment Plant.

Compliance activities

We check compliance with the permits through regular contact with the operator, site meetings, and by making regular inspections at Harwell. We issue RASCARs to summarise inspections, including any identified non-compliances, actions, recommendations and observations of good practice.

We receive and assess a range of monthly reports from the site. We maintain regular dialogue with the operator to ensure we are kept in touch with any emerging issues at Harwell and with progress on actions.

We hold weekly meetings with the Environment Manager and team to ensure we are aware of progress on decommissioning, progress on actions and recommendations and any emerging issues at the site. The Magnox Internal Assessor joins our meetings. We also receive regular updates from project leads at the site.

Since the last SSG we have undertaken two inspections at the site.

In June we inspected the arrangements for the management of site drainage, drainage related assets and prevention of firewater runoff from the site at Harwell. Before the inspection the site provided us with relevant documents so that we could assess management arrangements. On the day of the inspection, we visited the Liquid Effluent Treatment Plant and the Lydebank Brook surface water drainage discharge point. We then had a meeting with staff who talked to us about the drainage system across the site and its management. We identified no non-compliances with the site permit.

In October we carried out an inspection of asset management arrangements at the site. We were provided with relevant documentation in advance of the inspection. We then spent a day with the Environment Manager and other relevant staff who answered our questions about asset management processes and practices. During the site walkdown we met with appropriate staff in areas of interest to us. During the day we identified further documents and systems to be inspected. We booked a further virtual meeting in order to see the company's asset management and maintenance databases. We identified no non-compliances with the site permit.

At both inspections we spoke to staff who were appropriately experienced to deal with our areas of enquiry. On both visits the staff were knowledgeable, open to questioning and committed to compliance.

Environmental impact

The site environmental permit requires Magnox to monitor and assess the impact of discharges on the environment. The results of Magnox's environmental monitoring programme (EMP) indicate that the environmental impact from permitted discharges remains low. Magnox's results continue to be consistent with our independent programme, and do not indicate any results of concern or significant change from previous years.

The Environment Agencies and Food Standards Agency carry out independent environmental monitoring around nuclear sites. These monitoring programmes support our regulatory function and provide reassurance that public radiation exposures are within legal limits. The results of this work are published annually and the most recent report, *Radioactivity in Food and the Environment 2021 (RIFE 27)*, was published on the GOV.UK website in November 2022.

[Radioactivity in food and the environment \(RIFE\) reports - GOV.UK \(www.gov.uk\)](https://www.gov.uk/rife-reports)

We expect a new (28th) edition (covering 2022) to be released in early November. As part of a commitment to minimise the carbon footprint and move to electronic communications, a decision has been taken to stop production of the printed version of the report. It will continue to be available as an electronic version, available at the link above.

The report for 2021 continues to show that, overall, total doses to the public from permitted discharges and direct radiation around nuclear sites remained below the legal limit set to protect members of the public (set at 1 millisievert per annum (mSv)). Radioactivity from natural background, rather than nuclear sites, continues to be the more significant source of exposure to communities in all areas of the UK. Artificial radioactivity in the environment, from the nuclear industry and from past testing of nuclear weapons, accounted for less than 0.2% of the exposure to the UK population.

The RIFE report presents a yearly assessment of radiological dose to individuals in the local population who are most exposed to radiation from each nuclear licensed site (known

as the 'representative person'). In 2021, the attributed total dose to the representative person from all pathways and sources of radiation from the Harwell site was 0.005 millisieverts. This is less than 1% of the annual limit for radiation exposure for a member of the public of 1 millisievert/year, and less than 0.5% of the average annual amount of radiation we all receive from natural sources (2.7 millisieverts/year). The RIFE report notes that the attributed total dose from Harwell site remains broadly similar to that for previous years and is slightly lower than 2020.

Further information, including the most recent breakdown of the average individual dose to the UK population by source of exposure, is available on the UKHSA website here <https://www.ukhsa-protectionservices.org.uk/radiationandyou/>

Discharge reports

The site's environmental permit requires Magnox to use the best available techniques (BAT) to produce the minimum amount of radioactive waste and minimise permitted disposals into the environment. Disposal of wastes – as solids, liquid or gases can only be made via permitted routes or to permitted sites. The site is required to report liquid and gaseous discharges to the environment to us on a regular basis. We examine these reports and produce RASCARs for them. Copies of the discharge reports and the RASCARs are available on request. See the 'further information' section at the end of this document to find out how to request them.

Both liquid and gaseous discharges from Harwell continue to be at levels well within permitted limits. It is noted that the relative level of these discharges may fluctuate as the decommissioning programme evolves.

Incidents and enforcement

We have not taken any enforcement action at Harwell in the period since the last SSG meeting.

Further information

A public register service is available on the GOV.UK website at:

<https://environment.data.gov.uk/public-register/view/index>

Alternatively you can request access to public documents directly by contacting the Customers and Engagement Team in the Wallingford office. Please email WTenquiries@environment-agency.gov.uk

Further information on our role in regulating the use of radioactive substances and related activities on nuclear licensed sites can be found on the Environment Agency pages of the Gov.UK website at:

<https://www.gov.uk/government/publications/nuclear-regulation-in-the-environment-agency>

Our enforcement and sanctions policy is publicly available on the GOV.UK website at <https://www.gov.uk/government/publications/environment-agency-enforcement-and-sanctions-policy/environment-agency-enforcement-and-sanctions-policy>

Public Health England has placed guidance on ionising radiation dose comparisons on the GOV.UK at:

<https://www.gov.uk/government/publications/ionising-radiation-dose-comparisons>

The Environment Agency's lead nuclear regulator for the Harwell site is Rebecca Cleverley. Rebecca is part of the national Nuclear Regulation Group (South) (NRG (South)) which is based at the Environment Agency's Wallingford office in Oxfordshire.

NRG (South) undertakes environmental regulation of radioactive substances on nuclear licensed sites in southern England. It works closely with the local Environment Agency teams in those areas as well as external bodies such as the Office for Nuclear Regulation.

Members of the local Environment Agency team cover the site for general (non-radioactive substances) environment protection matters such as regulation of groundwater, contaminated land, waste management and water abstraction.

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