

update

UKAEA Harwell News

Harwell Decommissioning Update brings you information on the site restoration programme.



New gate on the horizon

Over the past few months, anyone travelling across the Harwell site will have seen the new eastern entrance slowly taking shape. This will become the principal visitors' reception for the Nuclear Licensed Site when delicensing of the eastern part of the Harwell site is achieved.

The new entrance and cross-site fence are the first visible elements of a larger programme of works that will allow the eastern part of the Nuclear Licensed Site to

be released for integrated development, along with the Harwell Campus as a whole.

Now nearing completion, the works have involved road layout modifications, the installation of new gates, a security fence and vehicle stopper, police lodge and access controls.

Construction of a new reception building and pass office adjacent to the entrance will take place as a second phase of the works - to be finished in time for changeover to the new site layout.

Harwell enters new era

Welcome to the spring edition of the Harwell Decommissioning Update.



In the last edition I referred to the new arrangement by which Harwell and its sister site, Winfrith, in Dorset would become a single management unit.

That change has now taken place, in preparation for the formation of the new company, Research Sites Restoration Limited (RSRL) later this year.

RSRL will manage and operate both the Harwell and the Winfrith sites. RSRL itself will be wholly owned by UKAEA Limited.

Preparing for these changes meant that the last financial year was very challenging. Notwithstanding these challenges, we have delivered our decommissioning programme safely and efficiently. This is a great tribute to all our staff and our contractors. Some of our successes are covered in this edition of HDU.

Alan Neal

Pioneers get together

A group of pioneering scientists who worked at Harwell during its post-war research heyday met up for an informal reunion recently.

Forty-three senior scientists, some of them in their nineties, were reunited at the Kingswell Hotel near Harwell. The

purpose, as organiser and former Harwell physicist Terry Price explained, was to "wallow in nostalgia."

As well as greeting old friends and exchanging news, the scientists and their families heard from UKAEA Business Strategy Director, Stephen White, who brought them up-to-date on the decommissioning programme on the Harwell site, which has seen 1.5 million sq ft of unused buildings demolished.

Former Harwell scientists Brian Flowers and Bob Jackson with current UKAEA Business Strategy Director Stephen White and reunion organiser Terry Price



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CLEAN-UP WORK CONTINUES



SOLAR INNOVATION



FAREWELL TO SERGEANTS' MESS



SOLID WASTES COMPLEX



Decommissioning work in Harwell's radiochemistry facility was suspended at the beginning of 2007, due to funding constraints. However, inside the building, various clean-up projects are continuing.

The programme to condition radium waste will carry on until it is completed (see right). This work is expected to continue until the end of March 2009. An option study is being undertaken to determine whether the remote handling wing facilities will be needed for further radium can work.

The eventual plan is to place this historic facility, which has been at the heart

of so much of Harwell's innovative nuclear chemistry work over the years, into the most efficient Care and Maintenance regime possible," explained Alec Inns, Facility Manager at the radiochemistry facility.

"And to achieve this at minimum cost, consistent with safety and security, until the re-start of decommissioning activities."

Key target achieved



One of Harwell's key clean-up objectives was reached at the end of 2007, with the early completion of work to process cans of radium contaminated waste.

The radium waste, the result of operations carried out on site in the early 1990s, is being size reduced, packaged and conditioned for long-term storage in Harwell's Remote Handling Wing. By the end of December, a total of 24 cans had been processed and despatched for storage.

"This early completion is a considerable achievement," said Alec Inns, Facility Manager, "and a tribute to the two teams in the Radiochemistry Facility and the Solid Waste Complex who worked together on this."

Safety summary

Between October and December 2007, there were two RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations) reportable events.

One involved a contractor bumping his head during cleaning operations and the second a heating cable being dropped during a lifting operation.



Solar innovation

In an unusual move, solar panels have been installed on the Harwell site to power float switches and alarms that monitor the water level in a new sub-terrain tank.

"As far as we know, solar panels have never before been used on the site to power anything," explained Amy Cunningham, Assistant Project Manager for the Site Active Drains Project.

"Surface water was finding its way into the system, so we installed a new tank to capture the water and isolate Hangar 10 from the trade waste system.

"We needed a source of year-round power and, with no handy cable supply to tap into, our design contractor Entec UK Ltd. looked at alternatives and came up with the idea of solar panels. They've now been installed and commissioned. We took the plug out and let the first water flow on 7 April and everything seems to be working well."

Decommissioning

RM2 completes inactive commissioning

The project to procure a second retrieval machine (RM2) achieved a significant milestone in March with the completion of inactive commissioning.

The machine will be used to accelerate the recovery of legacy Intermediate Level Waste from the tube stores at Harwell. The retrieval and repackaging of solid ILW is on the critical path to closing the site.

For several years retrieval operations have been taking place using the original retrieval machine (RM1) operating in one of the stores and significant progress has been made.

However, another legacy waste store contains five times as many waste cans as the original inventory. In order to meet the challenging targets for waste retrieval, RM2 will need to retrieve cans at a much higher rate.

In 2004 Assystem was awarded the

£6.4 million contract for the detail design and manufacture of the machine. The UKAEA project and operations teams have worked closely with both Assystem and their sub-contractors to ensure that lessons learnt in the design, manufacture and operation of RM1 were acted upon.

Although the actual waste retrieval and export processes in the two machines are similar, the throughput of RM2 will be much higher because it can access up to 20 tubes from a single location. Further improvements will be realised because RM2 is larger and more equipment can be stored within it, avoiding the need for posting special tools in and out.



Fully assembled RM2 weighs in excess of 250 tonnes. It has been designed to be broken down into modules, each weighing less than 10 tonnes, to facilitate ease of movement between retrieval locations by the existing building crane, ready for reassembly at the next retrieval location.

"The success of the inactive commissioning phase is thanks to good team work," said Senior Project Manager, Richard Lightowlers. "The team, supported by Colin Churchman and Gordon Fisher, with Derek Tyrrell as Plant Operations Commissioning Shift Manager and Leaders Brian Calder and Eddie Russell have worked exceptionally well together."

Farewell to sergeants' mess

Work to demolish a former RAF sergeants' mess at Harwell, which began in March, is progressing well.

Originally constructed in the 1930s by the RAF, the building was modified for early post-war work on radiochemistry. In the 1980s, it was refurbished for use as offices.

Around 80% of the building has already been demolished to floor slab level. Work has paused temporarily while a quantity of asbestos is safely dealt with, as Project Manager, Andy Beynon, explained.

"Health and safety concerns must always come before any demolition priorities. Even so, we expect the demolition to floor slab to be completed by around mid-April."

The building is being decommissioned and demolished as part of a project to clear the eastern part of the site for delicensing and redevelopment.



A 1946 newspaper discovered during demolition work

Staff focus:

Solid waste complex maintenance and projects team



Matthew Peacock (centre right with dark glasses) and members of the B462 Maintenance, Projects and Engineering team, outside the main engineering building.

Behind every great team, lies ... another great team. This is certainly true of Harwell's waste operations, recovery and processing programmes, which form a key part of the activities on the site.

The Solid Waste Complex at Harwell has high profile year-on-year PBIs relating to waste recovery and processing, which are on the Harwell Site critical path to passive safety.

Working behind the scenes, the 32 staff and additional contractors who form the Solid Waste Complex Maintenance and Projects team provide the trade functions necessary to support the waste operations.

These include everything from mechanical and electrical engineering, maintenance and support, to construction and installation, civils, C&I, drawings, flasks and technical support.

"Without the efforts of this dedicated, multi-disciplinary team, the operations staff would not be able to deliver the PBIs and the Complex would not meet its statutory licence requirements," explained Maintenance and Project Manager, Matthew Peacock, responsible for the team.

Recent projects have included:

- building strengthening and numerous refurbishment projects
- various safety interlock upgrades
- a secondary hydraulic system for the

- remote handled waste store
- an upgraded camera system for the remote handled waste store remotely operated crane
- cell line PLC upgrades,
- a retrieval machine grab (in conjunction with a Canadian University)

"In a typical year we will deliver around 40 plant enhancement projects. At the same time, the team will progress their way through 900 work orders. And we have to maintain it all as well!

"Working closely with our colleagues in waste operations, we ensure the continuing safe and effective operation of Harwell's waste recovery programme and plant development," Matthew concluded.

Diary dates

LSG meetings

Local Stakeholder Group (LSG) meetings, all of them open to the public, are held in the lecture theatre at the Health Protection Agency, Chilton, Didcot. The next LSG meetings will be on:

- **Friday 13th June at 10:00**
- **Thursday 18th September at 18:00**
- **Friday 5th December at 10:00.**

Site exercises

There will be a site security exercise on 18th June and the annual site exercise will be held in October.

Vale and Downland Museum Trust



Harwell is helping the Vale and Downland Museum Trust to celebrate its jubilee year with a sponsorship donation. The museum attracts some 45,000 visitors a year and specializes in local history displays and arts events.

East Hendred Heritage Trust

The focus of the work of the East Hendred Heritage Trust is the restoration and conservation of two paintings depicting East Hendred village life. UKAEA Harwell made a donation towards a cabinet in which to exhibit the paintings in the village's Champs Chapel Museum.