

HARWELL decommissioning update



UKAEA Harwell News

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

Introduction

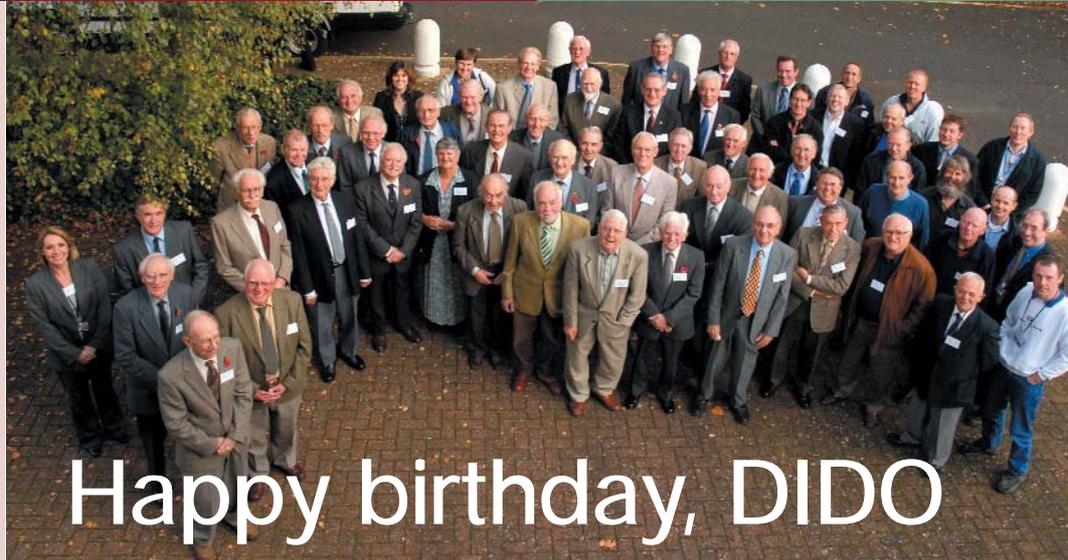
By John Wilkins,
Head of Site, Harwell

I make no apologies for emphasising safety in this issue of Harwell Decommissioning Update. No matter how good our safety record, it is important that we strive for further improvement. Within UKAEA there is no higher priority than improving safety.

As well as constantly driving home the safety message, it is also essential to recognise good practice when you find it. That is why we are highlighting an initiative by Harwell's Liquid Effluent Treatment Plant team. Called 'Time Out for Safety,' it is an example of good practice in action.

Several major decommissioning landmarks have been reached since our last issue. A project to stabilise drums of chemical waste from the Western Storage Area has been completed, while one to cement sludge from the Liquid Effluent Treatment Plant has got off to a good start. Research laboratories dating from the 1960s have been demolished and underground fuel tanks, which go back even further, have been removed.

The Staff Focus this time features teams from two of the site's major complexes, whose collaborative approach to a decommissioning project has been instrumental in achieving remarkable success.



Happy birthday, DIDO

DIDO, one of Harwell's most important research reactors, celebrated its 50th 'birthday' in November.

Former reactor managers and supervisors, who were in charge of the materials testing facility between 1956 and 1990, met to celebrate 50 years since DIDO first achieved criticality.

The anniversary event involved 50 retired and current UKAEA staff. Guests were given presentations by John Wilkins, Head of Site, and Ed Abel, Senior Project Manager for Reactor Decommissioning. They were shown around the partially decommissioned DIDO reactor and exchanged news over a buffet lunch.

The event was the inspiration of Dixon Halliday, who headed Harwell's Research Reactors Division in the 1980s, and is now retired. Working with Harwell Communications Manager Angela Vincent, Dixon contacted former employees who had worked on the reactor.

"The DIDO reactor was the most important research reactor in the country and several of us wanted to mark its 50th anniversary in an appropriate way," said Dixon. "I'm grateful to UKAEA for hosting the reunion and I was delighted to meet so many of my former colleagues."

John Wilkins added, "DIDO shut down in 1990 and has undergone extensive decommissioning since then."

Consulting on waste

Members of the public are being asked for their views on the integrated waste strategy being developed for UKAEA Harwell. The wastes arise from the decommissioning and clean-up of the site.

Stakeholders, including the Nuclear Decommissioning Authority (NDA), safety and environmental regulators, the Local Stakeholder Group, local communities, employees, members of the public and other interested parties, are being invited to comment on various options for the wastes.

Their views will be reviewed by a panel of experts before the options are assessed. Later, a report will be produced and there will be further consultations.

Further more information please visit: www.ukaea.org.uk/sites/public_consultations.htm

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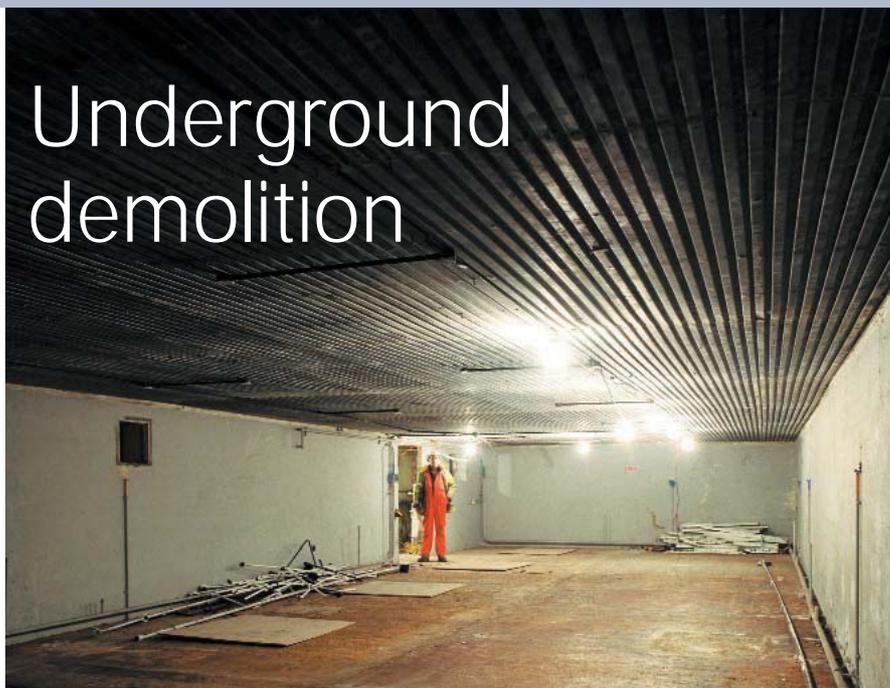
FORTY YEARS ON



CHILTON SCHOOL

A building right in the centre of the Harwell site is currently undergoing demolition. "Not that you would notice", commented UKAEA Senior Project Manager, Paul Pritchard, "because it was one of the RAF aviation fuel stores and is entirely underground."

The structure consists of several large fuel tanks below bombproof concrete access rooms and roofs. UKAEA used the building for experiments and document storage. During the demolition it has been necessary to shut a nearby site road to guard against the very low possibility of subsidence. The demolition will be completed in early 2007.



Underground demolition

Work began on the removal of the six historic 12,000 gallon underground tanks, each measuring approximately 2.8 metres in diameter and 10metres long, on 20 November and progressed well. The main part of the project was completed by Christmas.

"Once we'd taken the concrete roof off the building above them - which was three feet thick - the removal of the tanks themselves was relatively easy," explained Project Manager Paul Pritchard. "Considering their age, the tanks were in pretty good condition."

"As you would expect after all this time, there was some surface rust but they were basically intact and proved to be clean of

any fuel - clean enough to be disposed of as scrap metal."

The hole left by the tanks will be backfilled with crushed material from the building and the area will eventually be laid to grass.



Diary dates

Local Stakeholder Group (LSG) meetings for 2007 will be held in the lecture theatre at the HPA Education Centre, Fermi Avenue, Harwell Science and Innovation Campus, Didcot, Oxon, on the following dates. LSG meetings are open to the public.

- 15 March at 18:30 for 19:00
- 8 June at 10:00 for 10:30
- 13 September at 18:30 for 19:00
- 14 December at 10:00 for 10:30

Improving safety on site

People who work at Harwell are being asked to take a more proactive approach to safety, Head of Site John Wilkins said in recent safety briefings to over 600 people.

Although Harwell has a good record for safety, he went on, it is essential that even minor accidents and injuries are eliminated. The two key messages of the briefings were: accidents do not just happen - they have causes; and safe working is part of everyone's job.

"We want to encourage more team-working," said John Wilkins, "with everyone taking responsibility for their own safety and the safety of those around them."

He stressed that UKAEA must be a place where good safety behaviours are recognised, unsafe acts are challenged, and people are not afraid to ask questions.

"We must learn from our mistakes and use those experiences to improve," he said.

Stop, think, act, review

- Before every job - **STOP** and **THINK** about what you are doing.
- If something is unsafe or something unexpected or unusual happens - **STOP** and **ACT**
- Take time at the end of a job to **REVIEW** how it could have been done more safely.

Time out for safety

Harwell's Liquid Effluent Treatment Plant's (LETP) decommissioning team recently decided to step down for one-and-a-half days, to take 'time out for safety'. The whole team, staff and contractors, came up with ideas on how to do the job safer. Some short-term improvements, such as better segregation of people and plant, were introduced immediately. Others will be introduced later.

UKAEA Project Manager, Dave Probert, said, "This is an important step towards improving the safety culture as we move from operations to decommissioning at the LETP."



Safety summary

Between October 2006 and December 2006, there have been no safety events involving UKAEA staff or contractors.

Decommissioning

Laboratories demolished



Research laboratories built at Harwell in the 1960s have been demolished.

Until 1999, the former Material Development Division laboratories were used for research into a variety of areas, including advanced ceramics, coatings, batteries and solid state and surface chemistry.

After decontamination, KDC Ltd was contracted to strip the building of any remaining asbestos and demolish it. Steps were taken to reduce noise and vibration levels during the work, as the laboratories were connected to an occupied building and close to complex and sensitive facilities.

First drums from the cementation line

The first drums containing cemented sludge from Harwell's Liquid Effluent Treatment Plant's (LETP) encapsulation plant have been filled and moved into safe storage. Pumping of the sludge began on schedule in November and good progress is now being made.



"This is excellent news. We're really pleased it's gone so well," commented Plant Manager Gareth Thomas. This work is part of the clean-up of the LETP and involved the designing and building in-house of a sludge remobilisation plant.

"We made some modifications to the plant to simplify the route of the sludge to the drums and mitigate blockages. That worked well and the process has been running smoothly ever since," said Gareth.

Another 10 drums, each containing 500 litres, will be filled and stored by the end of March, as part of the active commissioning of the modified plant. Full production with the filling of a further 250 drums will begin after that.

Waste stabilisation complete

The project to stabilise drums of chemical and low level waste excavated from Harwell's Western Storage Area (WSA) is complete. It was finished under cost and ahead of schedule.

Some 930 drums of hazardous chemical radioactive wastes were treated and disposed of, using a unique cementation process. Project Manager Paul Atyeo explained, "We used a conventional cement mixer, adapted for the purpose, to stabilise the wastes, in conjunction with a bespoke machine that emptied the drums. The resulting waste in a concrete block form was easy and cost-effective to dispose of."

Forty years on

The first of six FINGAL (Fixation IN Glass of Active Liquors) vessels has been safely retrieved from Harwell's solid waste plant, where it had been stored for the past 40 years. It has now been moved to an active handling facility. There it is being size reduced and repackaged, prior to going into interim storage.

The FINGAL process was developed at Harwell in the 1960s as part of an experimental programme to stabilise high level waste by incorporating it in glass.

"It was a tricky operation as the vessel had been in storage for so long but, thanks to good team-working, we recovered it safely," said Senior Project Manager Trevor Chambers. "The Waste Complex Manager Gary Preston and his team had to make a number of modifications to the lifting and handling methods. They are now checking out the other five prior to recovering them."

The plan is to lift the remaining FINGAL vessels early in 2007.



Staff Focus

Work to decommission and repackage redundant gloveboxes from one of Harwell's major research facilities has been completed ahead of schedule, thanks to close co-operation between two teams.

The former radiochemical facility was built during the 1940s and 50s. In its heyday it housed many of the scientists and engineers who pushed forward the development of the UK's civil nuclear programme. Today the facility is being decommissioned in preparation for its demolition and the eventual restoration of the area.

One of the biggest challenges of this work is the project to deal with gloveboxes used in plutonium research. Two teams stepped up to the challenge - one from the research facility itself, under Bob Baker, and one from Harwell's solid waste plant, under Dave Bird and Brent Ray. The solid waste team were responsible for size reducing and repackaging the gloveboxes.

The project, which was due to be finished in March 2007, was completed in mid November. In the latest stage of the clean-up process, 35 gloveboxes, out of a total of 76, were moved to the solid waste plant.

"Co-operation between the two buildings worked well," said Project Manager Bob Baker, "and that's why the whole programme has been so successful."

He is responsible for co-ordinating a team of 10, both UKAEA staff and



Harwell glovebox 'movers and shifters' combined project team.

subcontractors, including operators provided by JCI and health physics staff from NUKEM. "This was a complex process," Bob explained, "which also required co-operation between different teams within the building."

A key task in the overall schedule is the shipping of boxes to the solid waste plant. RAM Transport, under Tracey Inwood, provided invaluable assistance both in the planning and operational stages of the programme.

Dave Bird and Brent Ray's team consists of nine operational staff, supported by a maintenance team and health physics professionals from contractors NUKEM. As Dave explained, dealing with the gloveboxes involved planning at all levels. "It made particular demands on our operations team, without whose careful and methodical approach the project would not have run so smoothly, safely and to such a timescale."

Sponsorships

New kit brings success



In their first home game wearing UKAEA-sponsored kit, a new local football club scored two notable wins. Hanney Youth United, was founded by Paul Aram and Phil

Ledbury. UKAEA Harwell, on behalf of the NDA, donated money for the club's kit.

Mark Barnard, who works at UKAEA Culham and is chairman of the club, said, "A big 'thank you' to UKAEA for sponsoring the kit."

Chilton School

UKAEA Harwell, on behalf of the NDA, contributed towards a new sports community changing room and toilet facilities in the grounds of Chilton Primary School.

If you would like further information about Harwell's sponsorship programme or if you are involved in a local community project or club, please contact louisa.williams@ukaea.org.uk



All change

It's all change for Harwell's Local Stakeholder Group. After serving it for almost 20 years, Secretary Nick Hance retired at the close of the November meeting.

Angela Vincent succeeds him as Secretary of the 40-strong committee, which consists of county, district and parish councillors, local interest groups, and trade

Visitors



- **ANDRAD** - Romania's agency for radioactive waste - visited the site. The group heard a presentation by Doureay's Sandy McWhirter, toured the active handling facility with Lesley Blowfield, and were guided by Angela Vincent on a site tour.

- Former Defence Secretary Michael Portillo came to Harwell to record an interview for his BBC Radio 4 series on political history.



In the DIDO reactor (l to r): Michael Portillo, Andy Munn (UKAEA), Julia Goodchild, BBC Producer, Beth Taylor and Ed Abel (UKAEA).

- Sir Brian Bender, Permanent Secretary at the Department of Trade and Industry, visited to see the progress being made on the development of the Science and Innovation Campus and meet UKAEA Chairman Barbara Thomas Judge and Chief Operating Officer Norman Harrison.

Ted Johnston

It is with sadness that we report that Ted Johnston, the first head of the Isotope School at Harwell, died on 28 December 2006, aged 95.

and staff union representatives, representing the local community around the Harwell Science and Innovation campus. The committee is chaired by District Councillor Terry Fraser of Wantage.

Cllr Fraser thanked Nick for his long service to the local community and presented him with retirement gifts. To coincide with the 60th anniversary, this year, of the former Harwell research site, Nick has published an illustrated history of the Harwell campus.