

FEBRUARY 2012

# DOWNREAY NEWS

# Honoured!

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## ON THE RECORD

by **Simon Middlemas**  
DSRL Managing Director

The first edition of Dounreay News of 2012 is the penultimate one for me and this column.

I'll be handing over the role of managing director to Roger Hardy in eight weeks' time, assuming the transition phase is completed satisfactorily.

The contract to complete the closure of the site will be the biggest awarded in the UK public sector for some time.

But the task for everyone at the site won't change - to close down this site as quickly and as cheaply as it is safe to do so.

The planned removal of fuels from the site will reduce the liability significantly, removing the need to build new high-security facilities and lowering the security status of the site.

Meantime, so long as we remain a high security site, it's vital we do everything necessary to safeguard the materials still here.

I was really encouraged by the support from members of the Highland Council last month for the plan to remove the fuels from the site.

There was praise for the site workforce, too. Some councillors described today's safety record as exemplary and our record of decommissioning as among the best in Britain.

It's heartening to hear such comments. But we all know how quickly that reputation can be lost in a surge of publicity about even minor mishaps.

So whatever the future holds, I would urge you not to lose sight of the most important task of all - your own personal safety and the safety of those around you. ○

Send your stories to the editor at:

sue.thompson@dounreay.com



# NaK destruction – a success story

**Dounreay is within touching distance of completing one of Britain's most important nuclear clean-up tasks.**

The DFR NaK Disposal Plant is on course to complete the destruction of the bulk of the toxic metal coolant by the end of March.

Fast reactors were the only nuclear reactors in Britain to use liquid metal instead of gas or water in the cooling circuits - only two fast reactors were built, both at Dounreay.

PFR's 1,500 tonnes of liquid sodium was destroyed in August 2008. Now DFR will reach a major milestone in the decommissioning of the reactor with the destruction of the remaining six tonnes of NaK coolant.

The toxic metal is lifted in batches from inside the reactor and its six miles of cooling pipes and is transferred to a shielded treatment plant built beside the reactor inside the iconic sphere. Here the NaK is reacted with water under a blanket of nitrogen to create a hydroxide solution that is neutralised with nitric acid.

The salty water created by this process is still too radioactive to be discharged to sea, so it is passed through filters called ion exchange columns that absorb the caesium contamination. This greatly reduces the radioactivity in

the water to a level that is within limits authorised by SEPA for sea discharge. The contamination absorbed on the columns is retained and stored as intermediate-level waste.

Destruction of the estimated 6,300 litres remaining will complete the destruction of all the 57 tonnes of bulk NaK.

Once the bulk of the metal is destroyed, attention will turn to flushing out and destroying the final eight tonnes of residue from the system. ○



- NDP operation began in 2008 - £15m purpose built plant
- DFR NaK is the second highest hazard for the entire NDA estate
- Destruction of the hazardous material is one of the biggest priorities for the NDA and the UK Department of Energy and Climate Change.
- The rate of destruction of the NaK is reducing the radiological and chemical hazard at a rate of 20 million bequerels per second.
- PBI for destruction of 48.6 tonnes of NaK achieved against the odds on 10th December 2011 (305 batch processes)
- Destruction of all 57 tonnes expected by end of March
- DFR has gone seven years without a lost time accident
- Sept 2008 - March 2009 successful plant shutdown to implement changes to the ion exchange plant

# Decontam building on verge of demolition

Four years of hard graft are nearly over for **Robbie Manson's** team as they stand in the shell of D1207, the building they began decommissioning in 2008.

Now they are getting ready for the final phase - stripping off the cladding and size reducing the framework of metal beams, with demolition contractor, JGC.

By the end of March, the building should be gone, and the project should be able to claim the PBI.

The building has been marked up with a network of colour-coordinated areas, so that it can be disposed of through the appropriate waste routes.

Men in forklift trucks are removing sacks of rubble from the building.

DSRL decommissioning engineer **Eddie Mackay** says that between 600 and 800 tonnes of contaminated concrete and brick waste has created during the clean-up operations.

The building was badly contaminated because of its operational history, he explains.

"Parts of the building were designed as wet-room areas, where large items, such as flasks, were washed down with pressure hoses, and as a result contamination was sprayed throughout the building.

"Although the floor was laid with acid resistant bricks, porous grout was used, so contamination seeped into the floor.

"As with many of the facilities on site, little consideration had been given to how it would be cleaned up at the end of its operational life.

"Much of the decommissioning work had to be carried out by workers in airline suits."

Some areas of the floor have been dug out and re-laid, and by the time the building is dismantled, the whole floor slab will have been overlaid with concrete.

Adds Robbie: "JGC won the contract to dismantle the building. Once they strip off the cladding, the steelwork frame will be size reduced.

"Considerable surveying and characterisation work has taken place. As a result, a significant amount of the steelwork is exempt waste and so can be recycled.

"The remainder of the steelwork that is low level waste will be size reduced and packed into HHISO containers for eventual disposal in the new LLW waste vaults." ○

The companies who have had a hand in the clean up and dismantling of D1207 are:

- DSRL
- Nuvia
- JGC
- Gunns
- Johnson Controls Ltd
- Arch Henderson
- Northern Asbestos
- NDSL
- Caithness Scaffolding

The decontamination and waste handling facility was built in 1957.

It played an essential supporting role to many of the major facilities on site.

It handled wet decontamination, incineration, and repackaging of waste.

It was always a busy facility – in one three month period in 1965, it handled 30 tonnes of safety clothing for decontamination.



## News in brief

### Sellafield decommissions PFR fuel production plant

The Sellafield plant that fabricated much of PFR's fuel has now been cleaned up and reduced to a shell of its former self.

Construction of PFR began in 1968 and in parallel the PFR fabrication facility was built at Sellafield to provide fuel for the new reactor.

The plant operated from 1971 until 1992, during which time it manufactured part of the 42 tonnes of the fuel that PFR burned during its operational life.

Decommissioning the plant began in 1994, once PFR had been shut down. Over five thousand 200 litre waste drums were filled during the clean-up process.

PFR was built to replicate a full size commercial fast reactor and during its lifetime supplied 600 million units of electricity to the grid.

But by the late 1980s, Britain decided there was no immediate need for such a development and shelved the fast reactor programme.

### NDA examines options for higher activity waste

A new report examines how the NDA can better integrate the management of higher activity waste from the clean-up of its sites in the UK, including Dounreay.

The NDA's draft strategy development programme is open to comment until February 24.

In Scotland, national policy is for the management of higher activity waste in near-surface facilities. In England and Wales, it is by geological disposal.

"It is imperative that we ensure the very best use of these facilities as and when they become available," states the report.

"In light of this, we believe HAW strategy should move towards better application of the waste hierarchy including more characterisation, sorting, segregating, re-use and recycling; consideration of more treatment options; optimised selection of package and interim store designs; greater integration across the estate, in particular by sharing treatment and interim storage assets and capabilities; and adoption of alternative options that mitigate risks associated with current reference strategies." ○

## News in brief

### Government to reuse UK plutonium stocks

At the beginning of December the Department of Energy and Climate Change (DECC) published the conclusions of its consultation on the long term management of UK-owned separated civil plutonium.

In the consultation document, the Government proposed a policy of reuse of its existing plutonium stocks as mixed oxide fuel (MOX) for use in civil nuclear reactors.

Any remaining plutonium that was unsuitable for conversion to MOX would be immobilised and treated as waste.

DECC's report confirmed that, as a result of the consultation, the Government intends to adopt this as the preferred policy.

### Speedy Hire wins £2m nuclear decommissioning contract

Plant and tool hire company Speedy Hire has won a £2m contract to supply equipment for decommissioning of nuclear power stations.

It signed a three-year deal with the NDA in November to supply equipment to its sites, including Dounreay.

Speedy Hire is no stranger to the nuclear industry, counting several sites including Sellafield among its existing customers.

It will be testing, inspecting and carrying out repair work to lifting equipment on site.

### Turnstiles at main gate activated

The new turnstile access system for staff and contractors with site passes was successfully brought into operation on January 16.

Security had issued around 455 PIN numbers to staff not already in possession of one during November and December.

Site safety reps gave the access system the thumbs up during a test run the week before.

Security staff and CNC officers were on hand to iron out any glitches at in-muster and out-muster, and make sure that all ran smoothly.

Security manager **Malcolm Clark** thanked the staff for their cooperation in a broadcast message.

"On behalf of all the people involved I would like to thank you for your support during the in-muster this morning," he said.

The new turnstiles are part of a package of measures to reinforce the security of the site that are being implemented. ○

# PM praises Dounreay workforce

Prime Minister David Cameron has praised workers at Dounreay for going beyond the call of duty to protect themselves and the environment from harm.

He was speaking as DSRL emerged as one of only three in the UK to qualify for the country's highest awards for workplace safety and environmental protection.

The British Safety Council said an independent audit of DSRL found "exemplary health and safety systems that are among the best in the world".

A second assessment of its environmental standards found that DSRL staff "go beyond compliance and strive for best practice in all areas of environmental management".

**Doug Graham** and **Graeme Dunnett** received the council's highest awards at an event in London on behalf of DSRL.

**Prime Minister Cameron** said: "These awards recognise the crucial success that these organisations and their employees have achieved in their pursuit of excellence in the management of health, safety and environmental matters at an international level, at a time of global challenge.

"The Government would like to place on record its appreciation of the support given by the British Safety Council in raising public awareness of the benefits that effective health, safety and environmental management brings to businesses, employees, the environment and economy as a whole.

"I am confident that by continuing to work in partnership with the British Safety Council, other stakeholders, employers and employees, we can tackle the many challenges we face to achieve a healthier, safer and sustainable society.

"We will strive to accomplish our goals in reducing the burden on employers and employees and cutting the many millions of working days currently lost each

year across the world through work-related ill health and injury."

DSRL chairman **Stephen White** said: "Everyone, from the clean-up teams stepping inside some of the most hazardous facilities in Britain through to the managing director, is working

tirelessly to develop a culture where we do not tolerate any harm, be it personal or environmental.

"We are delighted to receive this recognition from the British Safety Council." ○



The NDA's head of programme (DSRL), **Nigel Lowe**, wrote to site boss **Simon Middlemas** at the beginning of December last year.

He asked Simon to pass on congratulations on behalf of the NDA to everyone on site for the recent achievements in safety.

He singled out the milestone of five million man-hours without an LTA, the Sword of Honour for

safety performance and the Globe of Honour for environmental performance.

We should also remember JCL's six years without LTA, and PFR's seven years without LTA.

"These achievements are considerable and are especially so in the midst of a busy and productive year of decommissioning at Dounreay," said Nigel.

# Trial project captures memories



Historic Scotland and the National Museum of Scotland recognise Dounreay as being of national importance and its heritage should be captured and preserved for the benefit of future generations.

## Memories of life at Dounreay are being preserved for future generations to hear by heritage officer James Gunn

"Technical data and objects are being collected, but capturing oral social history is just as important. People's memories provide a fascinating insight into the human/social aspects of the UK's fast reactor experiment," says James.

The site's heritage strategy covers this aspect and James has just completed a pilot project, interviewing five retired UKAEA members of staff, and one who has completed 50 years on site with no sign of leaving yet.

This has produced a few interesting stories.

**Don Ryan** (who worked on site on and off from 1961 until 1994) gave a fascinating insight into his time as a professional engineer.

The excellent housing and interesting work offered by UKAEA were the factors in his decision to move from London to Dounreay.

His early days were spent living in Ormlie Lodge hostel which, he said, had the feel of a post graduate residence.

The hostel was run by a fellow Irish compatriot, **Miss Bentley**, who created a large family atmosphere and was often seen patrolling the long corridors with her walking stick, keeping a check on her "boys".

One particular DFR story shows the humour that played an important part in making Dounreay an enjoyable place to work.

"One humorous memory concerns the loss of false teeth. Not mine – I still have my own", recalled Don.

"There was usually a 'watch-keeping' presence in the reactor sphere during runs. One of the duty team just happened to be leaning on rails beside the instrument panels, facing outwards towards the spherical steel 'wall' when he sneezed –

quite energetically.

"Half a set of teeth, under the influence of gravity and the internal sphere slope, disappeared from view, rattling down to the, never visited, bottom sphere skirt. This was known to be a difficult area to access.

"The lost teeth were the subject of a claim on UKAEA but this was rebuffed in firm administrative terms.

"Some future decommissioner or archaeologist may make a surprise find – or maybe, just, the teeth were retrieved long ago by shift initiative?"

The transcripts and recordings will be made available to the public via the Highland Council's North Highland Archive in Wick and will be useful for future researchers of Dounreay's history.

Caithness Horizons will also receive the transcripts and recordings for possible use in their Dounreay exhibition. ○

# Dounreay's security culture: have your say

The changes to the site entrance and security fences may have got you thinking about the site's security and your role in maintaining it.

On behalf of the Department for Energy and Climate Change, The Centre for the Protection of National Infrastructure (CPNI) are carrying out a review of security cultures in governmental public bodies.

As contractors to the NDA, DSRL is caught by the review, which will evaluate the security culture on site and benchmark it to show us the areas where we are strong and the areas where we need to improve.

The ideal security culture is where employees are security-conscious and thinking about how to protect information, people and services.

An online CPNI workforce survey will be launched in February, initially for DSRL staff only.

The DSRL senior management team want to understand what your thoughts are about security issues at Dounreay.

The survey will give you the opportunity to tell them what is actually going on, rather than what should be going on. It's anonymous and confidential, which helps to remove any

awkwardness.

For every survey that is completed, £1 will be donated to Help for Heroes, a charity formed to help those who have been wounded in Britain's current conflicts.

Once the results of the survey are processed by CPNI, the senior management will be presented with a report giving the results and suggested actions for them to consider. The results of the survey will be published in Dounreay News. ○

The survey should take no more than 5-10 minutes to complete. The questions will cover a range of issues that impact on security culture:

- how you perceive the level of management commitment to security;
- the extent to which you think there are rewards for positive behaviour and/or consequences for non-compliance;
- whether you think the right processes are in place to support positive security behaviour.



# Dounreay helps world's largest titanium manufacturer

Dounreay's safety practices and technical knowledge has helped an international manufacturer, and benefited a Caithness company.

TIMET UK is the world's largest supplier of high quality titanium metal products.

A conversation that took place over a year ago between DSRL's senior safety advisor **George Armour** and TIMET's HSE manager **Rob Allan** prompted the company to get in touch.

DSRL then invited TIMET staff to travel the 600 miles from their West Midlands base to the NDA's most northerly site, to observe face to face how Dounreay implements maintenance on its NaK cooling systems within its reactors.

Titanium is used in hundreds of diverse aerospace, industrial and emerging applications where no other metal is as reliable or economical, and shares similar industrial safety issues for maintenance outages on NaK cooling systems used for furnaces used in the production of the titanium products.

Talking about the visit, **George Armour** explained: "Taking apart the site safely is Dounreay's top priority and sharing our technical knowledge and expertise with others is a culture we have always embraced.

"The DFR NaK is the second highest hazard for the entire NDA estate and it's critical we meet the necessary safety and environmental standards as we decommission the site. It's good to share our experiences and in this case involve our contractors and other local companies



in a quest to help others."

DSRL welcomed three TIMET representatives - **Rob Allan**, **John Walsh**, TIMET's engineering manager and the company's UK director of manufacturing, **Tim Gibbons**.

They observed the site's safety practices and DSRL's **Kevin Porteous** gave them an overview of the process, followed by technical presentations given by **Jamie Bain** of JGC and **Dr Jonathan Morgan**, DSRL's alkali

metals advisor.

Also arranged to coincide with their time in the North was a visit to Dounreay's local supplier Stephen's Plastics Ltd in Halkirk to discuss NaK bag design, production and quality control issues.

In expressing his thanks for the visit, TIMET's Tim Gibbons, said: "I would like to convey our admiration for the professionalism and expertise of the people we met during our time at

Dounreay. The operations demonstrated have a definite place within our organisation.

"It has been an extremely worthwhile and enjoyable fact-finding mission."

TIMET have since confirmed that they will be adopting the safe systems of work demonstrated at Dounreay and have placed an order with Stephen's Plastics Ltd for custom designed and manufactured bags. ○

## Work begins to demolish FCA admin block

The D1200 office block is being 'soft stripped' in readiness for demolition in February.

Northern Asbestos have completed the asbestos removal and the internal fixtures and fittings are being stripped out.

The windows have already been removed and will be stored for possible re-use elsewhere on site.

Demolition will take place

probably over a few days at the end of February.

Once the rubble has been cleared away, a new front will be built to give access to the D1200 corridor and the labs. ○



# Fuels moves come into focus

Acrimonious debate 20 years ago about the import of nuclear fuel seemed a dim and distant memory when the NDA took their plans to export nuclear fuel from Dounreay to the chamber of the Highland Council last month.

There was broad support for proposals to remove the nuclear fuels from the site before it closes down in the next decade or so.

The first train carrying breeder material from DFR is due to leave for Sellafield in summer 2012.

Other fuels could follow depending on the outcome of an options paper being issued by the Nuclear Decommissioning Authority.

**Alex Anderson**, DSRL's head of waste and fuels, accompanied **Dr Adrian Simper**, head of strategy at NDA, when he outlined their plans to councillors in Inverness on January 19.

"The response of councillors was very heartening," said Alex. "They recognised the site is closing down, so it makes sense to move the fuel to Sellafield where the facilities exist to look after it."

Sutherland councillor **George Farlow**, who sits on the site stakeholder group, told colleagues he has been "impressed by the

innovative work carried out by DSRL staff" but did wonder if nuclear energy was worth the effort involved in cleaning up after it.

Another stakeholder group member, Caithness councillor **David Flear**, was equally supportive of the workforce, describing their safety record as "exemplary".

He said their success in accelerating the closure raised economic challenges for the community and urged the NDA to support construction of a Thurso by-pass.

The agenda item had been billed as a presentation about "exotic fuels" at Dounreay - a term that surprised one councillor who wondered how spent fuel could ever be considered alluring or attractive.

Adrian Simper confessed he had coined the term. "I've been regretting it ever since," he said. ○



## DSRL PBO competition in final phase

The transition period for the preferred bidder – Babcock Dounreay Partnership - started on December 12, 2011 and will continue until share transfer at the end of March 2012. The preferred bidder team first came to site on December 14, when **Roger Hardy** (DSRL managing director designate) gave a number of presentations to DSRL staff. For anyone who did not manage to attend one of Roger's presentations, a video was made and showings of this video can be arranged by contacting **Sue Thompson** (6085) in the communications department.

It is important to remember that

**Simon Middlemas** and his team remain in charge of the site during the transition period. Roger Hardy and his new team of secondees only take over at the point of share transfer.

At present the preferred bidder staff are having meetings with DSRL staff and visiting a number of plants. DSRL staff are also providing briefings on a variety of topics to the preferred bidder team.

The DSRL competition support team contacts are **Mark Raffle** (Tel 6670) and **Rhona Gill** (Tel 6067) D2003 Zone 9, or email "dsrl competition support". Please get in touch if you have any questions.

To ensure that only work formally

agreed with NDA is carried out, all requests for competition support should be routed through this team. Please let the team know if you are asked directly by NDA, preferred bidder or anyone else to carry out any work connected with competition. ○



# The apprentices' calendar

As recruitment starts for the apprentice intake of 2012, Dounreay News looks back on a busy year.

## 1 March – STEM ambassadors “speed date” with high school students

Dounreay apprentices are among a group of young scientists and engineers who visit high schools in Caithness and north Sutherland, speaking to around 300 pupils who are choosing their subjects at Standard Grade. Pictured are **Duncan Carruthers** and **Jamie Spargo**, talking about what it's like to be an engineering apprentice.



## 2 March – NSAN Awards in Manchester

Qualified apprentice **Gary Weir** is awarded the HND Student of the Year and is a runner up in the Scottish Apprentice of the Year award.

## 3 March – Caithness Science Festival

All DSRL apprentices automatically become STEM ambassadors. Some of them assist at the 2011 science festival, meeting, greeting and escorting students, or helping with workshops.



## 4 May – apprentice scheme gets engineering approval

DSRL's apprenticeship scheme is formally approved by the Institution of Engineering & Technology (IET) and the Institute of Mechanical Engineers (IMechE). Any apprentice going through DSRL's training programme (and those who have completed in the past three years) is now eligible to apply for professional registration as Engineering Technicians (EngTechs).

## 5 May – field trip to Aberdeen

The third year apprentices go on a field trip to Aberdeen, where they visit other companies to see what they do. They also have a team building day, where they get the opportunity to try out archery.



## 6 June – helping out with Goblin Challenge

Apprentice STEM Ambassadors help local school children to become the overall winners at the Scottish Goblin Challenge at the Grampian Transport Museum at Alford. The apprentices had spent the last eight months mentoring the children as they built the Goblin cars, going in to the schools every week to help construct the kit and help the children decide on their designs and materials for the bodywork.



## 7 June - learning valuable skills

DSRL third year apprentice **Craig Nicolson** is photographed carrying out forklift truck training at the Ormlie branch of Training At Naver.

## 8 July – working in Dunnet Forest

This year's first year apprentices from DSRL and Johnson Controls spend a busy week working in Dunnet Forest. Their main project is to construct a new bridge over a boggy area to allow quad bike and trailer access to an area of the forest for collecting logs, removing old trees and general forest maintenance. Taking part are DSRL apprentices **John Budge**, **Marc Anderson**, **Liam Stewart**, **Euan Mackay** and **Andrew Macaskill**, and JCL apprentices **Jamie Cormack** and **Daniel Storton**.



# The apprentices' calendar



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## 9 July – the Scrabster Fair raft race

DSRL's **Adam Matheson** and **Michael Moar** are part of the six-man crew who come second at the Scrabster Fair raft race. Four purpose-built rafts take part this year and the boys do well to fend off the stiff competition – and stay afloat - and row from the inner to outer harbour into second place. They are pictured looking jubilant following their victory. Other team members not pictured are **Duncan Carruthers** and **Darryn Wright**.



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## 10 July – Smallbore Rifle Association Scottish championship event

Apprentices help out with target control, collecting targets from the range, sorting out targets for the scorers and then filling them when complete as well as being in control of the armoury (signing rifles in and out of secure storage area).

## 11 August – the apprentices indenture ceremony

This year's batch of Dounreay's newly qualified skilled workers are presented with their indenture certificates by Lord Lieutenant for Caithness **Ann Dunnett**. Well over a thousand people have served their time as apprentices at Dounreay.

## 12 September – new apprentices come to site

They visit site for a week to carry out site induction, medicals, safety courses and trade introductions. They are pictured, from left: **Liam Elder, Brian Sutherland, Donald Spence, Sean Milligan, Arran Henderson, Brian Wade, Darryl O'Sullivan**.



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## 13 September – walking the sponsored walk

This is the tenth sponsored walk that Dounreay's apprentices have done, raising a considerable amount of money for local charities over the years.

## 14 October – Engineering Industry day

Apprentice STEM ambassadors showcase their work with local schools at the event that takes place at the North Highland College. They help the students learn about science, technology, engineering and maths through fun and educational activities.



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## 15 October – Loch Eil outward bound course

Every first year apprentice takes part in a week of team building at the Loch Eil outward bound centre, where they go sailing, climbing (tall trees and taller mountains), abseiling, mountain rescue and overnight expedition.



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## 16 November – sponsored walk cheque presentation

Members of the Caithness branch of the Guides and Scouting Associations are welcomed to site to be presented with cheques for £600 each, raised by the apprentices following their sponsored walk in September.

## 17 November – Keiss community association Christmas lights

Apprentices help make the Keiss Christmas lights a success by fixing the rope lighting to the frames, and doing all the electrical connections and testing. ○

DSRL will be advertising in the local papers during February for new applicants to join the apprentice training programme. Applicants must live within the Dounreay travel to work area, have an interest in and aptitude for engineering, and be of school leaving age by summer 2012. The closing date for applications is March 2.

# Atom film a stepping stone to bigger things

Film-maker **Gair Dunlop's** interpretation of Dounreay has opened up the story of the site to new audiences across Europe.

Now, the lecturer in media arts and imaging at Dundee University is talking to the Nuclear Decommissioning Authority about opening up the rest of Britain's atomic heritage.

Gair made a 20-minute film about Dounreay in 2010, bringing an artistic perspective to its

construction, operation and decommissioning.

The film has been screened to audiences in Scotland, England, Germany and the Netherlands. Its latest showing was a double-header – a showing in Dundee Contemporary Arts on the same night it opened in Stuttgart.



Gair Dunlop (right) with site heritage officer James Gunn at the film's premiere in Caithness Horizons last year.

The success of "Atom Town" has led to discussions with the NDA and the University of Manchester about similar projects elsewhere in the UK.

"It could be the start of

something big I hope," said Gair.

For more information about the film, visit [www.atomtowntown.org.uk](http://www.atomtowntown.org.uk)

## Training at Naver

To arrange your training please check the training event calendar and SAP for dates, or call us at Naver on 01847 804735.

February	Course Title	Venue
1	Pressurised suits	Dounreay
1	ATO holder DSRL	Naver
1	RMC refresher	Dounreay
1	Confined space operator	Dounreay
2	Business Gateway – record keeping	Naver
2	Manual handling	Naver
3	Safe systems of work upgrade (am/pm)	Dounreay
3	Business Gateway – marketing & selling skills	Naver
3	Emergency first aid	Dounreay
6	Safe systems of work upgrade (am/pm)	Dounreay
6	Asbestos awareness	Naver
6-7	Overhead crane	Ormlie
7	Site induction	Dounreay
7-9	NEC3 training	Naver
8	Basic radiological induction	Dounreay
8	Asbestos awareness (am/pm)	Dounreay
8-9	Overhead crane	Ormlie
8-9	Recre8t yourself	Naver
9	Environmental awareness at Dounreay	Dounreay
10	Hand and power tools	NHC
13	Mobile elevated work platform – boom	Ormlie
13-17	PTLLS training	Naver
14	Site induction	Dounreay
15	Basic radiological induction	Dounreay
15	Mobile elevated work platform – boom	Ormlie
15	Confined space operator	Dounreay
16	Mobile elevated work platform – scissors	Ormlie
16	Intermediate criticality	Dounreay
17	Emergency first aid	Dounreay
20	Confined space management	Dounreay
20	Operational monitoring theory	Naver
20-21	APM intro to project management	Naver
20-24	Slinger signaller/crane supervisor	Ormlie
21	Institute of Leadership Management (ILM)	Naver
21	Site induction	Dounreay
22	Basic radiological induction	Dounreay
22	Environmental management at Dounreay	Naver
22	Achieving excellence in customer care	Naver
22	Asbestos awareness (am/pm)	Dounreay
23	Environmental awareness at Dounreay	Dounreay
24	Hand and power tools	NHC
27	Operational monitoring assessment	Dounreay
27-1 Mar	Forklift novice	Ormlie
28	Site induction	Dounreay
29	Basic radiological induction	Dounreay
29	Asbestos awareness (am/pm)	Dounreay

## Domino puzzle

5	2	1	6	3	4	5	6
5	2	0	3	5	1	4	4
4	1	0	3	0	1	2	3
4	2	4	1	0	1	3	6
6	3	1	4	4	0	5	5
0	0	2	6	6	0	5	2
6	2	6	2	5	1	3	3

	0	1	2	3	4	5	6
6							
5							
4							
3							
2							
1							
0							

The grid contains a series of all dominos from 0-0 to 6-6 placed once in the grid. You must work out where each domino is in the grid by marking bold lines around it. A tick-box is provided for you to keep track of which dominos you have placed to ensure you don't place the same domino more than once. There is one solution which you can reach through logical rules.

Answers in next months issue

# + OHD BULLETIN +

## Bowel cancer and screening

Every 15 minutes someone is diagnosed with bowel cancer in the UK. Every 30 minutes someone dies from it.

Ninety five percent of all diagnoses are in people over the age of 50. If diagnosed at the earliest stage, bowel cancer is highly treatable, with a survival rate of more than 90% over five years.

Nearly all bowel cancers develop in the large bowel - in the colon or the rectum. Bowel cancer is also referred to as colorectal or colon cancer.


Most bowel cancers develop from polyps which are usually non-cancerous and, once detected, can be removed easily if caught early enough.

### Prevention & minimising risk

By taking some simple steps to improve your diet and taking regular exercise can help reduce your risk of bowel cancer. So it is important to:

- eat plenty of fibre
- eat five portions of fruit and vegetables a day.

- limit your intake of red meat and avoid processed meat
- keep active and exercise regularly
- keep hydrated and avoid drinks containing caffeine
- know your alcohol limit
- don't smoke.
- know the symptoms and act on them if you have any concerns.
- take part in the bowel cancer screening programme in your area when you are invited. This involves completing a simple test which can help identify whether further investigation is necessary.

If you are worried about any symptoms that you think might be caused by bowel cancer, make an appointment with your GP or call the Bowel Cancer UK Information and Support Service on 0800 8 40 35 40 or email [support@bowelcanceruk.org.uk](mailto:support@bowelcanceruk.org.uk) 



### Know the signs

The symptoms of bowel cancer can be:

- Bleeding from your bottom and/or blood in your poo.
- A change in bowel habit lasting for 3 weeks or more especially to looser or runny poo.
- Unexplained weight loss.
- Extreme tiredness for no obvious reason.
- A pain or lump in your tummy.

You might experience one, some, all of the above or no symptoms at all. Remember most symptoms will not be bowel cancer.

## STUC top men visit site

The general secretary of the Scottish Trade Union Congress, **Graham Smith**, and the assistant secretary, **Stephen Boyd**, visited site late last year.

They were in the area at the invitation of the Thurso & Wick Trade Union Council.

They came to site and met up with site director **Simon Middlemas**.


Discussion took place on various issues concerning the large union membership at Dounreay and the importance of the socio economic activities in the run down of the site over the next ten years.

The trade union movement has a long term commitment to the lifelong learning agenda and has offered to assist with the plans for transitional training.

During the visit Graham and Stephen also met local union reps, councillors and members of the local socio economic teams and members of the HIE and Chamber of

Commerce.

Graham was impressed to learn of the progress made by the inter-agency groups charged with diversifying the economy, particularly the developments that have taken place at both Wick and Scrabster harbours and the new facilities in place at North Highland College campus.

He said: "We are very pleased to visit Dounreay and discuss with the management and trade union representatives how we can assist in making sure that the workforce at Dounreay continue with the high standards set in the decommissioning operations, and are able when the time is right to re-train for the opportunities that will exist with the new emerging industries of the future." 



From left, John Deighan (Unite), Stephen Boyd (STUC), June Love (socio economics), Graham Smith (STUC), Niall Watson (Prospect) and William Swanson (MB)

# Ambassadors help schools become Olympians

Dounreay STEM ambassadors were involved in the latest project to encourage Highland school children to take an interest in science subjects.

The Northern Heat of the Highland Olympics in Technology (HOT) program took place in the new Energy, Technology and Engineering Centre in Thurso in November 2011.

It involved schools from the northern reaches of Highland Council territory - Farr Secondary, Golspie High School, Thurso High School and Wick High School.

Twelve teams took part in the event - two from Farr High School, two from Golspie High School, four from Thurso High School and four from Wick High School. In total, around fifty five pupils were involved.

The event was organised by **Stuart Tait**, who is seconded to a project to support the technical departments in the four high schools in the Dounreay travel to work area.

The project is being funded by a partnership between DSRL, Highlands and Islands Enterprise and the Highland Council.

The event was supported by

**Pat Keiran**, STEM ambassador coordinator for the north Highlands.

Pat had organised some fun STEM activities to keep the pupils busy throughout the day in addition to the main HOT event.

The teams had to negotiate a remotely controlled model fork-lift truck, carrying a ping pong ball, around an obstacle course and it involved building a bridge at one section of the course to successfully negotiate the obstacles.

The winners were the team who did it in the shortest time.

Winners were The Tanks from Wick High School, with Funny Farm 2 from Farr High School coming a close second.

These teams will go on to take part in the main HOT event which will take place in March at Eden Court, Inverness.

Rumour has it that all the teams in the Inverness area are extremely concerned about the high quality of the teams from the north....



1st place (Wick High School, The Tanks)

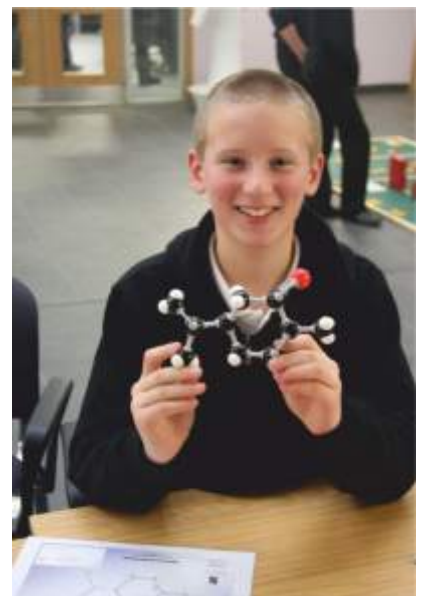


2nd place (Farr High School, Funny Farm 2)



3rd place (Farr High School, Funny Farm)

The Northern Heat is just one of the projects being organised by the HOT2012 project, involving primary and secondary schools in the Highland Council area. More information on the HOT challenge can be found at: <http://highlandolympicsintechnology.moonfruit.com/>



## Kongsberg awarded offshore renewables contract

Kongsberg Maritime Ltd has been awarded a contract with leading wave energy technology provider Aquamarine Power to carry out work on Orkney.

The company will carry out underwater noise assessments of the Oyster wave energy device. Developed by Aquamarine Power, Oyster captures wave energy from near-shore sites and converts it into clean sustainable electricity.

This collaboration is a first between Kongsberg Maritime and Aquamarine Power, and will involve measuring underwater noise during the Oyster installation and operational

phases at the EMEC range, Billia Croo on Orkney. Kongsberg Maritime will also be involved in the installation and operational phases, which will take place off the north-west coast of the Isle of Lewis.

The next-generation Oyster 800 wave energy device was recently installed at Billia Croo in Orkney. There are plans to install two further Oyster devices at the site in 2012 and 2013. Each device will have a generating capacity of

800kW.

The data collected by Kongsberg Maritime will contribute to an assessment of the potential effects of underwater noise on marine mammals, fish and diving birds once the Oyster device is installed and operational.

CNSRP's Programme Manager **Eann Sinclair** welcomed the news as further evidence that companies in Caithness & North Sutherland are winning work in the developing marine energy sector.



# Tony Sinclair: gone fission

His father built the reactor and Tony Sinclair spent the last decade taking it apart.

Now, their 58-year family connection to Dounreay Fast Reactor is about to come to an end.

Tony, a plant operator with Babcock at DFR, retires on February 17, the day of his 65th birthday.

His late father **Sandy**, whose family ran a coachbuilders in Thurso, started work at Dounreay in 1954 with construction firm Wards.

He moved to the UK Atomic Energy Authority in 1958 and was joined at Dounreay in 1974 by his son Tony, who was taken on as a painter and decorator.

Both worked for the UKAEA on the Dounreay Fast Reactor before Sandy, a chargehand fitter, retired in 1980.

Tony continued to work at Dounreay, moving from the UKAEA

in the 1990s to a succession of private contractors.

Today, he's a plant operator with Babcock at DFR.

"When I started here we were still building reactors. I was one of the first people across at PFR. Now I'm dismantling what my father built at DFR," he says.

When Sandy retired in 1980, colleagues gave him a souvenir paper and pen set made in the image of DFR by site apprentices.

It's been inherited by Tony – and its return to site has been of great interest among colleagues at DFR.

Tony, who's married to **Helen** and lives in Wick, is looking forward to spending more time looking after the "Isabella Fortuna", the historic fishing boat belonging to the Wick Society. He's been a director of the society for seven years. ○



Tony Sinclair and the souvenir pen set presented to his father Sandy when he retired in 1980.

## Dounreay charity fund in toy appeal joy

The Dounreay Employees Charity Fund (DECF) was one of many donors who helped needy children celebrate Christmas through the 2011 Caithness FM toy appeal.

**Jackie Johnson** from Caithness FM thanked all the companies who contributed to the appeal.

"The toy appeal has been a tremendous success and we are delighted with the support we have had from the companies and staff at Dounreay and in the community," she said.

"Thank you also to everyone who donated gifts - with your support we really have made a difference this year."

**John Deighan**, Chairman of DECF, said: "Once again the DECF Committee fully supported this very worthwhile cause.

"Given the current financial climate, this year more than ever these toys are needed to ensure less fortunate children in Caithness have a present to open on Christmas morning."

DSRL programme office and finance staff, G A Barnie staff and

JGC staff at t3uk didn't send Christmas cards this year and instead donated the money to the toy appeal.

**Audrey Simpson** from OCS made and sold tablet and donated all the proceeds.

The Dounreay Fire and Ambulance gave £200 from their charity fund.

NDSL donated toys directly to the appeal.

All gifts were delivered to the social work department in Wick who distribute them to those most in need around the county.

Jackie said: "We estimate that this year's toy appeal was in the region of £3,500 donated between toys and cash. It is the most ever collected – a really amazing and generous response."

Jackie and **Bob Johnson** from Caithness FM are pictured here receiving the toys from John Deighan and **Marie Mackay** of DECF. ○



## “Quotable Quotes”

“With this non-violent action, Greenpeace shows that French nuclear installations are vulnerable... Simple activists with peaceful intentions and few means managed to reach the heart of a nuclear plant... Several of our activists sat on the roof of one of the two reactors.”

Greenpeace France spokesman Sophia Majnoni d'Intignano, describing how activists broke in to the Nogent-sur-Seine nuclear plant near Paris (The Wall Street Journal)

“The government says that as long as the radioactive leak can be dammed from the sides it can be stopped, but that's wrong. They're going to have to build a huge trench underneath the plant to contain the radiation – a giant diaper. That is a huge-scale construction and will cost a fortune. The government knows that but won't reveal it.”

Freelance journalist Shigeo Abe claims the clean up costs of the Fukushima disaster are being massively under-reported by the Japanese media (The Japan Times)

“DRS is delighted to have the opportunity to work with Sellafield Ltd and Northern Rail in providing this trial train service which will not only give the Sellafield staff a more relaxing and stress free way to travel to work but we will be able to assist Northern Rail in relieving demand for services at this peak time.”

Neil McNicholas, MD for Direct Rail Services (DRS) who have launched a six-week trial train service for the Sellafield workforce (www.rail.co.uk)

“Augean has started to dump the waste while court proceedings are still going on. We would like to show that the people of King's Cliffe and the surrounding villages are very annoyed by that. Given Augean are just about to put in an application to extend the dump we want to show the people of King's Cliffe have not settled down to the idea of nuclear waste.”

Chris Leuchars, spokesman for villagers opposing a radioactive waste site in the village of King's Cliffe, who staged a demonstration against the dump (Evening Telegraph)

To see these and more visit the communications homepage at: <http://dnotes6.ukaea.org.uk/dsrl/external-headlines.asp>

# Bob's festive Polar success

**Bob Kerr spent Christmas Day 2011 on the summit of Antarctica's highest peak, Mount Vinson.**

It's part of his quest to climb the seven highest mountains on the seven continental plates, and now leaves him with only one more to climb – Mount Everest.

Bob joined a small international team of mountaineers for the attempt on Mount Vinson. They flew to the southern tip of Chile in South America before making a four-hour flight to Union Glacier in Antarctica in a chartered Kazakhstan Ilyushion 76 cargo plane.

Christmas is summer in Antarctica, which means balmy conditions of minus 20 degrees Celsius and 25 knot winds. A final 45-minute flight in a twin otter aircraft took them to the foot of Mount Vinson.

Mount Vinson towers above the landscape at 4,892m. Before they could consider tackling it, the team first had to acclimatise themselves by climbing a smaller peak, a mere 2,800m. This reduced the risk of developing fatal conditions such as high altitude pulmonary oedema or high altitude cerebral oedema.

The team hauled supplies of food, fuel and equipment up the

**Mount Vinson is the highest point on the Antarctica continent and towers at 4892m (16,050 feet) above the surrounding glaciated polar terrain. Bob thinks he may be the first British person to ascend the highest peak in both the Arctic and the Antarctic as he had previously scaled Greenland's highest mountain of Gunnbjørn Fjeld (3694m, 12119 feet) in June 2004, while he worked for UKAEA.**


mountain on sledges to their high camp. Bob found himself the only team member with previous polar experience of man-hauling sledges, and used his knowledge to ensure that all team members were properly roped together.

On Christmas Day 2011, the temperature was about minus 20 degrees Celsius at high camp as the team made their climb. They reached the summit after six and a half hours. In spite of the wind chill of minus 55 degrees, everyone took their gloves off to take photos.

The team made it back down

to high camp in less than two and a half hours to their Christmas dinner – freeze dried food and a hot drink.

"Mountaineering in Antarctica has many logistical and safety challenges, just like decommissioning Dounreay," said Bob.

"With good planning and good risk mitigation it is possible to achieve challenging objectives safely and I'm looking forward to continuing to support Babcock in the safe delivery of the reactor support services contract at Dounreay." 

Bob made sure he took appropriate reading material



Calling the office



# TOPIC OF THE MONTH



## Safety signage and you

Safety signage and barriers are there to protect you from hazardous activities, says Assurance's John Deighan.

Health & Safety law requires employers to provide specific safety signage wherever there is a risk that has not been avoided or controlled by other means, for example through engineering controls or safe systems of work.

Dounreay Standard 0008 (Signs, Warning Notices and Signals [Safety] Management) applies to all premises and activities under Dounreay control and the following types of signs and notices:

- warning signs and notices
- other safety signage identified as a result of risk assessments
- colour coded pipe and ducted system markers
- verbal, acoustic and hand signals

### Why are barriers and signage important?

Barriers, signage and segregation are put in place to identify and warn people about a particular hazard and protect them from harm.

Barriers and warning signage should never be crossed, disregarded or removed unless you have authorisation to do so.

As Dounreay is decommissioning, temporary signage to warn staff of certain activities will be used. It is important that signage is visible, up to date and staff are informed of any changes that are taking place.



Supervisors should inspect their areas to ensure the integrity, suitability and validity of the barriers and signage in their work area.



Any defective signage or barriers should be reported to the area supervisor or raised with your safety advisor or safety representative and replaced.



Take personal responsibility for your own safety and the safety of others and make every effort to improve safety on our site.



Follow all rules, procedures, warning signs and instructions.

### Examples of safety signage:

Examples	Description and Format
<b>Blue signage: Mandatory</b>	 <p><b>Format:</b> Blue circle, white pictogram</p> <p><b>Action:</b> Must Do - obey the instruction as stated.</p>
	 <p><b>Examples:</b> Fire action notices, Wear safety hat, Wear safety footwear, etc. Usually supplemented with written text caption.</p> <p><b>Wear helmet</b></p>

Examples	Description and Format
<b>Yellow signage: Warning notice</b>	 <p><b>Format:</b> Black/yellow triangle, black pictogram</p> <p><b>Action:</b> Be aware of potential danger and act accordingly.</p>
	 <p><b>Examples:</b> Hazardous Substances, Items falling from height, electricity etc. Usually supplemented with written text caption.</p> <p><b>Flammable</b></p>

Examples	Description and Format
<b>Red signage: Prohibited</b>	 <p><b>Format:</b> Red circle &amp; diagonal with black pictogram</p> <p><b>Action:</b> Must Not Do - obey the instruction as stated</p>
	 <p><b>Examples:</b> No smoking, No naked flames, No eating, No drinking etc. Usually supplemented with written text caption.</p> <p><b>No access for unauthorised persons</b></p>

Examples	Description and Format
<b>Green signage: Safe condition</b>	 <p><b>Format:</b> Green square, white pictogram</p> <p><b>Action:</b> Activate/use to get to safe state</p>
	 <p><b>Examples:</b> Emergency telephone, Emergency stop, Emergency route.</p> <p><b>Emergency eye wash</b></p>



### Safety Barrier

Ensure that Safety Barriers are suitable and sufficient  
Make sure barriers are properly maintained

## Nuclear news

### Alaskan seals to be tested for radiation

A scientist preparing to test tissue from sick ringed seals in Alaska says that he is doubtful that there is a link to the Fukushima disaster.

More than 75 sick and 60 dead ringed seals have been discovered in Alaskan waters since July 2011, with outbreaks in Russia and Canada. The cause remains a mystery but the National Marine Fisheries Service has declared the outbreak an "unusual mortality event".

Professor of chemical oceanography at the University of Alaska Fairbanks, **John Kelly**, said that the widespread presence of the disease indicates that the answer lies elsewhere in the northern waters. "My gut feeling is that...the answer lies in something else that's in the sea," he said.

Ringed seals are the smallest of Alaska's ice seals, and are on the point of being listed as a threatened species. (Homer News)

### Nuclear fun fair puts German town on map

A never-used nuclear power plant in Kalkar, Germany, has been converted into an amusement park by a Dutch businessman.

The Wunderland Kalkar park boasts 40 rides, a convention centre and a hotel.

The cooling tower of the abandoned power plant has been converted into a merry-go-round ride with a difference.

The park attracts 600,000 visitors a year to the 1,000 year old town. (The Seattle Times)

### Endangered croc finds home in nuke plant

A nuclear power plant has become the unlikely sanctuary for the endangered American crocodile.

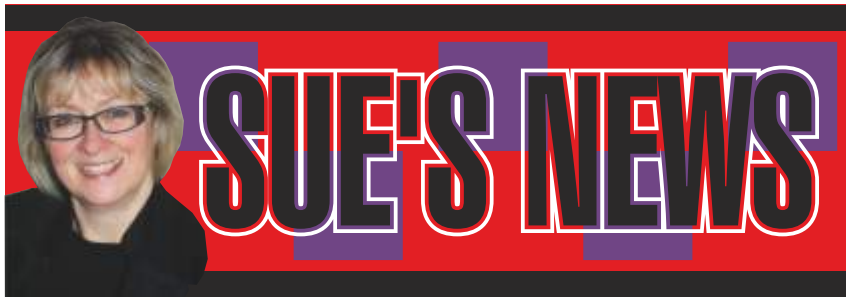
The Turkey Point nuclear power plant is in a remote part of the Florida swamps, making it difficult for humans to disturb the crocodiles, who nest in the plant's 168 miles of man made cooling canals.

About 400 adult and adolescent crocodiles make the canals their homes.

**Frank Mazzotti**, a professor of wildlife ecology and conservation at the University of Florida explains that canals such as those found at the power plant site provide nesting habitat that has "to some extent compensated for the loss of habitat elsewhere."

By the 1970s, there were fewer than 300 American crocodiles in south Florida. However, since the Turkey Point power plant was constructed, the numbers have increased dramatically, and there are now more than 1,500 in the state today.

(The Associated Press)



The Dounreay Community Fund donation to CLIC Sargent's 'Dip with a Nip' event meant that all the money raised by participants will go directly to the children's cancer charity.

Just under one hundred adults and children braved the chilly seas on Boxing Day to raise almost £10,000 between them. Dippers were treated to a 'nip' of Old Pulteney liqueur afterwards to warm them up.

DSRL's **Natalie Marshall** is the chair of the Caithness fundraising committee for CLIC Sargent.

Dounreay was well represented by 'Team Lovely' who raised over £3,000 through events such as bake sales.

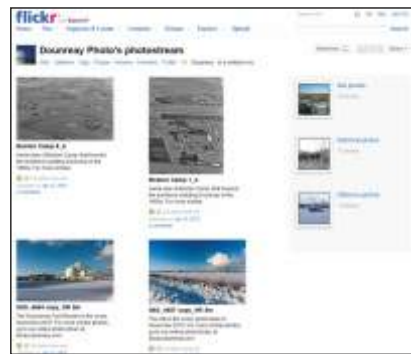
OCS manager **Davie Mowat** was delighted to get a letter from the CNC firing range praising the work and general commitment of cleaner **Bob Sales**.



The firing range is just part of Bob's patch, which includes DFR and sees him coming in early in the morning to get his work done well before the day staff come in. Bob, who has been working for OCS for two years, says that the officers have become more than clients.

"I've got a lot of respect for them, and they're more like friends," he says.

Davie Mowat added: "As a company and as a manager I fully appreciate the flexibility that some of my staff such as Bob are able provide, in order to satisfy clients' needs".



The DSRL online image library on the dounreay.com website has proved to be a very popular resource which is helping to make the site more accessible to the outside world.

Since it went 'live' in September 2009, more than 600 users have registered to download images of Dounreay.

The extensive photographic archive now contains over 2,000 images from all areas of the site, ranging from the 1950s to the present day.

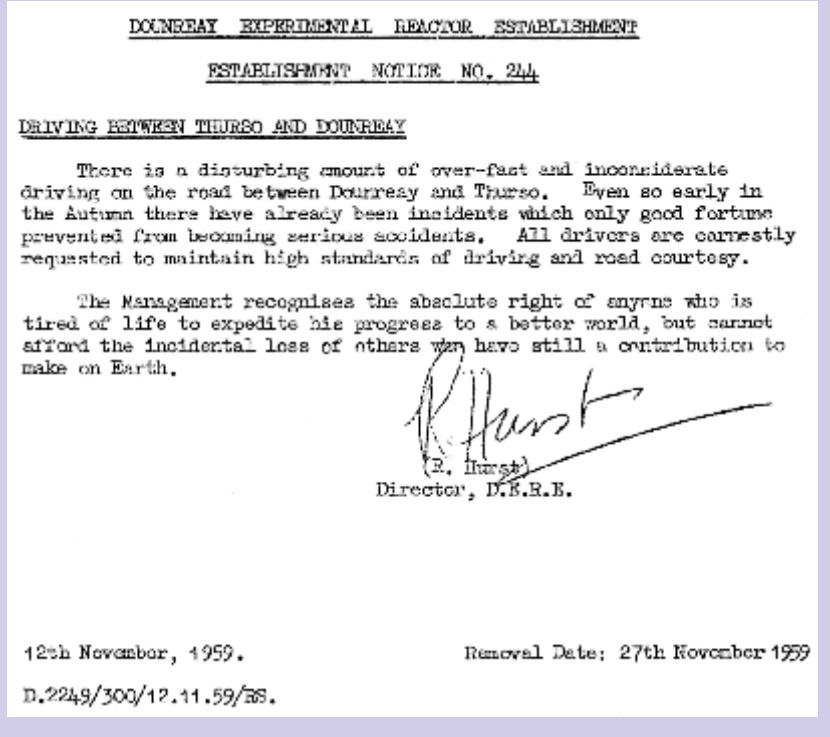
To complement the photo library, DSRL also has an account on Flickr, the online photo sharing website.

Selected photographs from the online library will be posted onto Flickr at 'Dounreay Photo' as a taster, with viewers encouraged to visit the online photo library for more.

Dounreay Photo can be found at: <http://www.flickr.com/photos/dounreay>

# Road rage ~ 1959!

**Don Ryan**, ex-UKAEA, sent in this memo written by Dounreay's first director, **Robert Hurst** in November 1959 on the subject of road manners while driving between Thurso and the site. Just goes to show that there is nothing new under the sun. ○



## Answer to Winter word search



Hidden message: O Little Town of Bethlehem

### Answers to Dounreay Anagrams

- |                      |                    |                     |                   |
|----------------------|--------------------|---------------------|-------------------|
| 1. Miriam Sutherland | 7. Philip Colville | 13. Davie Alexander | 19. Stuart Tod    |
| 2. Gordon McIntosh   | 8. Mike Brown      | 14. Alex Anderson   | 20. Steve Strange |
| 3. Tony Wratten      | 9. John Deighan    | 15. Jillian Bundy   |                   |
| 4. Simon Middlemas   | 10. Simon Coles    | 16. Graham Cameron  |                   |
| 5. Sue Thompson      | 11. Charlie Fowler | 17. John Sibbald    |                   |
| 6. Alan Scullion     | 12. Alex Potts     | 18. Eddie Simpson   |                   |

