

# **DOUNREAY NEWS**

## **Landfill 42**

**- the beginning  
of the end?**

**- page 3**

**Rare flower  
relocated**

**- page 5**

**Apprentices  
graduation  
ceremony**

**- centre pages**

**New boys  
on the block**

**- page 10**



## ON THE RECORD

by **Simon Middlemas**  
DSRL Managing Director

This month, the *John O'Groat Journal* published the 2011 *Decommissioning Dounreay* supplement.

Looking through its pages, I'm sure it will remind you of all the good work that has taken place in the last twelve months at Dounreay.

It's surprising how quickly we forget what we've achieved, as it becomes the past and we push on with our focus firmly on the future.

But it's worth taking a bit of time to sit down and read about how the site has changed; the buildings that have gone, the projects that were successful, and the things that we are still working towards achieving.

It also makes you realise how far we've come, and how we're beginning to break the back of the decommissioning.

It brings even closer the day when the site is locked up and the handful of people still working at Dounreay walk away for the last time.

That day is not as far off as you may think.

Remember when getting rid of the NaK in DFR seemed to be an impossible hill to climb? We're now within a hundred batches of the end.

Remember when Dounreay's legacy seemed destined to be contamination of this beautiful county's beaches? We're cleaning up the seabed and beaches now.

Remember when we had an uneasy relationship with our regulators? They recognise our improving attitude and performance, and are happy to go on the record to say so at the Dounreay Stakeholder Group.

That hill to climb still looks as big as ever, but I'm sure that after you've thumbed through the pages of the *Decommissioning Dounreay* supplement you'll feel justifiably proud of yourself and your colleagues, and ready to take on the challenge of better, safer, cleaner, cheaper work once more.

# H&S roadshow well attended

The site's annual Health and Safety week was held in September. The theme this year was industrial safety. There were presentations and a static stand produced by SAP working at height **Brian Miskelly**, SAP electrical **Ian Mackay** and SAP lifting **Stuart Hamilton**.

The roadshow visited both reactors, the FCA and the Welcome Break. Everyone was invited to participate in a health & safety quiz. Most of the answers could be found by studying the stands, or by asking the presenters a few shrewd questions. There were winners picked from each area visited by the roadshow. First prize was an Antler flight trolley bag, and second prize was a Power Monkey charger. ○



The prize winners

### The winners of the prizes were:

#### FCA:

- First - George Trueman
- Second - Luke Bunch

#### Main Site:

- First - Esther Gunn
- Second - Janice Grant

#### DFR:

- First - Dougie Mackay
- Second - Stuart Anderson

#### PFR:

- First - John Simpson
- Second - Robert Falconer



Send your stories to the editor at:



sue.thompson@dounreay.com

# Landfill 42 work ahead of schedule

**DSRL may soon be able to surrender its landfill licence.**

The future of the site's licensed inert waste disposal facility, Landfill 42, has been the subject of detailed discussions between DSRL and its regulators over the last few years.

Now DSRL is proceeding to install an engineered cap which will sit over the area and protect people and the environment alike from future interaction with the contents of the landfill.

The first stage of the work – the re-profiling of the site to make it suitable for capping – was completed at the end of August, eight weeks ahead of time and below budget.

Contractors MM Miller worked with DSRL staff to move 50,000 tonnes of material, as the edge of the landfill was pulled back ten metres from the coast.

The top of the re-profiled mound has been sloped to direct rainwater to an extensive network of drains which will carry water away.

Once the re-profiling was completed, Nuvia carried out a full surface radiation survey using the Groundhog.

In the next stage a high density plastic membrane will be installed and covered with a drainage layer of man-made geo-composite

material, held in place by layers of crushed rock.

Lorry loads of armour rock from the nearby quarry at Sandside were being brought in to protect the side of the landfill facing the sea.

DSRL involved Scottish Natural Heritage in the design of the final surface of the landfill cap. SNH suggested that DSRL cover the landfill with a finish suitable for ground-nesting sea birds, such as gulls, oystercatchers and terns.

DSRL will submit an application to SEPA to surrender the landfill licence, following a period of monitoring. ○



## News in brief

### National nuclear archive event held

On behalf of the NDA, DSRL held a small scale planning event for the national nuclear archive, which took place in Wick on September 29. The outline planning application is due to be submitted early next year.

The NDA has commissioned an independent expert review of information management practice at Sellafield and the wider NDA estate, due to be completed by the end of the year.

The resulting paper will cover issues such as the amount of material to be archived, and retention schedules. It will be considered by the NDA Executive this financial year.

### How preparing for the worst is good business sense

Last year DSRL's executive team instigated a project to develop and deploy business continuity management plans (BCM) at Dounreay. A team led by Alan Scullion developed BCM plans with the help of over 50 staff and contractors. The plans went live in September.

One in five UK companies experiences a significant disruptive event every year. And today's economic and business climate doesn't help.

If an organisation is unable to manage a disruption effectively, the situation can rapidly turn into a crisis and the organisation may fail.

BCM is about anticipating the kind of things that can go wrong and damage a business, and being ready to take planned and rehearsed steps to protect the business and stakeholders' interests.

The new BCM arrangements will make DSRL more resilient to misfortune, and better able to recover when it strikes.

### Tony Fountain to leave NDA

The NDA announced on September 20 that their CEO, Tony Fountain, will be leaving the NDA in October to pursue his career back in the oil and gas sector.

Mr Fountain joined the NDA in October 2009 following a 25 year career at BP.

NDA Chairman Stephen Henwood said on the NDA's website today: "Tony has made a huge contribution to the NDA's achievements over the last couple of years. He has reshaped the organisation to become more delivery focused, and under his leadership considerable progress has been made in our mission. We are disappointed to be losing him and wish him every success.

"The NDA's mission remains one of the most exciting and challenging roles in the public sector and we look forward to finding a suitably experienced and skilled successor, a process that has already begun." ○

## News in brief

### SEPA publishes Fukushima fall out data

Scotland's environment watchdog has published a detailed report on the radiation linked to Fukushima that was detected in Scotland earlier this year.

The Japanese nuclear plant was crippled by the earthquake and tsunami in March.

SEPA increased its comprehensive monitoring programme for radioactive substances after an air sampler in Glasgow reported trace levels of iodine-131 in the air. Air samplers at Dounreay also recorded minute amounts of iodine-131.

The report is a comprehensive list of data generated by the additional sampling. SEPA expects that a UK-wide report will be produced later in the year which will include data from SEPA, the Environment Agency and the Health Protection Agency.

A spokesman for SEPA said: "This report provides the information that allowed SEPA to conclude that the concentrations of iodine-131 posed a negligible risk to human health."

### NDA publishes industry guidance on storage of higher activity waste

The Nuclear Decommissioning Authority has issued national guidance about the storage of higher activity wastes at its sites, including Dounreay.

The guidance aims to standardise arrangements and to establish good practice for storage of this type of waste during the next 100 years or longer.

The guidelines will be "road tested" for a year and will be refined and adjusted in the light of feedback.

National policy for the long-term management of this type of waste changed in Scotland recently, from deep geological disposal in a UK repository to near-site near-surface storage.

### Supercompactor out of action

The supercompactor unit at the Waste Receipt, Assay, Characterisation and Supercompaction facility (WRACS) has been put out of action due to a plant breakdown, and is likely to remain inoperable for some time.

Drums of solid low level waste will continue to go through the process of assaying and characterisation of their contents, but will then be stored awaiting a resumption of crushing operations.

The supercompactor, which exerts a force of 2,000 tonnes on the drums to compact them to around a fifth of their original size, is made by Dutch firm, Fontijne. ○

# Re-cans on course for Christmas target

Re-canning the out-of-reactor breeder fuel is keeping the D2001 project team very busy.

They completed a three-year programme of de-cladding the slugs last year, and now their task is to prepare the fuel for one of two options – storage at Dounreay or transportation to the UK's national fuel stocks.

They are re-canning the slugs in uranium re-can tubes, which makes them compatible for acceptance at Sellafield.

The fuel pieces, or 'slugs', are about the thickness of a broom handle and 15cm long. Uranium is very heavy and each fuel slug weighs 2.3kg.

The team consists primarily of DSRL, Nuvia and NDSL staff. They have also received help from other on-site contractors, which they gratefully acknowledge.

Nuvia's **Malcolm Ness** handles the manipulator with the deftness borne of long experience. Using

the robotic arm, he loads two slugs into the top of a re-can tube sitting in the hydraulic crimping machine. It is canted at an angle to protect the re-can from the weight of the slugs.

Once the open end of the re-can is crimped closed, Malcolm lifts it out and slots it into a measuring tube to ensure that it hasn't been damaged or deformed by the crimping process. It is then weighed and the weight recorded.

It's a laborious process, but the operators average four filled re-cans per day.

Project manager **Colin Paterson** explains that the in-cell equipment was designed on site and manufactured in the facility's workshops.

"We've tried, as much as possible, to manufacture all the re-canning equipment in-house. We

required custom made equipment for the job and everyone had a say in the final design," he says.

"The in-cell equipment is working very well and should see the project to completion.

"We met our PBI in July for installing and commissioning the equipment."

Thirty-six re-cans are packed into a 'hybrid' crate, which in turn goes inside a 'hybrid' drum.

The 'hybrid' drums, so called because they open top and bottom so they can be loaded and unloaded by different facilities, were designed by the breeder team at DFR and earned them first prize in the Dounreay Director's Safety and Innovation Awards.

"Our next PBI is to produce four crates of re-canned fuel by Christmas," says Colin. ○



# Rare flower sparks relocation project

The new LLW facility team have ensured the survival of a rare and fragile plant

The northern shores of Caithness, Sutherland and Orkney are home to the Scottish primrose, *Primula scotica*, a tiny flower that prefers the relatively mild winters and cool summers that the north coast provides.

Its recorded sites have decreased significantly over the last sixty years. One such site is Dounreay, lost in the 1950s to the fast reactor research programme.

As the site is being demolished and returned to nature, great efforts are being made to encourage endangered species to return, and to protect existing areas of rare species from further destruction.

When the new low level waste facility was being designed, the team carried out an environmental impact assessment as part of the planning permission. It identified significant populations of Scottish primroses.

DSRL project manager **Graeme Morgan** explained: "We have designed the new facilities to avoid, where possible, the main clusters of Scottish primroses.

"Where the buildings are likely to have a negative impact on these flowers we decided to relocate 2,000 plants that were most at risk.

Local botanical field worker **Karen Ball**, of KB Environmental, carried out the relocation.

"The Scottish primrose is an endemic species of international importance because it only grows here in Caithness, Orkney and Sutherland," she said.

"This site is one of the most significant populations of Scottish primrose in Caithness and as a result of the translocation project, the populations which were threatened by future construction works are now relocated within a protected habitat zone further east along the cliff top."

The plants were carefully removed in the turf, repositioned in another area of coastal heath, and watered to ensure they had the best possible start their new home. They have also been fenced off to prevent them from accidental damage during the construction.

The team kept Scottish Natural Heritage informed throughout.

SNH area officer for Caithness, **Tom Kellett**, is delighted that DSRL has invested in the future of this fragile and beautiful little flower "*Primula scotica* typically



Environmental advisor Simon Cottam, Karen Ball & TV naturalist Mike Dilger

flourishes on the cliff tops which are frequently subject to salt spray, and within grazed areas which help prevent taller vegetation out-competing this tiny plant," he explained.

"This fragile species is sensitive to pressures of development and changes in climate and habitat. We are therefore very pleased at the commitment of the Dounreay team to protect this population throughout the decommissioning works." ○



## Primula scotica

The Scottish Primrose occurs only in Caithness, Sutherland and Orkney – its total world distribution. It is a national Biodiversity Action Plan (BAP) identified species. It mainly occurs in coastal heath. The plant has a basal rosette of leaves from which a single flower stalk arises. Rosettes are recognisable and countable from April to late September. Flowers may, or may not occur on a rosette, but usually some flowers are seen in April/May and again in July/August.



# Information room opens on site

A room dedicated to telling the story of life beyond Dounreay has been opened on site.

It's designed to give the workforce a better understanding of the work being carried out by the Caithness and North Sutherland Regeneration Partnership (CNSRP) to develop a new economy for the area. Its first visitor was the NDA's new head of programme **Nigel Lowe**.

The information available includes the potential £6 billion of work to develop the Pentland Firth and Orkney waters which will generate hundred of jobs. The Dounreay socio-economic alliance, (the NDA, Babcock and DSRL) work together to support the activities identified in the CNSRP programme.

DSRL boss **Simon Middlemas** said "The Dounreay

socio economic alliance is working well since we took forward the socio economic partnering charter and through it we have already delivered a number of CNSRP programme activities."

"Through discussions with staff working on the site, it was evident that people are not aware of the work being undertaken to develop the area and the information room should provide some comfort to those wondering what their future may hold.

"There has been a lot of hard work going on through the CNSRP and you just have to look at the exciting new development at Scrabster harbour, the new builds at the North Highland College and the ambitious Chamber of

Commerce project *Make the Right Connections* to see that real progress is being made."

Nigel Lowe, said: "The NDA has a socio economic remit and takes this very seriously, especially in areas such as Caithness where traditionally Dounreay was the linchpin of the economy and the reason we have supported these important local projects.

"As someone who has just moved to the area, the information room gave me an overview of the work being done by the CNSRP and I welcome the innovative approach being taken here to communicate this to everyone working on the site.

"For the NDA, the Dounreay workforce is our priority and we are

keen to provide re-assurance that we will continue to do as much as we can to help the local regeneration effort. There is still a long way to go and I look forward to working in partnership with the PBO and DSRL going into the future."

The information room, located next to the Welcome Break (previously the bank office), will be updated on a regular basis. A programme is being developed to invite members of the CNSRP and others to come to site to talk to staff about the progress being made and new opportunities that may be identified.

**Please go and visit the information room leave your feedback in the visitor book.** ○

From left: Nigel Lowe (NDA), Simon Middlemas (DSRL) and Eann Sinclair (CNSRP)



# What will stay and what will go

Demolishing a redundant nuclear site like Dounreay creates a lot of radioactive material. So where will it all end up?

Most of it will remain at the site indefinitely, says **Alex Anderson**, DSRL's head of waste and fuels, but a small amount is possibly destined to leave over the coming months and years, because it belongs to other people or because it could be used again to make electricity.



## How much radioactive material is there at Dounreay?

Cleaning out and flattening the site will yield about 300,000 tonnes of radioactive waste and about 100 tonnes of nuclear fuel. Nuclear fuel can be used again but radioactive waste cannot.

## Why is there so much more waste than fuel?

Waste includes all the everyday industrial equipment, materials and buildings that have been contaminated by coming into contact with nuclear materials.

## What is the difference between fuel and waste?

Fuel is uranium or plutonium that is fissile. This means it can react with great energy if enough of it comes together in a "critical mass". This is what happens inside nuclear reactors.

Fuel that's been burned in a reactor is called "spent fuel". Typically, only about three per cent of the fuel has been spent, so the rest of the material can still be used if it's reworked.

Waste originates when spent fuel is recycled and accounts for about three per cent or so of the fuel that's been used and can't be used again.

## What about security?

All radioactive materials attract a level of security protection according to the type of material it is. Nuclear fuel has the potential to cause a nuclear reaction, so generally it carries a much higher level of security than radioactive waste.



## What will happen to it all?

It would take 9,000 or so separate transports to clear the site of all the radioactive waste.

The waste will stay at Dounreay now, apart from a few hundred tonnes belonging to foreign customers and some material that may need specialist treatment elsewhere.

The exact amount will be known

once the Scottish and UK governments decide if any of the foreign waste can be exchanged. There could be as few as 22 transports abroad or as many as 200.

If all the fuel goes, it would need probably 100-200 transports.

So, of the 300,000 tonnes we need to manage here, the amount that needs to leave is likely to be less than a thousand tonnes, and most of that would be leaving because it belongs abroad and cannot remain here under government policy about the return of waste.

## When will transports start?

Fuel has been leaving the site for several years in small quantities. As more facilities are demolished, decisions taken now will decide how the site looks when decommissioning is complete.

Almost half the fuel still at Dounreay comes from the experimental fast breeder reactor dating from the 1950s. The NDA has asked the site to be ready in 2012 to start returning this to national stocks. Other fuels may follow, but no decisions have been taken yet.

Waste belonging to foreign customers is ready now to be collected under UK Government undertakings about the return of overseas waste.

## Could it all stay at Dounreay.

Yes. The expertise exists to manage it safely. The NDA would need to invest in additional buildings and security in the long term.

## How will it be transported?

It depends on the type of material and the container being used to transport it. These are determined by standards drawn up by the UN's International Atomic Energy Agency.

In general, transports are by sea, road and rail.

## Will the public be informed?

The only information the industry



cannot disclose is detail which might compromise the safety of any particular movement, such as precise routes, timings, quantities and security arrangements.

## Is it safe?

Yes. The containers are designed to remain intact in the event of a mishap, such as a road traffic accident. Radioactive materials are moved routinely in the UK every day.

## What other transports are needed?

Radioactive particles will be transported to the site from the seabed and local beaches for so long as the particle recovery and monitoring programme continues.

Some equipment needed to decommission particular facilities contains radioactive sources that need to be sent for calibration and re-certification.

Some lightly radioactive materials, such as lead bricks, mercury and sodium, might be removed for recycling or specialist decontamination elsewhere.

Samples such as soil, concrete and graphite are sent to specialist labs for characterisation and independent verification. ○

# DSRL PBO competition update

Bidders submitted their tenders in late August, and tender assessment is underway by NDA.

The winning bidder (the "preferred bidder") is expected to be announced by NDA on November 23, 2011. You will be advised by broadcast message as soon as Simon Middlemas is notified by the NDA.

The preferred bidder is expected to be on site from mid-December for the transition period, which will finish on April 2, 2012 when the DSRL shares are transferred to the preferred bidder. It is only at this point that the

preferred bidder becomes the new parent body organisation (PBO) and the new PBO personnel take over from the current PBO personnel.

Thank you to the 355 people who completed the online survey to say what they would most like to hear from the preferred bidder when they first come onto site. The results will be published on the intranet and will be passed to the NDA for the preferred bidder.

The presentation given to staff in August and an updated Q&A brief

are available on the Intranet under Useful Pages/DSRL PBO Competition.

The competition rules found on the same pages continue to apply until the announcement of preferred bidder. Information rooms will be available in October – these will allow further discussion and questions on the transition period. Details of dates and times will be provided separately.

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, bidders or anyone else to carry out any work connected with the competition. ○

# Graduation day for apprentices

This year's batch of Dounreay's newly qualified skilled workers were encouraged to make the most of the exciting opportunities and challenges ahead.

Giving her keynote speech at the annual prize giving ceremony in August, Lord Lieutenant of Caithness, **Anne Dunnett**, talked about her own ambitions to succeed as a solicitor when she too completed her apprenticeship against the odds.

She was speaking at the awards ceremony of Dounreay's apprentice training programme when she presented certificates of indenture and achievement trophies to the latest group of young people to qualify in electrical, mechanical and instrument crafts.

Anne congratulated the

apprentices for all their hard work and achievements and explained: "I'm living proof that with enough determination and ambition you can succeed. I was considered a relatively late-starter for my chosen profession and as I already worked within the legal profession as a Sheriff Officer I had to overcome the system to qualify as a solicitor at age 35.

"Practical work and experience really counts and you have to stick with your ambitions and work very hard to thrive in these difficult and uncertain times.

"You are a credit to your company, the NDA and its

contractors. Keeping the skills in the area is something we should all be very proud of, not just your friends and family who are gathered here tonight. It's a great opportunity for young people and you should be congratulated for seizing the chance to better yourselves."

A new generation of skilled workers will be needed to make the most of the investment prospects the county is being offered as Dounreay's impending closure looms.

"We need to take what's on offer and grasp the hard work and challenges that we face to make

sure we develop new major industrial opportunities in the area within the marine energy sector," explained Dounreay's managing director **Simon Middlemas**.

"This is one of the best days of the year for us and is just the beginning. Don't believe the cynics, the North Sea runs on Dounreay apprenticeships and the county is proud of you all.

"We wish you every success now and with your future careers beyond Dounreay."

DSRL is working to help the local economy retain the high-quality training when it's no longer needed by the site. ○



DSRL & JCL indentured apprentices with Anne Dunnett



DSRL indentured apprentices with Anne Dunnett and Jim Swan



JCL indentured apprentices with Ali Mackay, Vi Blumfield and Will MacIvor



Chris Harvey with the Lachie Macmillan trophy, Vi Blumfield, Simon Middlemas and Duncan Carruthers with the Dounreay Director's Trophy

# Graduation day for apprentices



Anne Dunnet



Jim Swan



Four years ago when they began their apprenticeships



Simon Middlemas



Adrian Mackay (DSRL)



Martin Sutherland (DSRL)



Christopher Harvey (JCL)



Stuart Ramsay (DSRL)



David Crawford (JCL)



Neil Macdonald (JCL)



Kris Hamilton (DSRL)



Matthew Sutherland (DSRL)



Steven Blackwood (DSRL)



Jamie Spargo (DSRL)

Well over a thousand people have served their time as apprentices at Dounreay. When the site shuts down there will be highly trained professionals to continue the legacy of Dounreay's skilled workforce to develop the county's new industrial opportunities.

# New boys on the block

Last month Dounreay welcomed its newest additions to the apprentice training scheme.

*Dounreay News* caught up with the keen new starts who are raring to go and looking forward to almost everything Dounreay has to offer – with the exception of the early mornings it would seem.

“I’m looking forward to the Locheil Course and getting to know everyone better.” said **Sean Milligan**.

“I’m looking forward to working on site and learning from qualified electricians although not looking forward to the early morning starts,” explained **Arran Henderson**.

**Brian Sutherland** told us he’s looking forward to getting hands on experience in the workshops and **Donald Spence** told us how he’s not looking forward to the long bus journey into work but is looking forward to working alongside

craftsmen and learning a trade.

**Brian Wade** added: “The outward bound course, sponsored walks and Dunnet Forest will provide a fun environment to develop and build friendships and I’m looking forward to getting into the workshops and learning from the tradesmen.”

“I’m looking forward to starting college and working on site in the workshops.” said **Darryl O’Sullivan**, and **Liam Elder** went on to add: “I’m looking forward to having the freedom of being a working man and being paid rather than being at school.”

However, he too told us he’s not looking forward to the early mornings that go with it.

Wakey wakey boys! ○



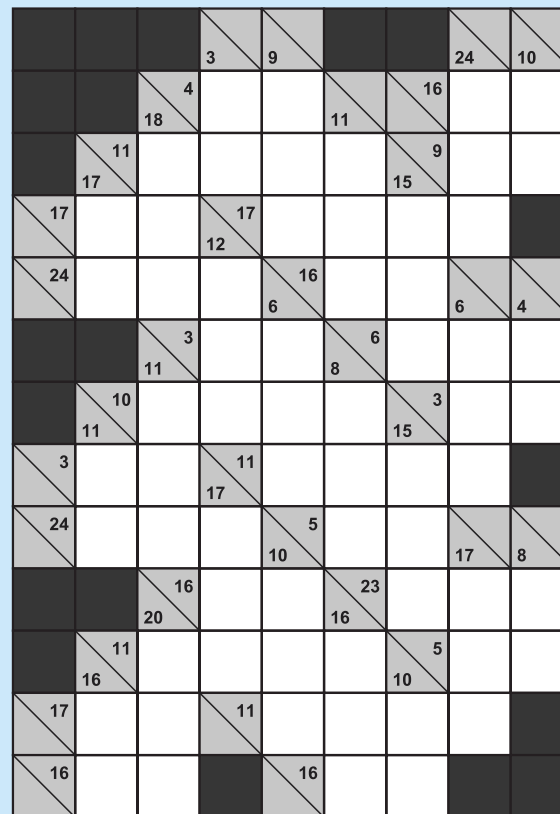
Pictured on their first day on site are, from left: Liam Elder, Brian Sutherland, Donald Spence, Sean Milligan, Arran Henderson, Brian Wade and Darryl O’Sullivan.

## 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. ○

October	Course Title	Venue
3	Forklift refresher	Ormlie
3	Pressurised suits	Dounreay
3-5	Lift supervisor	Ormlie
4	Site induction	Dounreay
5-6	Windmills workshop	Naver
5	Basic rad induction	Dounreay
5	RMC training	Dounreay
6	Confined space operator	Dounreay
6-7	Overhead crane novice	Ormlie
7	Emergency first aid	Dounreay
10-13	Counterbalance novice	Ormlie
10	Confined space operator	Dounreay
13	Radiation worker	Naver
17-20	Counterbalance novice	Ormlie
17	Excel training	External
18	Site induction	Dounreay
19	Basic rad	Dounreay
21	Emergency first aid	Dounreay
24-26	Slinger/signaller	Ormlie
24-27	Appointed persons lifting	Ormlie
25	Site induction	Dounreay
26	Environmental awareness	Dounreay
27	Environmental management	Naver
27	Temporary containment	Naver
31-3 Nov	IOSH – managing safely	Naver

## Kakuro puzzle



This is a little like a number crossword – instead of clues for each vertical or horizontal set of white cells, you are given a number which shows the sum for those cells. Thus a number '5' above two cells will tell you those two cells must sum to '5'. You cannot use the same number more than once in each run of cells, so for instance if you were required to make '6' from two cells, you could not use '3' and '3'. There is one solution to each puzzle that you can reach through the use of logic alone. ○

Answers in next months issue

# + OHD BULLETIN +

## Fight the flu this winter

Most of us will probably have a cold this winter and some of us may have flu.

Colds and flu are caused by viruses that can be spread rapidly through droplets that are coughed and sneezed by people who are carrying the virus.

Although cold and flu viruses primarily spread from person-to-person contact, the viruses can also be transferred from contact with contaminated surfaces.

Flu symptoms can hit quite quickly and severely. They usually include fever, chills, headaches and aching muscles and as flu is caused by a virus and not bacteria, antibiotics are not effective in treating the symptoms.

The best way to avoid becoming infected with a cold or flu is to wash your hands frequently with soap and water or with an alcohol-based sanitizer.

Anyone can get flu, but it can

be more serious for certain people such as people aged 65 or over, people who have a serious medical condition, and pregnant women.

If you are in one of these groups then you may be more vulnerable to the effects of seasonal flu (even if you're quite fit and healthy).

To ensure you are protected, it's important to be vaccinated against the flu every year because the flu viruses are always changing. Usually around autumn is recommended.

If you think that you may need a flu vaccine, check with your GP or contact OHD on x2184 for further information.

If you have a cold or flu the best advice is to try to rest, eat well, avoid stress and keep well

hydrated.

If you have a fever, you may need extra fluids. Drink lots of water and fruit juices to keep you hydrated.

You could also use oral paracetamol to treat fever and pain. Inhaling steam with a decongestant in it is great for helping clear a blocked nose. The decongestants help to reduce swelling inside your nose so you can breathe more easily.

If you are feeling unwell or have forgotten to bring your decongestants, do not hesitate to contact OHD as we have some available.

People tend to eat fewer fruits and vegetables during the winter months, which is the opposite of what we should be doing.

Everyone needs at least five

servings of fruit and vegetables every day to get adequate vitamins, minerals and antioxidants – all things we need for a healthy immune system. Make sure fruit and vegetables are part of every meal.

Other foods that boost your immune system include lean meats, fish, poultry, low-fat dairy, whole grains and seeds. A healthy body tends to have a healthier immune system.

**OHD can now be contacted by email so if you wish to make a non-urgent appointment, reschedule an existing appointment or for any other query, please email OHD/DSRL/DOUNREAY. To contact OHD by telephone, please call x2184.** ○

## Data collection in the spotlight for LLW

A reduction of up to £2.4 billion over the decommissioning lifetimes of nuclear sites could be one of the many benefits from increased levels of recycling, combustion, super-compaction and other measures for dealing with radioactive low level waste (LLW), a recent meeting was told.

The NDA is keen to see sustainable options used for the management of LLW, to minimise landfill and storage costs.

The measures are among those recommended in the UK Strategy for solid LLW, published by the NDA last year.

Representatives from the SLCs, regulators, English and Scottish Governments, the Welsh Assembly, the MoD and EDF were gathered for the latest LLW programme delivery group meeting, which discusses progress on implementation of the strategy.

**Jo Van Straaten**, the NDA's national programme delivery

manager for waste told the meeting in Bristol that accurate waste forecasts would be an important part of the strategy.

"Collecting information is a challenge in itself," said Jo, who chaired the meeting.

Delegates at the meeting also heard how the Site Licence Companies (SLCs) were addressing LLW arising at their sites.

Magnox, which operates a number of incineration units, for example, is considering on-site disposal while work is under way at Dounreay on a LLW repository. Dounreay was also developing a software system to track and

manage waste activities that could be used at other sites.

RSRL, which operates Harwell and Winfrith, was working on re-characterising waste and reviewing route options for combustibles and alternative landfill facilities.

Sellafield plans to implement combustion and alternative landfill facilities now that their revised site authorisation had been issued.

Information about the UK nuclear industry LLW strategy, previous and future integrated LLW programme delivery (iLPD) group meetings can be found on <http://www.llwrsite.com/llw-strategy> ○

**CATCH IT** – germs spread easily. Always carry tissues and use them to catch your cough or sneeze.

**BIN IT** – germs can live for several hours on tissues. Dispose of your tissue as soon as possible.

**KILL IT** – hands can transfer germs to every surface your touch. Clean your hands as soon as you can.



# £4m community fund gets under way

A new company has been set up to distribute £4m worth of funds from the NDA for community projects in Caithness & north Sutherland.

The community benefit fund is linked to the construction of a low level waste facility soon to be built at Dounreay.

Caithness and North Sutherland Fund Ltd was established with assistance from the Dounreay Stakeholder Group. There are seven directors: three Highland Councillors - **David Flear, John Rosie and Robbie Rowantree** - and four appointed directors with expertise in community and economic development - **Koreen MacDougall, John Henderson, Shona Munro and Frances Gunn**.

Since their appointment in late 2010 the directors have been working with DSRL on behalf of the NDA to establish the company and its working arrangements, ensuring the community makes the decisions on how the funding is spent.

The fund will provide a total of £4m to community organisations for projects that will increase the attractiveness of Caithness and north Sutherland as a place to live, work and invest. There will be particular emphasis on achieving

environment, social, culture and infrastructure improvements.

The fund directors invited primary school children in the community to design a logo which symbolises the fund's core purpose and mission. **Catriona Mohr**, a P7 pupil at Keiss primary school was chosen as the winner as the directors thought her design captured the fund's mission.

Fund chairman **John Henderson** explained: "The funding is for our community, so the directors wanted to invite the young people in our community to design a logo symbolising what they believe the funding will do for the area. A good response was received, but one design stood out from the rest.

"The directors, the NDA and DSRL have done a lot of work over the past few months to prepare for the launch of the fund later this year."

**Maureen Miller**, acting cluster head teacher at Keiss primary school, said: "We were all delighted that Catriona's design won. Catriona won £50 of Argos vouchers, and the school received an Xbox console which all the



Catriona receiving the prizes from Caithness & North Sutherland Fund directors Koreen MacDougall and John Henderson with the pupils from Keiss primary school.

pupils will benefit from. Hopefully many more in the community will benefit from this fund."

Directors **John Henderson** and **Koreen MacDougall** presented Catriona with her prize and the school with the Xbox console.

The fund will be launched in October 2011, before construction work starts later in the financial year. ○

The NDA will start the fund off with £1m at the start of the construction phase.

From 2014 to 2023, the fund will receive an annual amount of £300k, to coincide with the operational phase of the low level waste facility.

## Sub-sea monster powers up

Electricity is flowing into Scotland's national grid for the first time from a commercial-size tidal turbine.

The 1MW device is the fore-runner of a new power station on the seabed off the coast of Caithness.

Atlantis Resources Corporation, the international marine energy developer, connected its AR1000 tidal turbine to the grid at the European Marine Energy Centre in Orkney.

It's Scotland's first grid-connected, commercial-scale tidal turbine, marking a crucial milestone in the development of the marine energy industry.

The AR1000 is the world's most powerful single-rotor tidal turbine. Standing nearly 23 meters high and weighing in at 1,500 tonnes, it's one of the largest turbines ever built.

The three-blade turbine will be tested over the next two years, before being rolled out commercially through the MeyGen project in the Pentland Firth.

**Tim Cornelius**, CEO of Atlantis, said: "Marine energy enters the next phase of its evolution in great shape.

"I want to thank the huge ecosystem of technology partners, suppliers, contractors and industry figureheads who have supported us to date."

The project is one of the biggest of its kind and could provide electricity for 400,000 homes, purely from the power of the tides off Caithness. ○



## STEM contract boost

Young people taking qualifications in science, technology, engineering and maths are getting a boost from HIE and the University of the Highlands and Islands.

HIE has scooped a new 45-month contract with STEMNET, a national organisation that creates opportunities to inspire young people in the subjects.

The new arrangements will see HIE continuing to expand its successful STEM ambassador programme and entering into partnership with UHI.

More than 500 STEM ambassadors from businesses and organisations in the Highlands and Islands,

including Dounreay, volunteer their time to inspire and enthuse young people, sharing their own experiences and helping to bring STEM subjects alive.

UHI is recruiting a STEMNET coordinator whose role will include providing resources and information to teachers which supports the STEM curriculum and encouraging them to incorporate STEM ambassador activities into their teaching.

The contract, which runs until March 2015, complements the local pilot project in four local high schools (Wick, Thurso, Farr and Golspie) to enhance the teaching and learning of STEM subjects. This pilot project has been jointly funded by HIE and DSRL. ○

# OFF THE RECORD

by Marcus Mennie  
**Make the Right Connections Co-ordinator**

**Make the Right Connections is a transformational £2.3m programme. It will redefine the skills mixes within the Dounreay workforce and local supply chain. It will help to retain skills in the area, and adapt workforce capabilities. It will boost employment and generate new enterprises in the region. It will help local supply chain businesses diversify into new sectors.**

**OBJECTIVE 1: Support Dounreay supply chain to redefine their capabilities to fit emerging opportunities**

To realise this objective, a considerable amount of engagement has taken place between the Chamber of Commerce and a number of the supply chain business, and the work done in this area will be promoted through the Caithness Chamber of Commerce's *Invest Caithness* website

**OBJECTIVE 2: Market the redefined skills to attract inward investment**

From the information gathered from the participating companies, we are producing a company CV which will be promoted through the chamber of Commerce's *Invest Caithness* website. The website is being used to promote Caithness in the five key sectors where we anticipate future growth and employment opportunities - renewables, oil & gas, food & drink, tourism, and business services.

**OBJECTIVE 3: Encourage personal motivation for change**

This programme is aimed at you individually, if Dounreay's

decommissioning will affect you and you want to re-evaluate and review your career development. The programme is designed to help you consider the forthcoming changes and help you develop a plan for the future. It's designed around a two-day workshop, where you are encouraged, through a series of activities, to take a greater level of personal responsibility for your career progression by evaluating your future, focusing on your skills and exploring possibilities for the future.

**OBJECTIVE 4 & 5: Facilitate personal career adaptation and diversification ~Provide extensive, practical career development, re-training and re-deployment**

These objectives are about assisting people gain additional skills and knowledge through those training programmes identified by the individual, as being appropriate to their needs, that will allow and assist them to manage their transition from their current job into an employment opportunity outwith the site or within one of the sectors identified as being key to the sustainability of the Caithness economy.



**OBJECTIVE 6 & 7: Facilitate the repositioning of people into new jobs or enterprises ~Facilitate matching of re-skilled people with new opportunities**

As the project is only in its early stages, these objectives still have to be mapped out into operational activities. More information will be made available as this aspect is developed. ○

#### HOW TO APPLY:

The application process is fairly straight forward.

DSRL employee applications should be sent to **Ros Campbell** at Training at Naver where they will be endorsed and then forwarded on to MtRC for processing.

Applications from other individuals should be forwarded directly to **Christine Miller** at MtRC. All requests should be with the MtRC team at least two weeks prior to commencement of training.



#### Who are we?

Make the Right Connections, Caithness Chamber of Commerce, Caithness Horizons, Old Town Hall, Thurso, Caithness KW14 8AJ  
 Telephone: 01847 896508  
 email: [skills@caithnesschamber.com](mailto:skills@caithnesschamber.com)

This project is led by Caithness Chamber of Commerce and funded through a partnership with:



## “Quotable Quotes”

“I think that what's going on in the UK and in the US shows that we are now making significant progress on this technology. It can't any longer be dismissed as something on the far distant horizon.”

UK Science Minister David Willetts speaking at a meeting in which UK facilities joined forces with a US laser lab to develop clean energy from nuclear fusion. (BBC News)

“The Government plans two new nuclear plants in the South East which would mean decades more of these toxic cargoes passing within metres of houses, schools and hospitals. The consequences of an incident involving the highly radioactive spent fuel rods on these trains could affect hundreds of thousands of people. This is yet another reason why dirty, dangerous and expensive nuclear power is not the answer to climate change.”

Kate Hudson, General Secretary of the Campaign for Nuclear Disarmament, commenting on the temporary suspension of trains carrying nuclear waste past Olympic Park for the duration of the Olympics in 2012. (CND UK)

“This is a significant achievement as it's the first time since 1964 that we've been in a position to safely export nuclear fuel, the majority of which was burnt in the Windscale Piles reactors.”

Sellafield Ltd spokesman Dave Polkey, as Sellafield reaches an important milestone after successfully moving its first nuclear fuel in 50 years (BBC News)

“Many people want to know, if they are, or could be contaminated by radioactive radiation, but not all can purchase a Geiger counter. Let's develop an usable alternative.”

Hans Schorn, director of SpitConsult, talking about the app “Radioactivity-Meter” developed by SpitConsult that turns smartphones into Geiger counters (Open PR)

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



## Almost 300 Primary 7 pupils from Caithness and north east Sutherland schools were immersed in the challenging issues of community safety and crime prevention when they attended Safe Highlanders in Wick in September.

The two-day event gave the children the opportunity to understand the dangers of building sites, try out first aid on a dummy and learn about smoke alarms.

They were also encouraged to think for themselves about the dangers of posting personal information online. They were provided with tips on how to keep

safe and how to get further advice.

The agencies involved in this year's Safe Highlanders were DSRL, Northern Constabulary, Civil Nuclear Constabulary, Social Work & NHS Youth Action Team, Highland and Islands Fire and Rescue Service, Maritime and Coastguard Agency, British Red Cross, G M R Henderson

Contractors, SSCPA, The Highland Council and Fujitsu.

The organisers were grateful for the help of a number of volunteers who escorted the children from one set to another during the event. For the first time this year some S6 pupils from Wick High School also acted as escorts. ○



Trying out their first aid skills on the Red Cross dummies.

Safe Highlanders is part of the Safe Highlanders and Islanders which is a nationally recognised partnership project which received the runner up award in the COSLA Partnership Working category at the inaugural Scottish Government Safer Community Awards 2010. Children following the event become more aware of personal safety, potentially avoid becoming victims of crime, understand how to react to emergency situations and learn more about becoming good citizens.



Children spot areas of the 'building site' where accidents could happen.

## Electrical awards

Congratulations to the 15 people who passed their City & Guild Inspection and testing of electrical installations exams.

Tony Wratten handed out awards to some of those who passed this difficult exam first time.

Another nine people are due to sit the exams later this year. ○



Pictured are – front row: Andy Atkins, Chris Williamson, Susan Green, Tony Wratten, Louise Mclean, James Budge, Douglas Fraser; back row: Alan Morrison, Alex Crowe, Fergus Keddie, Ian R Mackay, Martin Sutherland.

# TOPIC OF THE MONTH



## Control of Litter

The people employed at Dounreay are generally conscientious with regards to litter, says environmental adviser **Simon Cottam**.

The people employed at the Dounreay site are generally conscientious with regards to litter. The site itself and the areas surrounding it are generally clean and tidy.

However, it only takes a few individuals to ignore their responsibilities when it comes to disposing of litter to undo the good work done by everyone else. There have been instances at the site where litter has not been disposed of appropriately and we need to ensure that this does not happen in the future.

Uncontrolled litter is unsightly and visually depressing. It shows a lack of respect for the environment and a lack of pride in where we live and work. Additionally, dropped litter damages property and is hazardous to both people and animals.

The government spends £65,000,000 per year on clearing litter from Scottish local authorities. This cost is absorbed into council tax charges paid by the public.

On top of this is the time and money spent remediating areas that have flooded due to drains blocking from the careless disposal of litter into the environment; and the eradication of disease and pests that spread where litter collects.

This problem is not a difficult one to fix. Dispose of litter appropriately.

### What are the litter laws?

It is a criminal offence for a person to litter. Local authorities, the police and other primary litter authorities can prosecute people who leave litter. The offence of littering is covered in Sections 87 and 88 of the Environmental Protection Act (EPA) 1990.

### What is the scope of littering?

The EPA does not provide a definition of litter or refuse, although the courts have considered the definition to be wide. The EPA defines the offence of leaving litter, as 'anything that is thrown down,



dropped or deposited and left that causes defacement, in a public place'. This accords with the popular interpretation that, "litter is waste in the wrong place."

Litter includes mainly synthetic materials. These are often associated with:- smoking, eating and drinking; items spilt during waste management operations; or items that have escaped from poorly disposed household, commercial and industrial waste. Litter may also include material that will eventually decay such as food waste (including chewing gum) and dog fouling.

### What happens if I am caught littering?

As well as giving rights to the member of the public, the EPA gives powers to local councils to take action against individuals and businesses that create litter, and powers to have areas cleaned up.

Leaving litter is subject to a maximum fine of £2,500. In addition, Fixed Penalty Notices of £50 can be issued by local council staff or the police for littering.

**Uncontrolled litter in the environment is an issue that we can solve. Lets get it sorted!** ○

## Nuclear news

### Ancient Roman glass may hold clues to vitrifying nuclear waste

US scientists have been studying a 1,800 year old shipwreck to understand how glass responds to prolonged immersion in water.

The study is part of international research on glass corrosion.

By studying the glass with an atom probe, the scientists hope it will help them to predict how vitrified waste might perform over thousands of years.

The most likely way for modern glass incorporating nuclear waste to corrode and dissolve is through prolonged exposure to water.

The glass was recovered from the wreck of a merchant vessel, the Iulia Felix, that sank in the Adriatic Sea.

(The News Tribune)

### Germany bracing itself for blackouts

Germany is struggling to provide sufficient energy without its nuclear power stations, critics claim.

The decision to shut down nuclear reactors in the wake of the Fukushima disaster has been heavily criticised by scientists and energy producers alike.

They claim that Germany's renewable energy sector, which accounts for 17% of the country's energy output, is unable to cope with demand for energy unless it is at maximum performance, meaning that the country must import large amounts of nuclear-generated electricity from France and the Czech Republic.

The Germany government estimates that the renewable energy sector could double its output over the next decade.

(The Scotsman)

### 'SLUG' could remove radioactivity from water

US researchers have developed a material that can trap and remove pollutants such as radioactivity from water.

The material, code-named SLUG-26, could be used to treat polluted water through an ion exchange process similar to water softening.

The researchers are focusing on SLUG's ability to trap technetium, which can leach out of solid waste and could contaminate groundwater.

The research may have benefits for long-term disposal of nuclear waste.

(UPI.com)

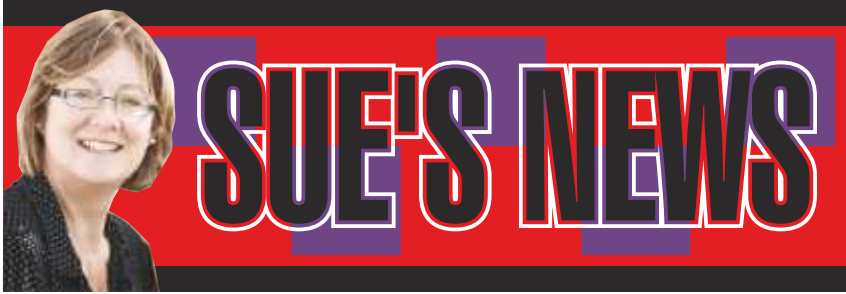
### Swimming robots to check on reactor leaks

US researchers are developing small round swimming robots that could check pipes in nuclear reactors for leaks.

The spherical robots would swim through the pipes, and examine their inner surfaces using a built-in video camera. They would be capable of transmitting live images back to a control panel.

Although the robots would have a limited life span of a few missions, because of the hazardous environment in which they would operate, the researchers are confident that they would be performing a very valuable service.

(Gizmag) ○



In September, DSRL welcomed **Peter Fotheringham**, (Waste technical support), and said goodbye to **Susan Haggarty**, who left to work in Wales.

**Mick Jones** sent in some photos taken during his honeymoon in Mauritius in August. Looks idyllic, Mick.



Congratulations to **Stuart Webster** who graduated from Oxford Brookes University after completing a three-year masters degree in Health, Safety and Environmental Management. through the Woodland Grange.



The Reactors' "gungeing" event took place in September, when **Hilary McGlasson, Gary Brown, Magnus O'Brien** and **Jack McCracken** consented to have a bucket load of slop poured over them. They raised £2,800 for Thurso High School special needs unit, and the Caithness branch of the MS Society.



**John Heathcote**, DSRL's principal specialist in contaminated land, has been appointed the deputy chair of the Soil and Groundwater Technology Association (SAGTA). SAGTA is an association of some of the UK's large contaminated land holders. It promotes good practice in the sustainable management of contaminated land.

The Nuclear Bikers' 1,000 mile bike ride started from Dounreay on September 9, and ended up four days later in Dungerness. They have raised £4,000 so far for the Japanese Red Cross.



## Dave in Dunnet swim for Team Matty

In October Nuvia's **Dave Spencer** will be swimming from Dunnet Head to Thurso in the Pentland Firth, to support his friend and fellow triathlete **Mark Taylor** in the first part of his triathlon quest to raise money.

The swim may be reversed depending on the currents, or switched to a loch if the weather is poor.

Dave will then hand over to **Sandy Christie** who will climb the Three Peak Challenge with Mark. These are the highest peaks in Scotland, Wales and England – Ben Nevis, Snowdon and Scafell Pike. Mark has set a deadline of 24 hours for this part of the endeavour.

Finally, Sandy Christie will hand over to **Lorna Stanger** who will cycle the last leg of the triathlon with Mark; a cycle back to Thurso via John O'Groats which Mark estimates as requiring 3 to 4 days.

Mark won the Shetland triathlon which was featured in *Sue's News* in September, but will need to be extremely fit to complete this challenge.

Dave explains the reason for the gruelling fund raiser: "Mark's brother Matty was seriously injured in Bali in July, and is being treated in hospital in Singapore, where his condition is still critical. Matty had no health insurance as he was between jobs and the costs of the treatment are unbelievable. Just being in hospital costs £1,500 a day. Once he stabilises enough to be returned to the UK the cost alone of that transfer is £75k.

"Mark is raising money to pay for Matty's treatment and hopes that this will encourage people to make sure they have adequate health insurance when travelling abroad. We might criticise the NHS, but some countries don't even give you the most basic of treatment unless you can pay for it."

If you want to help Mark and his family bring Matty home, there are a number of ways you can donate:

- Make a donation at the Picture Box shop in Thurso.
- Go online to <http://helpmattewtaylor.wordpress.com/donate-here/>
- Make a donation at the Dounreay Dose Records Office in D1310.

*Sue's News* will report on the outcome of The Quest. ○



"Team Matty" is, from left: David Spencer, Mark Taylor, Lorna Stanger, & Sandy Christie.

## Answer to Arrow-word Puzzle

Eg An Adder	S	Tribal Emblem	T	Glamour	G	Fever	Polite	C	Arm Joint	W	
	U	N	D	O	More Slothful	L	A	Z	I	E	R
Untie	A	Small Branch	T	W	I	G	Den	V	Foreshadow	I	
Abound	K	System Of Rules	E	Spring Flowers	T	U	L	I	P	S	
	T	E	E	M	Fanatic	Z	E	A	L	O	T
Loutish Person	From A Distance	T	Musical Instrument	F	Discovered	Arouse	I	Capital Of Norway	R	Simplicity	
	Y	A	H	O	O	Penned	W	R	O	T	E
Leg Bone	F	I	B	U	L	A	Salt Water Body	S	E	A	
	B	A	C	O	N	Large Ovens	K	I	L	N	S
Cut Of Pork	R	Corner	E	D	G	E	Doe (anag)	O	D	E	

