

ON THE LEVEL

Edition 21 September 2019

NEWS AND VIEWS FROM THE LLW REPOSITORY

Waste Not: Making best use of our resources

The Waste Hierarchy is a term with which readers of this newsletter should be familiar.

It gives top priority to preventing waste in the first place, but when waste is produced, it gives precedence to preparing it for re-use, then recycling, recovery and finally disposal as the least preferable option.

The hierarchy is applied rigorously to the management of low level radioactive waste, but we also use it when dealing with ordinary waste.

For instance it asks suppliers to cut back on packaging where practicable and ensures re-use is optimised by using the NDA Asset Register offering items no longer required to other NDA estate members. Some examples are relatively simple, such as replacing paper towels with hand driers in toilet facilities.



The Waste Hierarchy

Where waste generation can't be avoided LLWR does more than simply preach the virtues of recycling waste. Its success in encouraging the recycling of radioactive material is mirrored in the recycling of items in everyday use.

There's the obvious stuff, like paper, tins and cardboard with colour-coded recycling stations situated across the Repository Site and at Pelham House.

But the commitment runs much deeper – in industrial and office settings.

So how do we do it? LLWR pays a local

waste management company to remove the vast majority of its recyclables, which are then segregated at a plant in Carlisle.

The company sets its monthly non-radioactive recycling at-source target at 75% as a starting point from which to improve, and Environmental Advisor Sue Trohear and her colleagues are constantly striving to better that figure.

Clean concrete goes to groundwork contractors, to be re-used as aggregate, and plasterboard can be used in gypsum products for agricultural, commercial, domestic and industrial markets across the North of England.

Waste paint is used to power chemfuel generators and waste oil (fleet and machinery) is filtered during every vehicle service until it cannot be filtered any more. It is then made into processed fuel oil (PFO) and used to power ships or as fuel at power stations.

North West Air Ambulance collect our toners and printer cartridges for recycling and profits are ploughed back into the charity.

Redundant wooden sleepers from the Repository's railways siding are burned under a special scheme to generate electricity.

Or they can go to garden centres, landscaping or building merchants, or farmers' co-operatives for distribution to a wide range of approved applications.

"It's cost-effective to recycle," said Sue. "We are on a value mission at LLWR and recycling can certainly be value for money."

But recycling at LLWR is about much more than bottom line costs.

Plastic pollution is a scourge of the modern world, yet plastic waste segregated at source at LLWR can be recycled and



Setting an example: Environmental Manager Simon Hunter

manufactured into a wide range of plastic bags, using specialist plant.

Food waste recycling and glass recycling bins are available and plastic and non-recyclable plastic-lined cardboard cups are being phased out to be replaced by re-usable cups and glasses or compostable alternatives.

Sue named bagged and binned waste from dogs exercised by the public in Pelham's extensive grounds as one of the few items from LLWR that goes to landfill.

"They call me the bin police," she said, as she checked through a bin marked 'non-recyclable' in a Site kitchen, to see if any items had been placed there in error.

"Myself or any member of the team will challenge if we see this happening. And we've now got the cleaners on board, doing the same."

Securing our wildlife

Caring for our 'critters' is not a new concept to LLWR. When a new security fence was erected around the Repository Site in 2016 LLWR went out of its way – literally – to ensure wildlife suffered as little disturbance as possible.

The fence was re-routed to avoid a badger sett that fell across its path. Special tunnels were also incorporated to ensure badgers could roam off-Site.

Similarly, otter slots were constructed across both streams that cross the Site to ensure the

creatures could pass through the Repository unimpeded, and additional slots were placed at 2m intervals so amphibians and reptiles could move freely on and off Site.

"This was a good idea as it avoids inter-breeding on-Site and makes the population more sustainable in the long-term," said LLWR Ecologist Chris Arthur.

Safe and Secure: when our new security fence was erected in 2016, right, full account was taken of the needs of our wildlife.



Industry and ecology in harmony under our capping programme

The Repository Development Programme (RDP) is the largest undertaken in the history of LLWR.

It will span decades, cost tens of millions of pounds and result in the capping of existing vaults and trenches, and of any new vaults built at the Repository. And a key factor throughout its duration will be the environmental impact it has on the Site.

For instance, to help minimise road trips through local villages, clean material from unrelated Site activities is being stored at the Repository for eventual use as capping in-fill. One such storage area is close to a great crested newt breeding pond.

"To comply with the law we have to get a licence from Natural England which will allow us to trap newts, as *below*, and move them to safety," said Chris Arthur, LLWR Ecologist.

"As part of the mitigation, we are enhancing two ponds for them, digging a new one and enhancing the terrestrial habitat. We also have a lot of badger setts on Site and need to make sure that the badgers are not being affected by the development. A lot of monitoring of badger holes is going on to check if they are being used."

Common lizards, slow worms and snakes (adders) have made their home on a hillock on Site known as 'mound one', produced from material carved out when Vault 9 was constructed. But with this material also set to be in-fill for the capping programme, creatures will be moved to a safe place on



Deer friend: image taken on trench cap

Site. Chris is confident that the ecological balance of the 110 hectare Site will not be disturbed by RDP.

"From an ecological perspective, the capping of the vaults and trenches is not a huge problem," he said. "The vaults are made of concrete and full of ISO containers, so are not a habitat. The trench cap is used by some species but it will be replacing like for like, more or less, when the new cap goes on."

"There will be effects of course, from the construction of haul roads, for example, to transport material to where it's needed."

"But a lot of areas of Site will be unaffected and is good habitat, and we've also enhanced a lot of habitat. There is going to be more than enough habitat left for wildlife."

LLWR has in fact reviewed the best way to construct the haul roads from ecological and environmental perspectives to come up with the best routes.

Simon Hunter, Environmental Manager, said: "The plan is to manage ecology on Site whilst delivering the specific requirements of RDP. We are minimising the impact on the environment in the long term."

A Day in the Life

LLWR Ecologist Chris Arthur

8.10am Check old badger setts in RDP stockpiles on Site to monitor usage.



9am Return to office to record results. These are for my personal records but also serve to provide evidence if we face a legal challenge over any of our actions.

9.30am Stakeholder meeting on Site about the replacement of a pre-moulded drain. I'm there to provide any ecological/environmental advice that is required.

10.30am Back to the office to write an Ecology Impact Statement to support a planning application.

Noon Lunch

12.40pm Conduct reptile survey using felt tiles on mound 1, material from which is to be used as in-fill for RDP. Reptiles congregate under these tiles to heat up.

2.40pm Record the survey results in the office.

3pm Continue writing Great Crested Newt licence application to Natural England (to relocate the newts to new home on Site to make way for RDP in-fill material). Survey data, method statements of impact and mitigation, and signpost maps must all be included.

4.20pm Home

Nothing is left to chance

Extensive environmental monitoring programme ensures that safety is always our leading concern

Sixty years of safe working tells its own story about our top priority on the Repository Site. When safety is a factor, nothing is left to chance.

The programme carried out by our Environmental Monitoring team on the 110 hectare Site and beyond is detailed and extensive.

Environmental Advisor James Ridehalgh explained: "As a condition of our Environmental Permit we are required to undertake a comprehensive monitoring programme to look at all potential impacts of site operations.

"Environmental samples are collected from in and around the site on a quarterly basis throughout the year. These are analysed, reviewed and reported to the Environment Agency.

"Every third year enhanced monitoring is performed to capture a wider spectrum of sample points and a broader analysis suite across the site. We review this programme



Teamwork: James Ridehalgh, left, and colleague Andy Scott, monitoring on the trench cap

every year to ensure all work being carried out is still appropriate."

The triennial enhanced environmental monitoring programme is being undertaken this year.

While the monitoring team requires a little rest and recreation, our monitoring regime never sleeps.

Automatic data loggers are used to record

water level measurements, on fifteen minute or hourly frequencies, which are later downloaded for analysis.

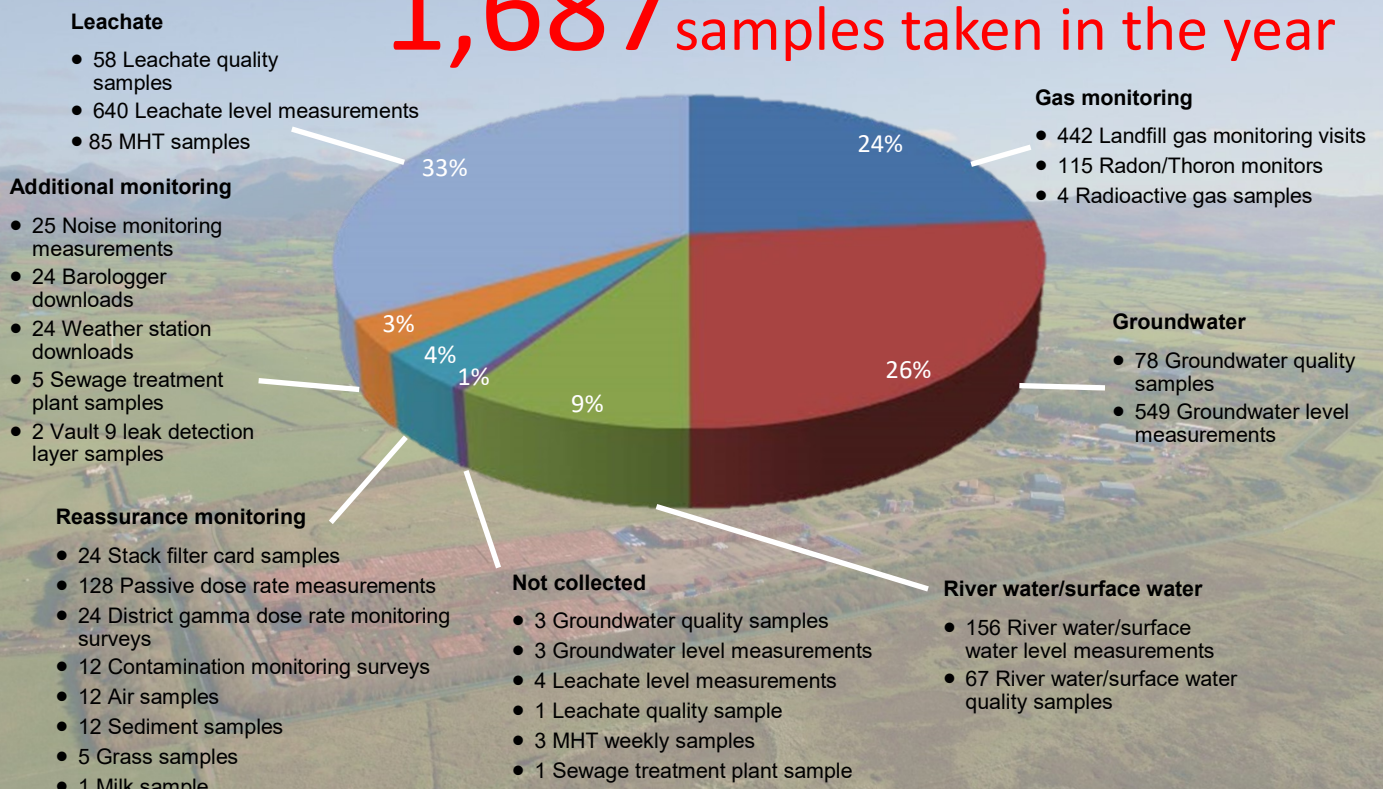
LLWR's objectives for the environmental monitoring programme include:

- To confirm that the Repository system is not giving rise to unacceptable environmental hazards by direct measurement of its impacts;
- To assess whether the Repository system is compliant with the relevant environmental standards;
- To define baseline conditions before specific engineering developments or activities are carried out;
- To provide reassurance to stakeholders that the system is safe.

It all adds up to a comprehensive monitoring programme that continues to show the Repository Site has minimal impact on the environment and that risks to the general public are negligible.

Proportional representation of our Environmental Monitoring Programme 2018/19

1,687 samples taken in the year



Paul's Points

On Saturday, 21st September, we will host a community event to mark 60 years of safe working at the Repository Site.



We want as many members of our community as possible to join us for the celebration, which will include refreshments and multiple attractions for the whole family at Pelham House, and an optional coach tour of the Repository Site, where we can explain some of the background to our philosophy on safety, and much more.

We never tire of saying it: safety is our No1 priority. The safety of our workforce, our community and our environment.

With that in mind, we decided to dedicate this edition of the newsletter to environmental matters – including a look at the extensive monitoring regime that helps ensure we operate safely, what we mean when we talk about recycling, our ecology and how we care for the wealth of wildlife on Site, and a look at how environmental factors play a key role in our capping programme.

Incidentally, last week, members of our team were in Glasgow to collect a fifth consecutive annual President's Award from The Royal Society for the Prevention of Accidents, for exceptional safety performance in 2018. The President's Award was conferred in recognition of LLWR receiving a 14th Gold Award in a row.

This week, it's Manchester, where we are in contention for three accolades at the NDA Safety & Wellbeing Awards.

We are not in this business to win honours, but it is nice to see our safety performance recognised on the national stage.

We have now worked over 1.25 million hours since our last lost time injury, and our Total Recordable Incident Rate remains at zero. But there is no room for complacency and we are again ramping up the focus on safety and wellbeing, highlighting slips, trips and falls.

Meanwhile, day-to-day business activities continue. As of August, we had delivered £137.55M of cost avoidance savings against the contract to date, from the diversion of LLW waste away from disposal at LLWR against a cumulative 2-year target of £153.63M. These savings are well on the way to achieving the contract commitment of £150M.

Preparations are ongoing to move the PCM Decommissioning Programme into the demolition phase and we are looking to maintain momentum on the commissioning of our new Site Emergency Control Centre (SECC). Work is ongoing to manage internal funding allocations to optimise delivery, and we are also retaining our focus on programme delivery performance.

And finally, as Brexit continues to dominate the national news agenda, we have completed updates to the LLWR Brexit readiness review to ensure we are prepared for any development on that front.

Paul Pointon

Managing Director

Other News



Ashleigh, Jade, Chloe and Abby with Keith Hitchen, Working Group Chair, following their presentation

Our apprentices are centre stage

Our apprentices hit the heights for charity – just days after taking centre stage at a key stakeholder event.

Abby Tallantire, Chloe Glaister, Jade Murphy and Ashleigh Wilcock, presented in front of Lead Team members, local councillors and regulators at our quarterly Site Stakeholder meeting - which is also open to the public - about their experiences during their first 10 months with the company. Jade and Chloe went on to volunteer to scale Scafell Pike, England's highest peak, with fellow members of the workforce, *below*, for our charity of the year Danica's Dream Fund, in a fund-raiser which generated over

£1,300 for the charity.

Jade said: "The chance to do a presentation on our apprenticeship journey to the stakeholders was a great opportunity for me as an apprentice to get involved with internal and external stakeholders."

Chloe added: "I really enjoyed doing this presentation and thought it was extremely beneficial for my self-confidence and self-esteem. There were various planning activities prior to the presentation, which was a good team building opportunity for all of the apprentices."

She also explained why she took part in the sponsored walk.



"I thought it was such a good idea and a way to make money for a brilliant cause," she added. "I can't say I was enjoying myself on the way up but looking back I am so proud. I did it not just for my own achievement but most importantly for the charity."

Invitation to our Stakeholder meeting

Please be aware that the latest quarterly meeting of the LLWR Working Group will be held in Drigg Village Hall, on Wednesday, 16th October, 2pm to 4pm.

All are welcome to join the mix of elected representatives, regulators and senior LLWR staff to discuss topics of mutual interest or concern about the Repository Site.

Low Level Waste Repository Site Offices:

LLW Repository Ltd
Old Shore Road
Holmrook
Cumbria
CA19 1XP

Pelham House Offices:

LLW Repository Ltd
Pelham House
Pelham Drive
Calderbridge
Cumbria
CA20 1DB

Tel: +44 (0)19467 70200