

# LLW Repository Ltd – 'Delivering the UK's Strategy for Low Level Waste Management'

Presented By:

Martin Walkingshaw Head of Waste Management Services

**Executive Director** 

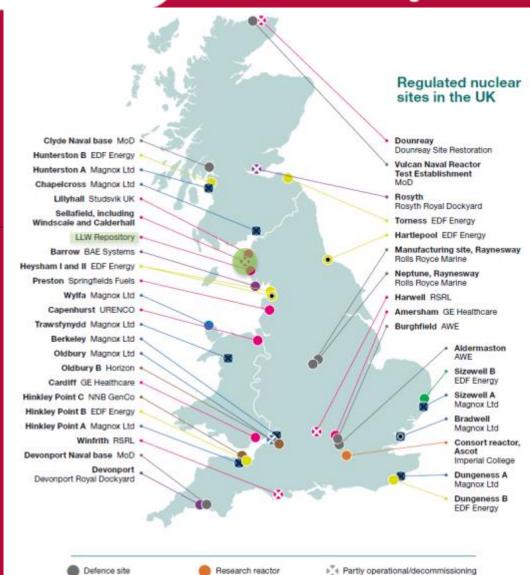


Our organisation is responsible for managing low level radioactive waste generated in the UK.

Our customers are from all sectors:-

- Nuclear Power Plants
- Fuel Cycle
- Decommissioning
- Defence/Military
- Medical
- Educational
- Industrial

### **National Waste Programme**



Submarine facilities

reactor (AGIR)

power station

Proposed nuclear

Advanced gas cooled

Magnox reactor Chemical plants and

other facilities

reactor (PWR)

Pressurised water

Decommissioning

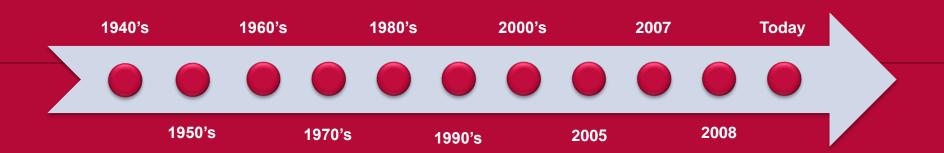
Identified by DECC as

potential new build sites



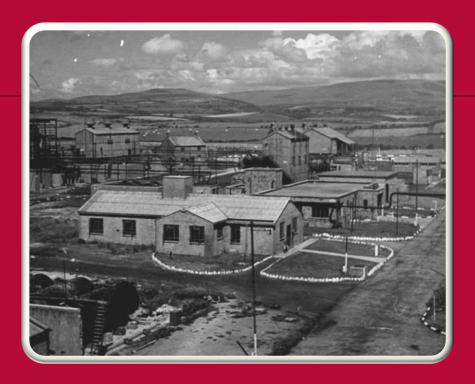


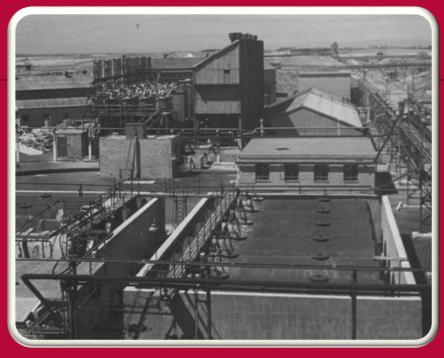
# Our Site has a long history





# 1940's: Royal Ordnance Factory







# 1950's: Low Level Waste Disposal





### 1980's: From Trenches to Vaults







# 1990's: ISOfreights and Grouting



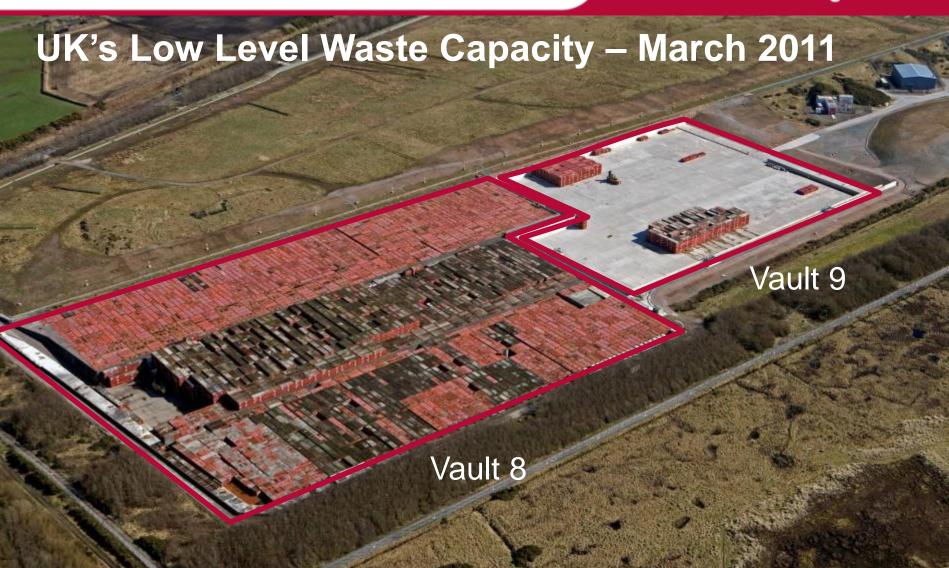












**UK LLW Management Policy** 

Avoid

Reduce

Reuse

Recycle

**Treat** 

**Dispose** 

**Best environmental option** 

**Worst environmental option** 

Apply the His

Hierarchy

Open new
waste
routes

Make best use of existing facilities



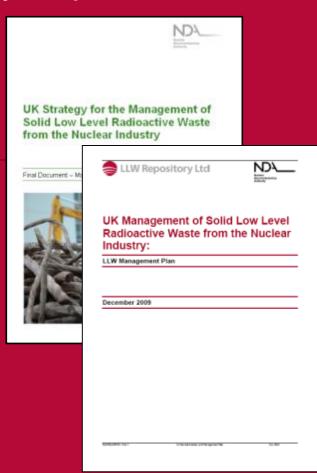
# National Strategy Implementation

Policy for the Long Term Management of Solid Low Level Radioactive Waste in the United Kingdom

26 March 2007

An Agree with the Dispersed of the Environment was desired as a second se

Why you should manage Low Level Waste...



What you should do...

LLW Repository Limited (1) And [CUSTOMER] (2)  WASTE SERVICES CONTRACT relating to packaging treatment and disposal of low level radioactive waste [REFERENCE]			
And [CUSTOMER] (2)  WASTE SERVICES CONTRACT relating to packaging treatment and disposal of low level radioactive waste	DATED	2010	
And [CUSTOMER] (2)  WASTE SERVICES CONTRACT relating to packaging treatment and disposal of low level radioactive waste			
And [CUSTOMER] (2)  WASTE SERVICES CONTRACT relating to packaging treatment and disposal of low level radioactive waste			
And [CUSTOMER] (2)  WASTE SERVICES CONTRACT relating to packaging treatment and disposal of low level radioactive waste			
And [CUSTOMER] (2)  WASTE SERVICES CONTRACT relating to packaging treatment and disposal of low level radioactive waste			
[CUSTOMER] (2)  WASTE SERVICES CONTRACT relating to packaging treatment and disposal of low level radioactive waste	LLW Repository Limited		(1)
[CUSTOMER] (2)  WASTE SERVICES CONTRACT relating to packaging treatment and disposal of low level radioactive waste	***		
WASTE SERVICES CONTRACT relating to packaging treatment and disposal of low level radioactive waste	And		
relating to packaging treatment and disposal of low level radioactive waste	[CUSTOMER]		(2)
relating to packaging treatment and disposal of low level radioactive waste			
relating to packaging treatment and disposal of low level radioactive waste			
relating to packaging treatment and disposal of low level radioactive waste			
relating to packaging treatment and disposal of low level radioactive waste			
relating to packaging treatment and disposal of low level radioactive waste			
relating to packaging treatment and disposal of low level radioactive waste	WASTE SERVICES CONTRACT		•
	relating to packaging treatment and disposal of low	ı level	
[REFERENCE]	radioactive waste		
	(REFERENCE)		
	pre- enervolg		

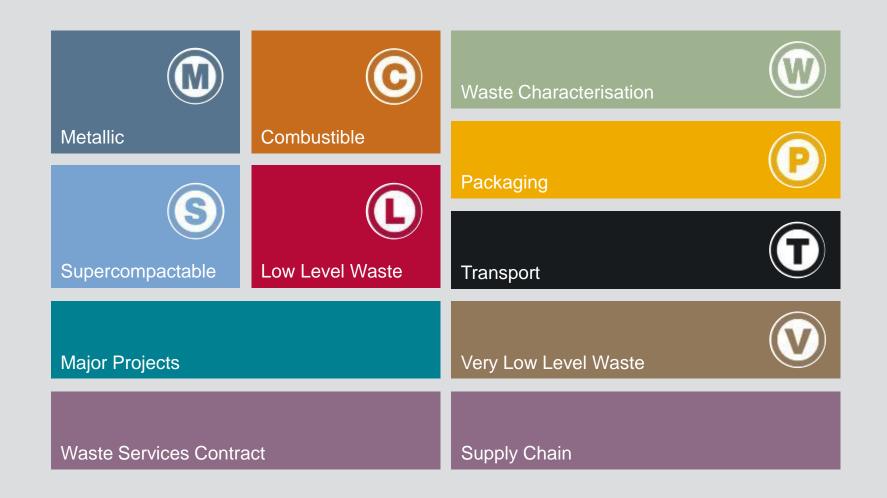
How you should do it!



Waste Management Services:-

'Helping waste producers to implement the National LLW Strategy'









Consultancy, sampling, analysis, anterpretation, reading and measurement services to support catoporisation and segregation activities.











Container and drum supply services from a fleet of approved IP-2 rated designs to support ufficient waste pocking.











#### **Transport**

Rail and road logistics services to optimise waste transportation across the UK and reduce carbon impact.







Segregation, size reduction, shot-blasting and melting services to treat and recycle metal.







Studsvik





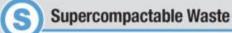
bum wastes and reduce waste disposal volumes.











High force compaction services to improve the packing efficiency of waste in disposal containers.





### Very Low Level Waste

Disposal services to manage the diversion and transfer of low activity low level wastes to suitable facilities.







PCC.

### Low Level Waste

Disposal services to provide long term management of low level waste at the national Low Level Waste Repository.







# Six Years in – how are we doing..?

- All of LLWR's major customers (NDA & non-NDA) now using metallic, combustible and VLLW routes
- Waste diversion targets in place across the NDA estate
- Three landfill sites with permits to dispose of VLLW
- Additional incineration capacity coming on-line
- Waste Characterisation and Integrated Transport Services raising standards and helping the pace of change.

Containers received for disposal in 2006/07 = 754 Containers received for disposal in 2013/14 = 203



# 2013/14 – the headline figures...



1792te

2013 = 1040te, 2012 = 2192te



6062m<sup>3</sup>

2013 = 1665m<sup>3</sup>



724 Road

**2013 = 262** 

**9** Rail



2592m<sup>3</sup>

**2013 = 753m³, 2012 = 300m³** 

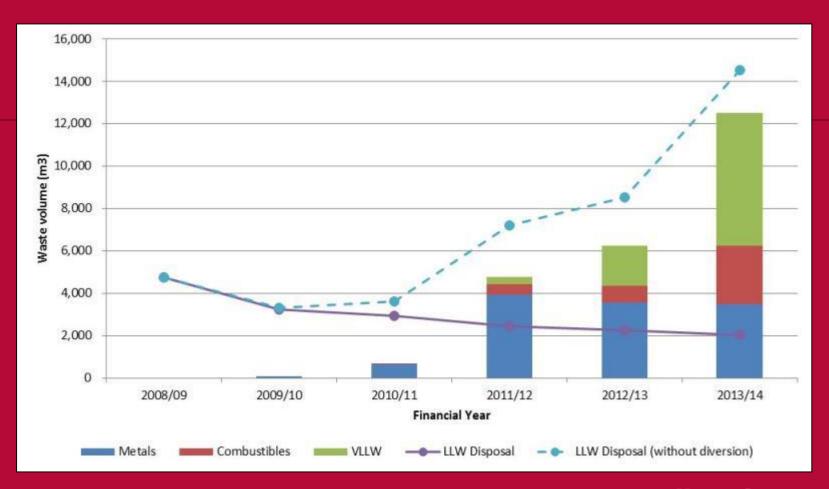


107 containers down on last year

2014 = 202, 2013 = 309, 2012 = 345



### **Progress**







# Typical Waste Management Projects...





# Key lessons –

- Policy implementation is working because...
  - We have been clear about the problem
  - We have addressed the full process (Characterisation, Packaging, Transport, Treatment, Disposal)
  - We have worked with the implementers customers, regulators and stakeholders
  - We have provided continuity
- Policy implementation is working despite...
  - Competing priorities / incentives
  - Incidents, accidents and supply chain dilemmas
  - Continuous challenge and scrutiny



Managing the UK's Low Level Waste is a long term business....

'We're six years in, only one hundred and fourteen to go...'



# www.llwrsite.com

customerteam@llwrsite.com



### What is Low Level Waste?

LLW Definition:

< 4,000 Bq/g Alpha

< 12,000 Bq/g Beta/Gamma

HV VLLW Subcategory:

< 4 Bq/g Total Activity

LA LLW – facility dependant



LLW

Intermediate Level Waste

> 4,000 Bq/g Alpha

> 12,000 Bq/g Beta/Gamma



ILW

High Level Waste

> 4,000 Bq/g Alpha

> 12,000 Bq/g Beta/Gamma

+ Heat generating



HLW