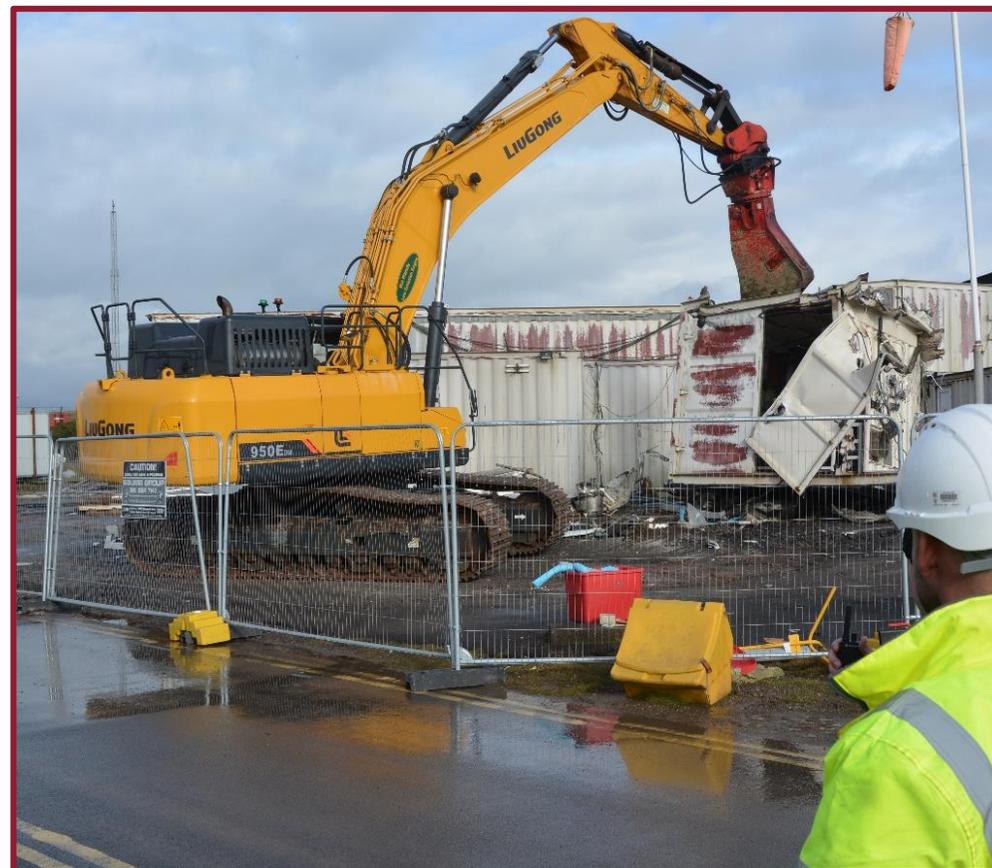


# National Waste Programme Quarterly Report

Quarter 1 FY20/21

*This report provides a “snapshot in time” of the progress being made within the National Waste Programme (NWP) community to achieve the strategic objectives of the programme. The report provides updates from NDA-estate waste producers, including a look-back, focus areas for the next quarter and a status update table on projects; events and significant deadlines for the coming quarter; information on engagement with the NWP’s series of training modules; and updates / changes to the threats / opportunities register.*

*For more information, please contact [nwp@llwrsite.com](mailto:nwp@llwrsite.com)*



## 1. Overview – National Programme

### 1.1. Quarterly Update

The Programme Office has successfully closed out the remaining outstanding work from FY19/20, with finalisation of the Discrete Item Précis, publication of the WAC-Explained (WAC-X) resource, and completion of the Scale-up of Waste Management for Decommissioning project.

Work on the FY20/21 programme of work has commenced, and the Programme Office has adapted delivery of this programme to accommodate the changes wrought by the COVID-19 pandemic, favouring digital meetings and data calls as opposed to the usual routes of face-to-face meetings and stakeholder workshops.

The Programme Office continues to provide support to the Problematic Waste Integrated Project Team, and the data gathering phase of work on the mercury project, which is undertaking a gap analysis on characterisation and containerisation arrangements for contaminated mercury stocks in the UK nuclear industry. The Programme Office Team has also been supporting the development of the NDA Integrated Waste Management (IWM) Programme.

### 1.2. Focus Areas for Next Quarter

- Commencement and delivery of the Waste Culture project.
- Commencement and delivery of the Waste Generator Requirements of the LLW Disposal Service project.
- Conclusion of the Environmental Permit Review.

### 1.3. Peer Reviews & Assists

The Programme Office has held two Peer Assists in Q1. The first of these was with Rolls-Royce Submarine Ltd, which focussed on their waste management process, and the second was with Dounreay Site Restoration Ltd, which was a follow-up to the 2017 Peer Assist exploring progress made on implementation of their Waste Optimisation Programme. The Peer Assists and any associated outputs will conclude and be produced in Q2.

### 1.4. Key Meetings

Meetings in Q1 were significantly impacted by the COVID-19 pandemic, which led to the cancellation of the April Delivery Overview Group meeting, and the postponement of the inaugural Customer Supplier Forum (which has been delayed to November).

An LLW NWP Board Meeting was held, with discussion and endorsement of the plan for integrating the NWP into the IWM Programme; it was agreed that the meeting would be the last meeting of the LLW NWP Board, with its governance role being transferred to the IWM Steering Group. To ensure continuity, it was agreed that the existing NWP Senior Responsible Owner would perform the same role for the NWP sub-programme under the new IWM Steering Group, and that they would be engaged, as appropriate, through wider governance arrangements in this capacity. Future NWP work programmes will be validated by the IWM Programme Group, and sanctioned through the IWM Steering Group.

## 2. Waste Management Services

### 2.1. Quarterly Update

Waste diversion in Q1 has been significantly reduced due to the COVID-19 pandemic, with no consignments from NDA waste producers for offsite treatment or disposal. Non-NDA estate companies have consigned some VLLW for disposal, but in significantly lower volumes than forecast. This reduced progress can be attributed to waste producer and supply chain resource constraints as organisations adapted to alternative methods of working and the temporary halting of many on-site activities. As of the end of June, the waste characterisation, LLW disposal, and packaging frameworks are operational with constraints; and the supercompactable and metallic frameworks are not currently operational (although these are expected to be operational by the end of July). The customer team is continuing to engage with waste producers to facilitate the production and implementation of restart plans for NDA waste producing organisations, with enabling works underway for resumption of consignments by the end of Q2.

LLW Repository Ltd (LLWR) awarded the replacement Metallic Waste Framework agreement in May. The framework has a four-year duration and enables waste producers across the UK to access the facilities and skills of all six participants via their Customer Contract with LLWR.

The customer team has concluded development of the new Customer Relationship Management (CRM) system and are in the process of implementing it. The system will provide consigning organisations with 'live' status updates as proposed consignments move through the Waste Enquiry process,

significantly reducing lead-times on queries. This piece of work was delivered in response to customer feedback, and ongoing improvement activities within Waste Management Services (WMS).

WMS has launched a new Learning from Experience (LFE) Process. The process compliments existing processes at LLWR, waste producer organisations and the supply chain to identify learning, best practice and successes / failures in waste management. The information is reviewed at a monthly committee meeting and relevant learning is selected to be shared with the wider waste community. The outputs are developed into a range of reports, briefs and flash shares and are disseminated through existing NWP and practitioner fora and made more widely available via electronic means.

### 2.2. Focus areas for next Quarter

- Roll out changes to the Waste Loading Plan process (reference Customer Notice - 2020-014 'Proposed Changes To LLWR Waste Loading Plan Review Process').
- CRM Phase 2 – Consignment Process – User acceptance testing.
- Development of replacement Characterisation Service technical scope.
- Work with Customers and Supply Chain to develop consignment restart schedules.
- Delivery of 3 x refurbished Gemini casks and new ancillary equipment from CIMAT facility in France.

### 3. Overview – Sellafield Ltd

#### 3.1. Quarterly Update

Q1 operational matters have been dominated by the response to the COVID-19 pandemic. A staged commencement of operations has been progressed, with a significant number of workfaces now operational. On-site LLW waste management operations have been undertaken, with waste collected, processed via internal waste management capabilities and safely stored. No LLW was transferred for treatment or disposal off-site during the quarter. A small amount of VLLW material has been disposed to the on-site landfill capability.

Good progress has been made on a range of transformation activities, including:

- Formalisation of the response to the mis-consignment Board of Inquiry and initiating the setting up of a standalone waste management organisation.
- Recommencement of the Active Demonstrator projects aimed at managing the boundary waste large metallic items removed from the high hazard facilities, and to trial sort and segregation approaches that can be applied to the breakdown of legacy alpha crates and alpha decommissioning operations.
- Implementing changes to the management of several individual waste streams to reflect the LFE from the Soft Bagged Waste Trial.
- Receipt of the bespoke Discrete Item analysis of 12 WAGR boxes from LLWR, which indicates the acceptability of disposal from a radiological perspective. The analysis has been submitted to the Environment Agency (EA) for their review. Further work will be required to address other WAC aspects.

- Several sub-programme tasks of work progressed to support the next phase of PCM drums, that may be suitable for management as LLW. This includes consideration of capacity issues, an update of the BAT, work on the drum selection methodology, and joint work with LLWR regarding the schedule.
- Developing the optioneering approach to establish the location to undertake the required AGR graphite sampling, as well as separate work on the approach to analyse the samples.
- Positive discussions with EA on documented plans to compile the first iterations of the Waste Management Plan (WMP) and Site Wide Environmental Safety Case (SWESC), as required by the EA guidance on requirements for the release from radioactive substances regulation (the GRRs).
- Further development of the BAT study assessing the approach for VLLW management post the filling of the existing on-site landfill capability.

In addition, the Waste Information Form (WIF) template has been populated ahead of scheduled submission early in Q2.

#### 3.2. Focus areas for next Quarter

- Commence offsite LLW/VLLW waste shipments.
- Progress the programme of work to take forward the findings of the waste management Board of Inquiry.
- Undertake follow-up engagement with EA and LLWR on the WAGR box assessments.
- Progress the arrangements to complete the required AGR graphite sampling.
- Progress the on-site landfill capability replacement BAT study.
- Progress implementation of the boundary metallic waste and the alpha sort and segregation Active Demonstrators.

## 4. Overview – Magnox Ltd

### 4.1. Quarterly Update

As a result of the COVID-19 pandemic, all waste shipments were stopped from 20<sup>th</sup> March. In addition, all sites were put into a 'pause' with minimal staff actually manning the sites; staff with suitable company IT were asked to work from home.

The result is that for Q1, there were no shipments of low activity waste and some delays to the delivery of transformational projects.

The joint waste management plan, JWMP18, was issued in April. A meeting was held in May to launch the transformational projects from the JWMP, where possible.

### 4.2. Focus areas for next Quarter

- Safe return of some staff to sites and the gradual restart of site operations including waste management and decommissioning activities
- Work on high level strategy for continuous reactor decommissioning at Trawsfynydd site, to include characterisation and waste management routes
- Establishment of programme board for the Magnox Waste Management Improvement Programme, development of programme blueprint and consideration of initial proposals from work completed so far.
- Participation in the IWMPG's sub-group on waste management culture, building on Magnox's own work in this area

- Start of JWMP re-forecasting process & review of document for significant changes in line with LLWR/NWP guidance

## 5. Overview – Dounreay Site Restoration Ltd

### 5.1. Quarterly Update

**Operations:** LLW plants were shut down into a safe, compliant state at the end of March 2020 as part of the DSRL site response to the COVID-19 pandemic.

This essentially remained the case throughout FY 20/21 Q1, although some preparations for return to plant occupancy were being implemented at end of the Quarter.

**Compliance:** Fingerprint review is ongoing throughout Q1.

### 5.2. Focus areas for next Quarter

- Restart plants in a controlled manner.
- Resume consignment of compliant LLW for waste processing / disposal, to include a campaign of Encapsulation Plant / D3100 vault disposal operations.
- Preparation of Non-Containerised Waste for off-site diversion via LLWR Framework.
- Complete stored LLW Half Height Isofreight (HHISO) container voidage assessments and prepare Best Practicable Means (BPM) Statements.
- Continue review and revision of Dounreay fingerprints.

## 6. Overview – LLW Repository Site

### 6.1. Quarterly Update

- No consignments dispatched this quarter due to the current COVID-19 pandemic; however, we have taken the opportunity to compile as many consignment packs as possible to allow us to consign almost immediately upon return to site.
- Working with Service Delivery, the Waste Services Quotations (WSQs) for metals has been extended until December 2020 and for VLLW until February 2021.
- Upon review of the draft waste consignment paperwork and the Waste Loading Plan for the MAFI Bogies, the haulier has requested an amendment to how the bogies are loaded. The Transport and Logistics Team are looking into this and providing feedback to move forward. Photos were requested of the underneath of the MAFI Bogies, these have been sent to the Transport and Logistics Team to liaise with the haulier to find a resolution. The advice given by the Customer Team was to complete a Waste Enquiry Form (WEN) specifically for the bogies to obtain the most competitive price.
- Working with Service Delivery, the draft Waste Consignment Information Forms for our Metallic Consignments have been provisionally accepted by Cyclife, pending photos and loading confirmation; this covers 4 consignments for the remainder of the calendar year.

### 6.2. Focus areas for next Quarter

- Container inspections to be carried out to allow consignment loading and transport to take place.
- Consignment of 2x Direct Grout Facility VLLW containers that were due to be shipped in March 2020.
- Restart of bag assay with Cavendish and subsequent consignments to our Service Provider.
- Consignment of MAFI Bogies.
- Large items from demolition to be assessed and prepared for consignment next year.
- Consignments to commence for Metals.

## 7. Forward Calendar

August 2020						
M	T	W	T	F	S	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

**17/08/2020** – LLW NWP Monthly Managers Telecon (T)

**26/08/2020** – NWP Monthly Report Waste Producer Submission Deadline (August Report)

September 2020						
M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

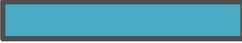
**21/09/2020** – LLW NWP Monthly Managers Telecon (T)

**30/09/2020** – NWP Monthly Report Waste Producer Submission Deadline (September Report)

October 2020						
M	T	W	T	F	S	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

**19/10/2020** – LLW NWP Monthly Managers Telecon (T)

**28/10/2020** – NWP Monthly Report Waste Producer Submission Deadline (October Report)

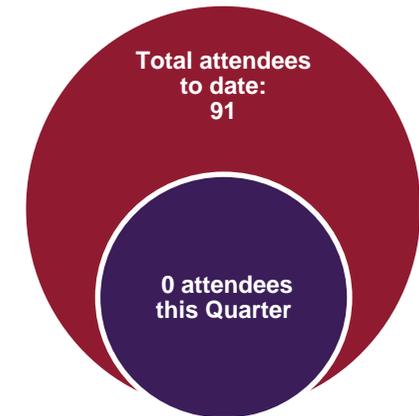
KEY	Meeting	Project workshop	Peer Review / Peer Assist	Deadline	Customer Forum
					
	BM=Birmingham	MA=Manchester	WA=Warrington	C=Cumbria	T=Teleconference

## 8. Use of Training Modules

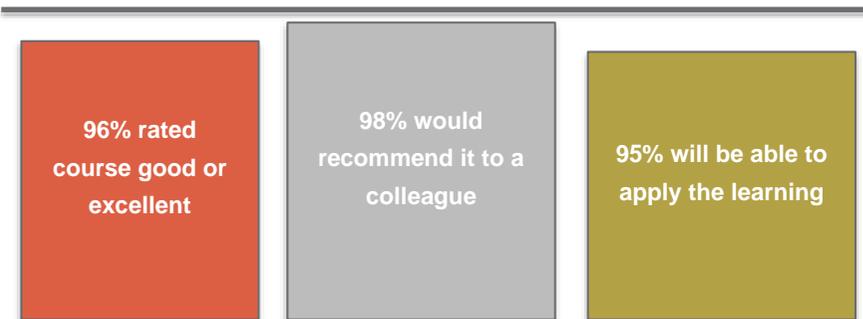
### e-Learning



### Classroom



### User feedback to date:



## 9. Performance against priority business changes

<p>Strategy implementation has commenced for a greater range of LLW / ILW boundary waste and problematic wastes. Progress has been made on integration of radioactive waste strategy. The NWP has successfully transitioned into the NDA IWM Programme.</p>		<p>There is a detailed understanding of the sustainability of LLW management practice and arrangements; and active action is being taken to improve this.</p>	
<p>LLWR - Undertake work to support the implementation of the Integrated Waste Management Programme (IWMP) and develop a plan for transition of the NWP into the IWMP</p>	<p>Magnox - Mixing and conditioning borderline and LLW sludges resins and other wet/organic wastes across Magnox to optimise disposability</p>	<p>LLWR - Enhancement of WMS customer service/consultancy skills</p>	<p>LLWR - Implementation of an enhanced process for the delivery of opportunity waste projects</p>
<p>Magnox - Strategy &amp; Permissioning for Sizewell &amp; Oldbury FED disposal, including conditioning and packaging options</p>	<p>Sellafield - Enhance waste advisor and technical specialist capability to provide ILW advice</p>	<p>Magnox - Develop strategy for in situ (on site) Disposal of LALLW applying the GRR</p>	<p>Sellafield - Further develop initial phase of the Sellafield sustainability agenda via the Sustainability Steering Group and supporting sub-groups</p>

Key	Priority Business Change	Sellafield	Magnox	LLWR
	Overall Priority Business Change Status	 Project not yet commenced	 Project has commenced and is behind schedule; but is expected to recover	 Project Complete
	Individual Project Status	 Project commenced and is on target to deliver on or ahead of schedule	 Project has commenced and is behind schedule; but is expected to recover	



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Waste management practice enables agile, efficient and effective waste flow management to support operations, decommissioning and site restoration. Waste management is fully risk-informed, enabling effective management of waste at the LLW / ILW boundary.

LLWR - Development of a Waste Characterisation Standard to support the NDA Good Practice Guide	Magnox - Waste Data Quality Improvements (NWP led project)	Magnox - Harwell Radiochemical facility. Work collaboratively with LLWR to develop an optimised model for characterisation of decommissioning wastes	Magnox - Waste consignment practices and mis-consignment controls
Magnox - Develop a need for site specific strategies to move away from past C&M (Care & Maintenance) arrangements into a more continuous decommissioning scope	Magnox - Waste management for scaled up decommissioning [NWP led project]	Sellafield - Building on the successful implementation of the PCM to LLW segregation capability, implement a programme of work to improve the segregation at source of alpha stream material that can be safely managed as LLW	Sellafield - Undertake combined assessment of potential on-site locations, off-site locations and supply chain options to establish whether to construct a replacement landfill capability post the filling of CLESA
Sellafield - Further develop decommissioning approaches, utilising LFE from ORANO and innovation from Innovate UK partners, to minimise, where practicable, the volume of ILW generated	Sellafield - Complete waste mis-consignment BoI Actions and the initial set up of a new Waste organisation and updated waste process	Sellafield - Work with LLWR to ensure that Decommissioning CHILW container (DCC), to be designed to support the management of contact handleable ILW arising from decommissioning, is also suitable for potential LLWR disposal	Sellafield - Develop and implement integrated approach for complete rad and non-rad characterisation of excavated wastes

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	Individual Project Status			
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	Reliable and appropriate local and national inventories are available that support and underpin decision making.
LLWR - Waste forecasting e-learning module development and launch	Sellafield - Undertake work to improve long term inventory management, including engagement with the NDA RWI process review programme that will be progressed post the 2019 update cycle

Priority Business Change		Sellafield	Magnox	LLWR
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	Individual Project Status			
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## 10. Strategic Threats and Opportunities

Strategic Threats					
	<2%	2-25%	26-50%	51-80%	>80%
	Very Unlikely	Unlikely	Possible	Likely	Very Likely
Severe	High (11)	High (15)	High (17)	Very High (19)	Very High (20)
Major	Medium (7)	Medium (9) 5 7 3	High (14) 1	High (16)	High (18)
Moderate	Low (4)	Low (5)	Medium (8) 2	High (12)	High (13)
Marginal	Very Low (1) 4	Very Low (2) 6	Low (3)	Medium (6)	Medium (10)

Strategic Threat	
1.	Significant waste mis-consignment event causes partial or full closure of diversion or disposal route(s).
2.	Insufficient radiological, non-radiological or volumetric capacity in the supply chain. Or excessive demand for capacity.
3.	Insufficient radiological, non-radiological or volumetric capacity at LLWR.
4.	Changes in legislation, governmental policy and regulatory perspective prevents execution of the LLW Strategy.
5.	Large volumes of waste from contaminated land remediation generated and managed as lower activity waste.
6.	Stakeholder concerns over radioactive waste management constrain access to existing routes and / or development of new routes and facilities.
7.	Global event (such as a future pandemic or war) impacts functioning of all parts of the LLW community, waste management and route availability.

Strategic Opportunities					
	<2%	2-25%	26-50%	51-80%	>80%
	Very Unlikely	Unlikely	Possible	Likely	Very Likely
Marginal	Very Low (1)	Very Low (2) 4	Low (3) 3 5	Medium (6)	Medium (10)
Significant	Low (4)	Low (5)	Medium (8) 1 2 6	High (12)	High (13)
Major	Medium (7)	Medium (9)	High (14)	High (16)	High (18)
Substantial	High (11)	High (15)	High (17)	Very High (19)	Very High (20)

	Strategic Opportunity
1	Positive step change in the sustainability of the supply chain.
2	Relevant ILW diverted from HAW disposal.
3	Buffer storage capabilities can be mobilised for contingency situations (only).
4	Improved use of transport infrastructure to support management of LLW.
5	Fit-for-purpose flexible and agile packaging fleets available for LLW management.
6	Management solutions available and in use for complex, challenging and problematic LLW (PW).