

# National Waste Programme Quarterly Report

Quarter 2 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.*

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## 1. Overview – National Programme

### 1.1. Quarterly Update

- Delivery of the FY20/21 Programme of Work is underway, and adaptations have been implemented to accommodate restrictions resulting from the COVID-19 pandemic.
- Contractor support has been procured for both the Waste Management Culture, and the Waste Generator Requirements of the LLW Disposal Service projects. The desk-based research and stakeholder engagement phases have commenced.
- The Environmental Permit Review report was completed in Q2. The report collates feedback from waste consignors that extends beyond LLW management (the scope of the 2018 Environmental Permit Review) into LLW and HAW management with waste treatment providers.
- The National Waste Programme (NWP) continues to participate in the establishment of the Integrated Waste Management Programme (IWMP) and the initiation of project scopes. Engagement in Q2 involved discussion of the potential application of the Enterprise Model by member organisations and development of the Integrated Waste Management - Virtual Stakeholder Event agenda.
- The Programme Office continues to support the Problematic Waste (PW) Integrated Project Team (IPT). Phase I of the Mercury Consolidation and Treatment Project has been delivered. The current state analysis of transport and characterisation issues associated with management of the waste has been completed, and the next phase of work will seek to deliver a Gate 0 (case for change) paper.

### 1.2. Peer Reviews & Assists

- The NWP has completed delivery of two Peer-Assist exercises - one with Rolls-Royce Submarine Ltd (RRSL) and another with Dounreay Site Restoration Ltd. Summary reports for each of these have been completed and submitted to host organisations, and precis reports are currently under development for issue to the wider waste producer community.

### 1.3. Key Meetings

- Meetings in Q2 have been delivered via enhanced teleconference/virtual capabilities that have transitioned into common practice as a result of the COVID-19 pandemic. The NWP (via the PW IPT) participated in a meeting to discuss the initiation of the NDA Innovation Partnership for asbestos treatment.
- The Programme Office participated in a workshop with NDA and RWM on the Virtual Programme Management Office for the IWMP.

### 1.4. Focus areas for next Quarter

- Progress delivery of the stakeholder engagement phase of the Waste Generator Requirements of the LLW Disposal Service project.
- Progress delivery of the stakeholder engagement phase of the Waste Management Culture Phase I project.
- Share outcomes of the Environmental Permit Review project.

## 2. Waste Management Services

### 2.1. Quarterly Update

- Waste Diversion in Q2 is still recovering from the impact of the COVID-19 pandemic, but in August and September consignments of divertible waste resumed from Magnox, Sellafield and LLW Repository Ltd. Organisations are in the process of submitting re-baselined targets for diversion and disposal following extensive restart planning and impact assessment. The LLW Repository Ltd Customer Team have provided support to each of these organisations throughout the process and will continue to as waste consignments begin to resume in earnest in Q3. Work has also been undertaken to support non-NDA estate organisations who predominantly maintained waste management operations during the COVID-19 lockdown period.
- The Customer Team has made arrangements to support the Magnox Continuous Reactor Decommissioning (CRD) Programme. Magnox Ltd are exploring whether or not it is possible to continuously decommission their lead site (Trawsfynydd) to the point of final site clearance without the need for an extended Interim Care and Maintenance phase. So far, LLW Repository Ltd has hosted a range of internal / external stakeholder meetings to specify the types of resource that Magnox will require throughout the programme to ensure key milestones are delivered.
- LLW Repository Ltd's Type B Programme has completed a major milestone with the delivery of the first of three refurbished TN Gemini casks, associated ancillary equipment, and internal furniture to the Magnox Harwell and

Sellafield sites. The fleet contributes to a forecasted saving to the NDA estate of £160M by transferring around 700 concrete-lined drums from Magnox to Sellafield. The remaining two casks are due for delivery in early Q3.

- Waste Management Services has expanded its suite of knowledge management resources with the launch of its library for the collation of learning from experience (LFE) on waste management. The intention is that this resource will become a repository of information provided by waste producers and other waste organisations from across the UK and span the entire waste lifecycle. It will also include summarised outputs from the LLWR Expert View process. These resources will provide Customers with useful information to support their decision-making, optioneering and waste management practice, and will be further enhanced as further information is collated in future.

### 2.2. Focus areas for next Quarter

- Framework renewal (Packaging / VLLW / Characterisation/ ESAT).
- AWE tanks – Phase 1 and 2.
- Inaugural Customer Supplier Forum (metals).
- TRS drums.

### 3. Submission – Sellafield Ltd

#### 3.1. Quarterly Update

Operationally, the Q2 focus has been on recovery from the COVID-19 pandemic and resolution of a data truncation error in the fingerprint database. The error is being worked through a fingerprint at a time, in conjunction with LLWR. To date no significant implications of the error have been identified, and transfer of waste for recycling, incineration and off-site and on-site landfill disposal have all commenced. Good progress has been made on a range of transformation activities, including:

- Progressing the Active Demonstrator projects aimed at managing the boundary waste large metallic items from the high hazard facilities, and trialling sort and segregation approaches that can be applied to the breakdown of legacy alpha crates and alpha decommissioning operations.
- Receipt of analyses conducted by EA and LLWR indicating that up to 60 WAGR boxes may be suitable for disposal at LLWR, subject to satisfactory completion of a disposability assessment. To support the work, the inventory information for previous disposed boxes has been updated and the associated BAT is being further developed.
- Two stakeholder workshops have been held to support identification of the BAT approach for managing VLLW post the filling of CLESA. NDA, EA and local councils were represented. Scoring of the options and scenarios, and weighting of the NDA Value Framework factors was discussed. The information will be collated ahead of a follow up workshop to compile an overall view of the scenario options.

- An integrated programme has been developed to support taking forward the potential to dispose of AGR Graphite to LLWR, with a new project manager introduced to manage the drum sampling campaign and finalise the export route.
- The WIF template was compiled and submitted, and support was provided to three national inventory workshops, as part of the NDA RWI improvement programme. Inventory paradigm, data input and data collection proposals were presented, and the way forward agreed.
- The approach to dispose of unknown chemicals was further progressed. Approval obtained that an ADR special provision can be utilised to support transfer. Initial sampling undertaken and engagement with incineration companies underway.

In addition, a detailed briefing event was held to drive support for an IIND-Sort and Segregate competition. 215 attended, of which approximately 1/3 were nuclear, 1/3 were academics from universities and 1/3 were from non-nuclear SMEs.

#### 3.2. Focus areas for next Quarter

- Continue the programme of work to resolve the fingerprint database issue. Increase the range of offsite LLW/VLLW waste shipments.
- Further progress the programme of work to take forward the findings of the waste management Board of Inquiry.
- Work with LLWR to progress the potential disposal of up to 60 WAGR boxes.
- Progress the arrangements to complete the required AGR graphite sampling.
- Progress the on-site landfill capability replacement BAT study.

## 4. Submission – Magnox Ltd

### 4.1. Quarterly Update

At the beginning of Q2 Magnox sites were still in a 'pause' state – with minimal staff on sites and no decommissioning or waste management activities being undertaken. Following national lockdown measures being gradually lifted and work undertaken to make sites COVID secure, staff were able to return allowing a cautious restart of site operations including waste management and decommissioning activities. By the end of Q2, all sites had recommenced waste operations and around half had shipped LAW, with all routes having been utilised.

A revised waste forecast was issued in September as JWMP18B – the main JWMP document was reviewed but no changes made at this time.

Work has continued on the high-level strategy for continuous reactor decommissioning (CRD) at Trawsfynydd site, including work on the characterisation strategy and waste management routes. Magnox and LLWR are working collaboratively on the latter area.

A programme board has been established to oversee the Magnox Waste Management Improvement Programme. Initial improvement proposals have been produced and are being considered.

### 4.2. Focus areas for next Quarter

- Further sites to make first LLW shipments following restart of waste operations.
- Completion of high-level characterisation strategy to support the CRD programme.
- Development of programme blueprint for the Magnox Waste Management Improvement Programme, and agreement of initial proposals from work completed so far.
- Complete reports on waste management benchmarking and waste management culture.
- Finalise waste compliance improvement plan (WCIP).

## 5. Submission – Dounreay Site Restoration Ltd

### 5.1. Quarterly Update

**Operations:** LLW Plants have been steadily returned to operational capability following the general Site response to the COVID-19 pandemic.

All essential radiological monitoring and statutory maintenances have been reinstated, key plant and equipment has been exercised and operator re-familiarisations completed in line with the requirements of the STOP WORKS.

No supercompaction or grout plant operations have been carried out and LLW Project work has yet to be restarted.

**Compliance:** Fingerprint Data Reviews and Gap Analysis ongoing throughout Q2.

### 5.2. Focus areas for next Quarter

- Continue restarting 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. Submission – LLW Repository Site

### 6.1. Quarterly Update

- Consignments have restarted this quarter following a period of downtime. We still have consignment packs ready to allow us to consign almost immediately when containers become available.
- Working with Service Delivery, the new Bulk Waste Enquiry Form (WEN) for Metals has been submitted and will be ready following the expiration of the current Waste Services Quotation in December 2020.
- A WEN was completed earlier this year for the MAFI Bogies to obtain a more competitive price. Bids have been received and reviewed.
- We have had some significant issues with equipment this quarter, most likely because of the lack of use during the lockdown period; a couple of our TC01R containers required repairing, the weighbridge required a repair and calibration and the bag assay equipment also required a repair.
- Some BAU projects are due to restart so the Waste Delivery Team have been involved in the kick-off meetings and providing support with creating Project Waste Management Plans.

### 6.2. Focus areas for next Quarter

- Consignment of 1x DGF VLLW container that was due to be shipped in March 2020 (1 was consigned in August 2020).
- Consignment of MAFI Bogies.
- Large Items from Demolition to be assessed and prepared for consignment next year.
- Continue consignments for Metals.
- Plan consignments for the next calendar year.
- Continue providing support to the BAU projects as they arise.
- Provide support to the Drum Re-characterisation Project.

## 7. Forward Calendar

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	31	






**05/10/2020** – LLW NWP Monthly Managers Telecon (September Make-Up Session).  
**07/10/2020** – Practitioners Forum Steering Group (T)  
**07/10/2020** – NWP Quarterly Report Waste Producer Submission Deadline (Q2 Report)  
**19/10/2020** – LLW NWP Monthly Managers Telecon (T)  
**28/10/2020** – NWP Monthly Report Waste Producer Submission Deadline (October Report)

November 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						

**03/11/2020** – Delivery Overview Group (T)  
**11/11/2020** – Practitioners Forum (1 of 3) (T)  
**16/11/2020** – LLW NWP Monthly Managers Telecon (T)  
**17/11/2020** – LLWR Customer Supplier Forum (Day 1) (T)  
**19/11/2020** – Practitioners Forum (2 of 3) (T)  
**24/11/2020** – LLWR Customer Supplier Forum (Day 2) (T)  
**25/11/2020** – NWP Monthly Report Waste Producer Submission Deadline (November)  
**25/11/2020** – Practitioners Forum (3 of 3) (T)

December 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			

**02/12/2020** – NWP Regulatory Meeting (T)  
**14/12/2020** – LLW NWP Monthly Managers Telecon (T)

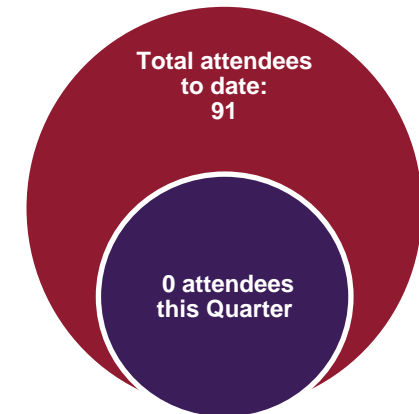
KEY					
	Meeting	Project workshop	Peer Review / Peer Assist	Deadline	Customer Forum
	BM=Birmingham	MA=Manchester	WA=Warrington	C=Cumbria	T=Teleconference

## 8. Use of Training Modules

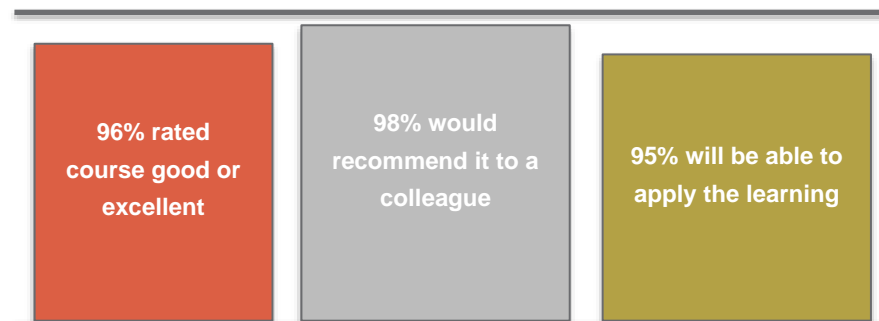
e-Learning



Classroom

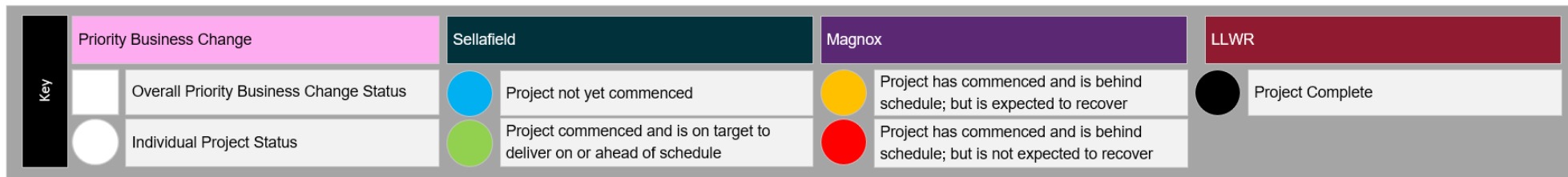
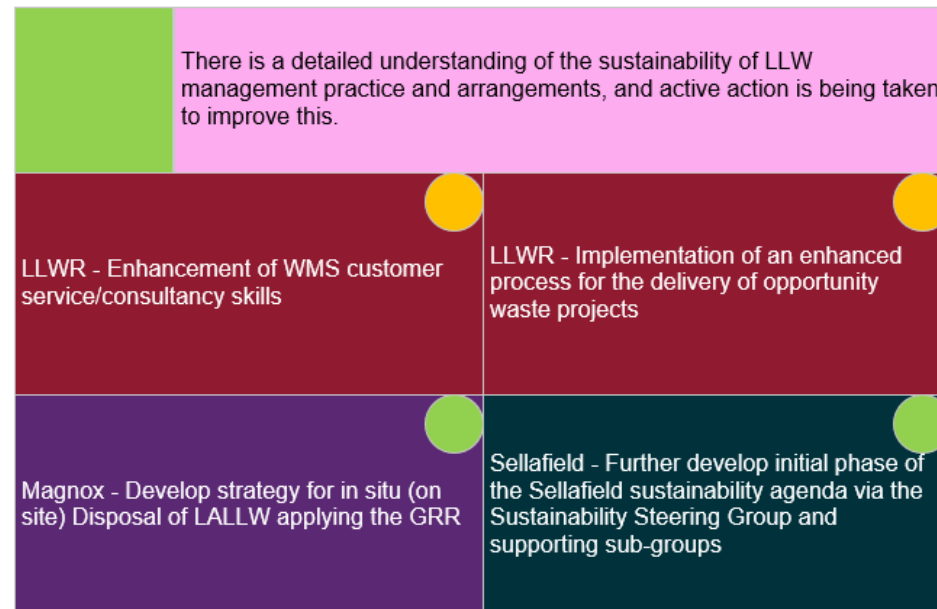
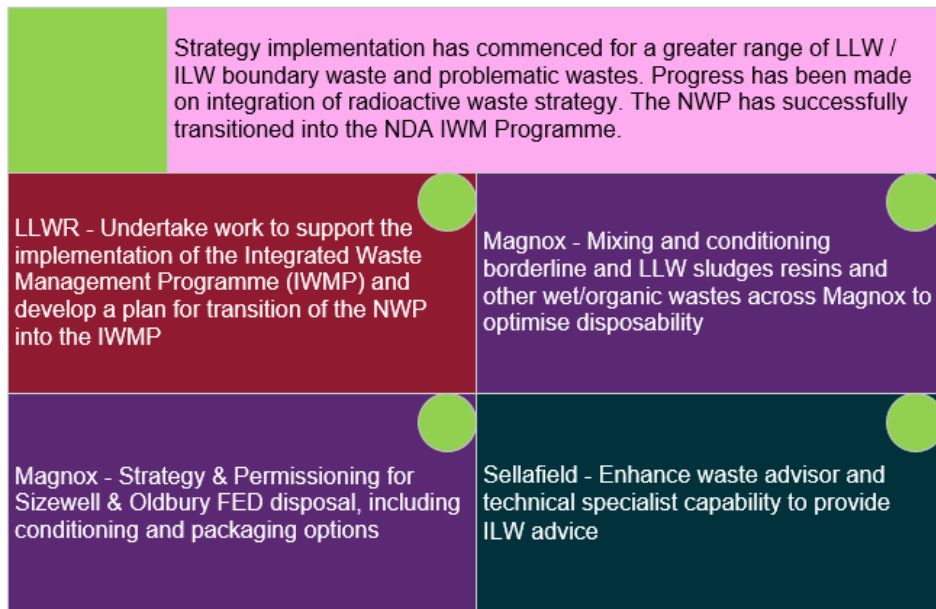


User feedback to date:










## 9. Performance against priority business changes





Key	Priority Business Change	Sellafield	Magnox	LLWR
	Overall Priority Business Change Status	<span style="color: blue;">●</span> Project not yet commenced <span style="color: green;">●</span> Project commenced and is on target to deliver on or ahead of schedule	<span style="color: yellow;">●</span> Project has commenced and is behind schedule; but is expected to recover <span style="color: red;">●</span> Project has commenced and is behind schedule; but is not expected to recover	<span style="color: black;">●</span> Project Complete
	Individual Project Status			

<p>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.</p>			
<p>LLWR - Development of a Waste Characterisation Standard to support the NDA Good Practice Guide</p>	<p>Magnox - Waste Data Quality Improvements (NWP led project)</p>	<p>Magnox - Harwell Radiochemical facility. Work collaboratively with LLWR to develop an optimised model for characterisation of decommissioning wastes</p>	<p>Magnox - Waste consignment practices and mis-consignment controls</p>
<p>Magnox - Develop a need for site specific strategies to move away from past C&amp;M (Care &amp; Maintenance) arrangements into a more continuous decommissioning scope</p>	<p>Magnox - Waste management for scaled up decommissioning [NWP led project]</p>	<p>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</p>	<p>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</p>
<p>Sellafield - Further develop decommissioning approaches, utilising LFE from ORANO and innovation from Innovate UK partners, to minimise, where practicable, the volume of ILW generated</p>	<p>Sellafield - Complete waste mis-consignment Bol Actions and the initial set up of a new Waste organisation and updated waste process</p>	<p>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</p>	<p>Sellafield - Develop and implement integrated approach for complete rad and non-rad characterisation of excavated wastes</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 not expected to recover	



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

## 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) 3 5	High (14) 1	High (16)	High (18)
Moderate	Low (4)	Low (5) 4	Medium (8) 2	High (12)	High (13)
Marginal	Very Low (1)	Very Low (2) 7 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 non-radiological, radiological or volumetric capacity at LLWR.
4.	Changes in legislation, governmental policy or regulatory perspective prevents or significantly impacts execution of LLW Strategy.
5.	Large, volumes of waste from rad contaminated land remediation generated and managed off-site as lower activity waste.
6.	Non-industry 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).