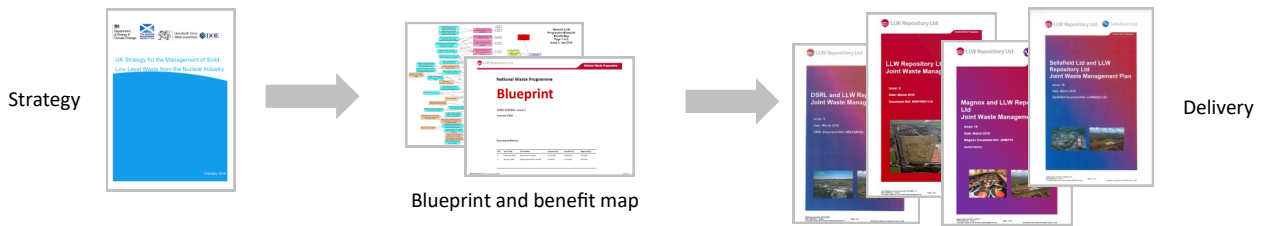


NATIONAL WASTE PROGRAMME QUARTERLY REPORT Q4 FY18/19

What is the National Waste Programme?

The National Waste Programme (NWP) is a cross-UK programme of work to lead the ongoing implementation and delivery of the *UK Strategy for the Management of Solid Low Level Waste from the Nuclear Industry*. The NWP covers all nuclear industry waste producers including those in the NDA estate, the public sector and the private sector. The NWP is led by LLW Repository Ltd on behalf of the NDA (who are responsible for leading strategy implementation for BEIS). The NWP works collaboratively with its stakeholders to produce a Blueprint and Benefit Map to show the direction of travel for strategy implementation. The activities to deliver the strategy are executed by the stakeholders of the NWP; for example by waste producers through their waste management practices.



The vision of the National Waste Programme is:

Optimised LLW management across the UK that delivers value for money.

The purpose of the NWP is to deliver a transformation in the way that LLW is managed in the UK, in accordance with the LLW Strategy. The NWP will deliver five strategic benefits:

NWP Strategic Benefits:

1. The life of the LLWR is extended to 2130.
2. Overall waste management costs are reduced.
3. Optimised LLW management that supports and enables effective hazard reduction and decommissioning.
4. Continued application of the Waste Hierarchy.
5. Stakeholders to the strategy are increasingly engaged with its delivery.

What is the purpose and structure of this report?

This report provides a “snapshot in time” of the progress being made within the NWP community to achieve the strategic objectives of the programme. The report is divided into five sections broadly aligned with the strategic benefits (to enable visibility of benefit realisation):

- Section 1 (Benefits 1 and 4) - waste diversion / disposal metrics and waste route availability map.
- Section 2 (Benefit 2) - cost avoidance metrics.
- Section 3 (Benefit 3) - updates from waste producers across the UK, key project tracker showing progress against delivery of projects to support priority business changes, an update on Peer Reviews/Assists, an update on the NWP training framework, details of NWP publications over the past quarter and of external publications / consultations from the past quarter.
- Section 4 (Benefit 5) - information on stakeholder interactions in the quarter and an update on industry issues/concerns.
- Section 5 - look forward—information on the priorities for the NWP community over the next 12 months, look forward notice-board, forward calendar and strategic threats and opportunities.

**SECTION 1: Benefit 1 — The life of the LLWR is extended to 2130 & Benefit 4—Continued application of the Waste Hierarchy**
**Waste diversion and disposal performance**
**KEY**

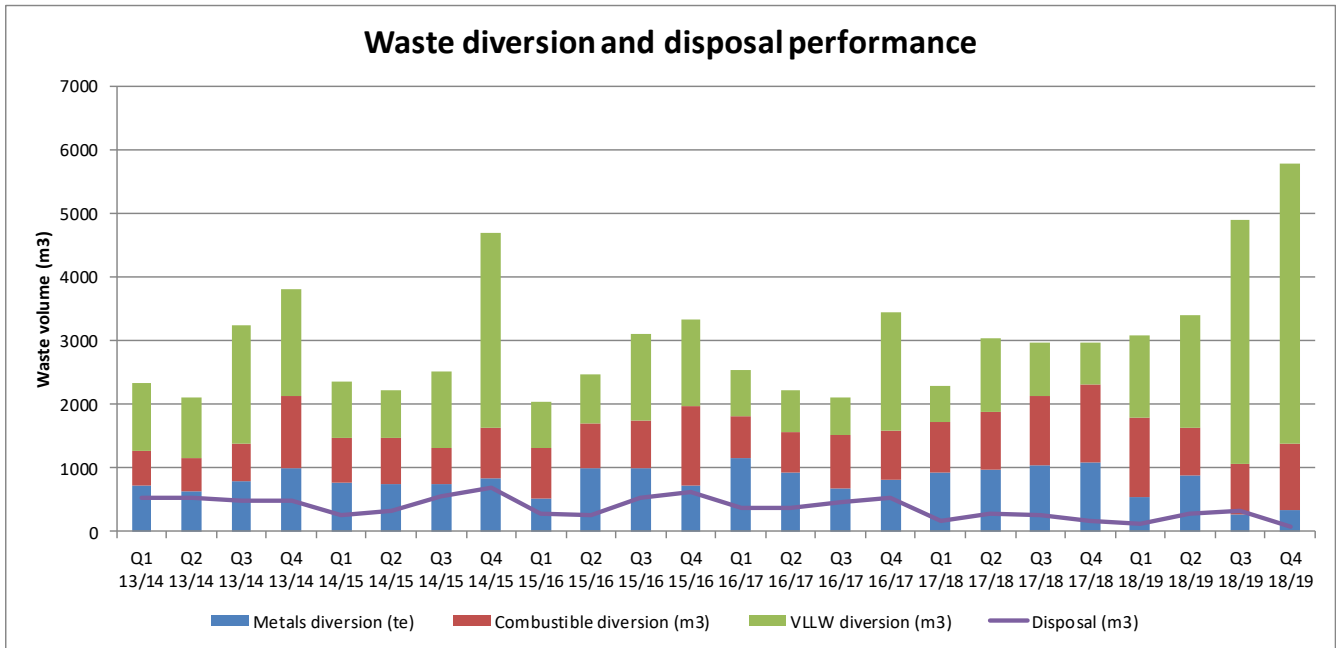
- Actual waste diversion is less than JWMP or LLW disposal exceeds JWMP
- Actual waste diversion or LLW disposal in line with JWMP.
- Actual waste diversion exceeds JWMP or LLW disposal is less than JWMP.

| Waste producer                | Route                                   | JWMP (for year) | Actual (Year to Date) | Actual Performance against JWMP (Year to Date) | % diversion (Year to Date)                        |
|-------------------------------|---|-----------------|-----------------------|--|---|
| Dounreay Site Restoration Ltd | Metallic (te)                           | 100             | 65                    |  | N/A   |
|                               | Combustible (m <sup>3</sup> )           | 24              | 16                    |  |   |
|                               | LLW disposal (no. containers)           | 0               | 4                     |  |   |
| LLW Repository Ltd            | Metallic (te)                           | 107             | 72                    |  | 100%  |
|                               | Combustible (m <sup>3</sup> )           | 234             | 241                   |  |   |
|                               | VLLW (m <sup>3</sup> )                  | 20              | 39                    |  |   |
|                               | LLW disposal (no. containers)           | 4               | 0                     |  |   |
| Magnox Ltd                    | Metallic (te)                           | 1031            | 1077                  |  | ~100%   |
|                               | Combustible (m <sup>3</sup> )           | 1251            | 1439                  |  |   |
|                               | VLLW (m <sup>3</sup> )                  | 5639            | 10524                 |  |   |
|                               | LLW disposal (no. containers)           | 15              | 6                     |  |   |
| Sellafield Ltd                | Metallic (te)                           | 800             | 890                   |  | 90%<br>(Including CLESA)                          |
|                               | Combustible (m <sup>3</sup> )           | 1800            | 2138                  |  |   |
|                               | VLLW off-site (m <sup>3</sup> )         | 600             | 722                   |  |   |
|                               | VLLW on-site at CLESA (m <sup>3</sup> ) | 3600            | 2403                  |  |   |
|                               | LLW disposal (no. containers)           | 93              | 77                    |  |   |
| Non-NDA estate (total)        | Metallic (te)                           | 854             | 32                    |  | 99%   |
|                               | Combustible (m <sup>3</sup> )           | 244             | 60                    |  |   |
|                               | VLLW (m <sup>3</sup> )                  | 9303            | 6374                  |  |   |
|                               | LLW disposal (no. containers)           | 23              | 9                     |  |   |
| NDA estate (total)            | Metallic (te)                           | 1938            | 2039                  |  | 96%<br>(Excluding CLESA)<br>96% (Including CLESA) |
|                               | Combustible (m <sup>3</sup> )           | 3285            | 3818                  |  |   |
|                               | VLLW off-site (m <sup>3</sup> )         | 6259            | 11285                 |  |   |
|                               | LLW disposal (no. containers)           | 112             | 83                    |  |   |
| UK nuclear industry (total)   | Metallic (te)                           | 2791            | 2070                  |  | 96%<br>(Excluding CLESA)<br>97% (Including CLESA) |
|                               | Combustible (m <sup>3</sup> )           | 3528            | 3878                  |  |   |
|                               | VLLW (m <sup>3</sup> )                  | 15562           | 17659                 |  |   |
|                               | VLLW on-site (m <sup>3</sup> ) (CLESA)  | 3600            | 2403                  |  |   |
|                               | LLW disposal (no. containers)           | 135             | 92                    |  |   |

Note: Diversion calculated using National Waste Programme norms and assumptions. Waste producers may use different assumptions in their own calculations.

Note: Dounreay is not included in the totals as these wastes are not being diverted from the LLWR

Waste Diversion and Disposal Performance



NDA-estate waste diversion performance across the UK has remained high (97%) during Q4 FY18/19. UK-wide diversion efforts this quarter have achieved the greatest quarterly cost avoidance since the implementation of the Strategy, at £34M. This can be attributed to the unprecedented levels of VLLW being diverted from the Repository (over 17,500m<sup>3</sup> YTD), with large land remediation projects at Urenco and Harwell representing the majority of this.

Availability of Waste Diversion and Disposal Routes

This table provides a summary of the usage of the waste diversion and disposal routes for waste producers across the UK; reflecting the routes used for waste management since 2008 through reclassification to out-of-scope, self-perform, use of direct contracts and use of the LLW Repository Ltd frameworks. This differs to the Waste Metric Dashboard, in that it records information gathered by the National Programme Office and not actuals data provided by the waste producers.

|       |   | Organisation |                    |            |                |     |                          |                |                            |                        |                          |            |                |             |                            |     |               |                          |     |       |                        |         |                                |              |         |         |                |              |                               |                            |        |   |
|-------|---|--------------|--------------------|------------|----------------|-----|--------------------------|----------------|----------------------------|------------------------|--------------------------|------------|----------------|-------------|----------------------------|-----|---------------|--------------------------|-----|-------|------------------------|---------|--------------------------------|--------------|---------|---------|----------------|--------------|-------------------------------|----------------------------|--------|---|
|       |   | DSRL         | LLW Repository Ltd | Magnox Ltd | Sellafield Ltd | AWE | Active Collection Bureau | Babcock Marine | Urenco Nuclear Stewardship | Cristal Pigment UK Ltd | Doosan Power Systems Ltd | HMNB Clyde | HMNB Devonport | HMNB Rosyth | EDF Nuclear Generation Ltd | EDS | GE Healthcare | Medical Research Council | NNL | Nuvia | Police National Centre | RRS Ltd | Rutherford Appleton Laboratory | Springfields | Cyclife | Tradebe | Tradebe Inutec | UKAEA Culham | Umicores Coating Services Ltd | UniTech Services Group Ltd | Urenco |   |
| Route | M | •            | ✓                  | ✓          | ✓              | ✓   | •                        | •              | ✓                          | •                      | •                        | •          | ✓              | •           | ✓                          | •   | •             | ✓                        | •   | •     | •                      | ✓       | ✓                              | •            | •       | ✓       | •              | •            | •                             | •                          | •      | • |
|       | C | •            | ✓                  | ✓          | ✓              | ✓   | •                        | •              | ✓                          | •                      | •                        | ✓          | •              | •           | ✓                          | •   | •             | •                        | •   | •     | •                      | •       | ✓                              | •            | •       | ✓       | •              | •            | •                             | •                          | •      | • |
|       | V | •            | ✓                  | ✓          | ✓              | ✓   | •                        | •              | ✓                          | •                      | ✓                        | •          | ✓              | •           | ✓                          | ✗   | •             | ✓                        | •   | •     | •                      | •       | ✓                              | •            | ✓       | ✓       | ✓              | ✓            | •                             | •                          | •      | • |
|       | L | ✓            | ✓                  | ✓          | ✓              | ✓   | •                        | •              | ✓                          | ✓                      | •                        | ✓          | ✓              | ✓           | ✓                          | ✓   | ✓             | ✓                        | ✓   | ✓     | •                      | •       | ✓                              | •            | ✓       | ✓       | •              | ✓            | ✓                             | •                          | •      | ✓ |

KEY: note that information refers to known route usage (via direct contract, on-site infrastructure or LLWR framework) since 2008.

✗ Waste route is not open (either not permitted or has not been opened by the waste producer).

• Waste route is open but is not in use by the waste producer.

✓ Waste route is open and is in use by the waste producer.

M Metallic treatment (surface decontamination and / or metal melting).

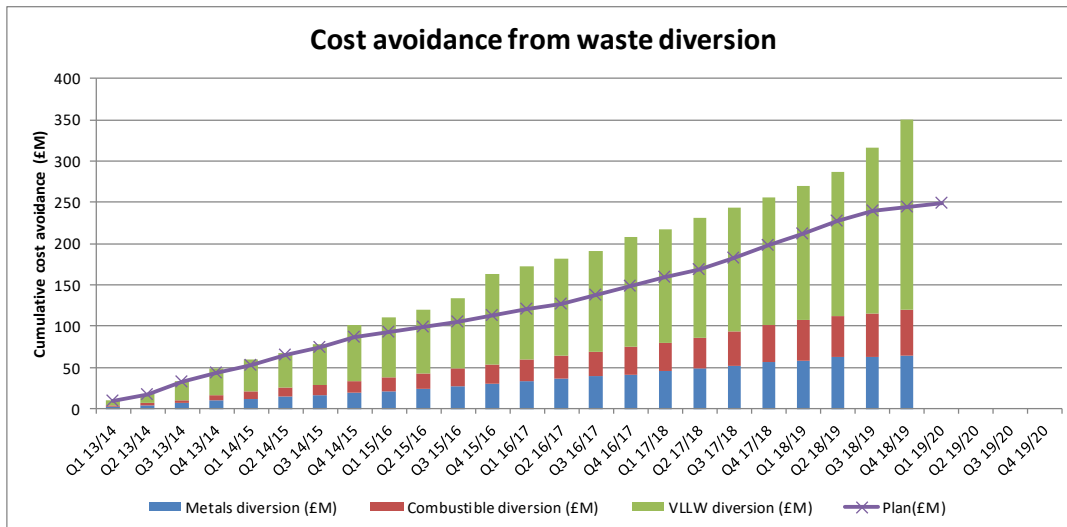
C Combustible waste management (incineration).

V Very Low Level Waste / low-activity Low Level Waste disposal.

L LLW disposal (to LLWR or to the Dounreay near site disposal repository/demolition waste vault).

SECTION 2: Benefit 2 — Overall waste management costs are reduced

Cost Avoidance from Waste Diversion



Cost avoidance is calculated by comparing the cost norm for the relevant route against the cost for disposal at the repository for the actual volumes diverted during the quarter.

SECTION 3: Benefit 3 — Optimised LLW management that supports and enables effective decommissioning and hazard reduction

Waste Producer Quarterly Updates



Continued good levels of diversion noted during 2018/19, including; 2394tes of metal diverted for recycling, 3125m<sup>3</sup> of VLLW to landfill capabilities, and 2138m<sup>3</sup> of material diverted for incineration. During 18/19 there has been a significant reduction in the number of containers generated and transferred for disposal (62) which is projected to continue to trend downwards in 19/20.

To support enhancing effective LLW management and diversion from LLWR focus has been on setting out the approach for waste capability development, identifying a number of near term deliverables. Focus areas in Q4 included:

- An SL-wide LLW/ sub LLW study to investigate future capability needs to support the next 2 decades of SL business has been continued, with outputs drafted.
- Commencing the 2nd soft bagged waste trial - despatches have begun, and the scope broadened to cover larger volumes and all SL waste streams.
- The commencement of the planning and enabling phase for waste active demonstrator, to bring about transformational change across the site (with a view to commissioning during Q3 of 19/20).

Further work has been scoped and planned to take place in 2019/20 which is documented in JWMP 16.

Key Boundary LLW/ILW areas have been progressed:

- Preparation work to support WAGR boxes to LLWR has taken place to allow assessment of other populations to begin (in Q1 19/20).
- Building on the problem definition and BAT work previously progressed with AGR graphite sleeves, work continued with LLWR to allow a position statement for the project to be developed and future programme of work recommended.


**Magnox**

At the end of Quarter 4, Magnox has diverted a total of 1,077 te metallic LLW, 1,440 m3 combustible LLW and 10,523 m3 LALLW/VLLW. This represents a diversion of 98% from the LLW repository, largely due to a combination of the success of the Harwell LETP land remediation project and Chapelcross heat exchanger ducts project, and fewer shipments to LLWR as a result of funding shortfalls impacting waste generating projects (only 6 containers were shipped by year end). The integrated strategy for managing Sizewell and Oldbury FED has been jointly developed and approved with LLWR and the associated BATs drafted for discussion at the respective Options Assessment Panels. The Company Safety Improvement Plan (CSIP) characterisation actions have been successfully completed this quarter, focusing on fingerprint management, uncertainty and competence & capability. A new Magnox Waste Improvement Programme has been initiated, with a focus on challenging current approaches to support more rapid and cost-effective decommissioning.


**LLW Repository Ltd**

A total of 14 consignments have been despatched this quarter (6x metals, 5x combustibles and 3x VLLW, including the Hunterston containers). The Wood Assay Trial commenced in Q4, and seeks to significantly reduce the amount of sampling required prior to consignment of waste, and aspires to become embedded as part of the BAU process. Information on the Legacy Drums has been provided to the National Waste Programme Team following the WEN submission last year, to feed into their work supporting the Problematic Waste Integrated Project Team. Also, the Site-Facing Team are supporting Waste Inventory and Compliance on Information collation for UKRWI 2019.


**Dounreay**  
*Decommissioning excellence*

WRACS Half Height ISO Loading Facility hoist recommissioned and supercompaction operations resumed following breakdown in Q3. 401 drums compacted in Q4 - this included the final drums from a backlog of around 16,000 drums (created during 2011-2015 when the supercompactor was replaced).

Compliant LLW disposals to LLW Vaults resumed following approval of Fingerprint Decay Correction BPM - 4 HHISO containers disposed in Q4.

### National Waste Programme Office Update

The National Waste Programme closed 2018/19 by completing all outstanding PBIs, with the submission of:

- The final report for Phase 2 of the *Packaging to 2050 of ILW with the potential to be managed as LLW* project;
- The technical notes from workshops held with Magnox Ltd and Sellafield Ltd for the *Disposability of Problematic Waste at LLWR* project;
- The final deliverable for the Management of short-lived ILW by decay storage outline business case project;
- The finalised *Radioactive Waste Baseline Review* documents.

The Programme Office held an introductory meeting with the new NDA LLWR Site Facing Team and interim Strategy Implementation Manager to provide a brief on the process, role and activities of the National Waste Programme.

NWP governance activities for Q4 included the face-to-face Monthly Managers Meeting, which held workshops on waste producer contingency arrangements for Brexit, and Strategic Risk Preparedness (specifically focussing on the Paris-Brussels Convention). The 14th Delivery Overview Group meeting took place, with attendance from 15 organisations. Discussions were focussed on mis-consignment and an interactive session on waste consignment practices. The information gathered will feed into two NWP projects in FY19/20.






### Non-NDA Estate











Diversion continues with non-NDA estate consignments being routine business across the portfolio of services. The Programme Office held a meeting with MOD to discuss the scope of a peer review for the Submarine Dismantling Project, to be held at Rosyth in late Q3 / early Q4 FY-19/20.

## Key Project Tracker

The NWP community agrees, on an annual basis, a number of priority business changes from the NWP Benefit Map. These priority business changes are those which are critical to supporting strategy implementation in the near term or are longer term changes which need to be initiated or driven to ensure they are delivered when the nuclear industry need them. This tracker provides a snapshot of performance of delivery of projects (tasks undertaken by waste producers) or enablers (tasks outwith of the control of waste producers, such as those undertaken by the regulators) which support achievement of the priority business changes for the current FY.

### KEY

-  Project not yet commenced.
-  Project has commenced and is on target to deliver on or ahead of schedule.
-  Project has commenced and is behind schedule; but is expected to recover.
-  Project has commenced and is behind schedule; but is not expected to recover.
-  Project is complete.

| Priority Business Change   | Project   | Project Status  |
|--|---|---|
| There are solutions in place for most problematic LLW, including items that fall outside the LLWR ESC  | LLWR - Project to explore and identify the requirements for the next evolution of the Waste Services Treatment Frameworks.              |   |
|  | LLWR - Project to identify and implement improvements to the processes used in Waste Management Services.                               |  |
|  | LLWR - Participation in NDA Critical Enablers transport and packaging strategy development.   |  |
|  | LLWR - Deliver the Problematic Waste IPT (jointly with RWM).  |  |
|  | LLWR - Project to develop an information resource to collate information on projects and opportunities for ILW to LLW reclassification. |  |
|  | LLWR - Project to deliver an outline business case on decay storage of a specific short-lived ILW wastestream.                          |  |
| Appropriate and flexible packaging and transport assets available; with increased use of rail and the ability to use mixed loads where appropriate | LLWR - Participation in Cumbria Coastal Railway Programme Board.  |  |
|  | LLWR - Implement outcomes from review of the LLWR Waste Acceptance Process.   |  |
|  | LLWR - Undertake a project to review the LLWR Waste Acceptance Process to increase usability and robustness of arrangements.            |  |
|  | LLWR - Delivery of a programme to examine and enhance LLWR arrangements to mitigate against the risk of mis-consignment of waste.       |  |

| Priority Business Change   | Project  | Project Status |
|--|--|----------------|
| Waste management processes enable robust and effective material diversion; with streamlined characterisation, sorting, segregation, packaging and consignment. | Magnox - Deliver the Magnox Waste Assurance Programme  |                |
|  | Magnox - Cross-estate project to understand and assess the disposability of wastes identified in the 2017 Problematic Waste Inventory as problematic owing to not being disposable in the LLWR   |                |
|  | Magnox - Project to determine solutions for Magnox problematic (various) wastes  |                |
|  | Magnox - Delivery of problematic waste IPT projects, on specific problematic waste groups  |                |
|  | Magnox - Participation in a project to explore waste producer perspectives on their understanding of the LLWR WAC and its structure, with the aim of identifying potential improvements / initiatives to improve waste producer understanding of the WAC |                |
|  | Magnox - Cross estate project to explore packaging of LLW and ILW with the potential to be managed as LLW (including that already packaged as ILW)   |                |
|  | Magnox - Deliver a report resulting from a review of the Magnox Integrated Waste Strategy (IWS)  |                |
|  | Magnox - JWMP Lifecycle Improvements   |                |
|  | Magnox - Support the LLWR Risk of Misconsignment Project   |                |
|  | Sellafield - Work with LLWR to develop BAT for management of 3000 drums of AGR graphite.   |                |
|  | Sellafield - Programme to integrate POCO, decommissioning and solid waste management arrangements.   |                |
|  | Sellafield - Work with LLWR to enable assessment of the next tranche of WAGR boxes.  |                |
|  | Sellafield - Develop approach to support acceleration of removal of material from high hazard facilities.  |                |
|  | Sellafield - Implement programme of work to further segregate material from the alpha stream that can be managed as LLW.   |                |
|  | Sellafield - Develop approaches for assay of bulk materials  |                |
| Sellafield - Undertake study to establish how LLW and sub-LLW system should evolve   |  |                |

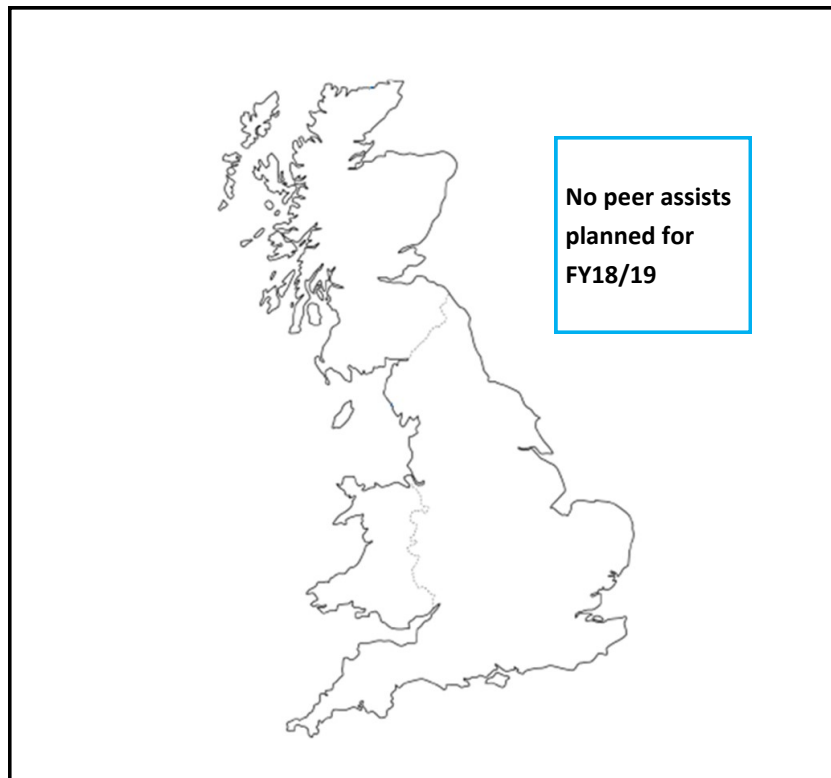


| Priority Business Change   | Project   | Project Status |
|--|---|----------------|
| Waste management processes enable robust and effective material diversion; with streamlined characterisation, sorting, segregation, packaging and consignment.   | Sellafield - Develop and implement programme of follow-up bagged waste trials                                       |                |
|  | Sellafield - Develop local capability to support removal of material from high hazard facilities                    |                |
|  | Sellafield - Undertake a review of BAT for LW-LLW / VLLW metal. Introduce beneficial option(s)                      |                |
|  | Sellafield - Undertake a review of BAT for LW-LLW / VLLW process wastes. Introduce beneficial option(s)             |                |
|  | Sellafield - Increase segregation of inorganic material currently disposed as LLW, in line with review findings.    |                |
| There is a flexible, sustainable supply chain infrastructure which includes enhanced options. The supply chain offers characterisation, sorting, segregation, pre-treatment and conditioning infrastructure to complement the infrastructure on sites. | Sellafield - Investigate how best to use the current on-site and off-site LLW facilities.                           |                |
|  | Sellafield - Investigate opportunities for optimising LLW waste collection and treatment facilities.                |                |
| A full understanding of the LLWR ESC assumptions and material limits is available and informs waste producer operations.   | Sellafield - Investigate the opportunities for decay storage.   |                |
|  | Sellafield - Investigate the opportunities for a risk based approach to disposal.                                   |                |
|  | Sellafield - Liaise with analytical services regarding step change in using exchange columns and the disposal route |                |
| Risk Based disposability approaches have been developed and are being implemented.   | Sellafield - Develop the combustible route for small quantities of orphaned chemicals                               |                |
|  | Sellafield - Implement additional packaging options for more efficient consignment of oil.                          |                |



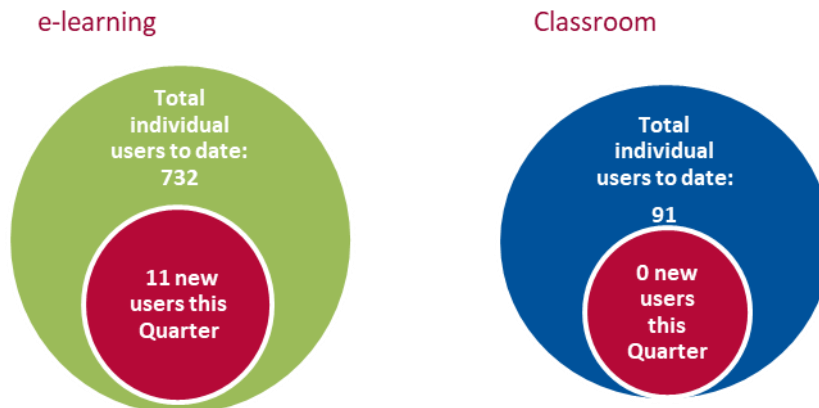
**Peer Reviews and Peer Assists**

This provides a summary of the planned and delivered peer reviews / peer assists during the financial year.

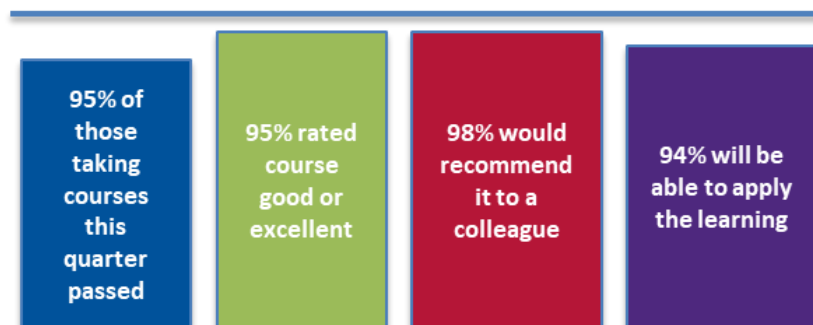


**NWP Training Framework**

**Use of training modules**



**User feedback to date:**



Looking Back Notice Board — publications, consultations and information

**EXTERNAL CONSULTATION**

**Working with communities: implementing geological disposal**

The final policy is published in [Implementing geological disposal: working with communities](#), which updates and replaces the [2014 white paper, Implementing Geological Disposal](#) in England.

**Outcome published**

**EXTERNAL CONSULTATION**

**Nuclear Decommissioning Authority radioactive waste management strategy consultation:**

The response by CoRWM to the consultation on the Nuclear Decommissioning Authority radioactive waste management strategy.

**CoRWM response published**

**EXTERNAL CONSULTATION**

**Nuclear Safeguards Regulations**

On 29 November, the Government has laid the *Nuclear Safeguards (EU Exit) Regulations 2018* and the *Nuclear Safeguards (Fissionable Material and Relevant International Agreements) (EU Exit) Regulations 2018* in Parliament for approval. These regulations set out the detailed legal framework for the UK's new domestic civil nuclear safeguards regime, after withdrawal from the European Atomic Energy Community (Euratom). A full Impact Assessment has been published with the draft Regulations alongside an Explanatory Memorandum. Following a formal public consultation on the regulations, Government has also published a Government Response, summarising the comments received and the changes made to these regulations.

**CoRWM response published**

**EXTERNAL CONSULTATION**

**Nuclear Decommissioning Authority: Pension reform**

The purpose of this consultation was to gather views on the proposed approach that will enable the Nuclear Decommissioning Authority (NDA) to implement pension reform. The pension reform will apply to members of the Civil Nuclear Pension Plan (CNPP) and the SLC section of the Magnox Electric Group of the Electricity Supply Pension Scheme (MEG-ESPS) only.

**CoRWM response published**

**NWP REPORT**

**NWP Reporting has Relocated!**

The majority of National Waste Programme reporting is moving to the NDA's HUB platform. If you are a HUB member and interested in keeping up to date with our latest publications, or if you want to browse our back catalogue, we can be found on the HUB at LLW National Waste Programme. If you don't have a HUB account, but you would like to join the community, please send your request to [NWP@llwrsite.com](mailto:NWP@llwrsite.com)



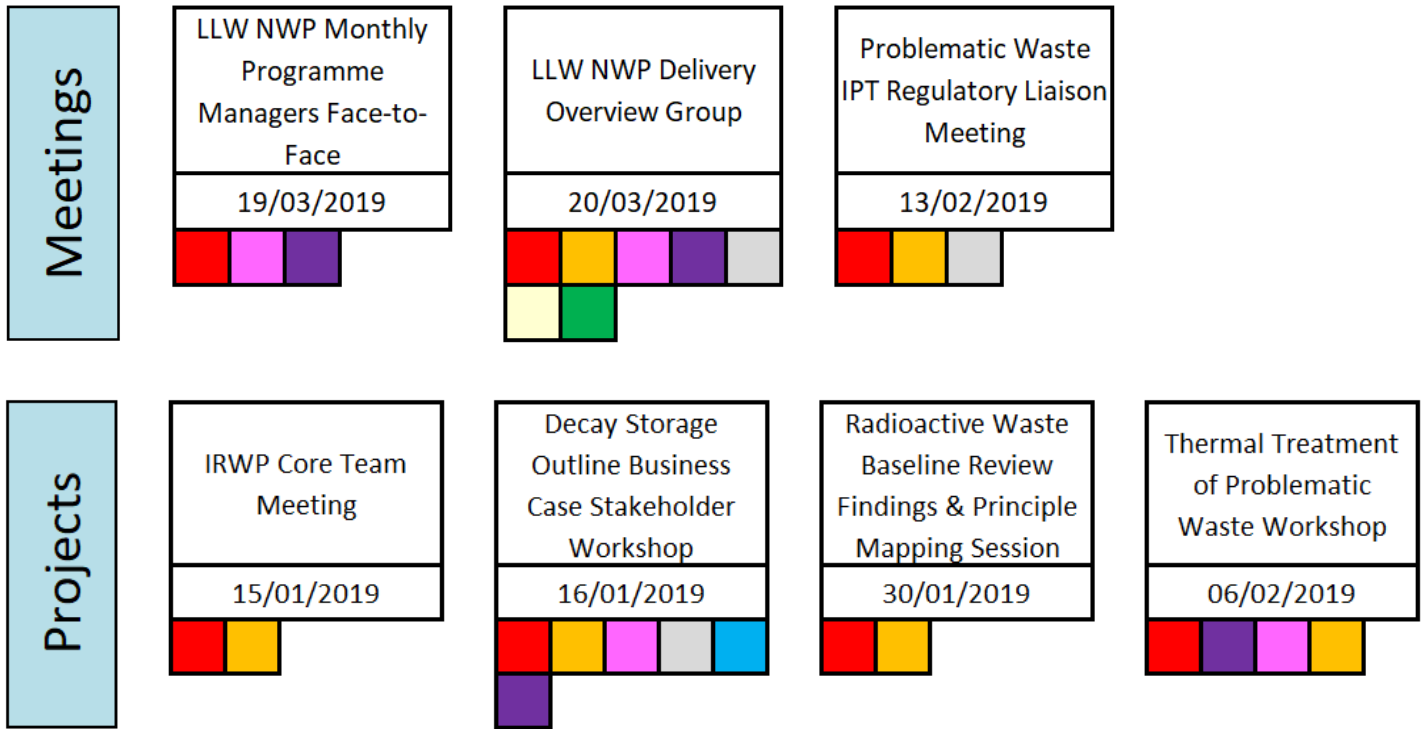
NWP Office publications, reports or training.



Publications or consultations external to the NWP Office.

SECTION 4: Benefit 5 — stakeholders to the strategy are increasingly engaged with its delivery.

Stakeholder interactions in the NWP during the quarter






**KEY:**





|                            |
|----------------------------|
| Regulators                 |
| Waste Producers - NDA      |
| Waste Producers - non NDA  |
| NDA                        |
| NuLeAF & Local Authorities |
| Supply Chain               |
| LLWR                       |
| RWM                        |

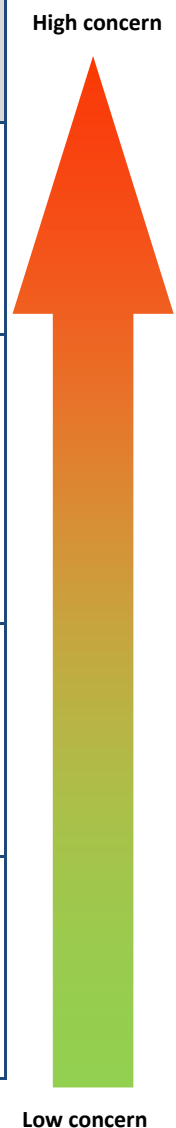
### Stakeholders' Key Issues and Concerns

The following table provides a summary of the key issues and concerns within the nuclear industry relevant to LLW management, collected by the National Waste Programme through formal and informal interactions with waste producers. The chart provides a summary of each issue, a statement of the change in status for that issue (i.e. whether the issue has become more or less important to the NWP community) and a commentary on actions that are being taken to resolve the issue.

**KEY**

-  No change in issue status since last quarter.
-  Issue status has increased since last quarter.
-  Issue status has reduced since last quarter.

| Issue  | Change since last quarter   | Commentary  |
|--|---|---|
| Paris-Brussels nuclear liability implementation.   |  | <ul style="list-style-type: none"> <li>• Government working with NDA, LLW Repository Ltd and the supply chain to understand the changes and mitigate impacts.</li> <li>• Uncertainty remains as to the timescale for implementation.</li> </ul>   |
| Risk of waste mis-consignment.                     |  | <ul style="list-style-type: none"> <li>• There were some waste mis-consignment near-misses and concerns during FY17/18, and a number of lower-level near-misses and concerns in FY18/19.</li> <li>• LLW Repository Ltd is working with waste producers and initiating additional work to support further mitigation of this risk.</li> <li>• Work being considered for FY-19/20.</li> </ul> |
| Waste packaging and transport.                     |  | <ul style="list-style-type: none"> <li>• Issues with Waste Loading Plans, hauliers and the range of waste containers available etc. continue to impact waste producers.</li> </ul>  |
| Complex projects and problematic waste management. |  | <ul style="list-style-type: none"> <li>• Greater interest and impetus in this area, with a number of complex projects being delivered.</li> <li>• The Problematic Waste Integrated Project Team (involving RWM, NDA and LLW Repository Ltd) is working with waste producers to identify opportunities for problematic waste management.</li> </ul>  |



**SECTION 5: Looking Forward**

**Sellafield Ltd**

- Continue with shipments for soft bagged waste trial.
- Continue with waste pilot active demonstrator.
- WAGR boxes to LLWR progress next tranche of assessments.
- Develop improved approaches for assay of excavation wastes.
- Understand LLW and sub LLW programme study and further work.


**Magnox**

- Confirm and initiate various improvement projects within the Magnox Waste Improvement Programme.
- Initiate new 2019/20 Company Safety Improvement Plan (CSIP) waste management actions.
- Support various NWP collaborative projects and NDA IPTs.
- Progress BATs and disposability permissions for Sizewell and Oldbury FED, with LLWR.
- Progress management of problematic legacy waste at Chapelcross.


**Dounreay**  
Decommissioning excellence

- Complete decant and consignment of LLW oils and solvents for off site incineration.
- Continue development of business case for LLW Handling Facility to allow waste diversion and better packing fractions in disposal containers.
- Resume Demolition LLW disposals.
- Complete fingerprint rationalisation project.


**LLW Repository Ltd**

- The Decommissioning Project is coming to an end, however, waste management remains a priority to ensure that waste is treated/disposed compliantly and the principles of the Waste Hierarchy are met. The waste team is picking up waste management on other areas of the site where the Decommissioning Project had previously been the focus.

**Non-NDA Estate**

- Continue embedding business as usual arrangements for waste diversion.
- Open new waste management routes as applicable and appropriate.
- Seek new opportunities for management of complex wastes.

**National Waste Programme Office**

- Finalising the FY19/20 programme of work.
- Planning / commencement of procurement for FY19/20 scopes of work.
- Preparations for the Rosyth Peer Review.

NWP Notice Board— looking forward

  
NWP Publication

**National Strategic BAT Tool**

This software tool seeks to provide information on the legal and strategic background that underpins the National Strategic BATs, and gives practitioners access to information on specific waste material groups to inform decision making.

**Expected Q2 2019/20**

  
NWP Publication

**Nochar**

This reports shows the results from the inactive laboratory trials using Nochar to immobilise oils and oily wastes prior to encapsulation in grout, and tests compliance of the grouted product with the LLWR WAC.

**Expected Q2 2019/20**



Publication or consultation from the NWP Office.



Publication or consultation external to the NWP Office.

**Forward Calendar**

| April 2019 |    |    |    |    |    |    |
|------------|----|----|----|----|----|----|
| 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 |    |    |    |    |    |

**15/04/19** – NWP Monthly Managers Meeting (T)

**24/04/19** – Problematic Waste Community of Practice Forum

| May 2019 |    |    |    |    |    |    |
|----------|----|----|----|----|----|----|
| 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 |    |    |

**04/06/19** – Radiologically Contaminated Mercury Credible Options Workshop

**13/06/19** – Case for change on arrangements for managing waste failing the DI Limit Workshop

**18/06/19** – NWP Monthly Managers Face-to-Face

| June 2019 |    |    |    |    |    |    |
|-----------|----|----|----|----|----|----|
| 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 |

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**Strategic Threats**

| Threat  | Impacts   | Proximity   | Rating (current) | Rating (target) | Mitigation activities   |
|---|---|-------------|------------------|-----------------|---|
| Significant waste mis-consignment event causes partial or full closure of diversion or disposal route(s). | <p>Waste route(s) closed for individual producer or whole industry.</p> <p>Closure of routes reduces supply chain sustainability (supply chain organisation(s) withdraw(s) from market).</p> <p>Increased waste disposal due to loss of diversion routes.</p> <p>Increased waste accumulation due to lack of disposal routes.</p> <p>Loss of radiological / volumetric capacity at LLWR.</p> <p>Increased costs for waste producers.</p> <p>NDA required to invest capital in new facilities.</p> <p>Regulatory controls increase burden (operational and administrative) on consignors.</p> <p>Loss of confidence in suppliers / waste producers / industry.</p> | Near term   | High (14)        | Low (5)         | <p>Waste producers review and improve waste consignment practices/barriers.</p> <p>Guidance on waste consignment developed by LLWR.</p> <p>Peer Reviews and Assists conducted at some sites covering mis-consignment. Highlighted in NWP training modules.</p> <p>External buffer storage capability on line to manage waste flows.</p> |
| Insufficient non radiological, radiological or volumetric capacity at LLWR.                               | <p>Inadequate capacity at LLWR; leads to requirement for new repository.</p> <p>Potential increase in number/volume of problematic streams.</p> <p>Some waste may have to be managed as HAW.</p> <p>Creates the need for additional storage and potentially higher treatment and disposal costs.</p> <p>Causes delays to programmes.</p> <p>Increased waste to diversion routes impacts capacity (e.g.</p>  | Medium term | Medium (9)       | Very low (1)    | <p>Increased or enhanced incentivisation for diversion.</p> <p>NDA intervention or direct action to engender different approaches at waste producer sites.</p>  |

| Threat  | Impacts   | Proximity   | Rating (current) | Rating (target) | Mitigation activities  |
|---|---|-------------|------------------|-----------------|--|
| Large volumes of waste from contaminated land remediation are generated and have to be managed as lower activity waste. | <p>Disposal of increased volumes of waste result in inadequate capacity at LLWR; leading to requirement for new repository / new fit-for-purpose disposal facility.</p> <p>Some waste may need to be managed as HAW.</p> <p>Creates need for additional storage.</p> <p>Reduced volumetric capacity at LALLW/VLLW disposal sites.</p>   | Medium term | Medium (9)       | Very low (2)    | <p>NDA working with regulators, planning authorities and other stakeholders to develop de-licensing approach and arrangement.</p> <p>Revised regulatory guidance on in situ disposal drafted (GRR); being trialled at three sites.</p> <p>On-site or near-site disposal of LALLW/VLLW.</p> |
| Insufficient radiological, non-radiological or volumetric capacity in the supply chain.                                 | <p>Fewer routes available; less capability and less redundancy in marketplace.</p> <p>Increased cost for waste producers (higher prices).</p> <p>No/inadequate diversion routes or capacity for waste.</p> <p>Excess volumes being sent to LLWR, so inadequate capacity at repository.</p> <p>NDA required to invest capital in new facilities.</p> <p>Increased waste accumulation due to lack of disposal routes.</p> <p>Increased costs for waste producers.</p> | Near term   | Medium (8)       | Low (5)         | <p>Working with consignors to improve short term forecasting of waste.</p> <p>Introduction of new Waste Treatment Services Framework (estimated 2020).</p>   |

| Threat  | Impacts  | Proximity   | Rating (current) | Rating (target) | Mitigation activities |
|---|--|-------------|------------------|-----------------|-----------------------|
| Changes in legislation, governmental policy and regulatory perspective prevents execution of LLW Strategy.                                    | <p>Could restrict ability to divert or dispose of LLW.</p> <p>Increased volume of waste that needs to be managed as LLW or that is disposable at LLWR.</p> <p>Additional cost to treat and dispose of waste to meet revised regulatory expectations.</p> <p>Adverse impact on LLWR and/or supply chain capacity.</p> <p>Adverse impact on access to overseas treatment routes.</p> <p>Issues with secondary waste</p>                                  | Medium term | Very Low (2)     |                 | N/A - risk tolerated. |
| Stakeholder concerns over radioactive waste management constrain access to existing routes and / or development of new routes and facilities. | <p>Increased volumes of waste have to be disposed of at LLWR.</p> <p>Supply chain cannot secure authorisation for sites/facilities.</p> <p>Transport of waste is constrained.</p> <p>Waste producers unable or unwilling to use the routes because of stakeholder opposition (reputational impact).</p> <p>Inadequate capacity at the LLWR; requiring need for new repository in worst case.</p> <p>Requirement to buffer store more VLLW and LLW.</p> | Near term   | Very Low (2)     |                 | N/A - risk tolerated. |

**Strategic Opportunities**

| Opportunity  | Impacts   | Proximity   | Rating (current) | Rating (target) | Realisation activities   |
|--|---|-------------|------------------|-----------------|--|
| Improve the sustainability and health of the supply chain.                   | <p>Better environment for investment in capacity and capability by supply chain.</p> <p>Continued presence for the supply chain.</p> <p>Improved value from the supply chain.</p> <p>Continued and optimised waste diversion.</p> <p>Release of LLWR resource for other activities (no need for liability channelling arrangements).</p> <p>Reduced prices (landfills may no longer require insurance for nuclear liabilities).</p> | Near term   | Medium (8)       | High (12)       | <p>Future competitions for frameworks continue to consider sustainability.</p> <p>Embed aggregating process.</p> <p>Supply chain sustainability review undertaken by LLWR on behalf of NDA in FY16/17 and FY17/18.</p> <p>During FY17/18, review of customer demand for LLWR WMS Frameworks and specific focussed engagement on frameworks to be recompleted in near term.</p> <p>Delivery of inventory improvement tasks.</p> <p>Implementation of a new design for Waste Services Frameworks (estimated 2020).</p> |
| Non-NDA estate consignors and New Build are fully engaged with the Strategy. | <p>Diversion maximised.</p> <p>Waste hierarchy applied and new waste management routes being used.</p>  | Near term   | Medium (8)       | High (12)       | <p>Potential to interact with New Build forums to increase visibility of NWP.</p>  |
| Management solutions for earlier management of ILW employed.                 | <p>Potential reduction in storage and disposal costs for waste producers.</p> <p>Prompt hazard and risk reduction.</p> <p>Diversion from GDF maximised.</p> <p>Improved value from supply chain.</p> <p>Enables earlier solution for waste producer.</p> <p>Reduced lifecycle cost.</p>   | Medium term | Medium (8)       | High (16)       | <p>Ongoing collaborative work.</p> <p>Share LFE from projects to manage complex wastes.</p> <p>NWP On-Site Decay Storage Principles project being delivered FY17/18.</p> <p>Alignment of permits, WACs and planning consents to safety cases.</p>  |

| Opportunity  | Impacts   | Proximity   | Rating (current)    | Rating (target)   | Realisation activities   |
|--|---|-------------|---------------------|-------------------|--|
| Fit-for-purpose, flexible and agile package fleets available for LLW management. | Optimised use of transport models.<br>Quicker and cheaper LLW management.   | Long term   | <b>Low (4)</b>      | <b>Medium (8)</b> | Develop new and fit-for-purpose packages.<br>NDA work on transport and packaging strategy initiated in FY17/18 under Critical Enablers thematic area.                                |
| Buffer storage capabilities available and in use.                                | Diversion maximised.<br>Improved value from supply chain.<br>Allows variability in waste arisings to be managed to remove peaks and troughs to supply chain.<br>Enables greater aggregation of waste from around the UK for treatment (driving better value).<br>Enables an earlier solution (removal of waste from site) for consignors. | Medium term | <b>Very Low (2)</b> | <b>Low (4)</b>    | Work to understand potential for and logistics of buffer storage options (NWP Gate 0 project) and next steps of that project.  |
| Improved use of rail infrastructure to support management of LLW.                | Reduced use of road (better carbon footprint, improved safety).<br>Potential for improved value from supply chain.  | Medium term | <b>Very Low (2)</b> | <b>Low (4)</b>    | DRS and LLWR undertaking some work to establish what might be available.<br>NDA work on transport and packaging strategy initiated in FY17/18 under Critical Enablers thematic area. |

| Opportunity  | Impacts  | Proximity | Rating (current) | Rating (target) | Realisation activities   |
|--|--|-----------|------------------|-----------------|--|
| Management solutions available and in use for complex, challenging and problematic wastes. | <p>Prompt hazard and risk reduction.</p> <p>Earlier solution for the management of such wastes.</p> <p>Cost savings across industry.</p> <p>Routes available for problematic waste.</p> <p>Avoidance of critical path schedule impacts due to inability to sentence problematic wastes that need to be dealt with.</p> | Long term | Medium (8)       | High (12)       | <p>Work through Problematic Waste IPT to identify and pursue opportunities.</p> <p>Work to identify opportunities for SL-ILW and Boundary Waste through NWP projects.</p> <p>Waste producers progressing opportunities for reclassification of ILW.</p> <p>Waste producers undertake work to progress opportunities for management of complex / problematic wastes.</p> <p>LLWR work with suppliers to understand and promote opportunities.</p> |