



LLW Repository Ltd

Waste Services Contract

# Waste Acceptance Procedure – Overview

WSC-WAP-OVR – Draft Version 1.0

DRAFT

# Waste Acceptance Procedure – Overview

## Document Control

	<b>Name</b>	<b>Signature</b>	<b>Date</b>
<b>Prepared by:</b>	[Name] [Job Title]		[DD/MMM/YYYY]
<b>Checked by:</b>	[Name] [Job Title]		[DD/MMM/YYYY]
<b>Approved by:</b>	[Name] [Job Title]		[DD/MMM/YYYY]

## Executive Summary

This document forms part of the Waste Services Contract between LLW Repository Ltd and its Customers. It provides an overview of LLW Repository Ltd's Waste Acceptance Procedure giving key information about LLW Repository Ltd, lower activity radioactive waste, waste treatment and disposal services and it acts as an introduction to the process for consigning waste to LLW Repository Ltd. Along with the processes that make up the Waste Acceptance Procedure, it tells customers **how** to consign waste. It should be read in conjunction with the Waste Acceptance Criteria that details **what** waste can be consigned to LLW Repository Ltd for treatment and / or disposal. A Process Overview Diagram (Reference: WAP-PRO-OVR) that provides a visual guide to the waste acceptance processes described in this document is available from our website: [www.llwrsite.com](http://www.llwrsite.com)

If you need any assistance or have any questions regarding this Waste Acceptance Procedure or LLW Repository Ltd's Waste Services, please contact the LLW Repository Ltd Customer Team by telephone: (01946) 722000 or by e-mail: [customerteam@llwrsite.com](mailto:customerteam@llwrsite.com)

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## **1. Introduction**

This document provides an Overview of LLW Repository Ltd's Waste Acceptance Procedure. It forms part of the Waste Services Contract and it is a contractual requirement for Customers to follow these procedures in order to consign waste to LLW Repository Ltd for Treatment and / or Disposal.

### **1.1. LLW Repository Ltd**

LLW Repository Ltd is a Radioactive Waste Management company providing a range of treatment and disposal services to Customers across the UK to support the management of lower activity radioactive waste. LLW Repository Ltd is a Nuclear Decommissioning Authority Site Licence Company. It is owned and managed, under contract to the Nuclear Decommissioning Authority, by UK Nuclear Waste Management Ltd, a consortium led by URS Washington Division including Areva NC, Studsvik UK and Serco Assurance.

### **1.2. Low Level Waste Repository**

LLW Repository Ltd manages and operates the Low Level Waste Repository in West Cumbria under contract to the owner of the Facility, the Nuclear Decommissioning Authority. This is the UK's National Facility for the disposal of low level radioactive waste. LLW Repository Ltd's Low Level Waste Disposal Service involves the grouting and disposal of waste at the Low Level Waste Repository in the Near Surface Disposal Facility. LLW Repository Ltd holds the Nuclear Site Licence and the Disposal Authorisation that allow the facility to operate. In operating the Low Level Waste Repository, LLW Repository Ltd's primary objective is to provide a safe and secure disposal facility for low level waste whilst ensuring that the disposal capacity is preserved only for waste which needs to be disposed of in an engineered facility.

### **1.3. Lower Activity Waste**

Lower Activity Waste is the collective term used for all Low Level, Very Low Level and Exempt Waste that arises from the Nuclear Industry. LLW Repository Ltd provides Customers with a range of services that support the management of the full spectrum of Lower Activity Wastes.

### **1.4. Low Level Waste**

Low Level Waste includes metals, soil, building rubble and organic materials, which arise principally as lightly contaminated miscellaneous scrap. Metals are mostly in the form of redundant equipment. Organic materials are mainly in the form of paper towels, clothing and laboratory equipment that have been used in areas where radioactive materials are used – such as hospitals, research establishments and the nuclear industry. Low Level Waste contains radioactive materials other than those acceptable for disposal with municipal and general commercial or industrial waste. It is defined as “radioactive waste having a radioactive content not exceeding four gigabecquerels per tonne (GBq/te) of alpha or 12 GBq/te of beta/gamma radioactivity”.

### 1.5. Very Low Level Waste

Very Low Level Waste covers waste with very low concentrations of radioactivity. It arises from a variety of sources, including hospitals and the wider non-nuclear industry. Because Very Low Level Waste contains little total radioactivity, it has been safely treated by various means, such as disposal with municipal and general commercial and industrial waste directly at landfill sites or indirectly after incineration. Its formal definition is:

(a) in the case of low volumes ('dustbin loads') of Very Low Level Waste "Radioactive waste which can be safely disposed of to an unspecified destination with municipal, commercial or industrial waste ("dustbin" disposal), each 0.1m<sup>3</sup> of waste containing less than 400 kilobecquerels (kBq) of total activity or single items containing less than 40 kBq of total activity. For wastes containing carbon-14 or hydrogen-3 (tritium):

- in each 0.1m<sup>3</sup>, the activity limit is 4,000 kBq for carbon-14 and hydrogen-3 (tritium) taken together
- for any single item, the activity limit is 400 kBq for carbon-14 and hydrogen-3 (tritium) taken together

Controls on disposal of this material, after removal from the premises where the wastes arose, are not necessary."

Or (b) in the case of high volumes of Very Low Level Waste "Radioactive waste with maximum concentrations of four megabecquerels per tonne (MBq/te) of total activity which can be disposed of to specified landfill sites. For waste containing hydrogen-3 (tritium), the concentration limit for tritium is 40MBq/te. Controls on disposal of this material, after removal from the premises where the wastes arose, will be necessary in a manner specified by the environmental regulators".

### 1.6. Exempt Waste

Exempt Waste is a term used to describe certain lower activity wastes, when used for certain purposes and when managed in particular ways, to be excluded from particular regulatory provisions made under the Radioactive Substances Act. This type of waste falls into the definitions defined in an Exemption Order associated with the Radioactive Substances Act. Of most relevance in Lower Activity Waste Management is the Exemption Order for Substances of Low Activity. This Exemption defines specifies that solid radioactive material is exempt from the regulatory requirements for keeping and use, and waste is exempt from the regulatory requirements for disposal under RSA 93, provided that it is substantially insoluble in water and has an activity that does not exceed 0.4 Bq/g.

### 1.7. Intermediate Level Waste

Intermediate Level Waste is defined as those radioactive wastes exceeding the upper activity boundaries for Low Level Waste but which do not need heat to be taken into account in the design of storage or disposal facilities. This type of waste cannot be accepted by LLW Repository Ltd.

## **2. Prerequisites**

To consign waste to LLW Repository Ltd for treatment and / or disposal, there are a number of prequalification requirements that must be in place before new Customers can follow this Waste Acceptance Procedure.

The following are required:

- Waste Services Contract
- Agreement in Principle
- Disposal Authorisation

The following may be required:

- Transfrontier Shipment Authorisation

### **Waste Services Contract**

A Waste Services Contract is the contractual agreement between LLW Repository Ltd and the Customer who wants to consign waste to LLW Repository Ltd. The Contract incorporates the Waste Acceptance Procedure and the Waste Acceptance Criteria.

New Customers can apply for a Waste Services Contract by completing the Application Form available on our website.

### **Agreement in Principle**

To support an application for a Disposal Authorisation to the relevant Regulatory Body, a Customer may require an Agreement in Principle from LLW Repository Ltd that the proposed waste will, in principle, be suitable for Treatment and / or Disposal by LLW Repository Ltd.

New Customers can apply for an Agreement in Principle by completing the Application Form available on our website: [www.llwrsite.com](http://www.llwrsite.com).

### **Disposal Authorisation**

To allow waste to be consigned to LLW Repository Ltd, the Customer must hold a valid Disposal Authorisation issued under the Radioactive Substances Act by either the Environment Agency in England and Wales or the Scottish Environmental Protection Agency in Scotland. The Disposal Authorisation must cover the Waste Service the Customer wishes to utilise and the route to consign the waste to either the Low Level Waste Repository or directly to the relevant Treatment or Disposal Facility.

### **Transfrontier Shipment Authorisation**

Where waste is to be consigned to a Treatment and / or Disposal to a Facility outside the UK, the consignment must be covered by a Transfrontier Shipment Authorisation. For waste to be consigned to LLW Repository Ltd through the Waste Services Contract, LLW Repository Ltd can manage, and / or support the Customer in, an Application for a Transfrontier Shipment Authorisation and in obtaining any relevant Export Licences that may be required.

### **3. Waste Service Options**

Through the Waste Services Contract, LLW Repository Ltd provides Customers with a range of waste management options to ensure waste is managed in the most efficient manner possible with the objective of preserving the disposal capacity at the Low Level Waste Repository.

#### **3.1. Metallic Waste Treatment**

This service is a recycling option. Waste can be treated by shotblasting or smelting to remove the radiological content. The vast majority of the metal can then be recycled as Exempt Waste thus reducing the volume for disposal. The remaining secondary waste is consigned to the Low Level Waste Repository for disposal.

#### **3.2. Supercompactable Waste Treatment**

This service is a volume reduction option. Waste can be treated by high force compaction to reduce the volume that needs to be disposed of. The secondary waste product is consigned to the Low Level Waste Repository for disposal.

#### **3.3. Low Level Waste Disposal**

This service is a disposal option. Waste that is not suitable for treatment or secondary waste from a treatment process is consigned to the Low Level Waste Repository for disposal.

## 4. Waste Acceptance Procedure

The Waste Acceptance Procedure is the term used for the arrangements that Customers follow to consign waste to LLW Repository Ltd.

The Waste Acceptance Procedure has been split into a series of logical processes that cover the entire spectrum of waste management from forecasting through characterisation to treatment and disposal. The processes are:

- Waste Forecasting
- Waste Assurance
- Waste Characterisation
- Waste Enquiry
- Waste Consignment
- Waste Receipt

Each process consists of four elements:

- Process Diagram
- Guide
- Forms
- Templates

### Process Diagram

Each Process is detailed in a Process diagram. This diagram highlights the key steps in each process and defines the actions that the Customer, LLW Repository Ltd and the Supplier will take to complete the process.

### Guide

Each Process is supported by a Guide. The Guide provides additional details about each process step, information requirements, actions and the objectives of the Process. The Guide also explains how each Form should be completed, including the level of detail required, and the role of any Templates that LLW Repository Ltd completes.

### Forms

Each Process has related Forms. The Forms are to be completed by the Customer and submitted to LLW Repository Ltd to provide relevant information to complete the Process. Forms can be completed electronically and submitted to LLW Repository Ltd by e-mail.

### Templates

Each Process has related Templates. The Templates are completed by LLW Repository Ltd and issued to the Customer to provide relevant information related to the Process. Templates will be completed electronically and issued to the Customer by e-mail.

### 4.1. Waste Forecasting

The Waste Forecasting Process is the process that Customers follow to provide LLW Repository Ltd with a regular forecast of their Treatment and Disposal Volumes, Activity Content and Waste Packaging requirements. Customers complete the Waste Forecasting Form and submit it to LLW Repository Ltd. Following review of the forecast, LLW Repository Ltd will issue an Allocation of volume and activity capacity for waste services.

For Waste Packaging requirements, LLW Repository Ltd will ensure that sufficient waste containers are available to meet Customer requirements subject to receipt of a Purchase Order from the Customer. Further details are provided in the Packaging Services Process Diagram and Guide that form part of the Waste Services Contract.

The Waste Forecasting Process is an ongoing process between the Customer and LLW Repository Ltd for the duration of the Waste Services Contract. For a particular year, the process begins with the Customer compiling their requirements for the next 12 months in the Waste Forecasting Form and ends with LLW Repository Ltd providing an Allocation for the next 12 months.

The Waste Forecasting Process consists of:

- Waste Forecasting Process
- Waste Forecasting Guide
- Waste Forecasting Form

#### **4.2. Waste Characterisation**

The Waste Characterisation Process is the process that Customers follow to characterise their waste for Treatment and / or Disposal. There are a number of elements required to suitably characterise waste: originating process and history of the waste, consideration of predicted isotopic and hazardous elements, development of a sampling and analysis plan, implementation of sampling and analysis, derivation of a waste fingerprint, categorisation of the waste, identification of activity assessment and measurement techniques and finally the compilation of this information in a Waste Characterisation Form.

The Waste Characterisation Process is an ongoing process between the Customer and LLW Repository Ltd for the duration of the Waste Services Contract. For a particular quantity of waste, the process begins with the Customer identifying the nature of the waste to be characterised and ends when a Waste Characterisation Form has been approved by LLW Repository Ltd.

The Waste Characterisation Process consists of:

- Waste Characterisation Process
- Waste Characterisation Guide
- Waste Characterisation Form

#### **4.3. Waste Assurance**

The Waste Assurance Process is the process the Customers follow to provide re-assurance to LLW Repository Ltd that their own waste management arrangements and procedures will ensure that waste consigned to LLW Repository Ltd for Treatment and / or Disposal will comply with the requirements of both the Waste Acceptance Procedure and the Waste Acceptance Criteria. It also includes the activities that LLW Repository Ltd will undertake to provide assurance that waste consigned to LLW Repository Ltd for Treatment and / or Disposal is as described in the Waste Consignment Form. These objectives are achieved by undertaking Customer Audits and Assurance Monitoring of waste consignments.

The Waste Assurance Process is an ongoing process between the Customer and LLW Repository Ltd for the duration of the Waste Services Contract. For a particular quantity of waste, the process begins with the Customer outlining their waste management arrangements in the Waste Assurance Form and ends with LLW Repository Ltd monitoring consignments received for Treatment and / or Disposal.

The Waste Assurance Process consists of:

- Waste Assurance Process
- Waste Assurance Guide
- Waste Assurance Form

#### **4.4. Waste Enquiry**

The Waste Enquiry Process is the starting point for consigning a specific volume of waste under the Waste Acceptance Procedure. Customers wishing to consign waste to LLW Repository Ltd must complete a Waste Enquiry Form that provides outline information about the waste to be consigned and the potential waste treatment and / or disposal options that can be applied. The Form requires details for waste description, waste composition, physical properties, radiological properties and waste packaging options

The Waste Enquiry Process is related to a particular quantity of waste. It can be used to enquire about the suitability of a range of waste volumes for Treatment and / or Disposal services, such as a one-off large item, a multi-year operational wastestream, an entire decommissioning project or a single consignment of mixed waste. For a particular quantity of waste, the process begins with the Customer completing the Waste Enquiry Form and ends with LLW Repository Ltd issuing a Waste Services Quotation including a proposal for the management of the waste, any necessary variations that would be required and a Waste Packing Plan.

The Waste Enquiry Process consists of:

- Waste Enquiry Process
- Waste Enquiry Guide
- Waste Enquiry Form
- Waste Packing Plan Template
- Waste Services Quotation Template

#### **4.5. Waste Consignment**

The Waste Consignment Process is the process to be followed to allow the acceptance of each consignment of waste. Customers that have accepted Waste Services Quotation and generated a waste consignment must complete a Waste Consignment Information Form that provides detailed information on the contents of a specific container of waste. It may be necessary to obtain approval for a variation to the Waste Acceptance Criteria from LLW Repository Ltd through the submission of a Waste Consignment Variation Form. The information provided during this process forms the lifetime record of waste disposed of at the Low Level Waste Repository. It is therefore very important that Customers complete the Forms a fully and accurately as possible.

The Waste Consignment Process is related to a specific consignment of waste, i.e. a single container of waste. For a specific consignment, the process begins with the Customer generating the waste and packing it in accordance with the Waste Services Quotation and the Waste Packing Plan and, following approval, ends with the Waste Consignment being transported to the relevant Treatment or Disposal Facility.

The Waste Consignment Process consists of:

- Waste Consignment Process
- Waste Consignment Guide
- Waste Consignment Information Form
- Waste Consignment Transport Form
- Waste Consignment Variation Form
- Waste Consignment Approval Template
- Waste Consignment Rejection Template

#### **4.6. Waste Receipt**

The Waste Receipt Procedure is the process followed once a waste consignment has been delivered to LLW Repository Ltd for Treatment and / or Disposal. This Process does not require any initiating action from the Customer.

The Waste Receipt Process is related to a specific consignment of waste, i.e. a single container of waste. For a specific consignment, the process begins with the Waste Consignment being received at the relevant Treatment or Disposal Facility including inspection to confirm that the consignment complies with the relevant Waste Acceptance Criteria and ends with LLW Repository Ltd issuing a Waste Disposition Report that details the final status of the waste that was consigned after all Treatment and / or Disposal Services have been completed.

The Waste Receipt Process consists of:

- Waste Receipt Process
- Waste Receipt Guide
- Waste Receipt Template
- Waste Services Invoice Template
- Waste Event Report Template
- Waste Disposition Report Template

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**Low Level Waste  
Repository Site**

Drigg, Holmrook  
Cumbria CA19 1XH  
[www.llwrsite.com](http://www.llwrsite.com)