

# IWS Action Plan

March 2013



**Magnox Integrated Decommissioning and Waste Management Strategy**  
2013 Action Plan

<b>Accepted by:</b> P. Roach Strategic Programmes Director	Signature:  Date: 13 MARCH 2013
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# Introduction

## Background

The Nuclear Decommissioning Authority (NDA) is a strategic authority established in 2005 under the Energy Act 2004. It is responsible for decommissioning and cleaning up civil nuclear facilities; ensuring that all the waste products are safely managed; implementing government policy on the long term management of nuclear waste; and developing UK-wide nuclear low level waste (LLW) strategy and plans. The NDA strategy is delivered through management and operations contracts with licensed operators: site licence companies. Magnox (the company), owned by EnergySolutions, is the management and operations contractor responsible for ten nuclear sites and one hydroelectric plant in the UK working for the sites' owner, the NDA.

Figure 1: Magnox Sites



## Action Plans

There is a requirement from the NDA, and an expectation from the regulators, that the company will develop and maintain an Integrated Waste Strategy (IWS). Magnox fulfils this requirement through the production of S-036, Integrated Decommissioning and Waste Management Strategy. The strategy applies to all company nuclear licensed sites (and associated land-holdings), and all their wastes, ie intermediate level waste (ILW), low level waste (LLW), very low level waste (VLLW), non-radioactive waste, aqueous and gaseous discharges.

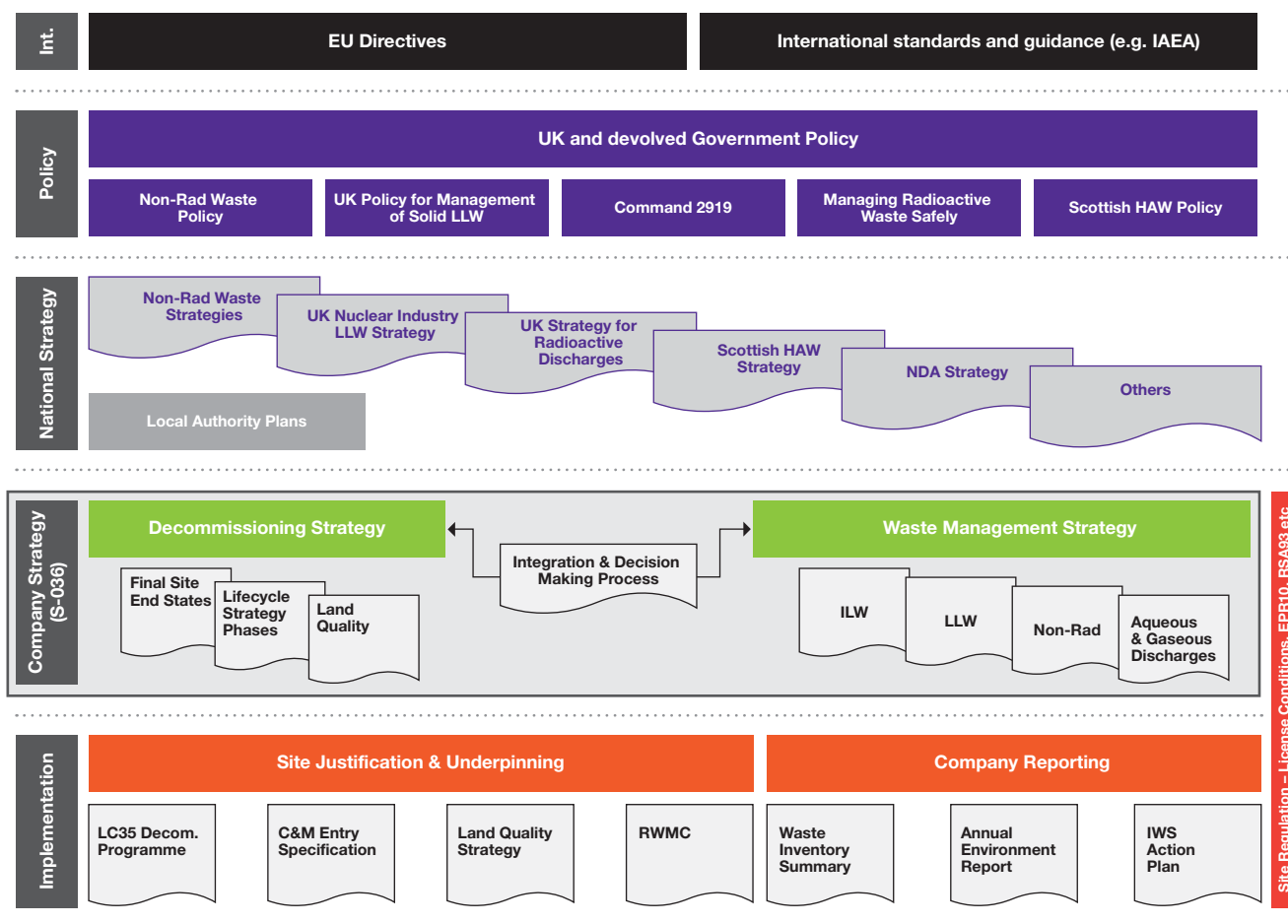
Any gaps, threats and opportunities identified throughout S-036 have been reviewed and the action plan contained within this document produced.

The strategy and therefore this action plan will primarily be implemented through a series of strategic programmes established to deliver safe and efficient decommissioning of the sites in-line with the Magnox Optimised Decommissioning Programme (MODP). The programmes cover the main areas of decommissioning and waste management; they are:



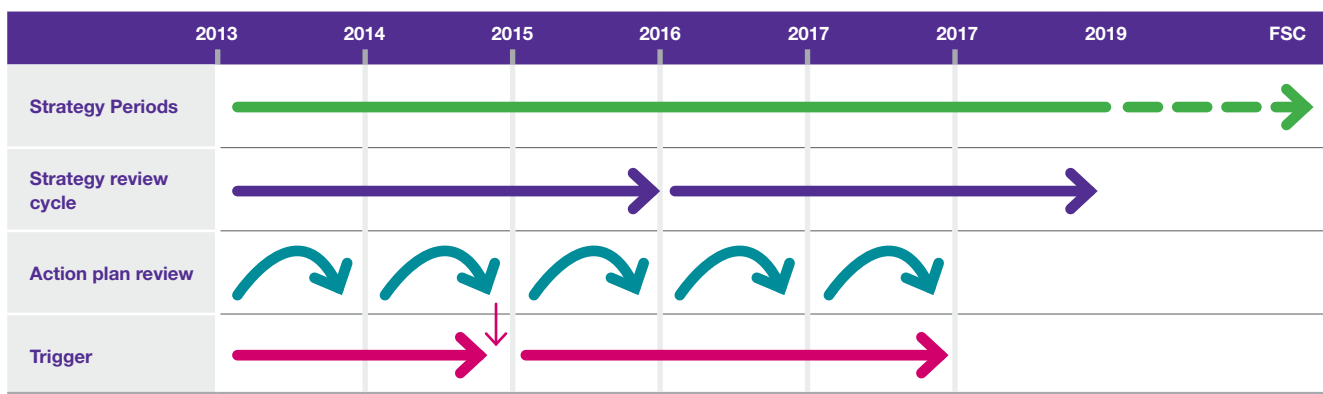
Figure 2 illustrates the interaction of the strategy within this document with government policy; NDA strategy; site underpinning and justification; and the reporting of progress on delivery of the company strategy.

Figure 2: Interaction with other strategies and plans



S-036 covers the whole strategy period, ie to the end of FSC. As a minimum, review of this document will be undertaken on a cycle of no more than three years. This action plan will be reviewed annually. The review cycle is shown in Figure 3.

Figure 3: Strategy and action plan review cycles



# 2013 Action Plan

	Action	Objective	Accountability	Target Date	Status
1.	<b>Ponds:</b> Agreement of care and maintenance (C&M) entry condition for Trawsfynydd and Bradwell ponds.	To enable reassessment of MODP targets for the remaining sites.	Ponds Programme Director	March 2014	New Action
2.	<b>Ponds skips:</b> Completion of ponds skips decontamination trials.	To determine the benefit of applying the technology.	Ponds Programme Director	October 2013	New Action
3.	<b>ILW Storage:</b> Approval gained for first of a kind interim stage letter of compliance (iLoC) for Bradwell waste streams.	To enable the close out generic iLoC issues and enable the development of iLoC submissions for other waste streams.  To enable the development and deployment of conditioning solutions.	ILW Programme Director	December 2014	New Action
4.	<b>ILW storage:</b> Placement of first conditioned waste package in the Bradwell Interim Storage Facility (ISF).	To increase to technology readiness level (TRL) 9 and enable Bradwell design to be used as a template for future stores.	ILW Programme Director	March 2014	New Action
5.	<b>ILW processing:</b> Recovery and processing of 50 drums of wet ILW at Hunterston A complete.	To enable the recovery and processing of wet ILW at Hunterston.	ILW Programme Director	March 2014	New Action
6.	<b>FED dissolution:</b> Cumulative 16 Te of Bradwell FED dissolved (processed and discharged) at Dungeness A.	To maximise the use of existing assets and to progress with the treatment of waste.	FED Programme Director	March 2014	New Action



Construction of Bradwell Interim Storage Facility



Construction of the WILREP facility



	Action	Objective	Accountability	Target Date	Status
7.	<b>FED dissolution:</b> Inactive and active commissioning of the Bradwell FED dissolution plant complete.	To increase to TRL 9 and enable the Bradwell design to be used as a template for future plant.	FED Programme Director	March 2014	New Action
8.	<b>Decommissioning:</b> Project standard models in place for plant and structures projects	Enable a standardised approach across the sites to be undertaken during deplanting and decommissioning.	Plant & Structures Programme Director	March 2014	New Action
9.	<b>C&amp;M:</b> Completion of all physical works at Bradwell to enable C&M entry in accordance with the safety case and stage submissions.	To enable dissemination of learning from Bradwell C&M safety case submissions to all sites and other site licence companies.	Plant & Structures Programme Director	2015	New Action
10.	<b>LLW management:</b> Delivery of the joint low level waste management plan (JWMP).	To embed the UK low level waste strategy within Magnox as part of a national waste programme.	Waste Programme Director	Ongoing (5 year rolling plan)	Live plan, reissued twice yearly.
11.	<b>Waste strategy:</b> Delivery to the NDA of gate B strategic management system (SMS) papers on ILW storage optimisation and FED treatment optimisation.	To enable preferred options to be identified and the optimised solution implemented.	Waste Programme Director	March 2014	New Action
12.	<b>C&amp;M:</b> Completion of enabling activities to establish the HUB Model.	To enable the central management of sites when they enter C&M.	Hub Director	March 2014	New Action



FED dissolution at Dungeness



Construction of Bradwell FED dissolution plant

# 2011 Action Plan Status

The Magnox 2011 Integrated Waste Strategy Main Report presented an action plan for closing gaps in waste management. The progress against the 2011 Action Plan is reported on the next few pages.

	Action	Objective	Accountability	Target Date	Status
1.	<b>Inventory:</b> to adopt the learning from the 'SMART' LLW Inventory project into the FSC waste volumes.	To understand and increase confidence in FSC LLW volumes.	Waste Programme Director	October 2012	<b>Complete</b> Review for LLW FSC data carried out and a report prepared. Recommendations submitted to the NDA. SMART Inventory review also carried out at Calder Hall.
2.	<b>Waste Tracking Software:</b> Complete implementation of the WTS at the remaining sites.	To improve the capability and effectiveness of tracking waste from cradle to grave.	Waste Programme Director	March 2013	<b>Complete</b> This has been fully implemented at all sites with the exception of Trawsfynydd as it is not considered applicable to this site.
3.	<b>Arrangements:</b> Fully implement the company MCP16, Management of solid, liquid and gaseous waste across the Magnox fleet. This is the enabling document for programmisation of waste.	Ensure consistent approaches to waste management, enabling more rapid further improvements.	Waste Programme Director	March 2012	<b>Complete</b> All sites implemented MCP-016.
4.	<b>Arrangements:</b> Implement the new company standard for clearance and exemption.	The benefit is to incorporate the new exemption order, VLLW, Controlled Burial etc in a programmed manner.	Waste Programme Director	March 2012	<b>Complete</b> A new clearance and exemption generic process has been developed and Company Standard updated.





Calder Hall SMART Inventory Review Team



Waste Tracking



# 2011 Action Plan Status

	Action	Objective	Accountability	Target Date	Status
5.	<b>Arrangements:</b> Implementation of Joint Guidance on higher activity waste.	To establish robust arrangements that demonstrate appropriate application of the Joint Guidance.	Waste Programme Director	March 2013	<b>Complete</b> New Company Standard issued. Contains a summary of all the arrangements / supporting information for the management of HAW.
6.	<b>Arrangements:</b> Develop options and enablers for central processing and storage of HAW within the Magnox fleet.	To establish the feasibility and viability of central processing and storage.	Waste Programme Director	Feasibility report and preliminary business cases in December 2012	<b>Complete</b> Gate 0 papers (case for change) prepared following the NDA Strategy Management System. Two projects have been established to investigate optimisation of FED Treatment and ILW Storage.
7.	<b>LLW routes:</b> Develop a comprehensive BPEO for all types of LLW.	To support BAT for all LLW and some borderline ILW to help implement UK strategy for LLW management.	Waste Programme Director	June 2012	<b>Complete</b> Generic strategic options assessment carried out for LLW. BPEOs established for each LLW type.
8.	<b>LLW Joint Waste Management Plan:</b> Monitor and maintain the Magnox/LLWR Joint LLW Management Plan.	To embed the new Joint Management Plan within Magnox Ltd and LLWR Ltd and support delivery of the National LLW Programme.	Waste Programme Director	Issue 2 of the JWMP March 2012	<b>Complete</b> Issue 4 of JWMP produced and agreed with LLWR. Progress is monitored through the National Waste Programme Governance Arrangements.





Berkeley Boilers – en route to Studsvik



Chapelcross Combustible Waste – Utilising efficient transport methods



Bradwell Fuel Pond Skips Optimised Disposal – Road & Rail feasibility trial



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