

# **UK Management of Solid Low Level Radioactive Waste from the Nuclear Industry:**

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**Analysis of Near-term Low Activity Low Level Waste Arisings  
within the UK Radioactive Waste Inventory 2010**

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**May 2011**

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## Executive Summary

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The 2010 Low Level Waste (LLW) Strategic Review <sup>[1]</sup> document provided an update to the NDA LLW baseline presented in 2008 with data from the UK Radioactive Waste Inventory 2010 (UKRWI) and an examination of current site LLW strategies, costs, and the available assets and infrastructure (existing and planned) for LLW management.

This report aims to further examine the UKRWI data on a site by site basis to consider the material breakdown of Low Activity – Low Level Wastes (LA LLW) (i.e. waste with an activity <200Bq/g) in order to assess the material volumes that may be suitable for management via options such as metal recycling, incineration and controlled burial in suitably permitted near surface disposal facilities. By considering the waste material composition, the expected effects of implementation of volume reduction techniques and the wastes' reported radioactivity concentrations, several assumptions can be made to provide a realistic estimate of the expected waste volumes that may be managed by these alternative routes. This report thus provides stakeholders involved in the development, regulation or consultation processes for LALLW treatment or disposal facilities with information on the current predicted volumes for LALLW arising on a regional basis over the next 15 years.

According to the UKRWI, the total volume of waste predicted to arise during the period 2010 to 2026 with an activity of <200Bq/g is 429,597m<sup>3</sup> from a total of 681,354m<sup>3</sup>. Following application of the Waste Hierarchy and exclusion of waste categorised as exempt, the resultant volume of LALLW that may require ultimate disposal is expected to be 261,908m<sup>3</sup>. This suggests that an estimated 61% of the overall waste volume predicted to arise over the next 15 years, with an activity of <200 Bq/g may ultimately require to be routed for disposal to a near surface disposal facility. Of the 263,416m<sup>3</sup> estimated, the largest contribution is expected from Sellafield, generating 35% (92,012m<sup>3</sup>) of the total. Harwell and Springfields make up the top three contributors with 32% (83,976m<sup>3</sup>) and 10% (26,532m<sup>3</sup>) respectively.

These figures are however based on estimates and will ultimately vary depending on the development of the UK National Waste Programme.

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## 1. Introduction

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The 2010 Low Level Waste (LLW) Strategic Review <sup>[1]</sup> document provides an update to the NDA LLW baseline presented in 2008 with data from the UK Radioactive Waste Inventory 2010 (UKRWI) and an examination of current site LLW strategies, costs, and the available assets and infrastructure (existing and planned) for LLW management. The aim of this was to inform identification of synergies and opportunities to improve LLW management across the estate as part of ongoing national strategy implementation.

A review of the UKRWI showed that information on the sites' LLW is developing to better identify waste streams and to incorporate new waste disposal routes. The total forecast LLW volume is 4.4 million m<sup>3</sup> which arises during 2010 to 2120. This consists of 3.3 million m<sup>3</sup> of Very Low Level Waste (VLLW) and 1.1 million m<sup>3</sup> of LLW. Sellafield is the dominant LLW waste generator for the UK, producing roughly 3.3 million m<sup>3</sup> of waste (LLW and VLLW) accounting for 76% of the UK's total waste. Volumes are dominated by VLLW wastes with soil and rubble identified as the main waste stream.

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### 1.1 Approach

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This report aims to further examine the 2010 National LLW Inventory data on a site by site basis to consider Low Activity – Low Level Wastes (LA LLW) (i.e. waste with an activity <200Bq/g) in order to assess the material volumes that may be suitable for management via options such as metal recycling, incineration and controlled burial in permitted near surface disposal facilities. By considering the waste material composition, expected affects of implementation of volume reduction techniques and the wastes activity levels, several assumptions can be made to provide a realistic estimate of the volumes that may be managed by these routes. This report thus provides stakeholders involved in the development, regulation or consultation processes of LALLW treatment or disposal facilities with information on the current predicted volumes of LALLW arising on a regional basis over the next 15 years and provides stakeholders with a near term analysis of the information for planning purposes.

The data displayed in Section 2 comprises all waste streams in the UKRWI. Tables 2 and 3 provide an overview of all data from the UKRWI and Tables 4 to 8 provide data on wastes with an activity of <200Bq/g. The inventory is then further broken down to show waste volumes predicted to arise in the next 15 years (up to 2026). This information is displayed in several tables:

- Table 2 provides a site by site summary of material composition of predicted waste arisings (for all waste activities up to 2120) grouped in to the following materials:
  - Graphite
  - Metals
  - Plastic/ Rubber
  - Soft Organics
  - Soil/ Rubble
  - Wood
  - Unknown Material
- Table 3 provides a site by site summary of waste arisings grouped by activity content of the wastestreams (for all waste materials up to 2120). This information is grouped into:
  - Exempt (<0.4Bq/g) – Some radioactive waste is exempted from regulation by an Exemption Order issued under the Radioactive Substances Act 1993(RSA93). Exempt waste does not need an authorisation for disposal.
  - VLLW (0.4 - 4Bq/g) - Radioactive waste that can be disposed of to specified landfill sites. After the waste is removed from its site of origin, it will be subject to controls on its disposal, which will be specified by the environmental regulators.
  - LLW (4 - 200 Bq/g) - LLW with radioactivity greater than HV-VLLW may be suitable for 'controlled burial'. The arrangements for this are the same as those for HV VLLW, except that:
    - The radiological impact assessment that will be needed to support an application will need to be more detailed. The Environment Agency would expect that any application should

have been prepared making reference to and proportionate use of its specialist guidance on radioactive waste disposal.

- If the EA authorise disposal, they may choose to include additional conditions in the authorisation to make sure any radiological impacts are suitably controlled.
  - LLW (200 - 4000 Bq/g) – LLW sent for treatment (e.g. incineration, metal melting, compaction) prior to disposal at LLWR.
  - LLW reported as >4000 Bq/g (4000 – 12000Bq/g) – LLW sent for treatment (e.g. incineration, metal melting, compaction) prior to disposal at LLWR.
- Table 4 provides a regional split of waste materials with an activity <200Bq/g generated up to 2026. Data in Tables 4 to 8 are split into the following time periods:
    - Stock (waste available as at the 1<sup>st</sup> of April 2010)
    - 2010 – 2016
    - 2017 – 2026
    - Total (Stock – 2026)
  - Table 5 shows a site by site summary of waste composition with an activity <200Bq/g for the identified time periods.
  - Table 6 then applies an adjustment to the Table 5 figures to take account of appropriate application of the Waste Hierarchy (WH) for wastes that could be suitable for alternative recycling or treatment processes, avoiding the need for disposal to near surface facilities. Based on the material composition information, it is broadly assumed that:
    - Metals are sent for: Metal Recycling
    - Plastic/rubber, soft organics and wood is sent for: Incineration
    - Soil/rubble is sent for: Disposal

However, it is anticipated that in reality, varying fractions of these waste types may ultimately be managed through alternative waste routes. For example some metal and combustible waste may not be segregated in practice and may therefore require disposal. Conversely, some soil/rubble may be suitable for re-use in construction or landscaping projects. The management of wastes will depend on the Best Available Technique (BAT) assessment for those wastes and will be determined on a case by case basis.

The following assumptions have been used to estimate the volumes remaining that will require disposal:

Assumption	Comment
5% of the total metal wastes will be disposed of.	This assumes that the metal treatment route grows in maturity and accounts for 95% of the metal waste route but allows for some metal waste that may not be suitable or cost effective for recycling to be disposed of.
100% of the soil and rubble will be disposed of.	It is currently expected that all soil and rubble will be sent for disposal though this may change if reuse or recycling becomes feasible.
50% of the combustible materials are disposed of.	50% of the combustible materials are incinerated. This takes into account the increasing use of incinerators for LLW but also allows for any waste streams for which incineration may not be technically feasible.
50% of the unknown material is disposed of.	

<b>Assumption</b>	<b>Comment</b>
10% of graphite is disposed of	This proportion is low due to the lack of a consensus on a preferred approach to the disposal of graphite <sup>[2]</sup> . As such while some graphite will be available for disposal, very little is expected to be disposed of until a consensus has been reached on the BAT for this waste.

Following the application of these adjustments, the volumes left reflect the waste which may ultimately be disposed to a near surface facility.

- Table 7 considers the waste activity and removes waste streams with a reported activity of <0.4Bq/g from the Table 4 values. Wastes with an activity of <0.4Bq/g would likely be considered a Substance of Low Activity under The Radioactive Substances (Substances of Low Activity) Exemption Order (as amended) <sup>[3]</sup>. This would result in the waste being exempt and disposed of along conventional waste routes. It is expected the new Exemption Orders will impact on waste volumes classed as exempt.
- Table 8 shows the effect on waste volumes taking in to account both the removal of exempt wastes and application of the estimated WH adjustments.

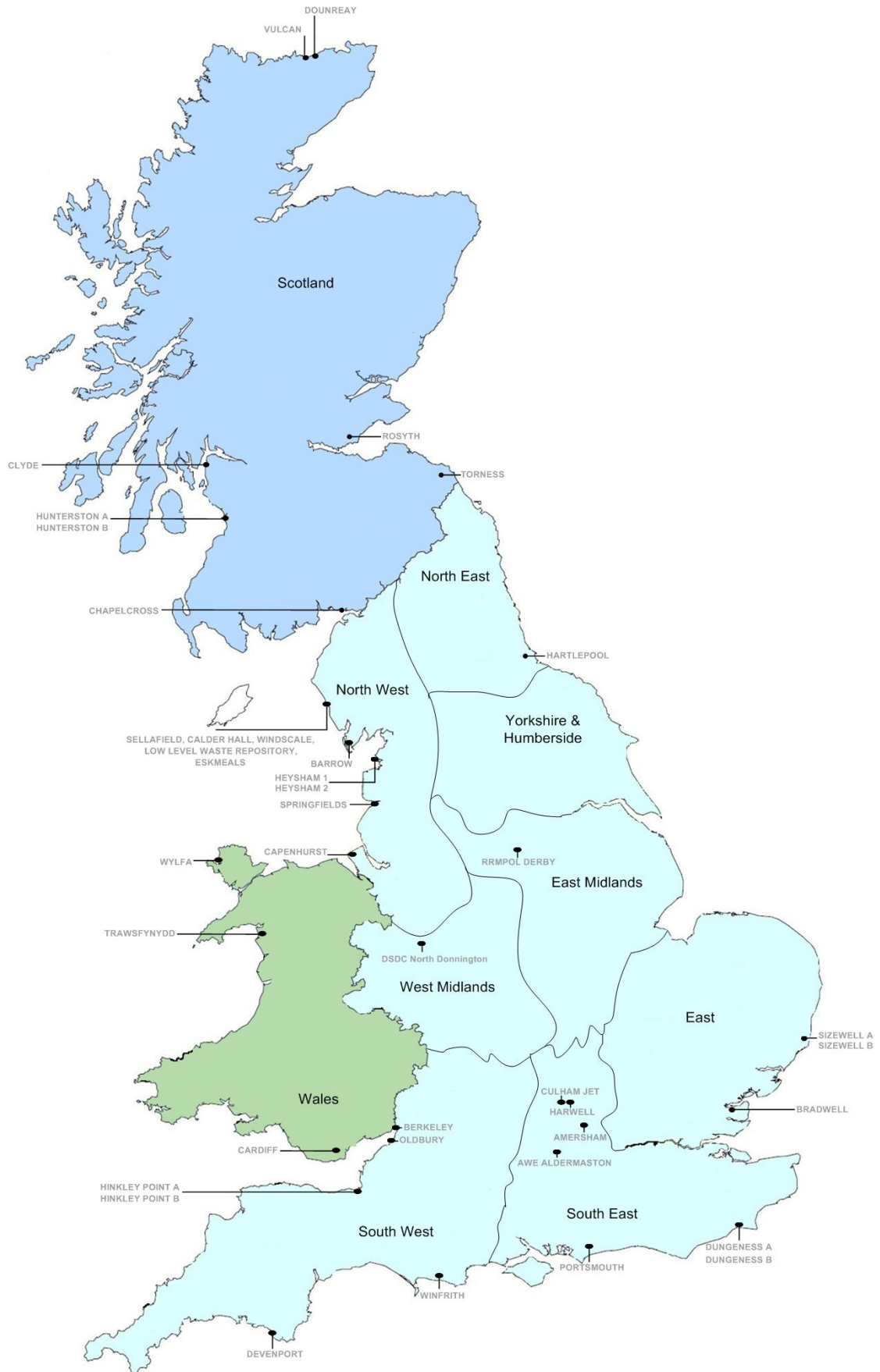
Two totals are shown in Tables 4 and 5. "Total as reported" is the total predicted volume of waste arising up to 2026, as was reported by the site. "Total based on material percentage" is the sum of the material breakdown shown in Table 1. The difference between these two values is due to a discrepancy in the UKRWI reporting which allows for a percentage composition of each waste stream to be greater or less than 100%.

The sites that provided data for the UKRWI are shown in Table 1 and their geographical location shown in Figure 1.

**TABLE 1 – SITES INCLUDED IN THE INVENTORY SUMMARIES**

<b>Site</b>	
Amersham	Heysham 2
AWE Aldermaston	Hinkley A
Barrow	Hinkley B
Berkeley	HMNB Portsmouth
Bradwell	Hunterston A
Calder Hall	Hunterston B
Capenhurst	LLWR
Chapel Cross	MOD Defence estate
Clyde	Oldbury
Culham	Rolls Royce (Derby)
Devonport	Rosyth
Donnington	Sellafield
Dounraey	Sizewell A
Dungeness A	Sizewell B
Dungeness B	Springfields
Eskmeals	Torness
Flasks & Flatrolls	Trawsfynydd
GE Healthcare (Cardiff)	Urenco (capenhurst)
Hartlepool	Various small users
Harwell	Windscale
Heysham 1	Winfrith
	Wylfa

FIGURE 1 – UK DISTRIBUTION OF SITES GENERATING LLW AND VLLW



## 2. Site Data

TABLE 2 – SITE WASTE MATERIAL COMPOSITION (ALL ACTIVITIES) (M<sup>3</sup>) UP TO 2120.

Site	Total as reported	Graphite	Metals	Plastic/Rubber	Soft Organics	Soil/Rubble	Wood	Unknown Material	Total based on material fractions
Amersham	13,390	-	2,664	5,037	6,580	264	383	1,579	16,507
AWE Aldermaston	31,072	89	8,964	5,017	6,009	9,518	2,034	550	32,180
Barrow	30	-	20	0	-	0	-	-	20
Berkeley	23,388	33	9,036	517	615	9,947	169	353	20,669
Bradwell	39,505	215	9,059	1,121	1,131	27,636	131	453	39,746
Calder Hall	41,804	6	21,592	383	999	16,699	530	231	40,439
Capenhurst	3,825	-	2,648	7	81	982	80	37	3,835
Chapel Cross	121,450	6	50,890	1,184	2,949	31,782	1,705	1,246	89,762
Clyde	558	-	208	175	90	32	54	214	772
Culham	6,570	-	1,832	203	10	2,799	-	100	4,943
Devonport	17,069	-	577	11,608	12,122	224	972	6,855	32,357
Donnington	100	-	80	5	7	-	3	15	110
Dounraey	73,284	1	23,850	2,675	1,611	42,733	324	2,356	73,551
Dungeness A	28,157	9	8,593	2,898	726	15,536	259	459	28,481
Dungeness B	17,509	1,694	13,464	2,077	612	1,119	2	1,660	20,629
Eskmeals	81	-	36	-	11	36	9	-	91
Flasks & Flatrolls	928	-	927	0	-	-	-	1	929
GE Healthcare (Cardiff)	10,600	-	3,421	1,005	4,091	825	3,266	1,950	14,557
Hartlepool	14,051	453	10,181	1,392	491	2,049	30	1,079	15,675
Harwell	94,010	-	4,450	188	103	84,844	29	112	89,725
Heysham 1	14,436	453	10,482	1,521	610	2,026	-	1,151	16,244
Heysham 2	17,924	654	11,923	1,678	1,499	3,018	56	1,323	20,152
Hinkley A	43,763	47	11,207	706	665	29,556	97	512	42,791
Hinkley B	14,202	470	10,369	1,730	555	1,172	-	1,360	15,655
HMNB Portsmouth	24	-	19	0	1	4	0	1	26
Hunterston A	46,697	7	12,517	1,043	2,169	30,376	399	858	47,370

Site	Total as reported	Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	Total based on material fractions
Hunterston B	14,340	467	9,131	1,606	2,183	1,223	132	1,280	<b>16,020</b>
LLWR	17,693	-	233	63	426	11,233	266	177	<b>12,398</b>
MOD Defence estate	39	-	6	-	-	29	-	4	<b>39</b>
Oldbury	27,086	1,890	14,522	1,156	1,118	8,585	613	373	<b>28,258</b>
Rolls Royce (Derby)	730	-	139	15	37	548	7	-	<b>745</b>
Rosyth	2,401	-	2,330	37	32	19	-	24	<b>2,442</b>
Sellafield	3,265,630	-	284,727	35,445	145,531	2,732,317	52,073	45,537	<b>3,295,629</b>
Sizewell A	29,830	-	7,912	2,319	918	17,215	87	704	<b>29,154</b>
Sizewell B	16,823	-	8,980	636	146	743	8	872	<b>11,385</b>
Springfields	239,933	1,021	86,615	22,399	11,650	81,863	1,021	19,364	<b>223,933</b>
Torness	18,568	654	11,659	1,642	1,962	3,008	45	1,305	<b>20,275</b>
Trawsfynydd	48,731	48	8,585	604	572	38,647	56	512	<b>49,023</b>
Urenco (Capenhurst)	2,811	-	1,617	76	1,026	107	-	76	<b>2,901</b>
Various small users	7,414	137	823	1,029	343	4,116	-	69	<b>6,517</b>
Windscale	5,039	2	1,120	63	53	3,444	88	170	<b>4,939</b>
Winfrith	9,295	-	2,811	317	12	4,937	60	109	<b>8,246</b>
Wylfa	46,796	3,325	13,254	846	854	29,067	83	524	<b>47,953</b>
<b>Totals</b>	<b>4,427,586</b>	<b>11,681</b>	<b>683,470</b>	<b>110,422</b>	<b>210,597</b>	<b>3,250,275</b>	<b>65,073</b>	<b>95,552</b>	<b>4,427,071</b>

Note: "Total as reported" is the total predicted volume of waste arising up to 2026, as was reported by the site. "Total based on material percentage" is the sum of the material breakdown shown in Table 1. The difference between these two values is due to a discrepancy in the UKRWI reporting which allows for a percentage composition of each waste stream to be greater or less than 100%.

**TABLE 3 – SITE WASTE ACTIVITY COMPOSITION (M<sup>3</sup>) FOR ALL WASTE UP TO 2120**

Site	Exempt (<0.4Bq/g)	VLLW (0.4 - 4Bq/g)	LLW (4- 200 Bq/g)	LLW (200- 4000 Bq/g)	LLW reported as >4000 Bq/g (4000 – 12000Bq/g)	Total
<b>Amersham</b>	-	9,000	1,900	725	1,765	<b>13,390</b>
<b>AWE Aldermaston</b>	-	2,858	20,283	5,785	2,146	<b>31,072</b>
<b>Barrow</b>	10	20	-	-	-	<b>30</b>
<b>Berkeley</b>	359	3,508	12,951	5,887	682	<b>23,388</b>
<b>Bradwell</b>	-	-	32,824	6,065	617	<b>39,505</b>
<b>Calder Hall</b>	4,235	1,200	18,609	17,753	8	<b>41,804</b>
<b>Capenhurst</b>	-	-	1,804	2,021	-	<b>3,825</b>
<b>Chapel Cross</b>	28,204	4,235	22,967	64,068	1,977	<b>121,450</b>
<b>Clyde</b>	-	-	487	71	-	<b>558</b>
<b>Culham</b>	-	-	3,567	1,110	1,893	<b>6,570</b>
<b>Devonport</b>	15,979	-	82	846	162	<b>17,069</b>
<b>Donnington</b>	100	-	-	-	-	<b>100</b>
<b>Dounraey</b>	405	593	41,679	30,228	379	<b>73,284</b>
<b>Dungeness A</b>	-	-	20,102	7,149	906	<b>28,157</b>
<b>Dungeness B</b>	7,270	-	3,924	6,315	-	<b>17,509</b>
<b>Eskmeals</b>	-	-	-	81	-	<b>81</b>
<b>Flasks &amp; Flatrolls</b>	-	78	850	-	-	<b>928</b>
<b>GE Healthcare (Cardiff)</b>	-	-	4,000	6,600	-	<b>10,600</b>
<b>Hartlepool</b>	7,964	895	2,883	1,884	425	<b>14,051</b>
<b>Harwell</b>	4,250	-	84,573	2,574	2,613	<b>94,010</b>
<b>Heysham 1</b>	8,175	-	3,775	2,139	347	<b>14,436</b>
<b>Heysham 2</b>	11,313	-	4,398	2,213	-	<b>17,924</b>
<b>Hinkley A</b>	-	432	39,830	3,472	28	<b>43,763</b>
<b>Hinkley B</b>	7,485	-	5,108	1,610	-	<b>14,202</b>
<b>HMNB Portsmouth</b>	-	-	-	24	-	<b>24</b>
<b>Hunterston A</b>	-	107	36,526	10,064	-	<b>46,697</b>
<b>Hunterston B</b>	7,300	-	4,895	2,145	-	<b>14,340</b>

Site	Exempt (<0.4Bq/g)	VLLW (0.4 - 4Bq/g)	LLW (4- 200 Bq/g)	LLW (200- 4000 Bq/g)	LLW reported as >4000 Bq/g (4000 – 12000Bq/g)	Total
LLWR	2,810	-	-	14,883	-	17,693
MOD Defence estate	-	-	39	-	-	39
Oldbury	-	-	8,977	17,850	260	27,086
Rolls Royce (Derby)	730		-	-	-	730
Rosyth	-	-	29	2,364	8	2,401
Sellafield	21,589	44,523	3,045,547	144,978	8,993	3,265,630
Sizewell A	-	1,359	22,423	5,992	56	29,830
Sizewell B	5,803		680	162	10,178	16,823
Springfields	-	202,838	35,737	1,358	-	239,933
Torness	11,689	-	4,787	2,089	3	18,568
Trawsfynydd	2	3,200	4,679	40,849	-	48,731
Urenco (capenhurst)	-	-	651	2,160	-	2,811
Various small users	-	-	-	7,414	-	7,414
Windscale	2,902		-	2,137	-	5,039
Winfrith	-	-	155	7,510	1,630	9,295
Wylfa	145	25,005	1,571	19,849	226	46,796
<b>Totals</b>	<b>148,719</b>	<b>299,851</b>	<b>3,493,292</b>	<b>450,423</b>	<b>35,301</b>	<b>4,278,868</b>

**TABLE 4 – REGIONAL WASTE MATERIAL COMPOSITION WITH AN ACTIVITY OF <200BQ/G BY TIME PERIOD (M<sup>3</sup>)**

Region	Time Period	m <sup>3</sup>								
		Total as reported	Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	Total based on material fractions
England	Stock	11,365	0	4,562	372	427	4,046	110	501	10,017
	2010 - 2016	158,269	124	29,497	16,799	19,872	80,389	2,171	15,272	164,123
	2017 - 2026	187,287	43	38,519	16,676	23,411	97,382	2,885	14,371	193,287
	Total up to 2026	356,921	167	72,578	33,847	43,709	181,816	5,166	30,144	367,428
Scotland	Stock	15,955	-	3,695	402	625	3,038	98	262	8,121
	2010 - 2016	30,558	-	1,748	58	922	10,031	114	227	13,099
	2017 - 2026	39,101	-	9,120	1,004	876	25,045	72	726	36,843
	Total up to 2026	85,614	-	14,563	1,464	2,424	38,114	285	1,214	58,064
Wales	Stock	48	-	3	1	1	2	0	0	7
	2010 - 2016	953	-	49	94	748	-	747	47	1,684
	2017 - 2026	1,352	-	74	136	1,072	-	1,067	67	2,415
	Total up to 2026	2,353	-	126	230	1,821	2	1,813	113	4,105

**TABLE 5 –SITE WASTE MATERIAL COMPOSITION <200Bq/g BY TIME PERIOD (M<sup>3</sup>)**

Site	Time Period	m <sup>3</sup>								
		Total as reported	Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	Total based on material fractions
Amersham	Stock	-	-	-	-	-	-	-	-	-
	2010 - 2016	<b>2,501</b>	-	289	955	1,362	62	87	215	<b>2,970</b>
	2017 - 2026	<b>3,652</b>	-	455	1,382	1,950	88	126	334	<b>4,334</b>
	<b>Total up to 2026</b>	<b>6,153</b>	-	743	2,338	3,312	150	213	549	<b>7,304</b>
AWE Aldermaston	Stock	<b>354</b>	-	-	-	-	348	-	-	<b>348</b>
	2010 - 2016	<b>2,906</b>	77	705	580	1,026	706	229	34	<b>3,358</b>
	2017 - 2026	<b>7,427</b>	10	1,998	1,280	1,319	2,136	504	66	<b>7,312</b>
	<b>Total up to 2026</b>	<b>10,687</b>	87	2,704	1,860	2,345	3,190	733	100	<b>11,018</b>
Berkeley	Stock	<b>85</b>	-	45	6	0	5	-	-	<b>57</b>
	2010 - 2016	<b>194</b>	-	1	-	12	-	12	-	<b>25</b>
	2017 - 2026	<b>455</b>	-	2	-	26	100	26	-	<b>153</b>
	<b>Total up to 2026</b>	<b>735</b>	-	48	6	38	105	37	-	<b>234</b>
Bradwell	Stock	<b>250</b>	-	77	9	17	97	6	-	<b>206</b>
	2010 - 2016	<b>302</b>	-	121	15	27	151	9	-	<b>323</b>
	2017 - 2026	<b>560</b>	-	188	24	42	235	14	-	<b>504</b>
	<b>Total up to 2026</b>	<b>1,111</b>	-	386	48	86	483	29	-	<b>1,032</b>
Culham	Stock	-	-	-	-	-	-	-	-	-
	2010 - 2016	<b>643</b>	-	-	-	-	-	-	-	-
	2017 - 2026	<b>2,924</b>	-	-	-	-	2,799	-	-	<b>2,799</b>
	<b>Total up to 2026</b>	<b>3,567</b>	-	-	-	-	2,799	-	-	<b>2,799</b>
Dungeness A	Stock	-	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-	-
	<b>Total up to 2026</b>	-	-	-	-	-	-	-	-	-
Harwell	Stock	<b>2,540</b>	-	-	-	-	2,532	-	-	<b>2,532</b>
	2010 - 2016	<b>37,583</b>	-	-	-	-	35,644	-	-	<b>35,644</b>
	2017 - 2026	<b>47,034</b>	-	-	-	-	45,829	6	-	<b>45,835</b>
	<b>Total up to 2026</b>	<b>87,157</b>	-	-	-	-	84,005	6	-	<b>84,011</b>

Site	Time Period	m <sup>3</sup>								
		Total as reported	Graphite	Metals	Plastic/Rubber	Soft Organics	Soil/Rubble	Wood	Unknown Material	Total based on material fractions
HMNB Devonport	Stock	396	-	4	281	293	1	24	163	766
	2010 - 2016	5,518	-	36	3,931	4,107	18	329	2,279	10,700
	2017 - 2026	7,842	-	51	5,587	5,837	25	468	3,238	15,208
	<b>Total up to 2026</b>	<b>13,756</b>	-	92	9,799	10,237	45	821	5,680	<b>26,674</b>
Hinkley Point A	Stock	445	-	10	1	17	1	0	0	30
	2010 - 2016	2,182	-	1,128	115	83	749	21	95	2,190
	2017 - 2026	2,135	-	1,150	94	73	739	19	76	2,150
	<b>Total up to 2026</b>	<b>4,762</b>	-	2,289	209	173	1,489	40	171	<b>4,370</b>
Oldbury	Stock	1	-	0	0	0	1	0	-	1
	2010 - 2016	17	-	14	1	1	-	1	-	18
	2017 - 2026	85	-	71	7	7	-	7	-	92
	<b>Total up to 2026</b>	<b>103</b>	-	86	8	8	1	8	-	<b>111</b>
Sizewell A	Stock	101	-	25	0	-	-	-	0	26
	2010 - 2016	1,105	-	62	62	33	6	2	31	196
	2017 - 2026	961	-	385	384	202	38	10	192	1,211
	<b>Total up to 2026</b>	<b>2,167</b>	-	473	447	234	45	11	223	<b>1,433</b>
Winfrith	Stock	-	-	-	-	-	-	-	-	-
	2010 - 2016	155	-	-	-	-	-	2	-	2
	2017 - 2026	-	-	-	-	-	-	-	-	-
	<b>Total up to 2026</b>	<b>155</b>	-	-	-	-	-	2	-	<b>2</b>
Windscale	Stock	1	-	0	0	0	0	0	-	1
	2010 - 2016	1,162	-	302	24	22	867	11	-	1,227
	2017 - 2026	1,338	-	482	30	23	820	10	-	1,365
	<b>Total up to 2026</b>	<b>2,500</b>	-	785	54	46	1,687	21	-	<b>2,593</b>
Eskmeals	Stock	-	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-	-
	<b>Total up to 2026</b>	<b>-</b>	-	-	-	-	-	-	-	<b>-</b>

Site	Time Period	m <sup>3</sup>								
		Total as reported	Graphite	Metals	Plastic/Rubber	Soft Organics	Soil/Rubble	Wood	Unknown Material	Total based on material fractions
HMNB Portsmouth	Stock	-	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-	-
	<b>Total up to 2026</b>	-	-	-	-	-	-	-	-	-
Various small users	Stock	-	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-	-
	<b>Total up to 2026</b>	-	-	-	-	-	-	-	-	-
Barrow	Stock	<b>20</b>	-	20	0	-	0	-	-	<b>20</b>
	2010 - 2016	<b>7</b>	-	-	-	-	-	-	-	-
	2017 - 2026	<b>2</b>	-	-	-	-	-	-	-	-
	<b>Total up to 2026</b>	<b>29</b>	-	20	0	-	0	-	-	<b>20</b>
Calder Hall	Stock	<b>1,299</b>	-	28	0	-	-	-	71	<b>99</b>
	2010 - 2016	-	-	-	-	-	-	-	-	-
	2017 - 2026	<b>59</b>	-	60	0	-	-	-	0	<b>60</b>
	<b>Total up to 2026</b>	<b>1,358</b>	-	87	0	-	-	-	71	<b>159</b>
Capenhurst	Stock	<b>1,804</b>	-	647	7	81	982	80	37	<b>1,834</b>
	2010 - 2016	-	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-	-
	<b>Total up to 2026</b>	<b>1,804</b>	-	647	7	81	982	80	37	<b>1,834</b>
Urenco (capenhurst)	Stock	<b>131</b>	-	105	-	-	24	-	-	<b>129</b>
	2010 - 2016	<b>140</b>	-	111	-	-	27	-	-	<b>138</b>
	2017 - 2026	<b>284</b>	-	239	-	-	42	-	-	<b>281</b>
	<b>Total up to 2026</b>	<b>555</b>	-	455	-	-	93	-	-	<b>548</b>
GE Healthcare (Cardiff)	Stock	-	-	-	-	-	-	-	-	-
	2010 - 2016	<b>933</b>	-	47	93	747	-	747	47	<b>1,680</b>
	2017 - 2026	<b>1,333</b>	-	67	133	1,067	-	1,067	67	<b>2,400</b>
	<b>Total up to 2026</b>	<b>2,267</b>	-	113	227	1,813	-	1,813	113	<b>4,080</b>

Site	Time Period	m <sup>3</sup>								
		Total as reported	Graphite	Metals	Plastic/Rubber	Soft Organics	Soil/Rubble	Wood	Unknown Material	Total based on material fractions
Chapel Cross	Stock	8,004	-	-	-	-	-	-	-	-
	2010 - 2016	19,456	-	135	-	-	1,621	-	-	1,756
	2017 - 2026	4,266	-	137	-	-	1,621	-	-	1,759
	<b>Total up to 2026</b>	<b>31,726</b>	-	272	-	-	3,243	-	-	<b>3,515</b>
Clyde	Stock	7	-	1	1	1	0	0	4	7
	2010 - 2016	38	-	16	14	7	0	4	13	55
	2017 - 2026	54	-	23	20	10	0	6	19	78
	<b>Total up to 2026</b>	<b>98</b>	-	41	34	18	1	11	36	<b>139</b>
MOD Defence estate	Stock	39	-	6	-	-	29	-	4	39
	2010 - 2016	-	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-	-
	<b>Total up to 2026</b>	<b>39</b>	-	6	-	-	29	-	4	<b>39</b>
Dounraey	Stock	7,505	-	3,415	395	476	3,020	81	249	7,635
	2010 - 2016	9,196	-	647	23	37	8,319	19	172	9,217
	2017 - 2026	25,926	-	2,408	128	33	23,294	19	28	25,911
	<b>Total up to 2026</b>	<b>42,627</b>	-	6,470	547	546	34,633	120	449	<b>42,764</b>
Donnington	Stock	20	-	16	1	1	-	1	3	22
	2010 - 2016	28	-	22	1	2	-	1	4	31
	2017 - 2026	26	-	21	1	2	-	1	4	29
	<b>Total up to 2026</b>	<b>74</b>	-	59	4	5	-	2	11	<b>81</b>
Dungeness B	Stock	38	-	19	11	-	-	-	15	46
	2010 - 2016	140	-	70	42	-	-	-	56	168
	2017 - 2026	5,744	-	4,648	760	214	235	-	657	6,514
	<b>Total up to 2026</b>	<b>5,922</b>	-	4,737	813	214	235	-	728	<b>6,728</b>
Flasks & Flatrolls	Stock	-	-	-	-	-	-	-	-	-
	2010 - 2016	486	-	486	0	-	-	-	0	487
	2017 - 2026	313	-	313	0	-	-	-	0	314
	<b>Total up to 2026</b>	<b>800</b>	-	800	0	-	-	-	1	<b>800</b>

Site	Time Period	m <sup>3</sup>								
		Total as reported	Graphite	Metals	Plastic/Rubber	Soft Organics	Soil/Rubble	Wood	Unknown Material	Total based on material fractions
Hartlepool	Stock	1	-	-	-	-	-	-	1	1
	2010 - 2016	3,947	-	3,293	174	58	166	-	136	3,827
	2017 - 2026	2,987	-	2,184	383	128	206	-	298	3,200
	<b>Total up to 2026</b>	<b>6,935</b>	-	<b>5,476</b>	<b>558</b>	<b>186</b>	<b>373</b>	-	<b>435</b>	<b>7,028</b>
Heysham 1	Stock	5	-	-	-	-	-	-	-	-
	2010 - 2016	4,033	-	3,434	174	58	152	-	135	3,954
	2017 - 2026	2,801	-	1,991	283	94	206	-	220	2,795
	<b>Total up to 2026</b>	<b>6,839</b>	-	<b>5,425</b>	<b>457</b>	<b>152</b>	<b>359</b>	-	<b>356</b>	<b>6,749</b>
Heysham 2	Stock	-	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-	-
	2017 - 2026	3,656	-	3,035	232	77	51	-	181	3,576
	<b>Total up to 2026</b>	<b>3,656</b>	-	<b>3,035</b>	<b>232</b>	<b>77</b>	<b>51</b>	-	<b>181</b>	<b>3,576</b>
Hinkley B	Stock	70	0	60	6	2	2	-	6	76
	2010 - 2016	578	1	483	60	18	16	-	54	632
	2017 - 2026	5,204	2	3,962	669	219	50	-	530	5,433
	<b>Total up to 2026</b>	<b>5,852</b>	<b>3</b>	<b>4,505</b>	<b>735</b>	<b>239</b>	<b>68</b>	-	<b>591</b>	<b>6,141</b>
Hunterston A	Stock	314	-	279	6	19	13	6	6	330
	2010 - 2016	1,062	-	945	21	64	42	21	21	1,115
	2017 - 2026	469	-	409	9	27	18	9	9	481
	<b>Total up to 2026</b>	<b>1,846</b>	-	<b>1,633</b>	<b>37</b>	<b>110</b>	<b>74</b>	<b>37</b>	<b>37</b>	<b>1,927</b>
Hunterston B	Stock	85	-	-	-	85	5	9	3	101
	2010 - 2016	635	-	-	-	635	38	64	19	756
	2017 - 2026	4,674	-	3,223	631	514	54	30	500	4,952
	<b>Total up to 2026</b>	<b>5,394</b>	-	<b>3,223</b>	<b>631</b>	<b>1,234</b>	<b>97</b>	<b>102</b>	<b>521</b>	<b>5,808</b>
LLWR	Stock	-	-	-	-	-	-	-	-	-
	2010 - 2016	353	-	5	13	25	315	4	4	366
	2017 - 2026	390	-	8	8	12	363	4	4	398
	<b>Total up to 2026</b>	<b>743</b>	-	<b>13</b>	<b>21</b>	<b>37</b>	<b>678</b>	<b>7</b>	<b>7</b>	<b>764</b>

Site	Time Period	m <sup>3</sup>								
		Total as reported	Graphite	Metals	Plastic/Rubber	Soft Organics	Soil/Rubble	Wood	Unknown Material	Total based on material fractions
Rosyth	Stock	-	-	-	-	-	-	-	-	-
	2010 - 2016	14	-	5	-	-	9	-	-	14
	2017 - 2026	14	-	5	-	-	9	-	-	14
	<b>Total up to 2026</b>	<b>28</b>	-	9	-	-	18	-	-	<b>28</b>
Rolls Royce (Derby)	Stock	30	-	6	1	2	23	0	-	31
	2010 - 2016	700	-	133	14	35	525	7	-	714
	2017 - 2026	-	-	-	-	-	-	-	-	-
	<b>Total up to 2026</b>	<b>730</b>	-	139	15	37	548	7	-	<b>745</b>
Sellafield	Stock	3,594	-	3,484	0	-	0	-	94	3,579
	2010 - 2016	59,298	-	12,363	1,584	10,185	31,887	1,410	5,838	63,267
	2017 - 2026	75,968	-	13,771	1,918	11,994	39,023	1,658	6,207	74,572
	<b>Total up to 2026</b>	<b>138,860</b>	-	29,618	3,502	22,179	70,910	3,068	12,139	<b>141,417</b>
Sizewell B	Stock	60	-	1	48	13	1	1	32	95
	2010 - 2016	140	-	3	112	29	1	1	76	223
	2017 - 2026	200	-	4	160	42	2	2	108	318
	<b>Total up to 2026</b>	<b>400</b>	-	8	320	84	4	4	216	<b>636</b>
Springfields	Stock	82	-	8	-	-	-	-	74	82
	2010 - 2016	34,150	46	6,434	8,940	2,788	9,096	46	6,314	33,664
	2017 - 2026	15,241	31	3,500	3,473	1,151	4,395	31	2,255	14,837
	<b>Total up to 2026</b>	<b>49,473</b>	76	9,942	12,414	3,940	13,491	76	8,643	<b>48,583</b>
Torness	Stock	40	-	-	-	46	-	2	0	48
	2010 - 2016	157	-	-	-	179	-	6	2	187
	2017 - 2026	3,698	-	2,915	216	291	48	8	170	3,648
	<b>Total up to 2026</b>	<b>3,895</b>	-	2,915	216	516	48	16	172	<b>3,882</b>
Trawsfynydd	Stock	43	-	1	0	0	1	0	-	2
	2010 - 2016	17	-	-	-	-	-	-	-	-
	2017 - 2026	6	-	-	-	-	-	-	-	-
	<b>Total up to 2026</b>	<b>66</b>	-	1	0	0	1	0	-	<b>2</b>

Site	Time Period	m <sup>3</sup>								
		Total as reported	Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	Total based on material fractions
Wylfa	Stock	4	-	2	1	1	1	0	0	5
	2010 - 2016	3	-	2	1	1	-	-	-	4
	2017 - 2026	12	-	7	2	5	-	-	-	15
	<b>Total up to 2026</b>	<b>20</b>	-	11	4	7	1	0	0	<b>23</b>
Totals	Stock	27,368	0	8,260	775	1,053	7,086	208	763	18,145
	2010 - 2016	189,780	124	31,293	16,951	21,541	90,419	3,032	15,546	178,906
	2017 - 2026	227,740	43	47,713	17,815	25,359	122,427	4,024	15,164	232,546
	<b>Total up to 2026</b>	<b>444,887</b>	<b>167</b>	<b>87,267</b>	<b>35,541</b>	<b>47,954</b>	<b>219,932</b>	<b>7,264</b>	<b>31,472</b>	<b>429,597</b>

**TABLE 6 –SITE WASTE MATERIAL COMPOSITION <200Bq/G FOLLOWING APPLICATION OF AN ADJUSTMENT TO ACCOUNT FOR IMPLEMENTATION OF THE WASTE HIERARCHY.**

Site	Time Period	m <sup>3</sup>							
		Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	Total based on material fractions
Amersham	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	14	478	681	62	44	108	<b>1,386</b>
	2017 - 2026	-	23	691	975	88	63	167	<b>2,006</b>
	<b>Total up to 2026</b>	-	37	1,169	1,656	150	106	275	<b>3,392</b>
AWE Aldermaston	Stock	-	-	-	-	348	-	-	<b>348</b>
	2010 - 2016	8	35	290	513	706	115	17	<b>1,684</b>
	2017 - 2026	1	100	640	659	2,136	252	33	<b>3,820</b>
	<b>Total up to 2026</b>	9	135	930	1,172	3,190	367	50	<b>5,852</b>
Berkeley	Stock	-	2	3	0	5	-	-	<b>11</b>
	2010 - 2016	-	0	-	6	-	6	-	<b>12</b>
	2017 - 2026	-	0	-	13	100	13	-	<b>126</b>
	<b>Total up to 2026</b>	-	2	3	19	105	19	-	<b>148</b>
Bradwell	Stock	-	4	5	8	97	3	-	<b>116</b>
	2010 - 2016	-	6	8	14	151	5	-	<b>182</b>
	2017 - 2026	-	9	12	21	235	7	-	<b>285</b>
	<b>Total up to 2026</b>	-	19	24	43	483	14	-	<b>584</b>
Culham	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	2,799	-	-	<b>2,799</b>
	<b>Total up to 2026</b>	-	-	-	-	2,799	-	-	<b>2,799</b>
Dungeness A	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	<b>Total up to 2026</b>	-	-	-	-	-	-	-	-

Site	Time Period	m <sup>3</sup>							Total based on material fractions
		Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	
Harwell	Stock	-	-	-	-	2,532	-	-	2,532
	2010 - 2016	-	-	-	-	35,644	-	-	35,644
	2017 - 2026	-	-	-	-	45,829	3	-	45,832
	<b>Total up to 2026</b>	-	-	-	-	84,005	3	-	84,008
HMNB Devonport	Stock	-	0	140	147	1	12	81	382
	2010 - 2016	-	2	1,966	2,053	18	165	1,139	5,343
	2017 - 2026	-	3	2,794	2,918	25	234	1,619	7,593
	<b>Total up to 2026</b>	-	5	4,900	5,119	45	411	2,840	13,318
Hinkley Point A	Stock	-	1	0	9	1	0	0	11
	2010 - 2016	-	56	57	41	749	10	48	962
	2017 - 2026	-	58	47	36	739	10	38	927
	<b>Total up to 2026</b>	-	114	104	86	1,489	20	86	1,899
Oldbury	Stock	-	0	0	0	1	0	-	1
	2010 - 2016	-	1	1	1	-	1	-	3
	2017 - 2026	-	4	3	3	-	3	-	14
	<b>Total up to 2026</b>	-	4	4	4	1	4	-	17
Sizewell A	Stock	-	1	0	-	-	-	0	2
	2010 - 2016	-	3	31	16	6	1	16	73
	2017 - 2026	-	19	192	101	38	5	96	452
	<b>Total up to 2026</b>	-	24	223	117	45	6	112	526
Winfrith	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	1	-	1
	2017 - 2026	-	-	-	-	-	-	-	-
	<b>Total up to 2026</b>	-	-	-	-	-	1	-	1
Windscale	Stock	-	0	0	0	0	0	-	0
	2010 - 2016	-	15	12	11	867	5	-	911
	2017 - 2026	-	24	15	12	820	5	-	875
	<b>Total up to 2026</b>	-	39	27	23	1,687	10	-	1,787

Site	Time Period	m <sup>3</sup>							Total based on material fractions
		Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	
Eskmeals	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	<b>Total up to 2026</b>	-	-	-	-	-	-	-	-
HMNB Portsmouth	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	<b>Total up to 2026</b>	-	-	-	-	-	-	-	-
Various small users	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	<b>Total up to 2026</b>	-	-	-	-	-	-	-	-
Barrow	Stock	-	1	0	-	0	-	-	1
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	<b>Total up to 2026</b>	-	1	0	-	0	-	-	1
Calder Hall	Stock	-	1	0	-	-	-	36	37
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	3	0	-	-	-	0	3
	<b>Total up to 2026</b>	-	4	0	-	-	-	36	40
Capenhurst	Stock	-	32	3	41	982	40	18	1,117
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	<b>Total up to 2026</b>	-	32	3	41	982	40	18	1,117
Urenco (capenhurst)	Stock	-	5	-	-	24	-	-	30
	2010 - 2016	-	6	-	-	27	-	-	32
	2017 - 2026	-	12	-	-	42	-	-	54
	<b>Total up to 2026</b>	-	23	-	-	93	-	-	116

Site	Time Period	m <sup>3</sup>							Total based on material fractions
		Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	
GE Healthcare (Cardiff)	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	2	47	373	-	373	23	<b>819</b>
	2017 - 2026	-	3	67	533	-	533	33	<b>1,170</b>
	<b>Total up to 2026</b>	-	6	113	907	-	907	57	<b>1,989</b>
Chapel Cross	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	7	-	-	1,621	-	-	<b>1,628</b>
	2017 - 2026	-	7	-	-	1,621	-	-	<b>1,628</b>
	<b>Total up to 2026</b>	-	14	-	-	3,243	-	-	<b>3,256</b>
Clyde	Stock	-	0	0	0	0	0	2	<b>3</b>
	2010 - 2016	-	1	7	4	0	2	7	<b>20</b>
	2017 - 2026	-	1	10	5	0	3	9	<b>29</b>
	<b>Total up to 2026</b>	-	2	17	9	1	5	18	<b>52</b>
MOD Defence estate	Stock	-	0	-	-	29	-	2	<b>31</b>
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	<b>Total up to 2026</b>	-	0	-	-	29	-	2	<b>31</b>
Dounraey	Stock	-	171	197	238	3,020	41	124	<b>3,791</b>
	2010 - 2016	-	32	12	19	8,319	9	86	<b>8,477</b>
	2017 - 2026	-	120	64	17	23,294	10	14	<b>23,519</b>
	<b>Total up to 2026</b>	-	323	273	273	34,633	60	224	<b>35,787</b>
Donnington	Stock	-	1	1	1	-	0	2	<b>4</b>
	2010 - 2016	-	1	1	1	-	0	2	<b>5</b>
	2017 - 2026	-	1	1	1	-	0	2	<b>5</b>
	<b>Total up to 2026</b>	-	3	2	3	-	1	6	<b>14</b>
Dungeness B	Stock	-	1	6	-	-	-	8	<b>14</b>
	2010 - 2016	-	4	21	-	-	-	28	<b>53</b>
	2017 - 2026	-	232	380	107	235	-	328	<b>1,283</b>
	<b>Total up to 2026</b>	-	237	407	107	235	-	364	<b>1,350</b>

Site	Time Period	m <sup>3</sup>							Total based on material fractions
		Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	
Flasks & Flatrolls	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	24	0	-	-	-	0	25
	2017 - 2026	-	16	0	-	-	-	0	16
	<b>Total up to 2026</b>	-	40	0	-	-	-	0	40
Hartlepool	Stock	-	-	-	-	-	-	0	0
	2010 - 2016	-	165	87	29	166	-	68	515
	2017 - 2026	-	109	192	64	206	-	149	720
	<b>Total up to 2026</b>	-	274	279	93	373	-	218	1,236
Heysham 1	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	172	87	29	152	-	68	508
	2017 - 2026	-	100	142	47	206	-	110	605
	<b>Total up to 2026</b>	-	271	229	76	359	-	178	1,113
Heysham 2	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	152	116	39	51	-	90	448
	<b>Total up to 2026</b>	-	152	116	39	51	-	90	448
Hinkley B	Stock	0	3	3	1	2	-	3	12
	2010 - 2016	0	24	30	9	16	-	27	106
	2017 - 2026	0	198	335	109	50	-	265	958
	<b>Total up to 2026</b>	0	225	368	119	68	-	296	1,076
Hunterston A	Stock	-	14	3	9	13	3	3	46
	2010 - 2016	-	47	11	32	42	11	11	153
	2017 - 2026	-	20	5	14	18	5	5	66
	<b>Total up to 2026</b>	-	82	18	55	74	18	18	265
Hunterston B	Stock	-	-	-	43	5	4	1	53
	2010 - 2016	-	-	-	318	38	32	10	397
	2017 - 2026	-	161	315	257	54	15	250	1,052
	<b>Total up to 2026</b>	-	161	315	617	97	51	261	1,502

Site	Time Period	m <sup>3</sup>							Total based on material fractions
		Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	
LLWR	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	0	7	12	315	2	2	<b>339</b>
	2017 - 2026	-	0	4	6	363	2	2	<b>377</b>
	<b>Total up to 2026</b>	-	1	11	18	678	4	4	<b>715</b>
Rosyth	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	0	-	-	9	-	-	<b>9</b>
	2017 - 2026	-	0	-	-	9	-	-	<b>10</b>
	<b>Total up to 2026</b>	-	0	-	-	18	-	-	<b>19</b>
Rolls Royce (Derby)	Stock	-	0	0	1	23	0	-	<b>24</b>
	2010 - 2016	-	7	7	18	525	4	-	<b>560</b>
	2017 - 2026	-	-	-	-	-	-	-	-
	<b>Total up to 2026</b>	-	7	7	18	548	4	-	<b>584</b>
Sellafield	Stock	-	174	0	-	0	-	47	<b>222</b>
	2010 - 2016	-	618	792	5,093	31,887	705	2,919	<b>42,013</b>
	2017 - 2026	-	689	959	5,997	39,023	829	3,104	<b>50,600</b>
	<b>Total up to 2026</b>	-	1,481	1,751	11,090	70,910	1,534	6,070	<b>92,835</b>
Sizewell B	Stock	-	0	24	6	1	0	16	<b>47</b>
	2010 - 2016	-	0	56	15	1	1	38	<b>111</b>
	2017 - 2026	-	0	80	21	2	1	54	<b>158</b>
	<b>Total up to 2026</b>	-	0	160	42	4	2	108	<b>316</b>
Springfields	Stock	-	0	-	-	-	-	37	<b>37</b>
	2010 - 2016	5	322	4,470	1,394	9,096	23	3,157	<b>18,466</b>
	2017 - 2026	3	175	1,737	576	4,395	15	1,128	<b>8,029</b>
	<b>Total up to 2026</b>	8	497	6,207	1,970	13,491	38	4,322	<b>26,532</b>
Torness	Stock	-	-	-	23	-	1	0	<b>24</b>
	2010 - 2016	-	-	-	89	-	3	1	<b>93</b>
	2017 - 2026	-	146	108	146	48	4	85	<b>536</b>
	<b>Total up to 2026</b>	-	146	108	258	48	8	86	<b>653</b>

Site	Time Period	m <sup>3</sup>							Total based on material fractions
		Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	
Trawsfynydd	Stock	-	0	0	0	1	0	-	1
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	<b>Total up to 2026</b>	-	0	0	0	1	0	-	1
Wylfa	Stock	-	0	0	1	1	0	0	2
	2010 - 2016	-	0	0	1	-	-	-	1
	2017 - 2026	-	0	1	2	-	-	-	4
	<b>Total up to 2026</b>	-	1	2	4	1	0	0	7
Totals	Stock	<b>0</b>	<b>413</b>	<b>387</b>	<b>527</b>	<b>7,086</b>	<b>104</b>	<b>381</b>	<b>8,898</b>
	2010 - 2016	<b>12</b>	<b>1,565</b>	<b>8,476</b>	<b>10,771</b>	<b>90,419</b>	<b>1,516</b>	<b>7,773</b>	<b>120,531</b>
	2017 - 2026	<b>4</b>	<b>2,386</b>	<b>8,908</b>	<b>12,679</b>	<b>122,427</b>	<b>2,012</b>	<b>7,582</b>	<b>155,998</b>
	<b>Total up to 2026</b>	<b>17</b>	<b>4,363</b>	<b>17,771</b>	<b>23,977</b>	<b>219,932</b>	<b>3,632</b>	<b>15,736</b>	<b>285,427</b>

**TABLE 7 –SITE WASTE MATERIAL COMPOSITION <200Bq/G FOLLOWING AN ADJUSTMENT TO ACCOUNT FOR DISPOSAL OF EXEMPT WASTE THROUGH CONVENTIONAL WASTE DISPOSAL ROUTES.**

Site	Time Period	m <sup>3</sup>							Total based on material fractions
		Graphite	Metals	Plastic/Rubber	Soft Organics	Soil/Rubble	Wood	Unknown Material	
Amersham	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	289	955	1,362	62	87	215	<b>2,970</b>
	2017 - 2026	-	455	1,382	1,950	88	126	334	<b>4,334</b>
	Total up to 2026	-	743	2,338	3,312	150	213	549	<b>7,304</b>
AWE Aldermaston	Stock	-	-	-	-	348	-	-	<b>348</b>
	2010 - 2016	77	705	580	1,026	706	229	34	<b>3,358</b>
	2017 - 2026	10	1,998	1,280	1,319	2,136	504	66	<b>7,312</b>
	Total up to 2026	87	2,704	1,860	2,345	3,190	733	100	<b>11,018</b>
Berkeley	Stock	-	44	6	0	5	-	-	<b>56</b>
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	44	6	0	5	-	-	<b>56</b>
Bradwell	Stock	-	77	9	17	97	6	-	<b>206</b>
	2010 - 2016	-	121	15	27	151	9	-	<b>323</b>
	2017 - 2026	-	188	24	42	235	14	-	<b>504</b>
	Total up to 2026	-	386	48	86	483	29	-	<b>1,032</b>
Culham	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	2,799	-	-	<b>2,799</b>
	Total up to 2026	-	-	-	-	2,799	-	-	<b>2,799</b>
Dungeness A	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	-	-	-	-	-	-	-

Site	Time Period	m <sup>3</sup>							
		Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	Total based on material fractions
Harwell	Stock	-	-	-	-	2,500	-	-	<b>2,500</b>
	2010 - 2016	-	-	-	-	35,644	-	-	<b>35,644</b>
	2017 - 2026	-	-	-	-	45,829	6	-	<b>45,835</b>
	Total up to 2026	-	-	-	-	83,973	6	-	<b>83,979</b>
HMNB Devonport	Stock	-	4	-	-	0	-	-	<b>4</b>
	2010 - 2016	-	25	-	-	1	-	-	<b>26</b>
	2017 - 2026	-	36	-	-	2	-	-	<b>38</b>
	Total up to 2026	-	65	-	-	4	-	-	<b>68</b>
Hinkley Point A	Stock	-	10	1	17	1	0	0	<b>30</b>
	2010 - 2016	-	1,128	115	83	749	21	95	<b>2,190</b>
	2017 - 2026	-	1,150	94	73	739	19	76	<b>2,150</b>
	Total up to 2026	-	2,289	209	173	1,489	40	171	<b>4,370</b>
Oldbury	Stock	-	0	0	0	1	0	-	<b>1</b>
	2010 - 2016	-	14	1	1	-	1	-	<b>18</b>
	2017 - 2026	-	71	7	7	-	7	-	<b>92</b>
	Total up to 2026	-	86	8	8	1	8	-	<b>111</b>
Sizewell A	Stock	-	25	0	-	-	-	0	<b>26</b>
	2010 - 2016	-	62	62	33	6	2	31	<b>196</b>
	2017 - 2026	-	385	384	202	38	10	192	<b>1,211</b>
	Total up to 2026	-	473	447	234	45	11	223	<b>1,433</b>
Winfrith	Stock	-	-	-	-	-	-	-	<b>-</b>
	2010 - 2016	-	-	-	-	-	2	-	<b>2</b>
	2017 - 2026	-	-	-	-	-	-	-	<b>-</b>
	Total up to 2026	-	-	-	-	-	2	-	<b>2</b>
Windscale	Stock	-	-	-	-	-	-	-	<b>-</b>
	2010 - 2016	-	-	-	-	-	-	-	<b>-</b>
	2017 - 2026	-	-	-	-	-	-	-	<b>-</b>
	Total up to 2026	-	-	-	-	-	-	-	<b>-</b>

Site	Time Period	m <sup>3</sup>							
		Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	Total based on material fractions
Eskmeals	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	-	-	-	-	-	-	-
HMNB Portsmouth	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	-	-	-	-	-	-	-
Various small users	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	-	-	-	-	-	-	-
Barrow	Stock	-	20	0	-	0	-	-	<b>20</b>
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	20	0	-	0	-	-	<b>20</b>
Calder Hall	Stock	-	28	0	-	-	-	71	<b>99</b>
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	60	0	-	-	-	0	<b>60</b>
	Total up to 2026	-	87	0	-	-	-	71	<b>159</b>
Capenhurst	Stock	-	647	7	81	982	80	37	<b>1,834</b>
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	647	7	81	982	80	37	<b>1,834</b>
Urenco (capenhurst)	Stock	-	105	-	-	24	-	-	<b>129</b>
	2010 - 2016	-	111	-	-	27	-	-	<b>138</b>
	2017 - 2026	-	239	-	-	42	-	-	<b>281</b>
	Total up to 2026	-	455	-	-	93	-	-	<b>548</b>

Site	Time Period	m <sup>3</sup>							
		Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	Total based on material fractions
GE Healthcare (Cardiff)	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	47	93	747	-	747	47	<b>1,680</b>
	2017 - 2026	-	67	133	1,067	-	1,067	67	<b>2,400</b>
	Total up to 2026	-	113	227	1,813	-	1,813	113	<b>4,080</b>
Chapel Cross	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	135	-	-	1,621	-	-	<b>1,756</b>
	2017 - 2026	-	137	-	-	1,621	-	-	<b>1,759</b>
	Total up to 2026	-	272	-	-	3,243	-	-	<b>3,515</b>
Clyde	Stock	-	1	1	1	0	0	4	<b>7</b>
	2010 - 2016	-	16	14	7	0	4	13	<b>55</b>
	2017 - 2026	-	23	20	10	0	6	19	<b>78</b>
	Total up to 2026	-	41	34	18	1	11	36	<b>139</b>
MOD Defence estate	Stock	-	6	-	-	29	-	4	<b>39</b>
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	6	-	-	29	-	4	<b>39</b>
Dounraey	Stock	-	3,168	391	429	2,889	80	249	<b>7,206</b>
	2010 - 2016	-	647	23	37	8,319	19	172	<b>9,217</b>
	2017 - 2026	-	2,408	128	33	23,294	19	28	<b>25,911</b>
	Total up to 2026	-	6,223	542	500	34,502	118	449	<b>42,334</b>
Donnington	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	-	-	-	-	-	-	-
Dungeness B	Stock	-	19	11	-	-	-	15	<b>46</b>
	2010 - 2016	-	70	42	-	-	-	56	<b>168</b>
	2017 - 2026	-	788	119	-	-	-	158	<b>1,064</b>
	Total up to 2026	-	877	172	-	-	-	229	<b>1,278</b>

Site	Time Period	m <sup>3</sup>							
		Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	Total based on material fractions
Flasks & Flatrolls	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	486	0	-	-	-	0	<b>487</b>
	2017 - 2026	-	313	0	-	-	-	0	<b>314</b>
	Total up to 2026	-	800	0	-	-	-	1	<b>800</b>
Hartlepool	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	451	-	-	-	-	-	<b>451</b>
	2017 - 2026	-	444	-	-	-	-	-	<b>444</b>
	Total up to 2026	-	895	-	-	-	-	-	<b>895</b>
Heysham 1	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	450	-	-	-	-	-	<b>450</b>
	2017 - 2026	-	444	-	-	-	-	-	<b>444</b>
	Total up to 2026	-	894	-	-	-	-	-	<b>894</b>
Heysham 2	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	-	-	-	-	-	-	-
Hinkley B	Stock	0	60	6	2	2	-	6	<b>76</b>
	2010 - 2016	1	483	60	18	16	-	54	<b>632</b>
	2017 - 2026	2	703	48	12	14	-	47	<b>826</b>
	Total up to 2026	3	1,246	114	32	32	-	108	<b>1,534</b>
Hunterston A	Stock	-	279	6	19	13	6	6	<b>330</b>
	2010 - 2016	-	945	21	64	42	21	21	<b>1,115</b>
	2017 - 2026	-	409	9	27	18	9	9	<b>481</b>
	Total up to 2026	-	1,633	37	110	74	37	37	<b>1,927</b>
Hunterston B	Stock	-	-	-	85	5	9	3	<b>101</b>
	2010 - 2016	-	-	-	635	38	64	19	<b>756</b>
	2017 - 2026	-	195	-	304	18	30	9	<b>557</b>
	Total up to 2026	-	195	-	1,024	61	102	31	<b>1,414</b>

Site	Time Period	m <sup>3</sup>							
		Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	Total based on material fractions
LLWR	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	-	-	-	-	-	-	-
Rosyth	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	5	-	-	9	-	-	<b>14</b>
	2017 - 2026	-	5	-	-	9	-	-	<b>14</b>
	Total up to 2026	-	9	-	-	18	-	-	<b>28</b>
Rolls Royce (Derby)	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	-	-	-	-	-	-	-
Sellafield	Stock	-	3,404	0	-	-	-	94	<b>3,498</b>
	2010 - 2016	-	12,306	1,518	10,142	31,880	1,410	5,835	<b>63,090</b>
	2017 - 2026	-	13,663	1,760	11,926	38,400	1,646	6,198	<b>73,593</b>
	Total up to 2026	-	29,373	3,277	22,068	70,280	3,056	12,127	<b>140,181</b>
Sizewell B	Stock	-	1	48	13	1	1	32	<b>95</b>
	2010 - 2016	-	3	112	29	1	1	76	<b>223</b>
	2017 - 2026	-	4	160	42	2	2	108	<b>318</b>
	Total up to 2026	-	8	320	84	4	4	216	<b>636</b>
Springfields	Stock	-	8	-	-	-	-	74	<b>82</b>
	2010 - 2016	46	6,434	8,940	2,788	9,096	46	6,314	<b>33,664</b>
	2017 - 2026	31	3,500	3,473	1,151	4,395	31	2,255	<b>14,837</b>
	Total up to 2026	76	9,942	12,414	3,940	13,491	76	8,643	<b>48,583</b>
Torness	Stock	-	-	-	46	-	2	0	<b>48</b>
	2010 - 2016	-	-	-	179	-	6	2	<b>187</b>
	2017 - 2026	-	-	-	219	-	8	2	<b>229</b>
	Total up to 2026	-	-	-	444	-	16	4	<b>463</b>

Site	Time Period	m <sup>3</sup>							
		Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	Total based on material fractions
Trawsfynydd	Stock	-	1	0	0	1	0	-	2
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	1	0	0	1	0	-	2
Wylfa	Stock	-	0	0	0	1	0	0	1
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	0	0	0	1	0	0	1
Totals	Stock	<b>0</b>	<b>7,908</b>	<b>487</b>	<b>709</b>	<b>6,898</b>	<b>183</b>	<b>596</b>	<b>16,782</b>
	2010 - 2016	<b>124</b>	<b>24,933</b>	<b>12,552</b>	<b>17,178</b>	<b>88,369</b>	<b>2,668</b>	<b>12,985</b>	<b>158,809</b>
	2017 - 2026	<b>43</b>	<b>27,686</b>	<b>9,019</b>	<b>18,383</b>	<b>119,681</b>	<b>3,503</b>	<b>9,568</b>	<b>187,884</b>
	Total up to 2026	<b>167</b>	<b>60,528</b>	<b>22,059</b>	<b>36,271</b>	<b>214,948</b>	<b>6,354</b>	<b>23,149</b>	<b>363,476</b>

**TABLE 8 –SITE WASTE MATERIAL COMPOSITION <200Bq/G FOLLOWING AN ADJUSTMENT TO ACCOUNT FOR DISPOSAL OF EXEMPT WASTE AND APPLICATION OF THE WH.**

Site	Time Period	m <sup>3</sup>							Total based on material fractions
		Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	
Amersham	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	14	478	681	62	44	108	<b>1,386</b>
	2017 - 2026	-	23	691	975	88	63	167	<b>2,006</b>
	Total up to 2026	-	37	1,169	1,656	150	106	275	<b>3,392</b>
AWE Aldermaston	Stock	-	-	-	-	348	-	-	<b>348</b>
	2010 - 2016	8	35	290	513	706	115	17	<b>1,684</b>
	2017 - 2026	1	100	640	659	2,136	252	33	<b>3,820</b>
	Total up to 2026	9	135	930	1,172	3,190	367	50	<b>5,852</b>
Berkeley	Stock	-	2	3	0	5	-	-	<b>10</b>
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	2	3	0	5	-	-	<b>10</b>
Bradwell	Stock	-	4	5	8	97	3	-	<b>116</b>
	2010 - 2016	-	6	8	14	151	5	-	<b>182</b>
	2017 - 2026	-	9	12	21	235	7	-	<b>285</b>
	Total up to 2026	-	19	24	43	483	14	-	<b>584</b>
Culham	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	2,799	-	-	<b>2,799</b>
	Total up to 2026	-	-	-	-	2,799	-	-	<b>2,799</b>
Dungeness A	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	-	-	-	-	-	-	-

Site	Time Period	m <sup>3</sup>							
		Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	Total based on material fractions
Harwell	Stock	-	-	-	-	2,500	-	-	<b>2,500</b>
	2010 - 2016	-	-	-	-	35,644	-	-	<b>35,644</b>
	2017 - 2026	-	-	-	-	45,829	3	-	<b>45,832</b>
	Total up to 2026	-	-	-	-	83,973	3	-	<b>83,976</b>
HMNB Devonport	Stock	-	0	-	-	0	-	-	<b>0</b>
	2010 - 2016	-	1	-	-	1	-	-	<b>3</b>
	2017 - 2026	-	2	-	-	2	-	-	<b>4</b>
	Total up to 2026	-	3	-	-	4	-	-	<b>7</b>
Hinkley Point A	Stock	-	1	0	9	1	0	0	<b>11</b>
	2010 - 2016	-	56	57	41	749	10	48	<b>962</b>
	2017 - 2026	-	58	47	36	739	10	38	<b>927</b>
	Total up to 2026	-	114	104	86	1,489	20	86	<b>1,899</b>
Oldbury	Stock	-	0	0	0	1	0	-	<b>1</b>
	2010 - 2016	-	1	1	1	-	1	-	<b>3</b>
	2017 - 2026	-	4	3	3	-	3	-	<b>14</b>
	Total up to 2026	-	4	4	4	1	4	-	<b>17</b>
Sizewell A	Stock	-	1	0	-	-	-	0	<b>2</b>
	2010 - 2016	-	3	31	16	6	1	16	<b>73</b>
	2017 - 2026	-	19	192	101	38	5	96	<b>452</b>
	Total up to 2026	-	24	223	117	45	6	112	<b>526</b>
Winfrith	Stock	-	-	-	-	-	-	-	<b>-</b>
	2010 - 2016	-	-	-	-	-	1	-	<b>1</b>
	2017 - 2026	-	-	-	-	-	-	-	<b>-</b>
	Total up to 2026	-	-	-	-	-	1	-	<b>1</b>
Windscale	Stock	-	-	-	-	-	-	-	<b>-</b>
	2010 - 2016	-	-	-	-	-	-	-	<b>-</b>
	2017 - 2026	-	-	-	-	-	-	-	<b>-</b>
	Total up to 2026	-	-	-	-	-	-	-	<b>-</b>

Site	Time Period	m <sup>3</sup>							
		Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	Total based on material fractions
Eskmeals	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	-	-	-	-	-	-	-
HMNB Portsmouth	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	-	-	-	-	-	-	-
Various small users	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	-	-	-	-	-	-	-
Barrow	Stock	-	1	0	-	0	-	-	1
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	1	0	-	0	-	-	1
Calder Hall	Stock	-	1	0	-	-	-	36	37
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	3	0	-	-	-	0	3
	Total up to 2026	-	4	0	-	-	-	36	40
Capenhurst	Stock	-	32	3	41	982	40	18	1,117
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	32	3	41	982	40	18	1,117
Urenco (capenhurst)	Stock	-	5	-	-	24	-	-	30
	2010 - 2016	-	6	-	-	27	-	-	32
	2017 - 2026	-	12	-	-	42	-	-	54
	Total up to 2026	-	23	-	-	93	-	-	116

Site	Time Period	m <sup>3</sup>							
		Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	Total based on material fractions
GE Healthcare (Cardiff)	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	2	47	373	-	373	23	<b>819</b>
	2017 - 2026	-	3	67	533	-	533	33	<b>1,170</b>
	Total up to 2026	-	6	113	907	-	907	57	<b>1,989</b>
Chapel Cross	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	7	-	-	1,621	-	-	<b>1,628</b>
	2017 - 2026	-	7	-	-	1,621	-	-	<b>1,628</b>
	Total up to 2026	-	14	-	-	3,243	-	-	<b>3,256</b>
Clyde	Stock	-	0	0	0	0	0	2	<b>3</b>
	2010 - 2016	-	1	7	4	0	2	7	<b>20</b>
	2017 - 2026	-	1	10	5	0	3	9	<b>29</b>
	Total up to 2026	-	2	17	9	1	5	18	<b>52</b>
MOD Defence estate	Stock	-	0	-	-	29	-	2	<b>31</b>
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	0	-	-	29	-	2	<b>31</b>
Dounraey	Stock	-	158	195	215	2,889	40	124	<b>3,622</b>
	2010 - 2016	-	32	12	19	8,319	9	86	<b>8,477</b>
	2017 - 2026	-	120	64	17	23,294	10	14	<b>23,519</b>
	Total up to 2026	-	311	271	250	34,502	59	224	<b>35,618</b>
Donnington	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	-	-	-	-	-	-	-
Dungeness B	Stock	-	1	6	-	-	-	8	<b>14</b>
	2010 - 2016	-	4	21	-	-	-	28	<b>53</b>
	2017 - 2026	-	39	59	-	-	-	79	<b>178</b>
	Total up to 2026	-	44	86	-	-	-	115	<b>244</b>

Site	Time Period	m <sup>3</sup>							
		Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	Total based on material fractions
Flasks & Flatrolls	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	24	0	-	-	-	0	25
	2017 - 2026	-	16	0	-	-	-	0	16
	Total up to 2026	-	40	0	-	-	-	0	40
Hartlepool	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	23	-	-	-	-	-	23
	2017 - 2026	-	22	-	-	-	-	-	22
	Total up to 2026	-	45	-	-	-	-	-	45
Heysham 1	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	23	-	-	-	-	-	23
	2017 - 2026	-	22	-	-	-	-	-	22
	Total up to 2026	-	45	-	-	-	-	-	45
Heysham 2	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	-	-	-	-	-	-	-
Hinkley B	Stock	0	3	3	1	2	-	3	12
	2010 - 2016	0	24	30	9	16	-	27	106
	2017 - 2026	0	35	24	6	14	-	24	103
	Total up to 2026	0	62	57	16	32	-	54	221
Hunterston A	Stock	-	14	3	9	13	3	3	46
	2010 - 2016	-	47	11	32	42	11	11	153
	2017 - 2026	-	20	5	14	18	5	5	66
	Total up to 2026	-	82	18	55	74	18	18	265
Hunterston B	Stock	-	-	-	43	5	4	1	53
	2010 - 2016	-	-	-	318	38	32	10	397
	2017 - 2026	-	10	-	152	18	15	5	200
	Total up to 2026	-	10	-	512	61	51	15	650

Site	Time Period	m <sup>3</sup>							
		Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	Total based on material fractions
LLWR	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	-	-	-	-	-	-	-
Rosyth	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	0	-	-	9	-	-	<b>9</b>
	2017 - 2026	-	0	-	-	9	-	-	<b>10</b>
	Total up to 2026	-	0	-	-	18	-	-	<b>19</b>
Rolls Royce (Derby)	Stock	-	-	-	-	-	-	-	-
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	-	-	-	-	-	-	-
Sellafield	Stock	-	170	0	-	-	-	47	<b>217</b>
	2010 - 2016	-	615	759	5,071	31,880	705	2,918	<b>41,947</b>
	2017 - 2026	-	683	880	5,963	38,400	823	3,099	<b>49,848</b>
	Total up to 2026	-	1,469	1,639	11,034	70,280	1,528	6,064	<b>92,012</b>
Sizewell B	Stock	-	0	24	6	1	0	16	<b>47</b>
	2010 - 2016	-	0	56	15	1	1	38	<b>111</b>
	2017 - 2026	-	0	80	21	2	1	54	<b>158</b>
	Total up to 2026	-	0	160	42	4	2	108	<b>316</b>
Springfields	Stock	-	0	-	-	-	-	37	<b>37</b>
	2010 - 2016	5	322	4,470	1,394	9,096	23	3,157	<b>18,466</b>
	2017 - 2026	3	175	1,737	576	4,395	15	1,128	<b>8,029</b>
	Total up to 2026	8	497	6,207	1,970	13,491	38	4,322	<b>26,532</b>
Torness	Stock	-	-	-	23	-	1	0	<b>24</b>
	2010 - 2016	-	-	-	89	-	3	1	<b>93</b>
	2017 - 2026	-	-	-	110	-	4	1	<b>114</b>
	Total up to 2026	-	-	-	222	-	8	2	<b>232</b>

Site	Time Period	m <sup>3</sup>							
		Graphite	Metals	Plastic/ Rubber	Soft Organics	Soil/ Rubble	Wood	Unknown Material	Total based on material fractions
Trawsfynydd	Stock	-	0	0	0	1	0	-	1
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	0	0	0	1	0	-	1
Wylfa	Stock	-	0	0	0	1	0	0	1
	2010 - 2016	-	-	-	-	-	-	-	-
	2017 - 2026	-	-	-	-	-	-	-	-
	Total up to 2026	-	0	0	0	1	0	0	1
Totals	Stock	<b>0</b>	<b>395</b>	<b>244</b>	<b>355</b>	<b>6,898</b>	<b>91</b>	<b>298</b>	<b>8,281</b>
	2010 - 2016	<b>12</b>	<b>1,247</b>	<b>6,276</b>	<b>8,589</b>	<b>88,369</b>	<b>1,334</b>	<b>6,492</b>	<b>112,320</b>
	2017 - 2026	<b>4</b>	<b>1,384</b>	<b>4,510</b>	<b>9,192</b>	<b>119,681</b>	<b>1,752</b>	<b>4,784</b>	<b>141,306</b>
	Total up to 2026	<b>17</b>	<b>3,026</b>	<b>11,029</b>	<b>18,135</b>	<b>214,948</b>	<b>3,177</b>	<b>11,575</b>	<b>261,908</b>

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### 3. Summary

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The total predicted volume of waste arising up to 2026 with an activity of <200Bq/g is 429,597m<sup>3</sup>. Following application of the WH and exclusion of waste categorised as exempt, the resultant volume of waste that may ultimately require disposal to a near surface facility is 261,908m<sup>3</sup>, an average of 17,461m<sup>3</sup> a year. This suggests that an estimated 61% of the overall waste volume predicted to arise over the next 15 years, with an activity of <200 Bq/g could be routed for disposal to a near surface facility. The remainder will be treated for volume reduction or recycling. Of the 261,908m<sup>3</sup> estimated, the largest contribution is expected from Sellafield, generating 35% (92,012m<sup>3</sup>) of the total. Harwell and Springfields make up the top three contributors with 32% (83,976m<sup>3</sup>) and 10% (26,532m<sup>3</sup>) respectively.

It is expected that the dominant waste material requiring disposal to near surface facilities will be soil and rubble. From the analysis presented, this accounts for 82% for the total waste for disposal, the remainder being mainly combustible and unknown materials with very little metal assumed to be disposed via controlled burial.

The total volumes shown in Table 7 suggest that 15% (66,121m<sup>3</sup>) of the waste predicted to arise up to 2026, has an activity less than 0.4Bq/g and could be managed through conventional waste disposal routes. This does not take into account the recent work completed by Sellafield and Magnox to re-assess the waste generated during major decommissioning works [4, 5, 6]. These studies identified several areas where waste, previously categorised as LLW may well be re categorised as exempt waste following further characterisation.

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#### 3.1 Waste Inventory Improvement Programme

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The summary above is compiled from the UKRWI 2010 and is reliant on the quality of the data within the inventory. It is recognised that various factors affect the quality of the national waste inventory data available. The Low Level Waste Management Plan includes an improvement programme which has been developed to correct the issues associated with inventory quality data listed below:

LLW inventory information is currently collected and managed in multiple datasets. These include the UKRWI, WIDRAM and bespoke datasets used by site waste teams to underpin the NDA lifetime Plans (LTPs) and Integrated Waste Strategy (IWS) submissions. These datasets are not always consistent due to different reporting formats, timescales and underpinning assumptions.

Although recently the Waste Accountancy Template (WAT) and UKRWI datasets have been converging, further work is needed in order to improve and refine the LLW dataset that can be used to improve the accuracy of short and long-term forecasting, liability estimating and strategic planning.

A significant amount of work has recently been completed by the NDA SLCs to improve the accuracy of their radioactive waste inventories, notably work carried out by Magnox North and South on the 'SMART Inventory' and Sellafield Ltd on the 'Decommissioning Mandate' process. As a result of these projects, baselines are in the process of being updated and these results will inform future inventories.

It is also foreseen that further improvements to the reporting of 'actual' waste treatment or disposal data by SLCs and the wider industry would greatly assist DECC in measuring the progress of the policy for long term management of solid low level radioactive waste. This would also provide greater accountability and bring focus to issues that affect future strategic decision making. To this end LLWR are producing management dashboards and metrics to collate the waste treatment and disposal "actuals" data from each site and thus demonstrate implementation of the National Waste Programme.

Element 8 of the National Waste Programme specifically concentrates on initiatives associated with improving the waste inventory and includes things such as, site targeted reviews across the NDA and Non-NDA estate, in-depth analysis of inventory data and leading improvements to existing waste inventory tools such as the WAT, British Radioactive Waste Information Management System (BRIMS) in order to ensure they remain 'fit for purpose'.

A specific example of the improvement in data reporting that is required is the assignment of activity levels to specific waste streams. Upon closer scrutiny, it has been identified that over 3.1 million m<sup>3</sup> of waste specified as VLLW actually appears to be LLW, albeit very close to the VLLW / LLW activity boundary. Conversely over 0.2 million m<sup>3</sup> of LLW streams appear to state VLLW activity levels.

This highlights a need to improve consistency in the categorisation or characterisation of wastes within the baseline and the possible deployment of specialist equipment to assist sites in achieving this aim. To this end LLWR are in the process of developing a characterisation framework which will shortly be available to sites and assist them in improving their waste characterisation and enable better waste segregation. Better characterisation will also enable the SLC's to estimate disposal costs and identify wastes streams that can be diverted from the LLWR through treatment or alternative disposal.

In addition, there are a number of materials which are not currently included in the LLW inventory the most significant of which is potentially contaminated land. A significant amount of further characterisation is necessary across a number of NDA and Non-NDA sites to define the potential size of the challenge. The ultimate quantity declared as LLW or VLLW (potentially up to 13 million m<sup>3</sup>) and subsequent management strategy will significantly impact on LLW strategy.

It is also currently unclear what impact the ongoing government EO review will have on the LLW inventory. Government are considering moving towards a system of radionuclide specific limits in line with the European approach. This may result in some material currently classified as LLW becoming exempt, whilst some material currently below the exemption threshold of 0.4Bq/g may fall within LLW.

The move towards an integrated LLW inventory data source containing accurate and appropriate information will provide improved confidence in waste inventory data and subsequent strategic analysis. This will also have the added benefits of SLCs being able to better underpin their site clean up plans and will generate confidence from the supply chain that there is a viable market to further develop treatment and disposal options.

Further to the data analysis presented in this report, LLWR plan to undertake a study to assess the availability, capacity and constraints of the facilities providing metal treatment, combustible, VLLW/LALLW disposal and ancillary services.

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## References

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1. UK Management of Solid Low Level Radioactive Waste from the Nuclear Industry: Low Level Waste Strategic Review. Low Level Waste Repository Ltd. March 2011.
2. Higher Activity Waste. Reactor Decommissioning Update – Summary of Options for Waste Graphite. Nuclear Decommissioning Authority February 2011. <http://www.nda.gov.uk/documents/upload/Summary-of-options-for-waste-graphite-February-2011.pdf>
3. The Radioactive Substances (Substances of Low Activity) Exemption Order (as Amended) 1992. April 1992. <http://www.legislation.gov.uk/uksi/1992/647/introduction/made>
4. SMART Inventory. Summary Report. Magnox North, Magnox South. MES/EST/GEN/REP/0006/10. Issue 1. September 2010.
5. ACCELS – LLW Opportunity Development – Response to deliverable 1. Sellafield Ltd. Revision B. November 2010.
6. ACCELS – LLW Opportunity Development – Response to deliverable 2. Sellafield Ltd. Revision Draft 2b. January 2011.