



Cumberland and Westmorland & Furness Joint Waste Needs Assessment 2025/26

Management Requirements for Commercial & Industrial Waste in Cumberland and Westmorland & Furness to 2045

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Abbreviations

Abbreviation	Term
AD	Anaerobic Digestion
C & I	Commercial & Industrial Waste
C, D & E / CDEW	Construction, Demolition & Excavation Waste
DEFRA	Department for Environment, Food and Rural Affairs
EA	Environment Agency
EfW	Energy from Waste
EWG	European Waste Catalogue
GVA	Gross Value Added
HWRCs	Household Waste Recycling Centres
LACW	Local Authority Collected Waste
MRS	Metal Recycling Site
MRF	Material Recycling Facility
RDF	Refuse Derived Fuel
WDF	WasteDataFlow
WDI	Waste Data Interrogator
WIR	Waste Incinerator Returns
WNA	Waste Needs Assessment
WPA	Waste Planning Authority
WTS	Waste Transfer Station

Glossary of Terms

Term	Definition
Agricultural Waste	Waste produced on a 'farm' in the course of 'farming'. Agricultural waste takes both 'natural' (or organic) and 'non- natural' forms e.g. plastics and metal.
Anaerobic Digestion	A process to manage organic matter including green waste and food waste broken down by bacteria in the absence of air, producing a gas (biogas) and nutrient rich solid or liquid (digestate). The biogas can be used to generate energy either in a furnace, gas engine, turbine or to power vehicles, and digestate can be applied to land as a fertiliser.
Bio waste	Waste that can break down over time due to natural biological action/processes, such as food, garden waste and paper.
Commercial Waste	Waste from factories or premises used for the purpose of trade or business, sport, recreation or entertainment.
Construction, Demolition & Excavation Waste	Waste arising from the building process comprising demolition and site clearance waste and builders' waste from the construction/demolition of buildings and infrastructure. Includes masonry, rubble and timber.
Defra	The UK Government department responsible for developing national waste management policy.
Energy from Waste	The conversion of the calorific value of waste into energy, normally heat or electricity through applying thermal treatment of some sort. May also include the production of gas that can be used to generate energy.
Environment Agency	The body responsible for the regulation of waste management activities through issuing permits to control activities that handle or produce waste. It also provides up-to-date information on waste management matters and deals with other matters such as water issues including flood protection.
European Waste Catalogue (EWC)	Comprehensive listing of wastes divided into 20 chapters, most of which are industry-based, although some are based on materials and processes. Each waste type is assigned a unique six-digit code. Otherwise referred to as List of Waste (LoW).
Exemptions	Certain activities exempt from the need to obtain an environmental permit. Each exemption has specific limits and conditions that must be complied with to remain valid. Exemptions must be registered with the Environment Agency. Each registration lasts 3 years.
Green waste	Biodegradable plant waste from gardens and parks such as grass and hedge trimmings, from domestic and commercial sources suitable for composting.
Hazardous Waste Landfill	Sites where hazardous waste may be disposed by landfill. This can be a dedicated site or a single cell within a non-hazardous landfill, which has been specifically designed and designated for depositing hazardous waste.
Hazardous Waste	Waste requiring special management under the Hazardous Waste Regulations 2005 due to posing potential risk to public health or the environment (when improperly treated, stored, transported or disposed). This can be due to the quantity, concentration, or characteristics of the waste.
Household Waste	Waste from households collected through kerbside rounds, bulky items collected from households and waste delivered by householders to household waste recycling centres and "bring recycling sites". along with waste from street sweepings, and public litter bins.
Incineration	The controlled combustion of waste. Energy may also be recovered in the form of heat (see Energy from Waste).
Industrial Waste	Waste arising from any factory and from any premises occupied by an industry (excluding mines and quarries).

Landfill (including land raising)	The permanent disposal of waste to land, by the filling of voids or similar features, or the construction of landforms above ground level (land-raising).
Landfill Directive	European Union requirements restricting the landfilling of biodegradable municipal waste and requiring pre-treatment of all waste to be landfilled and separate disposal of hazardous, and non hazardous and inert wastes.
Local Authority Collected Waste	Waste collected by or on behalf of a local authority. Includes household waste and business waste where collected by a local authority and non-municipal fractions such as construction and demolition waste delivered to HWRCs. LACW is the definition used in statistical publications, which previously referred to municipal waste.
Mass Balance	Method of assessing the quantity of waste that may be converted to recycled aggregate by comparing inputs and outputs for sites reporting through the WDI.
Materials Recycling Facility (MRF)	A facility for sorting recyclable materials from the incoming waste stream.
Mining Waste	Waste from extractive operations (i.e. waste from extraction and processing of mineral resources) including materials that must be removed to gain access to mineral resources, such as topsoil, overburden and waste rock, as well as tailings remaining after minerals have been extracted from the ore. Management subject to control through EU Directive 2006/21/EC.
'Next step' Site	Some waste to intermediate sites may not undergo any processing, thus are reported as leaving the site leave under the same EWC and are accounted for again at the 'next step' site where it is to be managed.
Non-Hazardous Waste Landfill	A landfill permitted to accept non-inert (biodegradable) wastes e.g. municipal and commercial and industrial waste and other non-hazardous (including inert) wastes. May only accept hazardous waste if a special cell is constructed.
Recovery	Subjecting waste to processes that recover value including recycling, composting or thermal treatment to recover energy.
Recycling	The reprocessing of materials extracted from the waste stream either into the same product or a different one.
Refuse Derived Fuel	A fuel produced to a contract specification by processing the combustible fraction of waste.
Residual Waste	<i>The Environmental Targets (Residual Waste) (England) Regulations 2023</i> , defines residual waste as any waste other than excluded waste that is (a) sent to landfill in the United Kingdom; (b) put through incineration in the United Kingdom; (c) used in energy recovery in the United Kingdom; or (d) sent outside the United Kingdom for energy recovery.
The Plan area	The area subject to the Waste Local Plan to which this study relates. In this case Cumberland and Westmorland & Furness including the Lake District National Park are Plan areas in their own right.
Waste Planning Authority	The authority responsible for planning for waste within a specific administrative area. In this case both Cumberland Council and Westmorland & Furness Council.
Waste Transfer Station	A site to which waste is delivered for sorting or baling prior to transfer to another place for recycling, treatment or disposal.

1. Purpose

- 1.1 In 2022 BPP Consulting produced a Waste Needs Assessment (WNA) for Cumbria as a whole for Cumbria County Council, using data from 2020. Since then, Cumbria County Council has split into two unitary authorities in 2023, Cumberland Council and Westmorland & Furness (W&F) Council.

The Waste Needs Assessment consists of the following documents:

1. Local Authority Collected Waste Assessment of Management Requirements to 2045;
2. Commercial & Industrial Waste Assessment of Management Requirements to 2045;
3. Construction, Demolition & Excavation Waste Assessment of Management Requirements to 2045;
4. Hazardous Waste Assessment of Management Requirements to 2045; and
5. Scoping Review of Other Waste.

This report is concerned with updating the Commercial and Industrial (C&I) waste baseline for 2023 and assessing its projected management requirements to 2045.

Principal Data Sources

- 1.2 The principal data sources used to generate this WNA are as follows:

Waste Data Interrogator

- 1.3 Operators of all sites permitted to manage waste submit returns on the quantities, types and origin of waste received and, where applicable, destination of waste removed at each site. These returns are collated by the Environment Agency (EA) and are included in a national dataset known as the Waste Data Interrogator (WDI), waste received and waste removed. This is released approximately nine months after the end of the calendar year to which the data relates. The 2023 WDI (composed of data for the calendar year 2023) was the most current version available at the time this WNA was commissioned (version 1 released Feb 2025).

Wastedataflow

- 1.4 Wastedataflow (WDF) is a web-based data entry portal for local authorities to report on local authority waste management arrangements to central Government on a quarterly basis. The data input is used to report on national recycling and landfill diversion performance as well as local authority league tables on recycling rates etc following independent quality checking. While Councils normally report in financial years, as the EA WDI reports for calendar year the data for Cumberland and Westmorland & Furness covering the four quarters of 2023 has been accessed to ensure comparability between datasets.

Advice on Data

1.5 The principal source of advice with respect to the use of data to inform production of a plan evidence base is the national Planning Practice Guidance available at <https://www.gov.uk/guidance/waste>. This states that:

"Assessing waste management needs for Local Plan making is likely to involve:

- understanding waste arisings from within the planning authority area, including imports and exports*
- identifying the waste management capacity gaps in total and by particular waste streams*
- forecasting the waste arisings both at the end of the period that is being planned for and interim dates*
- assessing the waste management capacity required to deal with forecast arisings at the interim dates and end of the plan period."*

Paragraph: 022 Reference ID: 28-022-20141016

1.6 It includes a section entitled "Using data to monitor and forecast waste needs", which articulates the following principles should waste planning authorities adopt when using data to plan for waste management:

- Make clear assumptions on how data were handled, as well as their impact (including on forecasting)*
- Provide data to an appropriate level of significance, based on their explicit assumptions. In practice, data quoted to more than 2 or 3 significant figures will not be helpful and spurious accuracy stemming from precise figures should be avoided*
- Plan for a range of each type of waste rather than a specific single figure."*

Paragraph: 036 Reference ID: 28-036-20141016 Revision date: 16 10 2014

1.7 In order to respect the need to avoid "spurious accuracy", the following approach has been taken:

1. Where actual tonnage data has been accessed, this has been used in the computations.
2. Where data has been subject to computation, this has been included to 3 sf.
3. Where percentages have been used to generate data, the percentages are presented as whole numbers, however the computations actually use the full value. This means that values presented may not always precisely correspond to the values computed when applying the percentage value presented in this report.

2. Estimating C&I Waste Baseline Arisings

Introduction

- 2.1 This section of the report is concerned with estimating arisings of Commercial and Industrial (C&I) waste in Cumberland and Westmorland & Furness in 2023. From this, future arisings are forecast and appropriate management targets proposed to then determine what future management requirements may exist or emerge.

Context

- 2.2 Commercial waste can be defined as waste from factories or premises used for the purpose of trade or business, sport, recreation or entertainment. Industrial waste can be defined as waste arising from any factory and from any premises occupied by an industry (excluding mines and quarries)¹.
- 2.3 Currently there is no requirement on businesses to submit records of waste produced and hence estimating quantities of Commercial and Industrial waste arisings for a specific Plan Area is a challenge. Two different approaches can be taken to estimate a baseline for C&I waste as follows:
- **‘Point of production’** using data based on the profile of businesses within an area and the application of waste production factors (related to the different business profiles). This method was used in the Defra national survey undertaken in 2009 that informed the previous approach to national estimates.
 - **‘Point of management’** using data related to C&I waste managed. This relies on records of waste delivered to, and removed from, permitted waste facilities. The Environment Agency (EA) collates this data submitted by operators in its ‘Waste Data Interrogator’ (WDI) on an annual (calendar year) basis. This data is supplemented by data for wastes managed at permitted sites that don’t report through the WDI via Waste Incinerator Returns (WIR). This approach is now used to estimate C&I waste arisings at national level and is referred to as the ‘Reconcile’ method.
- 2.4 The Cumbria WNA 2022 applied the ‘point of management’ approach which generated a **baseline value of c599,000 tonnes of C&I waste in Cumbria as a whole** in 2020.

¹ this differs to the definition included in the Cumbria WLP, which is considered to be incomplete.

3. Methodology

- 3.1 The method used to generate the updated baseline C&I waste arisings value in this report applies the ‘point of management’ approach adapted to reflect local circumstances and account for any double counting.
- 3.2 The methodology considers a number of datasets, in totality, to capture quantities of commercial and industrial waste that are managed rather than produced, through:
- Permitted waste management facilities reporting through Environment Agency Waste Data Interrogator (WDI)
 - Taking into account the quantity sent directly for export, in this case outside both Cumberland and Westmorland & Furness.
 - Excluding waste streams that fall outside the definition of Commercial & Industrial waste such as Agricultural, Mining, Construction, Demolition & Excavation Waste (C, D & E), wastewater treatment waste and hazardous waste included in the datasets; and
 - Local Authority Collected Waste (LACW) managed through WDI reporting facilities (as reported through WasteDataFlow²); and adjusting for
 - Waste managed through waste management facilities in Cumberland and Westmorland & Furness classed by the Environment Agency as waste transfer (due to risk of double counting).
- 3.3 The data has been allocated to either Cumberland or Westmorland & Furness where the origin is specified in the WDI down to unitary authority level. Where the data was not reported below Cumbria, the Cumbria value has been split according to the findings of a separate report³ on the proposed approach to WDI data attribution. This concluded a split of 58% attributed to Cumberland and 42% attributed to Westmorland & Furness ought to be applied.

² <http://www.wastedataflow.org/>

³ *Proposed Approach to WDI Data Attribution* BPP Consulting June 2025

Inputs to permitted waste management facilities

Step 1: Data relating to waste arising in Cumberland and Westmorland & Furness from the Waste Data Interrogator (WDI)

3.4 The starting point is to collate all data relating to waste reported as arising in Cumbria as a whole from the WDI 2023. This is waste arising in former Cumbria that is managed both within and beyond the boundaries of both Cumberland and Westmorland & Furness as shown in Table 1 below. This shows that the total quantity of waste arising in Cumbria as a whole managed through permitted sites reporting through the WDI for 2023 was c2,350,500 tonnes.

Table 1: Waste Arising from Cumbria as a whole (tonnes)

Source: WDI 2023

	Landfill	Metal Recycling Sites	Transfer	Treatment	Recovery to Land	Grand Total
Managed within Cumbria	210,810	25,225	554,326	945,967	115,900	1,852,228
Managed outside Cumbria	149,537	35,487	97,453	203,714	11,928	498,119
Total	360,347	60,712	651,779	1,149,681	127,828	2,350,347

3.5 Table 2 shows the data allocated for waste arising from Cumberland and Westmorland & Furness applying the split referenced previously to Cumbria waste. This shows a total quantity of waste arising in Cumberland of c1,166,000 tonnes and Westmorland & Furness of c1,184,000 tonnes.

Table 2: Waste Arising from Cumberland and Westmorland & Furness (tonnes)

Source: WDI 2023 plus split values from Cumbria (see Appendix 2)

Origin WPA	Management Method	Landfill	Metal Recycling Sites	Transfer	Treatment	Recovery to Land	Grand Total
Cumberland	Managed within Cumbria	90,149	16,536	145,085	557,685	94,312	903,767
	Managed outside Cumbria	55,681	21,291	38,255	140,271	6,918	262,415
	Total	145,830	37,826	183,340	697,956	101,230	1,166,182
Westmorland & Furness	Managed within Cumbria	120,661	8,689	409,241	388,282	21,588	948,461
	Managed outside Cumbria	93,856	14,197	59,198	63,443	5,010	235,704
	Total	214,517	22,886	468,439	451,726	26,598	1,184,165

Step 2: Make deductions of non-C&I waste streams

- 3.6 Waste listed under waste codes considered to represent C, D & E Waste (European Waste Catalogue (EWC) Chapter 17 plus waste codes 19 12 09 & 20 02 02) and therefore accounted for in the separate estimates of C, D & E waste⁴, need to be deducted from the values in Table 1. The quantities remaining after this deduction are displayed in Table 3 below. This shows that total waste arising has reduced to c1,268,500 tonnes for Cumbria as a whole.

Table 3: Waste Arising from Cumbria as a whole minus C, D & E Waste (tonnes -totals rounded)

Source: WDI 2023

Management Route	Landfill	Metal Recycling Sites	Transfer	Treatment	Recovery to Land	Grand Total
Managed within Cumbria	107,819	23,992	177,728	508,689	490.14	818,719
Managed outside Cumbria	146,722	26,726	68,366	197,442	10,294	449,551
Total	254,541	50,718	246,095	706,132	10,784	1,268,269

- 3.7 Table 4 shows the data further split into waste arising from Cumberland and Westmorland.& Furness This shows a total quantity of waste arising in Cumberland of c719,000 tonnes and Westmorland.& Furness of c549,000 tonnes.

Table 4: Waste from Cumberland and Westmorland & Furness minus C, D & E Waste (tonnes)

Source: WDI 2023+Cumbria split

WPA	Management Route	Landfill	Metal Recycling Sites	Transfer	Treatment	Recovery to Land	Grand Total
Cumberland	Managed within Cumbria	48,323	15,877	85,612	335,720	319	485,851
	Managed outside Cumbria	54,344	16,218	21,386	135,357	5,971	233,276
	Total	102,667	32,095	106,998	471,078	6,289	719,128
Westmorland & Furness	Managed within Cumbria	59,495	8,115	92,116	172,969	172	332,867
	Managed outside Cumbria	92,379	10,507	46,980	62,085	4,323	216,274
	Total	151,874	18,623	139,096	235,054	4,495	549,142

- 3.8 Waste identified under waste codes considered to represent agricultural (EWC Chapter 02 01), mining (EWC Chapter 01) and hazardous waste (all codes with *) are accounted for separately in this WNA⁵ and so are deducted from the values in Table 3. The quantities remaining after this deduction are displayed in Table 5. This shows that total waste arising has reduced to c1,233,500 tonnes.

⁴ Joint WNA 2025 Management Requirements for Construction, Demolition & Excavation Waste in Cumberland and Westmorland & Furness BPP Consulting March 2026

⁵ Joint WNA 2025 Management Requirements for Hazardous Waste in Cumberland and Westmorland & Furness BPP Consulting March 2026

Table 5: Table 3 Minus Agricultural, Mining & Hazardous Waste (tonnes - totals rounded)

Source: WDI 2023

Management Route	Landfill	Metal Recycling Sites	Transfer	Treatment	Recovery to Land	Grand Total
Managed within Cumbria	107,648	21,348	173,337	500,580	490	803,403
Managed outside Cumbria	146,621	24,079	66,896	182,192	10,294	430,081
Total	254,268	45,427	240,233	682,772	10,784	1,233,484

3.9 Table 6 shows the data further split between Cumberland and Westmorland.& Furness. This shows a total quantity of remaining waste arising in Cumberland of c697,000 tonnes and Westmorland.& Furness of c536,500 tonnes.

Table 6: Table 4 Minus Agricultural, Mining & Hazardous Waste (tonnes)

Source: WDI 2023 +Cumbria split

District	Management Route	Landfill	Metal Recycling Sites	Transfer	Treatment	Recovery to Land	Grand Total
Cumberland	Managed within Cumbria	48,155	13,979	83,034	329,176	319	474,662
	Managed outside Cumbria	54,295	14,787	20,298	126,853	5,971	222,204
	Total	102,451	28,766	103,332	456,029	6,289	696,867
Westmorland & Furness	Managed within Cumbria	59,492	7,369	90,303	171,405	172	328,740
	Managed outside Cumbria	92,325	9,292	46,598	55,339	4,323	207,877
	Total	151,818	16,661	136,901	226,743	4,495	536,617

Step 3: Make deductions of Local Authority Collected Waste

3.10 LACW is not distinguishable from C&I waste by reference to EWC Codes as both are generally classed as municipal waste under Chapter 20. It is, however, possible to cross reference to data from Wastedataflow (WDF), the online portal used by waste collection and disposal authorities for reporting LACW management. This allows the specific sites at which quantities of LACW have been managed to be identified. Cross referencing between the receiving sites in WDF and the site entry in the WDI enables attribution to specific routes, as shown in Table 7:

Table 7: Local Authority Collected Waste Received at Facilities included in WDI (tonnes - totals rounded)

Source: WDF 2023 & WDI 2023

Source District	Management Route	Landfill	Metal Recycling Sites	Transfer	Treatment	Grand Total
Cumberland	Managed within Cumbria	0	72	19,818	129,694	149,584
	Managed outside Cumbria	0	455	3,742	65,377	69,574
	Total	0	526	23,560	195,072	219,158
Westmorland & Furness	Managed within Cumbria	0	0	7,293	54,211	61,504
	Managed outside Cumbria	3,983	35	101	4,508	8,626
	Total	3,983	35	7,393	58,719	70,130
Grand Total		3,983	561	30,954	253,791	289,288

3.11 When values in Table 7 are deducted from the values in Table 6 the total remaining arisings value is as shown in Table 8 below.

Table 8: Gross C&I Waste Arising from Cumberland and Westmorland & Furness (tonnes - totals rounded)

Source District	Management Route	Landfill	Metal Recycling Sites	Transfer	Treatment	Recovery to Land	Grand Total
Cumberland	Managed within Cumbria	48,155	13,907	63,216	199,481	319	325,078
	Managed outside Cumbria	54,295	14,333	16,556	61,476	5,971	152,630
	Total	102,451	28,240	79,772	260,957	6,289	477,708
Westmorland & Furness	Managed within Cumbria	59,492	7,369	83,010	117,194	172	267,236
	Managed outside Cumbria	88,343	9,257	46,497	50,831	4,323	199,251
	Total	147,835	16,626	129,507	168,024	4,495	466,488
Grand Total		250,286	44,866	209,279	428,981	10,784	944,196

Step 4: Make deductions of specific wastes accounted for separately

3.12 Landfill leachate and sludges from wastewater treatment works are expressly excluded from the national Reconcile reporting method, as Defra considers counting wastes generated by waste management facilities from processes handling wastes generated elsewhere in the economy to be double counting under this overall waste stream. Based on this, the value for leachate and wastewater sludges from Cumberland and Westmorland & Furness managed at permitted facilities has also been deducted. This is calculated to be 158,879 tonnes of waste, of which 120,544 tonnes was managed within Cumberland and Westmorland & Furness.

3.13 Table 9 shows that deducting these values gives a **revised headline value of c785,500 tonnes**.

Table 9: Gross C&I Waste Arising in Cumberland and Westmorland & Furness (tonnes)

Source District	Management Route	Landfill	Metal Recycling Sites	Transfer	Treatment	Recovery to Land	Grand Total
Cumberland	Managed within Cumbria	48,155	13,907	63,216	121,279	319	246,876
	Managed outside Cumbria	54,295	14,333	15,567	61,231	5,971	151,396
	Total	102,451	28,240	78,783	182,510	6,289	398,272
Westmorland & Furness	Managed within Cumbria	59,492	7,369	83,010	74,851	172	224,894
	Managed outside Cumbria	88,343	9,257	10,114	50,112	4,323	162,150
	Total	147,835	16,626	93,124	124,964	4,495	387,044
Grand Total		250,286	44,866	171,907	307,474	10,784	785,317

Step 5: Make adjustments to account for intermediate sites (inc. waste transfer stations)

3.14 Adjustments may be needed to address recording waste at intermediate sites to account for:

- Double counting - the same waste being recorded once as an input from Cumberland and Westmorland & Furness to an initial facility in Cumberland and Westmorland & Furness, and then again as an input from Cumberland and Westmorland & Furness to a further or 'next step' facility if it goes for onward management; and
- loss of some waste - as a consequence of residues from the processing of waste arising at intermediate sites like MRFs where some outputs may be recoded from the original source of inputs i.e., the source identity gets lost, are not suppressing the final C&I waste arisings value.

Deduct movements of waste arising in Cumbria to transfer stations within Cumbria:

- 3.15 The national methodology (the 'Reconcile' method) discounts inputs to all types of transfer facility recorded in the WDI. This step applies to transfer sites as well as all sites falling under the classification of transfer/ treatment in the WDI. Since some processing takes place at many sites classed by the EA as waste transfer sites, it was not considered appropriate to simply deduct all inputs on the assumption that they would reappear at a 'next step' site in the same form i.e., classified under the same EWC code.
- 3.16 Instead, inputs to sites located within Cumbria identified in the WDI under the category of waste transfer were assessed against declared outputs, with the difference between inputs and outputs taken to be tonnage 'lost' as a result of some processing taking place on the transfer site. The difference between input and output is counted as an arising and not deducted. Given such sites often accept waste from beyond Cumbria, it is necessary to attribute the tonnage lost. This has been done by assessing the proportion of the input reported as arising from Cumbria as a whole and then applying that proportion (percentage) to the tonnage lost. For example, a Cumberland waste transfer site received 200 tonnes of waste, 100 tonnes of which comes from Cumberland, therefore inputs from Cumberland represent 50% of the total. It is then taken that 50% of the output value arose from the incoming Cumberland waste and has been attributed to Cumberland.
- 3.17 Table 10 shows a resulting value of c111,500 tonnes is to be deducted from the total arising value in Cumberland and c66,500 tonnes is to be deducted from the total arising value in Westmorland & Furness. This gives an **overall running C&I waste value of c655,500 tonnes** as shown in Table 11.

Table 10: Cumbria Transfer Station Double Counting

Source: WDI 2023 Cumberland and Westmorland & Furness site outputs

Line	Source	Cumberland	Westmorland & Furness
	Value from Table 9	63,216	83,010
1	Total input to Cumbria transfer stations (ex HWRC's, CDE, LACW, Haz, Agri, sludges & leachate)	138,809	89,624
2	Cumbria input to Cumbria transfer stations	109,983	85,793
3	% of Cumbria T Stn input from Cumbria (Line 2/1)	79%	96%
4	Output from Cumbria transfer stations	140,865	69,354
5	Tonnage of output attributed to Cumbria input (%) deducted to avoid double counting (line 4 x line 3)	-111,612	-66,390

Table 11: Gross C&I Waste Arising in Cumberland and Westmorland & Furness (tonnes)

Source District	Management Route	Landfill	Metal Recycling Sites	Transfer	Treatment	Recovery to Land	Grand Total
Cumberland	Managed within Cumbria	48,155	13,907	0	121,279	319	183,660
	Managed outside Cumbria	54,295	14,333	15,567	61,231	5,971	151,396
	Total	102,451	28,240	15,567	182,510	6,289	335,056
Westmorland & Furness	Managed within Cumbria	59,492	7,369	16,620	74,851	172	158,504
	Managed outside Cumbria	88,343	9,257	10,114	50,112	4,323	162,150
	Total	147,835	16,626	26,734	124,964	4,495	320,655
Grand Total		250,286	44,866	42,301	307,474	10,784	655,711

Deduct waste from intermediate facilities under 19 12 12⁶

- 3.18 Outputs from facilities that treat waste prior to its final fate such as Material Recovery Facilities (MRF) and Mechanical Biological Treatment (MBT) plant, for example, was deducted from the national estimates. These are likely to be coded under EWC Chapter 19 (Wastes from Waste Management Facilities). For the purposes of applying this method to Cumberland and Westmorland & Furness, the tonnage of processing residues was deducted for all intermediate sites located in Cumbria as a whole, excluding the MBT plants as the input to these is understood to be solely LACW⁷.
- 3.19 The principal waste of concern is waste resulting from mechanical treatment coded under EWC 19 12 12. Analysis of the WDI waste removed dataset for intermediate sites located in Cumberland and Westmorland & Furness indicates that the net output of this waste type in 2023 was 346,652 tonnes (77,076 Cumberland & 269,575 Westmorland & Furness). Where the input of C, D & E waste was greater than the net output of 19 12 12, it was all taken to have arisen from C,D&E waste with no attribution of the output waste to C&I waste; where there was a shortfall, the remainder was taken to have arisen from C&I waste inputs. The result of this calculation is 307,072 tonnes (55,200 Cumberland & 251,872⁸ W&F) of 19 12 12 output attributed to C, D & E waste was deducted, split across both Transfer and Treatment site categories. However, as shown in Table 11, the Cumberland to Transfer in Cumberland value was already at 0 and the Westmorland & Furness to Transfer in W&F value was only c16,500 tonnes, less than the tonnage of 19 12 12 waste to be deducted. Therefore, the actual value of 19 12 12 attributed to C, D & E waste that has been deducted is c42,000 tonnes (16,500t W&F Transfer+ 25,500t all Treatment), bringing the total running C&I waste arising value to c613,500 tonnes as shown in Table 12.

⁶ Note that 19 12 10 is also a principal waste resulting from mechanical treatment, but no significant amount was identified.

⁷ Note that while the MBT sites do receive a small amount of commercial waste collected by district councils (Allerdale and Copeland), as this is counted as contract waste the tonnage is accounted for as LACW.

⁸ 218,621 tonnes from the Sandscale Park site all originating from CDE waste.

Table 12: Gross C&I Waste Arising in Cumberland and Westmorland & Furness (tonnes)

Source WPA	Management Route	Landfill	Metal Recycling Sites	Transfer	Treatment	Recovery to Land	Grand Total
Cumberland	Managed within Cumbria	48,155	13,907	0	105,236	319	167,617
	Managed outside Cumbria	54,295	14,333	15,567	61,231	5,971	151,396
	Total	102,451	28,240	15,567	166,467	6,289	319,013
Westmorland & Furness	Managed within Cumbria	59,492	7,369	0	65,517	172	132,550
	Managed outside Cumbria	88,343	9,257	10,114	50,112	4,323	162,150
	Total	147,835	16,626	10,114	115,630	4,495	294,700
Grand Total		250,286	44,866	25,681	282,097	10,784	613,714

Additions

Step 6: Add non LACW inputs to Energy from Waste (EfW) facilities

3.20 There are no operational EfW plants in Cumbria as whole. Examination of data for inputs to EfW facilities indicates that c55,000 tonnes of waste attributed to either Cumberland or Westmorland & Furness, was sent to principally 4 EfW plants in England (and hence reported in the WDI). The data for management of Cumberland and Westmorland & Furness LACW published by Defra shows c.45,000 tonnes of LACW being managed through this route and therefore this value has been deducted leaving a value of c9,000 tonnes of C&I waste managed through this route in 2024. This tonnage has been added to the running C&I waste arising total giving a revised running arising value of c324,500 tonnes for Cumberland and c298,500 tonnes for Westmorland & Furness as shown in Table 13 below.

Table 13: Gross C&I Waste Arising in Cumbria (tonnes)

Source WPA	Management Route	Landfill	Metal Recycling Sites	Transfer	Treatment	Recovery to Land	EfW	Grand Total
Cumberland	Managed within Cumbria	48,155	13,907	0	105,236	319	0	167,617
	Managed outside Cumbria	54,295	14,333	15,567	61,231	5,971	5,251	156,647
	Total	102,451	28,240	15,567	166,467	6,289	5,251	324,264
Westmorland & Furness	Managed within Cumbria	59,492	7,369	0	65,517	172	0	132,550
	Managed outside Cumbria	88,343	9,257	10,114	50,112	4,323	3,802	165,952
	Total	147,835	16,626	10,114	115,630	4,495	3,802	298,502
Grant Total		250,286	44,866	25,681	282,097	10,784	9,053	622,766

Step 7: Accounting for waste recorded to North West only

- 3.21 Data quality of the WDI relies on operators of permitted sites to report inputs down to origin WPA level. A number of sites do not report inputs to that level, preferring to report at regional level only. This means that there is a potential for an underestimation of the tonnage of waste managed in Cumbria as a whole that is not attributed down to or below regional level. However, the WDI 2023 reports only 278 tonnes of C&I type waste that is not attributed down to WPA level going to one Cumbria site, therefore no attempt to attribute non-attributed waste to Cumbria has been made as it is not considered a significant amount (<500t).
- 3.22 The outcome of this process is a baseline value of **c623,000 tonnes of C&I waste** generated in Cumbria as a whole in 2023. This compares with a **C&I waste baseline value of c599,000 tonnes in 2020**.

Sense checking values

- 3.23 To ensure neither of the values obtained for 2020 and for 2023 are anomalous; the above methodology has been applied to the 2022 WDI dataset to triangulate the values. The resulting values are set out in Table 14 below:

Table 14 Cumbria as a whole C & I Waste arisings by component 2020, 2022 & 2023

Component	2020	2022	2023
Total Waste Arising in Cumbria	2,161,107	2,174,299	2,350,347
Minus C,D & E Waste	-778,347	-958,888	-1,082,077
Minus Hazardous Waste	-84,038	-21,083	-34,785
Minus LACW	-293,905	-267,184	-289,288
Minus Specific Waste	-190,220	-137,598	-158,879
Plan Area Transfer adjustment	-179,586	-138,965	-129,606
Treatment Next Step	-40,687	-37,690	-41,997
Addition of Uncodeable waste	0	0	0
Addition of EfW	4,348	3,117	9,053
Total	598,672	616,009	622,766
Indicated Annual Growth Rate		1.45%	0.55%

- 3.24 Table 14 shows that the amount of C & I waste produced in Cumberland and Westmorland & Furness across all assessed management routes increased between 2020 and 2022 by 1.45% pa and increased marginally between 2022 & 2023 by 0.55%. The 2020 value may have been affected by the Covid-19 pandemic local lockdowns.
- 3.25 Given that the baseline values presented in this report have been generated through the replication of a tried and tested methodology the results are considered to be robust and provide a value that can be used for forecasting with a degree of confidence. It is therefore proposed that the **baseline of c623,000 tonnes in 2023** be used (as this has been separated between the districts) as the starting point from which future management requirements for Cumberland and Westmorland & Furness' C & I waste be determined.

4. Forecasting Future C&I Waste Growth

4.1 The national PPG states when looking to forecast C&I waste:

"Waste planning authorities can prepare growth profiles, similar to municipal waste, to forecast future commercial and industrial waste arisings. In doing so, however, they should;

- set out clear assumptions on which they make their forecast, and if necessary, forecast on the basis of different assumptions to provide a range of waste to be managed;*
- be clear on rate of growth in arisings being assumed. Waste planning authorities should assume a certain level of growth in waste arisings unless there is clear evidence to demonstrate otherwise."*

Paragraph: 032 Reference ID: 28-032-20141016 Revision date: 16 10 2014

Hence the PPG anticipates the application of a positive growth rate.

DEFRA Analysis of Future C&I Waste Growth

4.2 Defra commissioned a Future Waste Arisings report in 2020⁹ which reported in 2021. This includes the most current national growth forecast for the C&I waste stream published by Government. The method used to produce a forecasting model for C&I waste included development of a time-series forecast for gross value added (GVA) for the commercial sector and separately for the industrial sector, which could then be used to generate C&I waste arisings forecasts. The forecasts also incorporate the impact of growth in the number of businesses on C&I waste arisings by combining data on waste generated per business size and sector and adjusting the GVA to waste ratios using the growth in the number of businesses in each sector by size respectively. Two forecasting models were produced for England from 2019 to 2050: one for commercial waste arisings (refer to Figure 1) and the other for industrial waste arisings (refer to Figure 2). The resultant graphs are reproduced as Figures 1 and 2 respectively.

⁹ 'Future Waste Arisings' DEFRA, April 2021

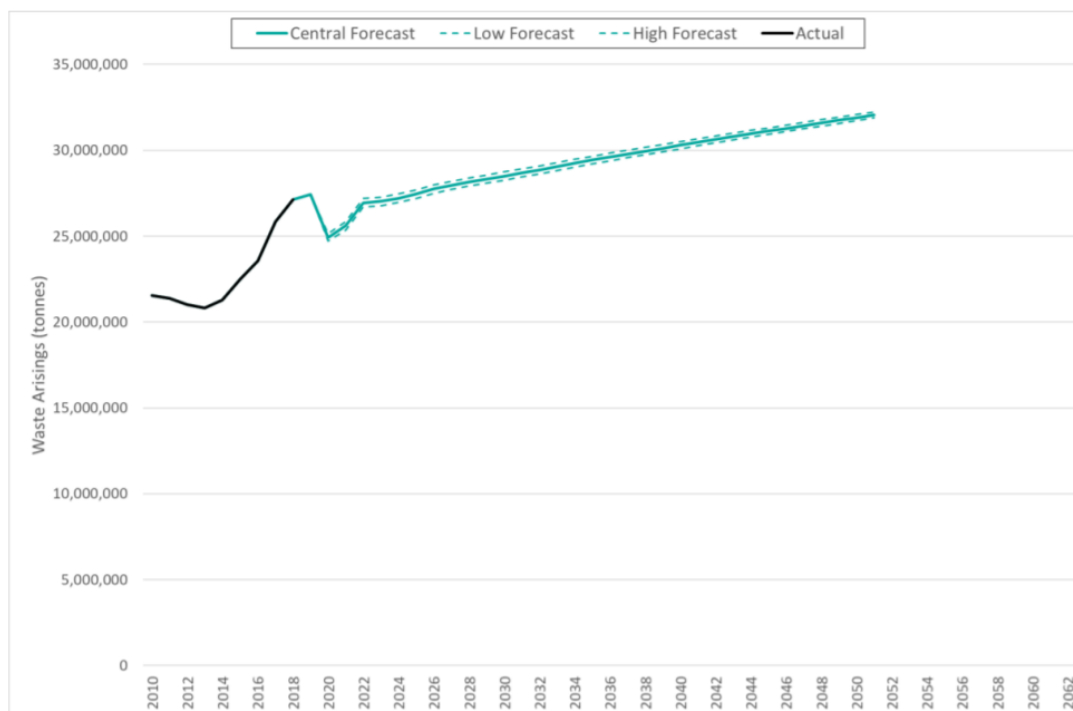


Figure 1: Commercial Waste Arisings Forecasts for England (2019-2050)

Source: Future Waste Arisings, produced for DEFRA (2021)

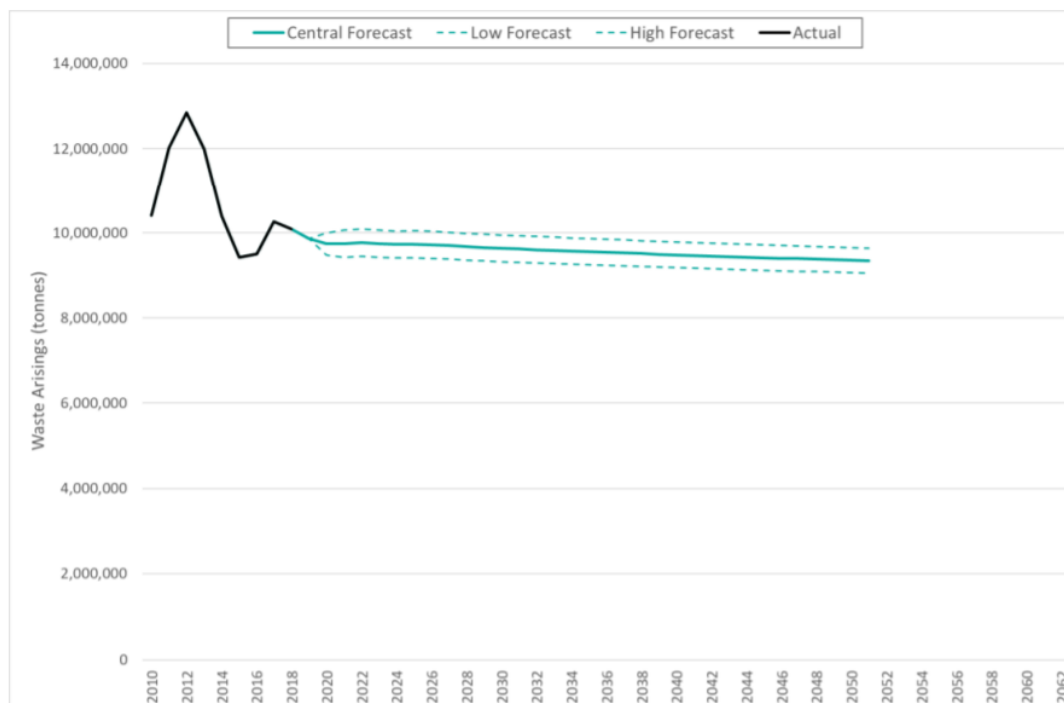


Figure 2: Industrial Waste Arisings Forecasts for England (2019-2050)

Source: Future Waste Arisings, produced for DEFRA (2021)

- 4.3 Figures 1 and 2 present central, low and high forecast waste arisings for the commercial and industrial sectors. Commercial waste arisings are projected to increase steadily from 2022 to 2050, whilst industrial waste arisings are projected to progressively fall from 2020 to 2050.
- 4.4 In order to assess how the national forecasts may be taken into account when forecasting local C&I waste arisings, data points have been extracted for the 2023-2045 period as that is the period which this WNA covers. For the purpose of this exercise, the national central forecast values were used. See Appendix 1 for how the growth rates were ascertained using national central forecast values.
- 4.5 The average annual growth rate generated in the period 2023 to 2045 was +1.08% per annum for commercial waste and -0.12% per annum for industrial waste respectively (refer to Appendix 1). These can now be weighted according to the percentage contribution waste from commercial sources and that from industrial sources make to the overall baseline arising value for Cumberland and Westmorland & Furness in 2023.
- 4.6 The Cumbria WNA 2020 found 292,192 tonnes of commercial waste was generated which represented c31% of the total C&I baseline arising value for 2017. Therefore, composite C&I waste growth factors were calculated as follows:
- Commercial waste represents 31% of C&I arisings: 31% of +1.08% per annum = +0.33%
 - Industrial waste represents 69% of C&I arisings: 69% of -0.12% = -0.08%
- +0.33%-0.08% = 0.25% per annum (composite)
- 4.7 The Cumbria WNA 2020 showed that by applying the growth factor of 0.25% per annum the local C&I waste baseline would confer flexibility in the plan. Therefore, 0.25% per annum growth rate has also been applied to the 2023 C&I baseline value to forecast arisings to 2045 as shown in Table 15 below.

Table 15: C&I Forecast applying Growth Factor of 0.25% p.a. to 2023 baseline value

	2023	2025	2030	2035	2040	2045
Cumberland Forecast	324,264	325,887	329,981	334,127	338,324	342,574
Westmorland & Furness Forecast	298,502	299,997	303,766	307,582	311,446	315,358
Forecast Total	622,766	625,884	633,747	641,708	649,770	657,933

- 4.8 Table 15 shows that applying the growth factor of 0.25% per annum to the 2023 baseline value, C&I waste arisings for Cumbria as a whole are expected to rise to c658,000 tonnes (c342,500 tonnes for Cumberland and c315,500 tonnes for Westmorland & Furness) by the end of the Plan period. This represents an increase of c35,000 tonnes on the 2023 value.

5. Existing C&I Waste Management Profile

- 5.1 To establish realistic future management targets which then informs future capacity requirements it is first necessary to understand how the C&I waste produced in Cumberland and Westmorland & Furness is currently managed.

Baseline Profile

- 5.2 The management profile presented in Table 13 is based on the management data available through the WDI 2023. Since waste identified as undergoing treatment may go on for recycling/composting/landfill or energy recovery, the principal management types reported through the WDI considered are those that would represent a final fate as follows:

- Landfill
- EfW and Recovery to Land
- Composting/biowaste

Landfill

- 5.3 As shown in Table 16 below, in 2023, c250,500 tonnes of C&I waste arising were sent to landfill, c102,500 tonnes of which arose in Cumberland and c148,000 tonnes of which arose in Westmorland & Furness.

‘Other’ Recovery

- 5.4 As shown in Table 16, in 2023, c20,000 tonnes of C&I waste arising was recovered of which c9,000 tonnes was sent to EfW facilities and c11,000 tonnes were sent to recovery to land sites (c11,500 tonnes Cumberland and c8,500 tonnes Westmorland & Furness).

Composting/biowaste

- 5.5 As shown in Table 16, in 2023, c44,000 tonnes of C&I waste arising (c15,000 tonnes from Cumberland and c29,000 tonnes from Westmorland & Furness) were sent to permitted composting/biowaste sites.

Recycling and Reuse

- 5.6 The difference between the sum of the tonnages for the above categories and the baseline value has been taken to represent the tonnage that went on for recycling. In 2023 this amounted to c308,500 tonnes (c195,000 tonnes from Cumberland and c113,500 from Westmorland & Furness) as shown in Table 16 below.

Table 16: Computed C&I Waste Management Profile

Route	Cumberland		Westmorland & Furness	
	Tonnes	%	Tonnes	%
<i>Total Arisings</i>	324,624		298,502	
Landfill	102,451	32%	147,835	50%
'Other' Recovery	11,540	4%	8,297	3%
Composting/Biowaste	15,038	5%	28,865	10%
<i>Recycling & Reuse (remainder)</i>	195,236	60%	113,505	38%

- 5.7 Table 16 shows that if it is assumed that three principal management routes for which data is available are utilised the inferred percentage of C&I waste recycled/ reused/ composted stands at 65% for Cumberland (60%+5%) and 48% for Westmorland & Furness (38% + 10%), while 'other' recovery i.e. waste sent to energy from waste either directly or as RDF stands at 4% for Cumberland and only 3% for Westmorland & Furness, with the proportions landfilled standing at 32% for Cumberland and 50% for Westmorland & Furness respectively.

6. Management Targets

- 6.1 Having established an existing management profile for both Cumberland and Westmorland & Furness, the next step is to consider what management profile may be desirable and achievable and therefore what waste management targets ought to be set in the Plan to achieve that management profile.
- 6.2 There UK Government has adopted the following targets for municipal waste management:
- 55% recycling floor by 2025; and
 - 60% recycling floor by 2030; and
 - 65% recycling floor by 2035; plus
 - 10% ceiling limit on landfilling by 2035.
- 6.3 In this context it should be noted that municipal waste is waste classed under Chapter 20 of the EWC which includes both LACW and waste of a similar nature. It has been estimated that up to 60% of commercial waste could fall within that definition. Given the split between commercial and industrial waste found in Cumbria as a whole set out in the earlier section of this report, the above targets would apply to less than 31% of the overall C&I arisings. This leaves a substantial proportion of C&I waste outside this target.
- 6.4 The Government has also set the following targets in the Environmental Improvement Plan 2023¹⁰ (EIP), which build on recycling and landfill diversion targets set out above:
- eliminate avoidable waste by 2050 and double resource productivity by 2050;
 - explore options for the near elimination of biodegradable municipal waste to landfill from 2028; and
 - halve 'residual' waste (excluding major mineral waste) produced person by 2042,
- 6.5 The target for the reduction in residual waste is enshrined in *The Environmental Targets (Residual Waste) (England) Regulations 2023*¹¹ which came into force on 30 January 2023 and is set on a kg per capita¹² basis from 2019 levels (574 kg per capita). Accordingly, the residual waste long-term target is that by the end of 31 December 2042 the total mass of residual waste for the calendar year 2042 does not exceed 287 kg per capita. Routes through which waste is managed counting as residual are:
- sent to landfill in the United Kingdom;
 - put through incineration in the United Kingdom;
 - used in energy recovery in the United Kingdom; or
 - sent outside the United Kingdom for energy recovery.

¹⁰https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1168372/environmental-improvement-plan-2023.pdf

¹¹ *The Environmental Targets (Residual Waste) (England) Regulations 2023*
<https://www.legislation.gov.uk/en/uksi/2023/92/made>

¹² Per head of population in England

6.6 The EIP also set the following interim targets for the residual waste target to be achieved by 31 January 2028:

- Reduce residual waste produced per person by 24%.
- Reduce residual waste in total by 21%.
- Reduce municipal residual waste produced per person by 29% with the following material specific reduction targets set for the municipal component by January 2028:
 - food waste produced per person by 50%.
 - plastic waste produced per person by 45%.
 - paper/card waste produced per person by 26%.
 - metal waste produced per person by 42%.
 - glass waste produced per person by 48%.

6.7 Given the above, going beyond the current municipal waste focussed targets is expected to be necessary¹³.

6.8 Taking the current management profile shown in Table 16 and the above targets, the following targets for the future management of C&I waste in Cumberland and Westmorland & Furness respectively are set out in Tables 17 and 18 below.

Table 17: Proposed Targets for C&I Waste Management in Cumberland
Italicised values from Table 16

	Milestone Year					
	2023	2025	2030	2035	2040	2045
Recycling/composting (floor)	<i>65%</i>	<i>≥65%</i>	<i>≥65%</i>	<i>≥65%</i>	<i>≥70%</i>	<i>≥75%</i>
Remainder to Landfill (ceiling)	<i>32%</i>	<i>≤27%</i>	<i>≤22%</i>	<i>≤15%</i>	<i>≤10%</i>	<i>≤10%</i>
Other Recovery (remainder)	<i>4%</i>	<i>8%</i>	<i>13%</i>	<i>20%</i>	<i>20%</i>	<i>15%</i>

¹³ It is predicted that to meet the residual waste reduction target a 72% recycling rate will need to be achieved by 2042 across the waste streams to which it applies.

Table 18: Proposed Targets for C&I Waste Management in Westmorland & Furness
Italicised values from Table 16

	Milestone Year					
	2023	2025	2030	2035	2040	2045
Recycling/composting (floor)	48%	≥53%	≥60%	≥65%	≥70%	≥75%
Remainder to Landfill (ceiling)	50%	≤40%	≤30%	≤20%	≤10%	≤10%
Other Recovery (remainder)	3%	7%	10%	15%	20%	15%

6.9 The proposed targets have been arrived at as follows:

- Recycling: The current computed composite recycling/composting rates of 65% and 48% respectively. Each are projected to steadily increase to achieve the ‘floor’ target for municipal waste of 65% by 2035 and 75% by 2045.
- Landfill: It is understood that there will be a need to landfill some C&I waste through to 2045 at a reducing rate, thus working back to give a year-on-year decline to achieve the ‘ceiling’ of 10% of the municipal component to landfill by 2035 and the near halving of the residual component (managed across both landfill and Other Recovery) by 2042 for both Cumberland and Westmorland & Furness.
- Other Recovery: Taking the remainder after the recycling floor target and the landfill diversion ceiling has been met while paying regard to the halving residual waste target combining both landfill and Other Recovery in this context.

Projected Management Requirements for Cumbria’s C&I Waste

6.10 Applying the management targets presented in Table 17 and 18 to the forecast arising values in Table 15 gives the management requirements for the Plan Milestone years set out in Tables 19 and 20.

Table 19: C&I Waste Management Requirements derived by applying Proposed Targets in Table 17 (Cumberland) to the Forecast at Plan Milestone years in Table 15

	Current (Table 16)	Waste Management Requirements at Milestone Years (tonnes)					Peak Requirement Difference (tpa) / Cumulative Requirement (tonnes)
	2023	2025	2030	2035	2040	2045	
Recycling/composting	210,274	211,827	214,488	217,182	236,827	256,931	256,931
Remainder to Landfill	102,451	87,990	72,596	50,119	33,832	34,257	1,347,148
Other Recovery	11,540	26,071	42,898	66,825	67,665	51,386	67,665

Table 20: C&I Waste Management Requirements derived by applying Proposed Targets in Table 18 (Westmorland & Furness) to the Forecast at Plan Milestone years in Table 15

	<i>Current (Table 16)</i>	Waste Management Requirements at Milestone Years (tonnes)					Peak Requirement Difference (tpa) / Cumulative Requirement (tonnes)
	2023	2025	2030	2035	2040	2045	
Recycling/composting	142,370	158,998	182,259	199,928	218,012	236,519	236,519
Remainder to Landfill	147,835	119,999	91,130	61,516	31,145	31,536	1,709,343
Other Recovery	8,297	21,000	30,377	46,137	62,289	47,304	62,289

6.11 Tables 19 and 20 indicates the following peak capacity requirement for the Plan period:

- c493,500 tpa of recycling/composting (c257,000 tpa Cumberland and c236,500 tpa Westmorland & Furness) in 2045; and
- c130,000 tpa Other Recovery (c67,500 tpa Cumberland and c62,500 tpa Westmorland & Furness) in 2040 declining to 98,500 tpa in 2045.

In addition, a cumulative requirement of c3.06Mt non-inert landfill capacity (c1.35Mt Cumberland and c1.71Mt Westmorland & Furness) in 2045.

Provision for recycling/ biowaste management

6.12 In the past, provision for recycling has been taken to mean provision of waste management facility capacity to sort materials through a Materials Reclamation/Recycling Facility (MRF). However, where materials are separated at source, facility requirement may reduce to a transfer station where source separated materials (e.g. paper, plastic) are stored and bulked up in bays prior to onward bulk delivery to a reprocessor. Given the introduction of the requirement of separate collection of materials as a default through Simpler Recycling, it may not be necessary for specific material sorting provision to be made within Cumberland or Westmorland & Furness. Rather the forecast need for material separation might be met by existing waste facilities that offer bulking capacity for separately collected materials.

6.13 In contrast to this, biowaste management does require specific facilities if it is to be processed locally. Hence additional consideration has been given to what the biowaste management capacity requirement might be that arises from the proposed targets set out in the above tables. The C&I waste stream has been assessed to contain up to 13% organic waste¹⁴. Given the introduction of separate food waste collections for households and businesses as part of the roll out of Simpler Recycling by 2026/7¹⁵, and the interim target for the food waste content of municipal residual waste to reduce by 50% by 2028 it can be assumed that all biowaste within the C&I stream would be effectively captured for separate treatment by 2030. This then yields the management capacity requirements for the biowaste management component shown in Table 21 with the remaining recycling requirement after biowaste is deducted .

¹⁴ Commercial and Industrial Waste Survey 2009: Final Report, Defra May 2011.

¹⁵ Simpler Recycling in England: policy update Defra November 2024

Table 21: Forecast Biowaste Management Requirement with Separate Biowaste Collection and remaining recycling requirement for Cumberland and Westmorland & Furness

Source WPA		Waste Management Requirements at Milestone Years (tpa)					
		2023	2025	2030	2035	2040	2045
Cumberland	Biowaste	15,038	21,183	27,883	28,234	30,788	33,401
	Recycling	195,236	190,644	186,604	188,949	206,039	223,530
	Total (Table 19)	210,274	211,827	214,488	217,182	236,827	256,931
Westmorland & Furness	Biowaste	28,865	20,670	23,694	25,991	28,342	30,747
	Recycling	113,505	138,329	158,566	173,937	189,670	205,771
	Total (Table 20)	142,370	158,998	182,259	199,928	218,012	236,519

6.14 Table 21 shows the combined peak biowaste management capacity requirement for Cumbria as a whole would be c64,000tpa at the end of the Plan period with an initial requirement of c51,500tpa in 2030.

Provision for non-inert landfill

6.15 The application of the proposed targets set out in Tables 17 and 18 would mean a combined cumulative non-inert landfill requirement over the Plan period of 3.06M tonnes; c1.35M tonnes in Cumberland and c1.71M tonnes in Westmorland & Furness, as shown in Table 22 below.

Table 22: Predicted Non-Inert Waste Landfill Requirement for C&I Waste over the Plan Period

Year	Cumberland		Westmorland & Furness	
	Annual Requirement	Cumulative Requirement	Annual Requirement	Cumulative Requirement
2023	102,451		147,835	
2024	95,220	197,671	187,948	335,783
2025	87,990	285,660	119,999	455,782
2026	84,911	370,571	114,225	570,007
2027	81,832	452,403	108,451	678,459
2028	78,753	531,157	102,678	781,136
2029	75,675	606,831	96,904	878,040
2030	72,596	679,427	91,130	969,170
2031	68,100	747,528	85,207	1,054,377
2032	63,605	811,133	79,284	1,133,662
2033	59,110	870,242	73,362	1,207,023
2034	54,614	924,857	67,439	1,274,462
2035	50,119	974,976	61,516	1,335,978
2036	46,862	1,021,837	55,442	1,391,420
2037	43,604	1,065,442	49,368	1,440,787
2038	40,347	1,105,789	43,293	1,484,081
2039	37,090	1,142,879	37,219	1,521,300
2040	33,832	1,176,711	31,145	1,552,445
2041	33,917	1,210,628	31,223	1,583,668
2042	34,002	1,244,631	31,301	1,614,970
2043	34,087	1,278,718	31,379	1,646,349
2044	34,172	1,312,891	31,458	1,677,807
2045	34,257	1,347,148	31,536	1,709,343

Appendix 1: Data taken from DEFRA's National forecast to produce average growth rates per annum

Year	Commercial	Growth rate p.a	Industrial	Growth rate p.a.
2020	24,858,115		9,717,112	
2022	26,885,177	4.08%	9,755,546	0.20%
2024	27,031,316	0.27%	9,713,007	-0.22%
2026	27,635,753	1.12%	9,710,955	-0.01%
2028	28,036,798	0.73%	9,647,868	-0.32%
2030	28,437,563	0.71%	9,605,052	-0.22%
2032	28,787,095	0.61%	9,562,070	-0.22%
2034	29,187,580	0.70%	9,519,198	-0.22%
2036	29,588,484	0.69%	9,516,814	-0.01%
2037	29,824,561	0.80%	9,508,771	-0.08%
Average growth rate p.a.		+1.08%		-0.12%

Appendix 2: Table showing how Cumbria waste was apportioned between Cumberland and Westmorland & Furness Data in Table 2

Source: WDI 2023 plus split values from Total Cumbria C&I waste

	Origin WPA	Management Method	Landfill	Metal Recycling Sites	Transfer	Treatment	Recovery to Land	Grand Total
Actuals in WDI	Cumberland	Managed within Cumbria	19,655	6,861	70,726	356,848	69,442	523,532
		Managed outside Cumbria	1,008	11,414	6,841	63,421	0	82,685
		Total	20,663	18,275	77,568	420,269	69,442	606,217
	Westmorland & Furness	Managed within Cumbria	69,613	1,684	355,395	242,849	3,578	673,119
		Managed outside Cumbria	54,266	7,045	36,451	7,794	0	105,555
		Total	123,879	8,728	391,845	250,642	3,578	778,673
	Cumbria Value to be Split	Managed within Cumbria	121,542	16,680	128,205	346,270	42,880	655,577
		Managed outside Cumbria	94,263	17,028	54,161	132,500	11,928	309,880
		Total	215,805	33,709	182,366	478,770	54,808	965,457
Outcome of Cumbria Value Split	Cumberland = 58% of Cumbria	Managed within Cumbria	70,494	9,675	74,359	200,837	24,870	380,235
		Managed outside Cumbria	54,673	9,877	31,413	76,850	6,918	179,730
		Total	125,167	19,551	105,772	277,687	31,788	559,965
	Westmorland & Furness = 42% of Cumbria	Managed within Cumbria	51,047	7,006	53,846	145,434	18,009	275,342
		Managed outside Cumbria	39,591	7,152	22,748	55,650	5,010	130,150
		Total	90,638	14,158	76,594	201,083	23,019	405,492