



Cheshire West & Chester Waste Needs Assessment Update 2026

Capacity Requirement for the Management of Waste in Cheshire West & Chester to 2045

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Glossary of Terms

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.
Biowaste	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.
Composting	A process in which biodegradable waste (such as green waste and kitchen waste) is broken down in aerobic conditions by naturally occurring micro-organisms to produce a material suitable for use as a soil improver.
Construction, Demolition & Excavation Waste (C, D & E 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.
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).
Inert Landfill	Landfill site permitted to only accept inert waste for disposal.
In Vessel Composting (IVC)	Composting materials within a closed system. Can be used to treat food and garden waste.
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 Aggregate Assessment (LAA)	Annual local aggregate supply and demand assessment conducted by Mineral Planning Authorities which includes a survey of recycled, secondary and alternative aggregate producers within their particular Plan area.

Local Authority Collected Waste (LACW)	Waste collected by or on behalf of a local authority. Includes household waste and business waste were 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.
Mechanical Biological Treatment (MBT)	A waste facility that combines a sorting facility with a form of biological treatment such as composting or anaerobic digestion.
Municipal Solid Waste (MSW)	Household waste and any other waste collected by a waste collection authority such as municipal parks and gardens waste and waste resulting from the clearance of fly-tipped materials.
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.
Open Windrow Composting	A process in which biodegradable waste (such as green waste and kitchen waste) is broken down in an open-air environment (aerobic conditions) by naturally occurring micro-organisms to produce a material suitable for use as a soil improver.
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	Waste remaining after materials for re-use, recycling and composting/organic waste treatment e.g. anaerobic digestion has been removed.
The Plan area	The area subject to the Waste Local Plan to which this study relates. In this case the borough of Cheshire West and Chester.
Waste Collection Authority (WCA)	A local authority that has a duty to collect household waste. They also have a duty to collect commercial waste if requested to do so and may also collect industrial waste.
Waste Disposal Authority (WDA)	A local authority responsible for managing the waste collected by councils acting as waste collection authorities and the provision of household waste recycling centres. In this case Cheshire West & Chester Council.
Waste Planning Authority	The authority responsible for planning for waste within a specific administrative area. In this case Cheshire West & Chester 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.

Executive Summary

This report presents the outcome of the updated Waste Need Assessment (WNA) undertaken by BPP Consulting LLP on behalf of Cheshire West and Chester (CWaC). This WNA update was produced to ensure that the findings presented in the WNA 2023 that forms part of the evidence base supporting the preparation of the Cheshire West and Chester Local Plan remains robust. The WNA identifies the future need for additional waste management capacity in CWaC to 2045. Future need is assessed by quantifying the principal waste streams arising in CWaC and forecasting the amount of waste that may need to be managed over the Plan period by different management methods. This takes into account the potential contribution existing waste management capacity within CWaC may make towards meeting this need.

The WNA Update found that a total of 1.13 million tonnes of waste arose within CWaC in 2024. The quantities of waste arising by principal category or waste-stream are shown in Figure 1 below:

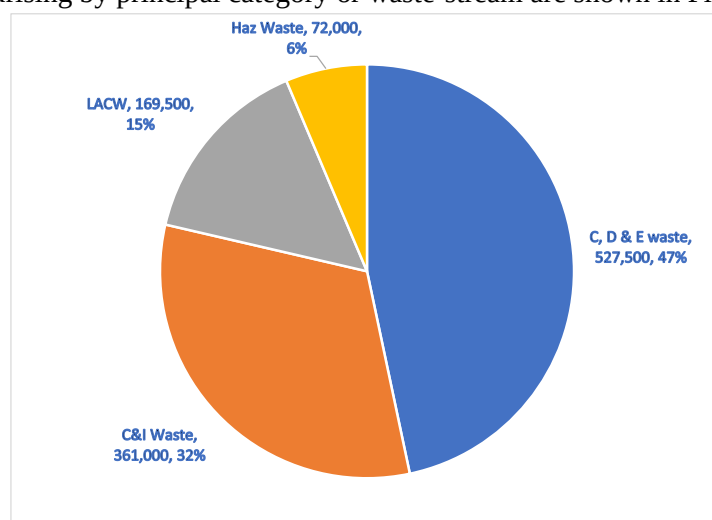


Figure 1: Quantities of Waste Arising in CWaC in 2024 by Stream

The WNA found that:

- There appears to be sufficient existing consented capacity to meet the projected management requirements for; recycling/ composting; 'Other Recovery' of residual non-hazardous Local Authority Collected Waste (LACW); Commercial and Industrial (C&I) waste; and for inert waste via recovery throughout the Plan period.
- The consent holder's decision not to open Kinderton Lodge Landfill is predicted to lead to a cumulative deficit in non-hazardous waste landfill capacity of c342,500 tonnes by the end of the Plan period. However, given that 'Other Recovery' capacity is more than sufficient to meet the identified Other Recovery need, it can be expected to cater for the projected deficit in non-hazardous waste landfill capacity. In addition, landfills with sufficient remaining void space to manage the predicted shortfall in non-inert waste landfill capacity were identified in Lancashire and Greater Manchester.

It should, be noted that given there is a policy expectation for waste to be driven up the waste hierarchy and a need to intensify recycling to reach the national target of halving residual waste production per head by 2042, proposals for capacity to move waste to tier three and above of the hierarchy (i.e. recycling), should not be constrained by the findings of this WNA.

1. Purpose

This report presents the outcome of an update of the 2023 Waste Need Assessment (WNA) undertaken by BPP Consulting on behalf of CWaC. The WNA assessed the adequacy of waste management capacity and identified possible shortfalls that may emerge over the proposed Local Plan period (to 2045). The updated WNA estimates the amount of waste that will require management over the plan period, whilst taking into account the contribution existing waste management capacity may make, to identify future gaps in capacity. This involves first quantifying and characterising the principal waste streams arising in CWaC. This work is undertaken in the context of the National Planning Policy for Waste (NPPW) and the national Planning Practice Guidance (PPG), which expects that:

"Planned provision of new capacity and its spatial distribution should be based on robust analysis of best available data." (PPG Para 035).

To achieve this the following steps have been followed:

1. Scope the key waste streams to be targeted for assessment;
2. Generate robust baseline waste arisings values;
3. Generate realistic forecasts of future waste arisings;
4. Define appropriate (relevant to the Plan area) targets for the management of each waste stream (to ensure that waste is managed in accordance with the waste hierarchy);
5. Assess current consented management capacity in CWaC;
6. Quantify future capacity needs accounting for cross boundary movements of waste;
7. Establish any associated future gaps in waste management capacity.

The WNA consists of the following reports:

- This Overview Report including Appendix A;
- Local Authority Collected Waste - Assessment of Management Requirements to 2045 (Appendix B);
- Commercial & Industrial Waste - Assessment of Management Requirements to 2045 (Appendix C);
- Construction, Demolition & Excavation Waste - Assessment of Management Requirements to 2045 (Appendix D);
- Hazardous Waste - Assessment of Management Requirements to 2045 (Appendix E);
- Scoping Review of Other Waste Streams¹ (Appendix F);
- Review of Strategic Waste Flows (Appendix G); and

¹ This concluded that the capacity needs of these streams need not be considered further in this WNA.

1.1 Principal Data Sources

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

Waste Data Interrogator

Operators of all sites subject to environmental permits relating to the management of waste in England are required to submit returns to the Environment Agency setting out the quantities, types and origin of waste received and, where applicable, destination and fate of waste removed. These returns are collated by the Environment Agency and reported in a national dataset known as the Waste Data Interrogator (WDI). The WDI is released approximately nine months after the end of the calendar year to which the data relates. The WDI 2024 (version 3 released January 2025), for the calendar year 2024, was the most current version available at the time of producing this WNA.

Hazardous Waste Interrogator

In the UK producers and managers of hazardous waste must notify the environmental regulator for the country in which they are located (in England this is the Environment Agency) of movements of waste classed as hazardous. This data is collated and reported in the Hazardous Waste Interrogator (HWI). Data is currently reported down to the receiving local area (defined by WPA) rather than by receiving site. The HWI 2024 (released September 2025) for 2024 was used in producing this WNA.

WasteDataFlow

WasteDataFlow (WDF) is a web-based data entry portal used by local authorities in England to report on the management of Local Authority Collected Waste (LACW) to central Government (DEFRA). Following independent quality checking the data is used to report on national LACW recycling and landfill diversion performance. While Councils normally report to WDF in financial years, as the Environment Agency WDI reports on a calendar year basis, the data for CWaC within WDF covering the four quarters of 2024 has been accessed to ensure comparability between datasets.

1.2 Quantities of Waste Produced in Cheshire West and Chester

The WNA update has found that c1.13 million tonnes of wastes arose within CWaC in 2024. This compares with c1.12 million tonnes of wastes found to arise within CWaC in 2021 reported in the WNA 2023. A breakdown by principal components for each WNA are set out below:

Waste Stream	2024 Baseline	2021 Baseline	Difference
Construction, Demolition & Excavation:	c.527,500	c543,500	-16,000
Commercial & Industrial Waste:	c.361,000	c359,000	+2,000
Local Authority Collected Waste:	c.169,500 ²	c178,500 ³	- 9,000
Hazardous Waste:	c.72,000	c43,000	+29,000
	1,130,000	1,124,000	+6,000

Quantities of waste arising from agriculture, waste water treatment and non-nuclear radioactive waste management were also reviewed in a separate report (Scoping Review of Other Waste Streams Appendix F) as required⁴ but not found to arise in sufficient quantities to warrant inclusion in the assessment exercise.

² 2023/24 value

³ 2021/22 value

⁴ Planning Practice Guidance: Waste Paragraph: 031 Reference ID: 28-031-20141016

2. Capacity Assessment Overview

The capacity of waste management facilities in CWaC has been established using data for planning consents combined with a review of data for waste inputs over the past five-years as reported through the annual versions of the WDI (2017-2021). Where possible the site specific values have been corroborated through direct contact with site operators/developers as part of a survey. The outcome of the survey is reported separately.

Examination of these datasets indicates that the following capacity types exist within the Plan area:

- Recycling including Recycled Aggregate Facilities (RAF), Material Recycling Facilities (MRF) and Metal Recycling Sites (MRS);
- Organic waste treatment (e.g. composting and anaerobic digestion);
- Waste Transfer/treatment capacity;
- Energy Recovery; and
- Landfill (non-hazardous and hazardous only).

Facilities where waste recycle is reprocessed into product, such as glass-furnaces and paper mills, were not included in this assessment exercise as they are not considered to be waste management development and therefore are not normally planned for in a waste local plan.

2.1 Net Self Sufficiency

Net self-sufficiency is an approach applied in waste planning to establish how much capacity should be planned for in each waste plan area. This follows the polluter pays principle whereby the area that produces the pollution (in this case waste) is taken to be responsible for ensuring its safe management. 'Net' self-sufficiency is applied as waste does not recognise administrative boundaries and so there is no expectation that every tonne of waste produced in CWaC ought to be managed within CWaC, rather that, overall, there should be a balance of provision. While not specifically required by NPPW, net self-sufficiency is applied as a principle to ensure that sufficient capacity is provided to manage the tonnage of waste equivalent to that predicted to arise within a Plan area, in this case in CWaC to 2045 i.e. the Plan period.

The degree to which CWaC is net self-sufficient is established by comparing the available management capacity within CWaC with the projected arisings which have been determined in the separate waste stream specific reports included as Appendices to this report. This ascertains overall state of self sufficiency, which may not necessarily reflect any specific projected capacity gap. It should be noted that any assessment of the total waste management capacity of a Plan area only presents a snapshot at a particular point in time as the number of waste management facilities in existence and in operation is in a state of flux, as new sites come on stream, and sites may expand and contract or even close over time.

It should be noted that while the assessment of management requirements has been conducted on a waste stream-specific basis within each report, the assessment of capacity cannot be conducted in such a specific way since the same facility may manage waste from a number of different waste streams. For example, sites receiving C, D & E waste may also receive C&I waste and LACW for transfer. This means it is necessary to interpret between the identified needs and the existing available capacity to identify any projected capacity shortfall.

2.2 Sources of Facility Capacity Data

Facility capacity data has primarily been ascertained from site input data presented in the WDI compiled by the Environment Agency over the most recent 3-year period 2022-2024 for which data is available (See Appendix A). The 3-year peak input was then calculated on a site-by-site basis. Any sites that did not report any inputs in the most recent 3-years have been excluded and the capacity has not been counted for the purposes of this WNA. For any sites that managed a significant amount of hazardous waste (greater than 20% of the total peak amount of waste managed) this capacity was deducted from the preferred capacity value, to ensure that hazardous waste management capacity provided by these sites was not compromised.

To allow for the possibility that the peak input value is not an absolute limit, a 20% 'freeboard' was added to the peak input values shown in the WDI. This adjustment is intended to reflect the maximum realistic throughput of a facility (on the basis that most facilities will not be working to their maxima throughout a year), as opposed to theoretical capacity that may be indicated by, for example, the site's Environmental Permit. The 3-year peak +20% was then compared with the maximum capacity value determined in the WNA 2023, and the higher value of the two was taken as representing the maximum capacity.

3. Capacity in CWaC by Management Method

3.1 Types of Waste Management Capacity

The waste hierarchy is set out at Article 4 of the revised Waste Framework (Directive 2008/98/EC) and compliance with it is obligatory under *The Waste (England and Wales) (Amendment) Regulations 2012*. The hierarchy sets an order of preference by which waste is to be managed, starting with the preferred option of prevention (Tier 1), followed by preparing waste for re-use (Tier 2), recycling/composting (Tier 3) and 'other recovery' (Tier 4), with disposal (Tier 5) (such as landfill or incineration without energy recovery) as the least favoured as shown in Figure 2.

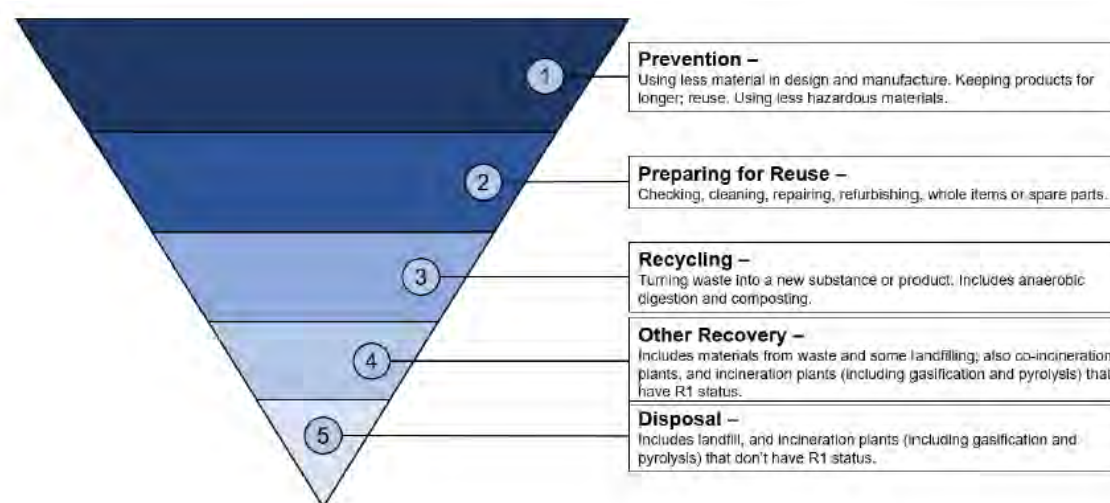


Figure 2: Diagrammatic representation of the Waste Hierarchy

Source: *Resource efficiency and waste reduction targets detailed evidence report DEFRA April 2022*.

It should be noted that under the Waste Framework Directive, recycling, composting and 'other recovery' operations such as Energy from Waste and anaerobic digestion are all classed as 'recovery' operations. Hence the use of the term 'other recovery', to cover operations that involve something other than recycling and/or composting/anaerobic digestion. This includes Energy from Waste (EfW) facilities, where waste is burnt to produce power and/or heat, providing they meet a minimum performance standard set out in the R1 formula and some landfilling where it involves the use of materials for restoration.

Following the waste hierarchy should generally lead to the most resource efficient and environmentally sound approach to managing waste. However, because the 'best' choice can be influenced by the fact that different waste streams have different characteristics (such as calorific value), in some cases departing from the waste hierarchy can lead to better environmental outcomes. When considering whether a departure from the waste hierarchy would be justified, decision-makers are to base their choices on the findings of Life Cycle Assessments (LCAs)⁵.

⁵ The way in which the findings of LCAs are relevant to decision making on the application of the hierarchy to waste management has been set out by Government in *Applying the Waste Hierarchy: evidence summary* DEFRA June 2011 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69403/pb13530-waste-hierarchy-guidance.pdf

Recycling is taken to include any activity that either results in the separation of materials suitable for reuse as a raw material and/or its actual conversion to a product (reprocessing). For the purposes of this capacity assessment exercise, recycling capacity does not include reprocessing capacity where a material such as waste paper is converted into a product such as newsprint as that is a manufacturing process. Plants or facilities where such processes take place are generally not considered to be development undertaken for the purposes of managing waste and so do not usually require planning consent from the WPA. Recycling capacity can take various forms from depots where source separated recyclable materials are bulked up for onward recycling, to facilities where materials may be separated out on delivery e.g. Household Waste Recycling Centres (HWRCs), through to fully fledged Material Recycling Facilities where complete loads of waste are passed through a processing line to extract and separate materials for recycling.

Composting, involves the decomposition of biodegradable and putrescible matter by aerobic processes. Composting facilities come in two principal forms, open-air (windrow), or enclosed (In Vessel Composting (IVC)). Open-air composting is only suitable for treating biodegradable waste such as green waste and some cardboard, while IVC can also process putrescible wastes such as kitchen wastes due to the requirements of the Animal By-Products Regulations.

Anaerobic Digestion (AD) involves the decomposition of biodegradable and putrescible matter within a vessel to produce biogas. While it has been classified in the waste hierarchy as a form of 'other recovery' (Tier 4), life cycle assessment has demonstrated that it is better than composting and other recovery options when it comes to the management of food wastes, and garden waste in some cases. Given that deviation from compliance with the waste hierarchy may be justified by life cycle thinking, it is therefore now considered alongside composting as an organic waste treatment method that can contribute to meeting recycling/composting targets. Figure 2 reflects this. Kitchen and commercial food waste can only be processed in enclosed systems such as in-vessel composting plant (IVC) and AD facilities due to the requirements of the Animal By-Products Regulations.

In this report, 'Recycling/composting' is therefore used as a shorthand term for material recycling and organic waste treatment including AD.

3.2 Recycling Capacity

Table 1 shows the assessment of recycling capacity in CWaC for all non-hazardous waste i.e. inert and non-inert waste excluding MRS as a number of these sites manage hazardous waste the capacity for which is accounted for in the separate hazardous waste report. Any sites that were active in the period 2021-2024 as shown in the WDI have been included in Table 1.

Whilst the WDI 2024 included eleven CWaC sites under the transfer site category, closer examination of the inputs and fates of the outputs of these sites revealed some separation and processing for recycling takes place. Of these sites, 1 was found to be a true transfer site, 2 were assessed to be converting C, D & E waste to recycled aggregate and have thus been included in Table 6 (that relates solely to inert waste recycling capacity); and 8 sites were found to be undertaking some recycling and so have been included in Table 1 overleaf.

Table 1: Recycling Capacity in CWaC for non-hazardous waste excluding MRSs

Site Name & Operator	Consented capacity provided (tpa)	Peak Input +20% tonnes (Appendix A)	Preferred Value (tonnes p.a.)	Notes
Argent Biodiesel Stanlow Plant, Argent Energy (UK) Ltd	116,051	139,013	139,013	Produces biodiesel from waste fats, oils and greases
Ashfield House, Dunkirk Way, Ash Metal Recycling Ltd	25,000	11,812	25,000	Processes ferrous and non-ferrous scrap metal and WEEE
Big Atom Recycling Plant, Big Atom Ltd	25,000	9,039	25,000	Site recycles tyres
Bridges Road Transfer Station, Alchem Merseyside Ltd	18,700	11,768	18,700	Processes HIC waste to recover recyclable materials
Chapterhouse Transfer Station, FCC Waste Services (UK) Ltd	125,000	102,000	125,000	Produces refuse derived fuel (RDF) from residual LACW and C&I waste;
C W & C Canalside Operations Hub, Cheshire West Recycling Ltd	-	37,924	37,924	HC&I waste transfer station operated by council-owned company.
Davenham Highways Depot, COLAS Ltd	-	2,372	2,372	Highways maintenance depot; activity involves recycling of road planings and spoil for reuse in road maintenance.
Guilden Sutton Depot, COLAS Ltd	-	6,614	6,614	
Manisty Wharf, Recresco Ltd	-	307,337	307,337	Processes glass cullet into remelt-grade cullet, glass sand and glass aggregate
Northwich Mini Skip, Thomas Bagley	-	4,456	4,456	Skip hire operator undertaking separation of recyclable materials.
Park Rd, Northwich, A S H Skip Hire	-	4,830	3,945	Skip hire operator undertaking separation of recyclable materials. 885t deducted for recycled aggregates
Plot 3, Ince Resource Recovery Park, Evero Energy	-	65,777	- ⁶	New site since WNA 2023
Shellway Rd, Ellesmere Port, Ash Aggregates Ltd	650,000	239,839	300,000	54% of input converted to recycled aggregate via wash plant counted in Table 6 ⁷ .
Stanlow Oil Terminal, Argent Energy Holdings Ltd	-	98,771	98,771	Accepts non-hazardous waste fats, oils and greases..
Tattenhall Transfer Station, Tudor Griffiths Ltd	-	14,165	14,165	Receives and sorts mixed skip waste for recycling
Winsford Depot, Cheshire West Recycling Ltd	-	28,147	28,147	Depot operated by council-owned company.
Total capacity			1,142,858	

Table 1 shows a total operational recycling capacity in CWaC (excluding MRSs) in 2024 of **c1.14 an increase of 0.6M tpa on the WNA 2023 value of 1.08Mtpa.**

⁶ Capacity not counted as currently operates as waste wood preparation facility for adjacent biomass plant.

⁷ Officer report for permission18/03199/FUL states the site will process up to 650,000 tonnes per year of non-hazardous CDE waste. It is anticipated that the plant will produce up to 350,000 tonnes of recycled / secondary aggregates per year,. Operator advised that 75% recycling rate actually being achieved.

3.3 Metal Recycling Capacity (MRS)

Scrap metal principally comes from industrial sources along with demolition and construction activity. End of life vehicles (ELVs) come from all sources including domestic. The WDI shows that in CWaC two permitted metal recycling sites (MRS) and three ELV depollution sites (authorised treatment facilities - ATF) received waste between 2017 and 2021. As ELVs are classed as hazardous waste until they have been depolluted, the capacities of sites primarily/ exclusively managing these have been accounted for in the separate hazardous waste management requirement report and therefore to avoid double counting, their capacity has not been counted in this assessment.

As metal recycling sites can operate under a T9 exemption for recovering limited amounts of scrap metal instead of an environmental permit, some such sites may not be identified through interrogation of the WDI. To capture these omissions, entries in the online register of scrap metal dealers for CWaC has been compared with the Environment Agency exemption register for T9. Where sites are registered under both, they have been taken to be operational. This found one additional metal recycling site, WM Processing limited. In the WNA 2023 City Metals had been identified, but that no longer appears to be registered in the Scrap Metal Dealer register, however it has been included as it is still advertising for scrap metal⁸. As exempt facilities do not report waste tonnage received, reference has been made to the estimates included in the original national Reconcile method⁹. This estimated a site's may handle 2,500 tpa under a T9 exemption.

The MRSs and their assessed capacity is shown in Table 2 below.

Table 2: Metal Recycling Capacity in CWaC excluding ELV ATFs

Site Name & Operator	Consented capacity (tpa)	Peak Input +20% (tonnes) (Appendix A)	Preferred Value (tonnes p.a.)
Cedab Rd, K J Bell Scrapmetal Merchants	-	5,979	5,979
60-64 Chapel St, Wincham, W R Roberts & Sons	-	7,646	7,646
Unit 13, Griffiths Park Ind Est, WM Processing Ltd	-	-	2,500
4 Railway Arches, Brook Street, City Metals UK Ltd	-	-	2,500
Total capacity			18,625

Table 2 shows a total operational non-hazardous metal recycling capacity in CWaC of **c18,500 tpa**. When combined with the running recycling capacity of **c1,143,500 tpa** this gives a running total recycling capacity of **c1,161,000 tpa**.

⁸ www.citymetals.com

⁹ DEFRA, Commercial and Industrial Waste Survey 2009 Final Report (December 2010).

3.4 Organic Waste Treatment Capacity

Various types of facility exist for the treatment of organic waste in CWaC ranging from open windrow composting to anaerobic digestion (AD). These are summarised in Table 3.

Table 3: Organic Waste Treatment Capacity in CWaC

Site Name & Operator	Facility Type	Consented capacity (tpa)	Peak Input (tonnes) (Appendix A)	Preferred Value	Notes
REnescience Northwich, Orsted REnescience Northwich O&M Ltd	MBT	144,000 ¹⁰	42,782	144,000 ¹¹	This site granted planning permission to change the operation to an anaerobic digestion plant
Haznorta Farm, Normans Farm Gas Power Ltd	AD	-	48,157	48,157	Dairy Products waste in liquid form
Holme Farm. DJ Willis & JH Willis	AD	-	93,881	78,196	Adjusted for c15ktpa agricultural waste input
Hapsford Composting Site, George Whittaker and Sons (Knutsford) Ltd	Composting	-	29,605	29,605	
Total Capacity				299,958	

Table 3 shows a total operational organic waste treatment capacity in CWaC of **c300,000 tpa**.

Therefore, there **c300,000 tpa** of capacity that could receive and process biodegradable waste from C&I and LACW sources. When combined with the running recycling capacity of **c1,161,000 tpa** this gives a **total capacity of c1,461,000 tpa**.

3.5 Household Waste Recycling Centres

There are 7 household waste recycling centres (HWRCs) provided by CWaC.

HWRCs may be regarded as providing transfer capacity since waste delivered by the public to these sites is bulked and then transported on for onward management. However, as c60%¹² of the inputs are segregated on the site to go on for recycling or composting, around 60% of the capacity of each of

¹⁰ Site subject to recent planning permission 25/00687/NMA that revised feedstock to source segregated food waste and focus on AD alone. Maximum capacity remain unchanged.

¹¹ Response to operator survey for WNA 2023 based on previous operation was 70,000tpa but planning application confirms intention for new configuration to operate to consented maximum.

¹² All outputs are shown as going for recovery; however, it is assumed that the mixed municipal waste component did not go for recycling. This stood at c40%.

these sites has been counted as contributing towards the overall recycling capacity. Their assessed recycling capacities are shown in Table 4.

Table 4: HWRC Capacity in CWaC (tonnes)¹³

Site Name	Operational Capacity (tpa)	Peak Input (WNA 2023)	Recycling Rate Achieved (%)	Preferred Value
Chester ¹⁴	13,000	11,733	62	7,274
Ellesmere Port	-	11,685	60	7,011
Frodsham	-	3,266	65	2,123
Neston	-	3,995	71	2,836
Tattenhall	-	2,211	67	1,481
Whitton (Northwich)	-	8,411	66	5,552
Winsford	-	9,858	65	6,408
Total Capacity				32,686

Applying the assessed recycling (60%) capacity in Table 4 gives **c32,500 tpa**.

Table 5 shows a total combined recycling/composting capacity of **c1.49 M tpa** exists in CWaC.

Table 5: Combined Recycling/Composting Capacity in CWaC

Capacity Type	Assessed capacity (tpa)
Recycling	1,142,858
Metal Recycling	18,625
Organic Waste Treatment	299,958
HWRC	32,686
Total	1,494,127

3.6 Recycled Aggregate Facilities

The capacity of the sites identified as producing recycled aggregate from inert C, D & E waste in 2024 has been assessed along with sites in the WDI that receive predominantly C, D & E waste using WDI peak input over 5-years data. Table 6 also includes a site identified as producing recycled aggregate that received waste not coded below Cheshire. One site listed in the WNA 2023, Dairy House Farm, CJS Construction and Aggregate Ltd was omitted as it no longer appears to be subject to a permit.

¹³ Given the HWRCs are under the control of CWaC, where the stated capacity is greater, this value has been taken as the preferred value.

¹⁴ Site enlarged in 2018 but CWaC looking to relocate to serve housing growth areas.

Table 6: Recycled Aggregate Facilities in CWaC cross checked with declared capacity in LAA
(*italicised entry has been counted in another table*)

Site Name & Operator	Consented capacity (tpa)	Peak Input +20% (Appendix A)	Preferred value	Notes
Shellway Rd, Ellesmere Port, Ash Aggregates Ltd	650,000	239,839	350,000	Planning application indicates up to 350,000 tonnes of recycled aggregate produced. Remaining capacity counted in Table 1.
Aggregates Yard, UK Aggregates & Plant Ltd (formerly D G Cummins & Co Ltd)	-	80,953	101,875	
Liverpool Rd, Backford, Cheshire Waste Skip Hire Ltd	-	25,999	29,162	
<i>Park Rd, Northwich, A S H Skip Hire</i>	-	<i>4,830</i>	<i>885</i>	<i>885t mass balance value taken in WNA 2023. Remaining counted in Table 1.</i>
Unit 13 Griffiths Park, Rudheath, Northwich Recycle and Demolition Ltd	-	6,414	6,414	Site did not appear in WNA 2023 as permit was issued in 2021.
Total Capacity			488,336	

Table 6 shows a total assessed operational recycled aggregate production capacity in CWaC of **c488,500** tpa in 2021 at the end of the Plan period.

3.7 Waste Transfer Capacity

Waste transfer refers to the reception and bulking of collected wastes, both residual and separated/co-mingled recyclates, for subsequent management at other facilities. Transfer capacity can be accommodated at dedicated sites or at sites where other waste management activities take place. For example, sites accepting skip waste for recycling may also accept source separated Local Authority Collected Waste (LACW) for onwards recycling. Transfer station capacity that facilitates recycling by providing bulking capacity, is already accounted for as providing recycling capacity in Table 1.

Table 7: Transfer Capacity in CWaC

Site Name & Operator	Consented capacity (tpa)	Peak Input +20% tonnes (Appendix A)	Preferred Value (tonnes p.a.)
Winsford Rock Salt Mine Waste Disposal Facility, Veolia ES (UK) Ltd	-	24,153	24,153
Total capacity			24,153

Table 7 shows a total transfer capacity facilitating the onward management of waste by a means other than recycling, of **c24,000** tpa. This relates to a transfer facility where EfW plant air pollution control residues may be received in bulk and then bagged for storage in the deep geological cavity identified as Bostock Landfill.

3.8 Final Fate Capacity

The types of facilities assessed thus far primarily¹⁵ provide ‘intermediate’ capacity where waste is processed/ sorted before being transported on for management at its final destination, or ‘final fate’ management. This section accounts for the capacity provided by sites where waste meets its final fate (other than where waste is converted into useful materials e.g. compost or recycle). This includes landfill and recovery to land sites.

3.8.1 Landfill Capacity

The term landfill is also applied by the Environment Agency to underground storage facilities. These are facilities used for the storage of waste underground in deep geological cavities. This include voids created by brine or salt extraction, where waste from chemical works may be stored as a sludge, or air pollution control residues may be stored bagged in dry form. As these facilities are classed as landfill for permitting purposes, the capacity offered by them appears in the Environment Agency Landfill Capacity Dataset. However, as they are often specialist facilities serving specific waste producers their capacity is not always available to accept waste generally and therefore provided the waste managed through them is not counted in a baseline Plan area arising value, the capacity offered by such facilities in CWaC has been excluded from this assessment of available landfill capacity. In this case the Holford Brinefield has been excluded, while the Bostock Landfill operated by Veolia ES (UK) Limited (aka the Minosus facility) taking APCr in bagged form has been discounted.

3.8.2 Non-Inert Waste Landfill Capacity

At the time the previous WNA was produced a landfill at Gowy was approaching completion so the site was not taken to offer any capacity in the forthcoming Plan period. The EA remaining landfill void dataset for 2024 now shows the landfill as offering no void. Therefore the position remains consistent with that taken in WNA 2023.

A site granted planning consent for mineral extraction and restoration by landfilling on appeal in 2012, and holds an environmental permit¹⁶ located at Kinderton Lodge. This would have involved creation of a void capable of accommodating up to 2.1M tonnes of non-hazardous waste over a 12-year period. The site could have accepted up to 275,000t of non-hazardous waste along with 25,000t of inert waste in each of the 12 years of operation. However the site has not been developed and the extraction and backfill permission has now expired/lapsed. This means the assessed non-inert landfill capacity and associated inert waste management capacity (for restoration) should no longer be counted.

This loss of potential capacity may be taken as an indication of lack of market appetite to develop non-inert landfill sites in general. Hence it is unlikely that a Call for Sites and site assessment exercise would actually result in additional sites being identified in CWaC itself. In such circumstances reliance must be placed on the availability of landfill void in WPAs in proximity to CWaC.

¹⁵ "Primarily", as organic waste treatment capacity can be a final fate if the resulting residues cease to be classed as waste.

¹⁶Kinderton Lodge Landfill Permit EPR/WP3130XG/V003

3.8.3 Inert Landfill Capacity

There are no sites operating as inert landfills in CWaC at the time of writing.

3.9 Recovery to Land Capacity

The WDI 2024 reports 1 recovery to land site operating in CWaC in 2024, this being the same site as that identified in the WNA 2023, being a lagoon, whose capacity was not counted in the capacity assessment as it only provides interim storage, rather than a final fate.

3.10 Other Recovery

There are two consented EfW plants capable of dealing with residual waste in CWaC as follows:

- the Protos Energy Recovery Facility, with capacity of up to 500,000tpa; and
- the Lostock Sustainable Energy Plant with consent for 600,000 tpa.

At the time of writing the WNA 2023 both were in the process of being built out, so the capacity has been counted. This update now indicates that both facilities are either undergoing commissioning or expected to do so in the next year or so, so inclusion of capacity of both remains appropriate.

In addition to this, there is the Ince Bio Power biomass power station that takes waste wood only, plus the Ellesmere Port High Temperature Incinerator (HTI) that primarily destroys hazardous waste but does have some energy recovery capability. These plants are listed in Table 8 along with their assessed capacities.

Table 8: Capacity at Consented Energy from Waste plants in CWaC

Site Name & Operator	Consented capacity (tpa)	Peak Input +20% tonnes (Appendix A)	Preferred Value (tpa)	Notes
Protos Energy Recovery Facility	500,000	¹⁷	500,000	Residual waste/RDF.
Lostock Sustainable Energy Plant	600,000	¹⁸	600,000	Residual waste/RDF.
Ince Bio Power, Evero Energy Services Ltd	176,500	64,934	176,500	Waste wood primarily from C,D&E waste stream only ¹⁹ .
Ellesmere Port HTI, Veolia ES Cleanaway Ltd	100,000	82,307	100,000	Primary inputs hazardous waste
Total Total residual waste/RDF			1,376,500 (1,100,000)	

Table 9 shows that there is c1.4M tpa offered by CWaC EfW plants of which 1.1M tpa of capacity will be available for residual waste management.

¹⁷ Undergoing commissioning trials at time of writing. <https://www.protoserf.co.uk/about-the-facility/>

¹⁸ Still under construction. <https://lostock.co.uk/>

¹⁹ Consented capacity taken given the site has the ability to manage this amount of waste (even though current inputs are 30% virgin timber. There is also a permitted mechanical treatment facility where waste is processed into fuel.

3.11 Capacity Summary

3.11.1 Intermediate Site Capacity

In 2024, capacity for managing waste at intermediate sites in CWaC totalled **c2.0 Mtpa an increase of 0.4Mtpa on the WNA 2023 capacity value**. Table 9 presents a summary of operating capacity of the different type of facilities investigated.

Table 9: Intermediate Waste Management Capacity in CWaC

Capacity Type	Assessed capacity		
	Non-inert waste		Inert waste
	Recycling	Transfer (without recycling)	Recycling
Recycling (Table 1)	1,142,858	-	-
MRS (Table 2)	18,625	-	-
Organic Waste Treatment (Table 3)	299,958	-	-
HWRC Recycling (Table 4)	32,686	-	-
Recycled Aggregate (Table 6)		-	488,336
Waste Transfer (Table 7)		24,153	
Total	1,494,127	24,153	488,336

3.11.2 Final Fate Capacity

Table 10 sets out a summary of final fate capacity in CWaC.

Table 10: Final Fate Waste Management Capacity in CWaC Assessed Capacity (tpa)

Capacity Type	Non-inert waste	Hazardous waste
Other Recovery Plants	1,100,000	100,000
Total	1,100,000	100,000

4. Assessing the Capacity Gap in CWaC

4.1 Waste Management Requirements

The management requirements for waste forecast to arise in CWaC to 2045 by capacity type at the Plan milestone years are set out in Table 11. The progression towards the target milestones is compared with the baseline value for 2021. The management requirements in CWaC have been derived by combining the waste stream specific data presented in the appendices.

Table 11: Forecast Waste Management Requirements in CWaC at Plan Milestone years

Source: Waste stream reports Appendix B, 3 and 4. Table 6 LACW, Table 23 C&I & Table 19 CDE

	Measured Baseline (Actuals)	Forecast Waste Management Requirements (Tonnes at Plan Milestone)				Peak or Cumulative Capacity Requirement (tonnes)	Trend in projected management requirements as per forecasts set out in Appendix B, 3 & 4
	2024	2030	2035	2040	2045		
Recycling/Organic Waste Treatment							
LACW	102,935	112,985	119,795	118,534	117,525	119,795	Rising then falling
C&I	290,692	297,125	308,766	309,539	310,313	310,313	Rising
CDEW	81,873	82,284	82,696	83,110	83,526	83,526	Rising
Total		492,394	511,257	511,183	511,364	²⁰	
Residual waste Other Recovery							
LACW	60,383	46,808	38,334	37,931	37,608	46,808	Falling
C&I	55,146	50,729	47,223	47,341	47,460	50,729	Falling then static
Total	115,529	97,537	85,557	85,272	85,068	97,537	
Residual waste Non-Inert Landfill							
LACW	443	1,614	1,597	1,582	1,567	34,447	Falling
C&I	15,425	10,870	7,265	7,283	7,301	208,420	Falling
CDEW	2,216	5,486	5,513	5,541	5,568	121,289	Rising
Total		17,970	14,375	14,406	14,436	364,156	
Aggregate recycling/ Recovery to Land and Recovery in Landfill							
Inert CDE	492,495	>466,273	>468,609	>470,957	>473,317	473,317	Rising

How the waste management capacity requirements identified in Table 12 above might be met is discussed below.

²⁰ Total not applicable as peaks occur in different milestone years depending on waste stream.

4.2 Recycling & Composting Waste Management

Recycling and organic waste treatment (aka composting) have been taken to sit at the same tier of the waste hierarchy and may therefore be considered interchangeable in terms of the movement of waste up the hierarchy. Therefore, combined targets are proposed.

When the total assessed management capacity for recycling and composting of c1,224,000 tpa shown in Table 9 (reduces to c1,221,500 tonnes in 2025 due to the expiry of the T9 exemption) is compared with the estimated combined recycling and composting requirement as shown in Table 11, it can be concluded that sufficient capacity exists to meet the Plan area need until for the entire Plan period (as shown in Table 12).

It should however be noted that to recycle a tonne of waste does not necessarily require provision of waste management capacity capable of processing a tonne of waste. Much depends on how the waste is presented for collection, plus the proximity to reprocessing sites. So, for example if waste is segregated effectively at source, the resulting materials may be delivered directly to a reprocessing site and not require provision of additional sorting capacity. It is notable in that regard that the Environment Act now requires the separate collection of at least three materials - food waste, dry mixed recyclables and glass - from all homes and business premises. If materials are not separated at source, then they may require processing through a MRF before going on for recycling.

Table 12: CWaC Waste Recycling/Composting Capacity Requirement at Plan Milestone years

Source: Table 10 & 12

	Tonnes at Plan Milestone				Peak Requirement (tonnes)
	2030	2035	2040	2045	
Recycling /Composting Requirement (Table 12)	492,394	511,257	511,183	511,364	511,364
Plan Area Capacity	1,511,167	1,511,167	1,511,167	1,511,167	
Difference (shortfall/surplus)	+1,018,773	+999,910	+999,984	+999,803	

Table 12 shows that there is predicted surplus recycling/ composting capacity of c1.1 M tonnes per annum at the start of the Plan period reducing to c1 M tonnes per annum in 2045. It should be noted that there should be no constraint on recycling and composting capacity, given the need to push for waste management higher in the waste hierarchy.

4.3 Residual Waste Management

4.3.1 CWaC Residual Waste 'Other Recovery' Capacity

When the total assessed management capacity for 'other' recovery of 1,100,000 tpa shown in Table 10 is compared with the estimated combined requirement as shown in Table 12, it can be concluded that sufficient capacity exists to meet the Plan area need for the entire Plan period (as shown in Table 13).

Table 13: CWaC Waste 'Other Recovery' Capacity at Plan Milestone years

Source: Tables 11 and 12

	Tonnes at Plan Milestone				Peak Requirement (tonnes)
	2030	2035	2040	2045	
Other Recovery	134,765	126,046	126,276	126,505	161,439
Plan Area Capacity	1,100,000	1,100,000	1,100,000	1,100,000	
Shortfall	+965,235	+973,954	+973,724	+973,495	

Table 13 shows that there is predicted c965,235 tonne surplus of 'other recovery' capacity in 2025 rising to c973,500 tonnes in 2035 to the end of the Plan period.

4.3.2 CWaC Residual Waste Landfill Capacity

While there is no obligation in national planning policy for CWaC to achieve net self-sufficiency for non-inert waste management alone throughout the Plan period, the management of mixed municipal waste by disposal or recovery is subject to the proximity principle and hence consideration has been given to the sufficiency of the remaining consented non-inert landfill capacity within CWaC alone. This approach recognises that the proximity principle encourages each WPA to plan for the management of mixed municipal waste through disposal and energy recovery on a more localised basis²¹. Table 15 of the WNA 2023 showed the predicted depletion profile of non-inert landfill void in CWaC as the projected combined residual non-inert waste landfill requirement was met. The depletion profile presented relied upon the availability of capacity at Kinderton Lodge Landfill which was expected to be operational from 2025. However as stated previously now the permission is taken to have lapsed, this capacity is no longer expected to come forward.

²¹ Waste Management Plan for England (DEFRA, January 2021)

Table 14: Predicted Non-Inert Landfill Requirement for CWaC Non-Inert Waste (tonnes)

Source: Tables 11 and 12

Year	LACW	C&I waste	C,D&E waste	Total Annual Non-inert Landfill Requirement	Cumulative Requirement
2025	1,631	14,666	5,458	21,755	21,755
2026	1,628	13,907	5,464	20,999	42,754
2027	1,624	13,148	5,469	20,241	62,995
2028	1,621	12,389	5,475	19,485	82,480
2029	1,617	11,629	5,480	18,726	101,206
2030	1,614	10,870	5,486	17,970	119,176
2031	1,611	10,149	5,491	17,251	136,427
2032	1,607	9,428	5,497	16,532	152,959
2033	1,604	8,707	5,502	15,813	168,772
2034	1,601	7,986	5,508	15,095	183,867
2035	1,597	7,265	5,513	14,375	198,242
2036	1,594	7,269	5,519	14,382	212,624
2037	1,591	7,272	5,524	14,387	227,011
2038	1,587	7,276	5,530	14,393	241,404
2039	1,584	7,280	5,535	14,399	255,803
2040	1,582	7,283	5,541	14,406	270,209
2041	1,580	7,287	5,546	14,413	284,622
2042	1,578	7,291	5,552	14,421	299,043
2043	1,575	7,294	5,557	14,426	313,469
2044	1,572	7,298	5,563	14,433	327,902
2045	1,567	7,301	5,568	14,436	342,338
Total	33,565	192,995	115,778		

Table 14 shows that in the absence of commencement of operation of the Kinderton Lodge landfill there is a predicted shortfall in non-inert waste landfill capacity for the whole Plan period. This results in a cumulative shortfall in non-inert waste management capacity of c342,500 tonnes at the end of the Plan period.

4.4 Inert Waste Management

The adopted CWaC Local Plan (2015) does not make a specific commitment to net-self-sufficiency for the management of inert waste. However, applying the objective of net self-sufficiency to this exercise is a useful way of establishing the extent to which the provision of capacity is adequate.

Inert waste can be managed through two principal routes depending on its nature/composition - recycled to aggregate or soil, or deposited for beneficial purposes on land (backfilling by inert landfill and recovery to land). Inert waste is also used for the restoration of non-inert landfills which is considered to be a beneficial use and hence a 'recovery' operation rather than disposal to landfill. The peak quantity of inert waste requiring management through recovery of one form or another is c473,500 tonnes as shown in Table 15.

Table 6 identifies 4 sites within CWaC reported as producing recycled aggregate. These sites have combined capacity of c488,000 tpa. This alone is sufficient to meet the predicted peak requirement of c473,500 tonnes in 2045. This does not take account of capacity at facilities that manage inert waste through permanent deposit to land that may come on stream on a temporary basis. CWaC has no consented inert waste landfills.

Table 15: CWaC Waste Inert Waste Management Capacity at Plan Milestone years

Source: Tables 10 and 12

	Tonnes at Plan Milestone				Peak Requirement (tonnes)
	2030	2035	2040	2045	
Inert Waste	>466,273	>468,609	>470,957	>473,317	473,317
Plan Area Capacity (Table 6)²²	488,336	488,336	488,336	488,336	
Difference (shortfall/surplus)	+22,063	+19,727	+17,379	+15,019	

Table 15 shows that no predicted capacity gap in inert waste management capacity, with a c22,000 tonnes of surplus at the start of the Plan period reducing to c15,000 tonnes in 2045.

4.5 Hazardous Waste Management

The separate hazardous waste report, prepared as part of this WNA, found that combined capacity offered by facilities within CWaC dedicated to managing hazardous waste equates to at least c287,000 tpa, which is a more than the c76,500 tonnes of hazardous waste that arose in CWaC in 2024. Moreover, CWaC also has c1,329,500m3 of remaining capacity for certain hazardous wastes (APCr) at Bostock Landfill plus c100,000 tpa for combustible hazardous wastes at the Ellesmere HTI. Both of these facilities would be regarded as strategically important regionally and nationally.

The separate hazardous waste report concluded that the Council should seek to secure the continued availability of capacity over the Plan period at those facilities in CWaC by safeguarding the key sites.

²² Assuming all fixed capacity is permanent and in operation for the Plan period.

5. Capacity Gap Summary

The findings from the preceding discussion on potential future waste management capacity gaps in CWaC are summarised in Table 16 below.

Table 16: CWaC combined Capacity Assessment & Annual Capacity Gap Analysis

Capacity Type	Waste Management Capacity Gap (Tonnes at Plan Milestones)			
	2030	2035	2040	2045
Recycling & Composting (Table 13)	+1,018,773	+999,910	+999,984	+999,803
Other Recovery (Table 14)	+965,235	+973,954	+973,724	+973,495
Non-inert Landfill (Table 15)	-17,970	-14,375	-14,406	-14,436
Aggregate recycling (Table 16)	+22,063	+19,727	+17,379	+15,019

Table 16 shows that there is sufficient capacity throughout the Plan period to meet the projected management requirements for:

- recycling and composting; and
- 'Other Recovery'; and
- the recovery of inert waste

While there is a predicted shortfall in non-inert landfill, this forecast shortfall will be more than offset by the substantial surplus in 'Other Recovery' capacity offered by the two EfW plants undergoing commissioning .

While there will be some waste that can't be diverted from landfill due to its low combustibility, given that there isn't an expectation that each WPA provides management capacity for every tonne of waste arising within its own boundaries and the significant surplus of other recovery capacity, it is not considered necessary for CWaC to provide for the management of this waste by itself. Therefore, it would not be unreasonable to rely on export of the remaining residual waste to landfill elsewhere. This is considered in the following section.

6. Regional Capacity

Given a projected shortfall in non-inert landfill disposal capacity within the Plan area from 2037, consideration should be given to the national policy expectation of waste planning authorities through National Planning Policy for Waste. In relation to identifying the need for waste management facilities this states that:

3. In preparing Local Plans, waste planning authorities should: ...

- consider the need for additional waste management capacity of more than local significance and reflect any requirement for waste management facilities identified nationally;*
- take into account any need for waste management, including for disposal of the residues from treated wastes, arising in more than one waste planning authority area but where only a limited number of facilities would be required;*
- work collaboratively in groups with other waste planning authorities, and in two-tier areas with district authorities, through the statutory duty to cooperate, to provide a suitable network of facilities to deliver sustainable waste management;*
- consider the extent to which the capacity of existing operational facilities would satisfy any identified need.*

This is intended to ensure that over-provision of capacity does not occur, rather an optimal distribution of capacity is established "to provide a suitable network of facilities to deliver sustainable waste management" that may extend beyond the specific plan area. This is particularly the case when facilities provided have substantially greater capacity than required to meet the needs of the Plan area in which it is located. The initial area of search for additional non-inert landfill capacity has been confined to the North West Region which includes the following WPAs²³:

- Blackburn with Darwen
- Blackpool
- Cheshire East
- Cumberland
- Halton
- Knowsley
- Lancashire
- Liverpool
- Greater Manchester authorities
- Sefton
- St Helens
- Warrington
- Westmorland and Furness
- Wirral

²³ Note that Cumbria's landfills have not been considered given BPP's capacity work indicated all the void offered by its landfills is needed for Cumbria's requirement.

6.1 Non-Inert Landfill Capacity

The capacity analysis presented in Table 14 identifies an emerging predicted shortfall in non-inert landfill capacity for the Plan period, resulting in a projected cumulative requirement of c316,000 tonnes. Therefore, consideration has also been given to the availability of non-inert landfill capacity in the North West region that CWaC forms part of. Remaining void data from the Environment Agency in 2024 (the latest available) shows just under 12 million cubic metres of non-inert landfill void was available in the North West region. The remaining void at the end of 2024 may be converted into capacity to accommodate the tonnage of non-inert waste shown in Table 17 below.

Table 17: Remaining Capacity at Permitted non-hazardous Landfill in North West region 2025

Site Name	Host WPA	Remaining Void m ³ (at end of 2024)	Estimated Capacity (Tonnes)	
			Inert deduction ²⁴	Non-inert ²⁵
Rixton	Warrington BC	319,486	71,884	247,602
Deerplay	Lancashire CC	662,082	148,968	513,114
Fletcher Bank		670,099	150,772	519,327
Jameson Road (Phase 2)		887,199	199,620	687,579
Clifton Marsh		1,564,803	352,081	1,212,722
Westby		224,364	50,482	173,882
Clayton Hall		219,868	49,470	170,398
Whinney Hill (Phase 2)		1,175,376	264,460	910,916
Harwood Quarry	Bolton BC	649,037	146,033	503,004
Pilsworth South	Bury BC	5,618,259	1,264,108	4,354,151
Total		11,990,573		9,292,694

Table 17 shows that according to the best available data there was just over 9.2M tonnes of non-inert landfill capacity was available in the North West region at the end of 2024, which would be more than sufficient to manage CWaC predicted cumulative non-inert landfill requirement of c342,500 tonnes over the Plan period.

Given the expectation that non-inert waste will continue to be diverted from landfill due to various pressures including the landfill tax, it may be assumed that the rate of depletion of void in consented landfill will reduce dramatically. This could conserve remaining void capacity, so that CWaC's predicted cumulative non-inert landfill capacity requirement (342,500t), may be accommodated within landfills within the region. That is predicated on other authorities planning to divert their waste from landfills which remains a national policy priority, driven by the landfill tax escalator.

²⁴ Total exceeds void due to density factor of 1.5 applied.

²⁵ Note non-inert capacity in Lancashire and Greater Manchester includes landfill with SNRHW cell thus capacity for non-inert waste in these WPA may be less than the remaining capacity for both hazardous and non-inert waste.

7. Capacity Assessment Conclusion

This Waste Needs Assessment (WNA) update consists of the following documents:

- Local Authority Collected Waste - Assessment of Management Requirements to 2045 (Appendix B);
- Commercial & Industrial Waste - Assessment of Management Requirements to 2045 (Appendix C);
- Construction, Demolition & Excavation Waste - Assessment of Management Requirements to 2045 (Appendix D);
- Hazardous Waste - Assessment of Management Requirements to 2045 (Appendix E);
- Scoping Review of Other Waste Streams²⁶ (Appendix F); and
- Review of Strategic Waste Flows (Appendix G);

The combined consideration of the reports above has found that the existing consented capacity within CWaC is sufficient to meet the predicted management requirements for waste predicted to arise in CWaC requiring recycling and composting, other recovery and inert recovery for the whole Plan period. There is a predicted shortfall in non-inert landfill, however, this forecast shortfall will be more than offset by the substantial surplus in 'Other Recovery' capacity offered by the two EfW plants currently under construction. In addition, c9M tonnes of non-inert landfill capacity has been identified in the North west region as a whole that might be relied upon.

It should, however, be noted that given there is a policy expectation for waste to be driven up the waste hierarchy and a need to intensify recycling to reach the Government's expectations regarding residual waste reduction by 2042, proposals for capacity that would move waste to tier three (recycling & composting/AD) and above of the hierarchy, should not be constrained by the findings of this WNA.

²⁶ This concluded that the capacity needs of these streams need not be considered further in this WNA.

Appendix A: CWaC Intermediate Site Throughput over 5 years reported through WDI tonnes (peak year identified by green cell, N/E = no entry)

Site Name	Operator	2022	2023	2024	3yr Peak	plus 20% Peak	WNA 2023 Peak Value	Preferred Value	Notes - Date Permit issued
Recycling Capacity									
Argent Biodiesel Stanlow Plant	Argent Energy (UK) Ltd	115,844	108,023	76,739	115,844	139,013	125,097	139,013	
Canalside, Oil Sites Rd	Big Atom Ltd	4,592	6,018	7,532	7,532	9,039	5,692	9,039	
Canalside Operations Hub	Cheshire West Recycling Ltd	30,202	26,746	31,506	31,506	37,807	37,924	37,924	
Chapterhouse Transfer Station	FCC Waste Services (UK) Ltd	80,637	63,225	66,587	80,637	96,765	102,000	102,000	
Davenham Highways Depot	Colas Ltd	999	433	1,105	1,105	1,326	2,372	2,372	
Griffiths Ind. Est, Northwich	T.Bagley T/A Northwich Mini Skip	3,503	3,616	2,649	3,616	4,339	4,456	4,456	
Manisty Wharf	Recresco Ltd	221,739	256,114	240,493	256,114	307,337	251,533	307,337	
Plot 3, Ince Resource Recovery Park	Evero Energy Services Ltd	45,263	54,814	20,008	54,814	65,777	no entry	65,777	
Stanlow Oil Terminal	Argent Energy Holdings Ltd	81,055	82,166	65,655	82,166	98,599	98,771	98,771	
Tattenhall Transfer Station	Tudor Griffiths Ltd	7,753	8,504	8,444	8,504	10,205	14,165	14,165	
Winsford Depot	Cheshire West Recycling Ltd	18,124	15,291	15,554	18,124	21,749	28,147	28,147	
Metal Recycling Sites									
Cedab Rd, Ellesmere Port	K. Bell T/A K J Bell Scrapmetal Merchants	4,811	4,982	4,881	4,982	5,978	5,979	5,979	
60-64 Chapel St, Wincham	W R Roberts & Sons	5,487	5,374		5,487	6,584	7,646	7,646	

CWaC WNA Update 2026

Site Name	Operator	2022	2023	2024	3yr Peak	plus 20% Peak	WNA 2023 Peak Value	Preferred Value	Notes - Date Permit issued
Organic Waste Treatment Capacity									
Holme Farm, Marsh Lane	D.J. Willis & J.H. Willis	34,893	17,069	78,234	78,234	93,881	1,823	93,881	
Hapsford Composting Site	G.Whittaker & Sons (Knutsford) Ltd	24,342	24,671	24,371	24,671	29,605	28,688	29,605	
Haznortra Farm	Normans Farm Gas Power Ltd	23,116	40,131	19,747	40,131	48,157	47,828	48,157	
REnescience Northwich	Orsted Renescience Northwich O&M Ltd	35,652	28,533	20,056	35,652	42,782	42,471	42,782	
Recycled Aggregate Production & C&D Waste Recycling Capacity									
Aggregates Yard	U K Aggregates & Plant Ltd	67,461	52,619	58,124	67,461	80,953	101,875	101,875	
Ashfield House, Dunkirk Way	Ash Metal Recycling Ltd	9,844	8,438	8,281	9,844	11,812	11,423	11,812	
Bridges Road Transfer Station	Alchem (Merseyside) Ltd	8,356	8,346	7,177	8,356	10,027	11,768	11,768	
Guilden Sutton Depot	Colas Ltd	1,298	481	1,052	1,052	1,558	6,614	6,614	
Liverpool Rd, Backford	Cheshire Waste Skip Hire Ltd	21,666	7,809	10,515	21,666	25,999	29,162	29,162	
Park Rd, Northwich	A S H Skip Hire Ltd	1,803	1,740	2,313	2,313	2,775	4,830	4,830	
Shellway Rd, Ellesmere Port	Ash Aggregates Ltd	199,866	140,539	150,439	199,866	239,839	204,588	239,839	
Unit 13 Griffiths Park, Rudheath, Northwich	Northwich Recycle & Demolition Ltd	1,626	2,709	5,345	5,345	6,414	1,281	6,414	
Waste Transfer Capacity									
Winsford Rock Salt Mine	Veolia ES (UK) Ltd	18,522	12,850	14,809	18,522	22,227	24,153	24,153	
Other Recovery Capacity									
Ince Bio Power	Evero Energy Services Ltd	95,007	129,587	118,691	129,587	155,504	76,780	155,504	
Ellesmere Port Incinerator	Veolia ES (UK) Ltd	68,626	73,080	67,637	73,080	87,696	82,307	87,696	

CWaC WNA Update 2026

Site Name	Operator	2022	2023	2024	3yr Peak	plus 20% Peak	WNA 2023 Peak Value	Preferred Value	Notes - Date Permit issued
Hazardous Waste Management Capacity									
4 Ollershaw Ln, Marston,	A Vlies Northwich Metals Ltd	1,652	2,081	2,097	2,097	2,517	3,072	3,072	
Ellesmere Port Waste T'ment Facility	Dunton Technologies Ltd	n/e	n/e	12,353	12,353	14,824	no entry	14,824	05.08.2021
Brunner-Mond Works	Eco-Option (UK) Ltd	19,417	11,932	11,199	19,417	23,300	38,436	38,436	
Ellesmere Port Transformer Oil Regeneration Plant	Haltermann Carless UK Ltd	8,250	7,421	7,568	8,250	9,900	10,277	10,277	
Unit 7 Indigo Business Park	J. McIntyre	1,371	1,472	1,465	1,472	1,767	no entry	1,767	19.04.2006
Dock Yard Rd, Ellesmere Port	Port Fuels Ltd	No entry	2,845	6,515	6,515	7,817	no entry	7,817	15.04.2020
Lostock Sodium Carbonate Manufacturing Site	Tata Chemicals Europe Ltd	1,437	827	357	1,437	1,724	2,012	2,012	
Cheshire Waste Management Centre	Tradebe North West Ltd	5,306	5,578	5,244	5,578	6,693	6,603	6,693	



Cheshire West & Chester

Waste Needs Assessment Update 2026

Appendix B: Local Authority Collected Waste Management Requirements for Cheshire West & Chester to 2045

Report: Final Issue

Version: v2.0

Issued: June 2026

BPP Consulting Document Control

Project: Cheshire West and Chester Waste Needs Assessment Update 2026

Report: Local Authority Collected Waste Management Requirements for Cheshire West & Chester to 2045

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While due care and diligence has been exercised in the preparation and production of this report, BPP Consulting LLP and its subcontractors exclude to the fullest extent lawfully permitted, all liability for any loss or damage however arising from reliance on its contents.

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Abbreviations

Abbreviation	Term
AD	Anaerobic Digestion
C & I	Commercial & Industrial Waste
C, D & E / CDEW	Construction, Demolition & Excavation Waste
CWaC	Cheshire West and Chester
DEFRA	Department for Environment, Food and Rural Affairs
DMR	Dry mixed recyclables
EA	Environment Agency
EfW	Energy from Waste
EWC	European Waste Catalogue
HWRCs	Household Waste Recycling Centres
LACW	Local Authority Collected Waste
MBT	Mechanical Biological Treatment
MRS	Metal Recycling Site
MRF	Material Recycling Facility
MWMS	Municipal Waste Management Strategy
PPG	Planning Practice Guidance
RDF	Refuse Derived Fuel
WCA	Waste Collection Authority
WDA	Waste Disposal Authority
WDF	WasteDataFlow
WDI	Waste Data Interrogator
WNA	Waste Need Assessment
WPA	Waste Planning Authority
WTS	Waste Transfer Station

Glossary of Terms

Term	Definition
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.
Biodegradable 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 for England.
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 through issuing permits to control activities that manage waste in England. It provides waste management data including the WDI.
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).
Green waste	Plant waste from gardens and parks such as grass and hedge trimmings, from domestic and commercial sources suitable for composting as biodegradable.
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).
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 a factory and premises used for industrial purposes (excluding mines and quarries).
Kerbside Collection	The collection of materials and waste from households, or occasionally industrial and commercial premises.
Landfill (including land raising)	The disposal of waste to land by permanent deposit. Includes filling of voids and the construction of landforms above ground level (land-raising).
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 (solid) waste (MSW).
Materials Recycling Facility (MRF)	A facility for sorting recyclable materials from the incoming waste stream.

Mechanical Biological Treatment (MBT)	A waste facility that combines a sorting facility with a form of biological treatment such as composting or anaerobic digestion.
Municipal Solid Waste (MSW) (from 2010)	Local Authority Collected Waste plus any wastes similar in nature and composition including that collected from businesses by private waste collection companies. (Term used for reporting against retained EU Directives only).
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.
Open Windrow Composting	A process in which biodegradable waste (such as green waste) is broken down in an open air environment (aerobic conditions) by naturally occurring micro-organisms to produce a material suitable for use as a soil improver.
Other Recovery	Processes such as energy from waste that recover value from waste other than recycling or composting. Sits below recycling in the waste hierarchy, but above disposal.
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	Waste remaining after materials for re-use, recycling and composting/organic waste treatment e.g. anaerobic digestion have been removed.
The Plan area	The area subject to the Waste Local Plan to which this study relates. In this case the borough of Cheshire West and Chester.
Waste Collection Authority (WCA)	A local authority that has a duty to collect household waste. WCAs also have a duty to collect commercial waste if requested to do so and may also collect industrial waste. In this case Cheshire West and Chester Council. In two tier areas the District or Borough Council is the WCA.
Waste Disposal Authority (WDA)	A local authority responsible for managing the waste collected by waste collection authorities and the provision of household waste recycling centres. In this case Cheshire West and Chester Council.
Waste Minimisation / Reduction	The most desirable way of managing waste according to the Waste Hierarchy, by avoiding the production of waste in the first place.
Waste Planning Authority	The authority responsible for planning for waste within a specific administrative area. In this case Cheshire West and Chester Council.
Waste Transfer Station	A site to which waste is delivered for bulking up prior to transfer to another place for recycling, treatment or disposal.

1. Introduction

- 1.1 Cheshire West and Chester (CWaC) Council commissioned BPP Consulting to produce an updated Waste Needs Assessment for CWaC using data for 2024 (hereinafter referred to as the WNA 2026). This updates the WNA 2023 produced by BPP Consulting using 2022 data.
- 1.2 The CWaC Waste Needs Assessment 2026 consists of an overall main report and five waste stream specific supporting reports, namely:
1. Local Authority Collected Waste Management Requirements to 2045;
 2. Commercial & Industrial Waste Management Requirements to 2045;
 3. Construction, Demolition & Excavation Waste Management Requirements to 2045;
 4. Hazardous Waste Management Requirements to 2045; and
 5. Scoping Review of Other Waste Management Requirements.

This report assesses future management requirements for LACW in CWaC to 2045.

Principal Data Sources

- 1.3 The principal data sources used to generate this report are as follows:

Waste data flow

- 1.4 Waste data flow (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. The WDF dataset provides granularity down to specific facilities where LACW was managed, although their identities do not always match with those shown in the Environment Agency Waste Data Interrogator. The WDF dataset relates both to Household Waste (collected household waste plus CRC and 'recycling bank' waste) as well as LACW. It should be noted that the data relates to waste collected and managed by, or on behalf of, local authorities and so waste such as that dealt with by householders themselves e.g. by home composting or bonfires, is not counted in the total. However, that is considered to represent a very small amount of the total and as such would not significantly influence waste planning policy. It does, however, contribute towards what might be classed as waste prevention activity, as it reduces the quantity of LACW set out for formal collection and onward management.

Defra LACW Management Dataset

- 1.5 The Government Department responsible for compiling statistics for the management and recycling rates achieved by local authorities across England is Defra. This publishes a number of datasets summarising annual (financial year) performance of each local authority based on data submitted by each local authority, through WasteDataFlow. This dataset is normally released in March of the year following the end of the financial year to which it relates. For example, the provisional annual results for LACW management in 2023/24 were released in March 2025.¹

¹ <https://www.gov.uk/government/statistics/local-authority-collected-waste-management-annual-results/local-authority-collected-waste-management-provisional-annual-results-202324>

Advice on Data

- 1.6 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 (PPG) 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

- 1.7 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 the management of waste arising in their respective administrative i.e. Plan area:

- 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

Data Presentation

- 1.8 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 rounded to the nearest 500.
 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.
 4. A threshold of >500 tonnes has been applied to certain computations.

2. Assessing LACW Arisings

Introduction

- 2.1 This section of the report is concerned with assessing arisings of Local Authority Collected Waste (LACW) in CWaC in 2023/24. From this, future arisings can be forecast for which appropriate targets can be proposed. This is then assessed against current LACW management capacity, with a view to identifying potential future capacity needs for which the forthcoming CWaC Local Plan may need to provide.

Definitions

- 2.2 In the UK, until 2010, the term municipal waste (MSW) was taken as meaning waste collected by or on behalf of local authorities (mainly from households) and waste deposited at Community Recycling Centres (CRCs) plus commercial waste collected by waste collection authorities, street sweepings, litter and fly tipped materials. However, to ensure consistency with the EU definition of municipal waste contained in the retained EU Landfill Directive, in 2010, the UK expanded the scope of the term to include not just waste from households but any wastes similar in nature and composition regardless of who it was collected by, or on behalf, of. This means, the term 'municipal waste' now includes wastes (of a similar type) also collected from businesses by private waste collection companies, that would fall under the category of commercial waste.
- 2.3 In light of this, a new term for waste previously known as 'municipal waste' was adopted by the UK Government– this term is “local authority collected waste” (LACW). In general, the non-household waste fraction of LACW represents around 5% of the total LACW arisings.

Collection & Management Contracts

- 2.4 Any waste local plan must have regard to the existing and future management arrangements for LACW. These arrangements are primarily dictated by contracts for the collection and management of LACW put in place by CWaC as the Waste Disposal Authority (WDA) for CWaC.

Arisings of LACW in CWaC in 2023/24

- 2.5 As LACW and household waste is measured and reported on by local authorities through WDF, the dataset published by Defra has been accessed to provide the following information.

In 2023/24 163,761 tonnes of LACW was collected in CWaC for management. Of this:

- 63% was recycled/ composted.
- 161,851 tonnes (96%) arose from households of which 59% was recycled or composted with a 51:49 split.
- Non household waste accounted for the remaining tonnage of 7,566 tonnes, 96% of which was recycled or composted

3. CWaC LACW Management Profile

3.1 The management profile of LACW arising in CWaC over the last decade is shown in Figure 1 below.

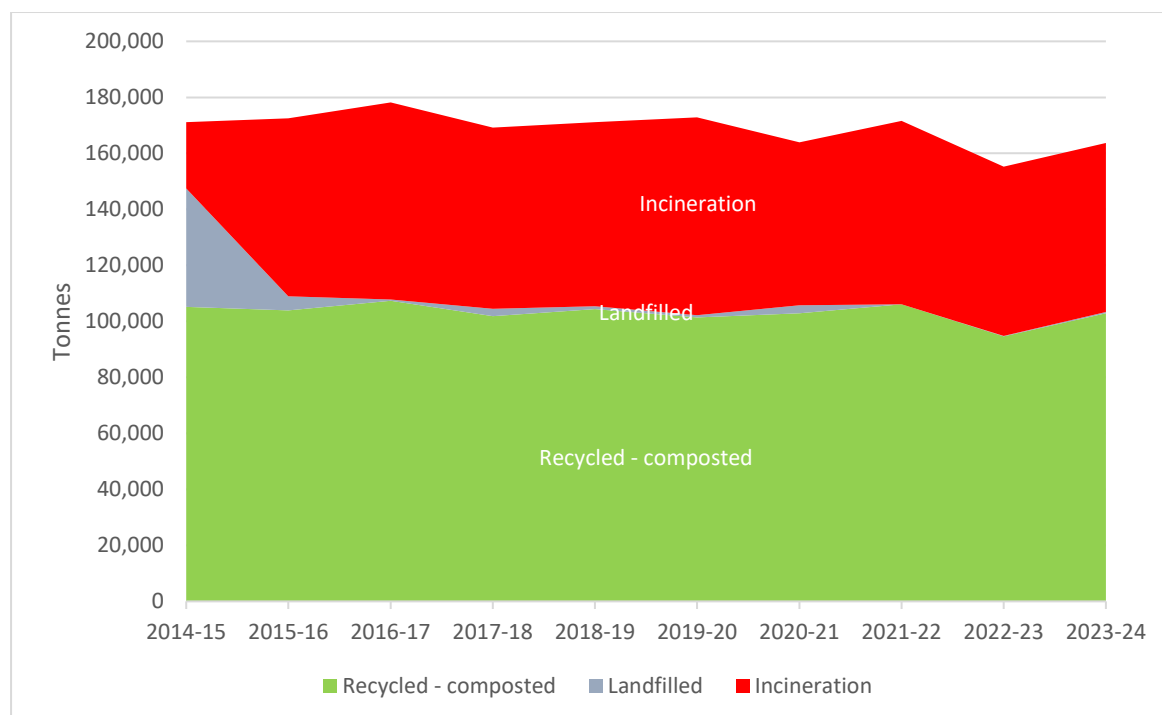


Figure 1: Management Profile for CWaC LACW 2014/15 – 2023/24 (tonnes)

Source: DEFRA

3.2 Figure 1 shows that the CWaC LACW management profile was underpinned by recycling and composting which peaked in 2021/22, dropped in 2022/23 and an uptick in 2023/24. It also shows the sudden transition in final management method for residual waste (waste remaining after recycling/ composting), from landfill to incineration in 2014/15 with landfill reducing from a peak of c67,000 tonnes in 2013/14 to c500 tonnes in 2023/24.

4. CWaC LACW forecast

Previous WNA Forecast

4.1 The following were considered in projecting future LACW arisings in CWaC to 2045 in the WNA 2023:

- advice relating to forecasting future 'municipal' waste arisings contained in national Planning Practice Guidance and reference to National LACW forecasts ;
- historical LACW arisings in CWaC; and
- Population Growth Forecasts for CWaC.

This exercise arrived at a growth rate of minus 0.13% per annum when considering future LACW capacity needs. This update revisits the exercise undertaken to confirm or otherwise if the growth rate applied remains robust in light of the LACW baseline arising value for 2023/24. This approach is discussed below.

Context in CWaC

4.2 The following sources have been considered in projecting future LACW arisings in CWaC over the Plan period:

- National Planning Practice Guidance (nPPG)
- Historical pattern of LACW arisings in CWaC
- National forecast of LACW growth in England

These are discussed below.

National Planning Practice Guidance

4.3 Examples of growth scenarios set out in the national Planning Practice Guidance (nPPG)² refer to either a constant rate or lowering of growth rates i.e. there is no mention of the possibility of a rising growth rate, suggesting that the Government does not see increasing growth in LACW as a scenario to be modelled.

4.4 However, in the DEFRA study of *Future Waste Arisings in England*³ in 2021, which includes the most current national forecast for LACW published by Government, the central forecast shows national LACW arisings are predicted to decrease marginally from 2022 to 2035 before a slight upswing from 2035 to 2050. This is contrary to nPPG advice cited above.

4.5 While the national LACW forecast presented in the DEFRA funded study provides an indication of the direction in which growth in LACW in CWaC may be headed, it should of course be noted that in presenting a national picture takes an average of what is predicted to happen across England.

² Ref.: Revision date: 16 10 2014 Paragraph: 029 & 30 Reference ID: 28-029-20141016

³ 'Future Waste Arisings' Eunomia, April 2021

Historical Pattern of LACW Arising in CWaC

4.6 The observed pattern of LACW arisings in CWaC over the past decade extended to include the 2022/23 and 2023/24 data points is shown in Figure 2 and Table 1 below.

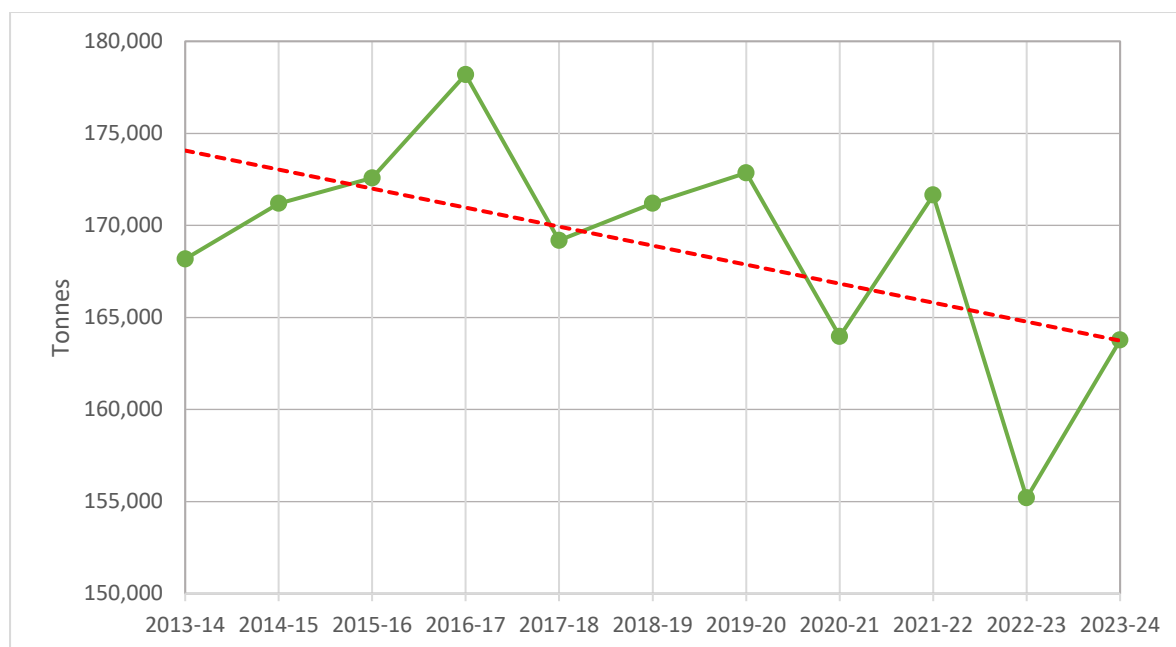


Figure 2: Trend in LACW Arisings in CWaC 2013/14 to 2023/24

y axis not set to zero, red dotted line is trend line that indicates an annual growth rate of -0.16% over the period as shown in Table 1 below.

Table 1: CWaC LACW arisings between 2013/14 and 2023/24 including 5yr growth rates

Year	Total	Annual growth rate	5-year growth rate
2013-14	168,172		0.40%
2014-15	171,194	1.80%	
2015-16	172,571	0.80%	
2016-17	178,192	3.26%	
2017-18	169,182	-5.06%	
2018-19	171,195	1.19%	-0.71%
2019-20	172,848	0.97%	
2020-21	163,968	-5.14%	
2021-22	171,647	4.68%	
2022-23	155,194	-9.59%	
2023-24	163,761	5.52%	
Mean Annual Growth Rate		-0.16%	

4.7 Historical data for LACW arisings (Figure 2 and Table 1) demonstrates considerable year-on-year variability between 2013/14 and 2023/24 rather than a sustained growth trend. Arisings peaked at 178,192 tonnes in 2016/17, before declining to a low of 155,194 tonnes in 2022/23,

followed by a partial recovery in 2023/24. This generates an overall mean annual growth rate of minus 0.16% as compared with the preferred growth rate applied in the WNA 2023 of minus 0.13%. Both negative values and it could be said that given the growth rate used in the WNA 2023 was less extreme it represents a more conservative view.

- 4.8 As shown in Figure 3, the population in CWaC has continued to increase steadily in 2021/22 and 2022/23, rising to around c366,000. In contrast, total Local Authority Collected Waste (LACW) arisings have continued to fluctuate falling to a low of approximately 155,000 tonnes in 2022/23, before partially recovering in 2023/24. This confirms the WNA 2023 finding that periods of population growth do not consistently correspond with increases in LACW arisings, with significant drops in arisings in 2020/21 and 2022/23 despite sustained growth in population numbers. Consequently, a growth profile that assumes a linear relationship between population numbers and LACW arisings would not be robust, given the multiple behavioural, economic and policy-related variables affecting waste generation over the period.

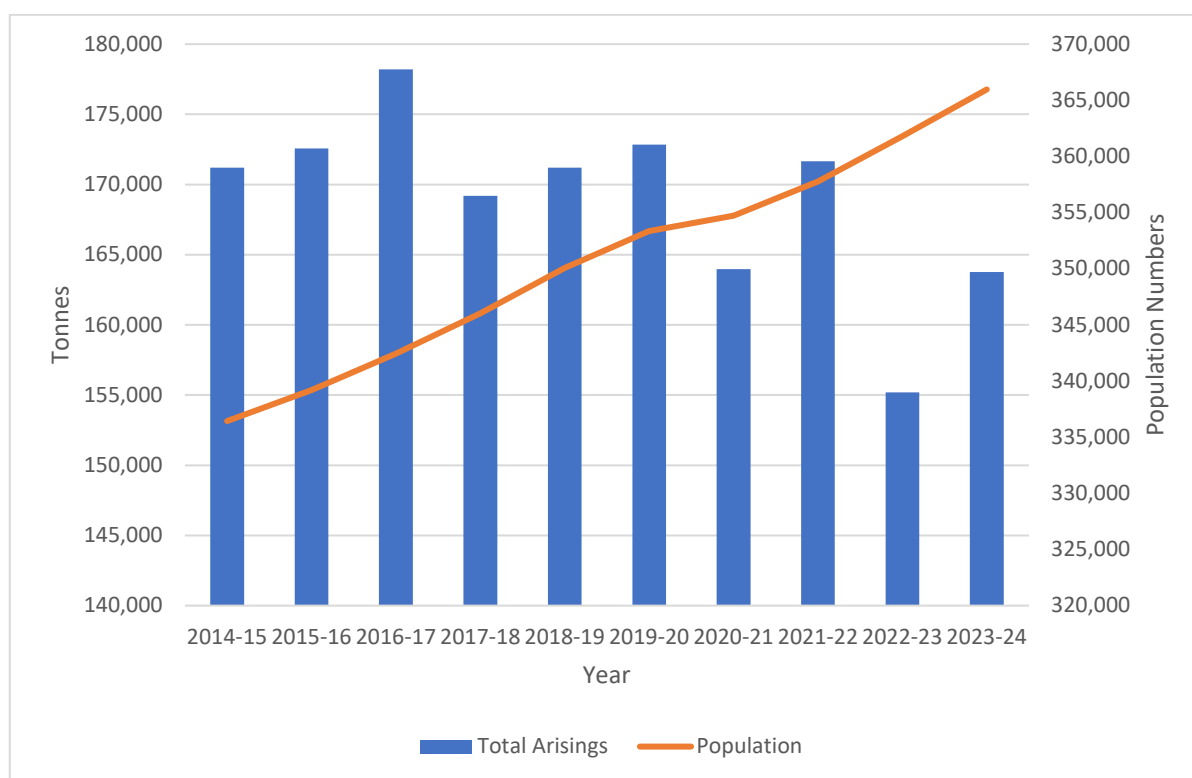


Figure 3: Total LACW arising (bar chart) vs population (orange line) 2014/15 to 2023/24
(y axis not set to zero)

5. Generating a Forecast for LACW

- 5.1 The method set out in the nPPG to generate a Plan area level LACW forecast based on generating a waste arisings per household/ capita growth profile used in the WNA 2023 has been replicated with the additional datapoints for 2022/23 and 2023/24. Results for CWaC are plotted in Figure 4 below.

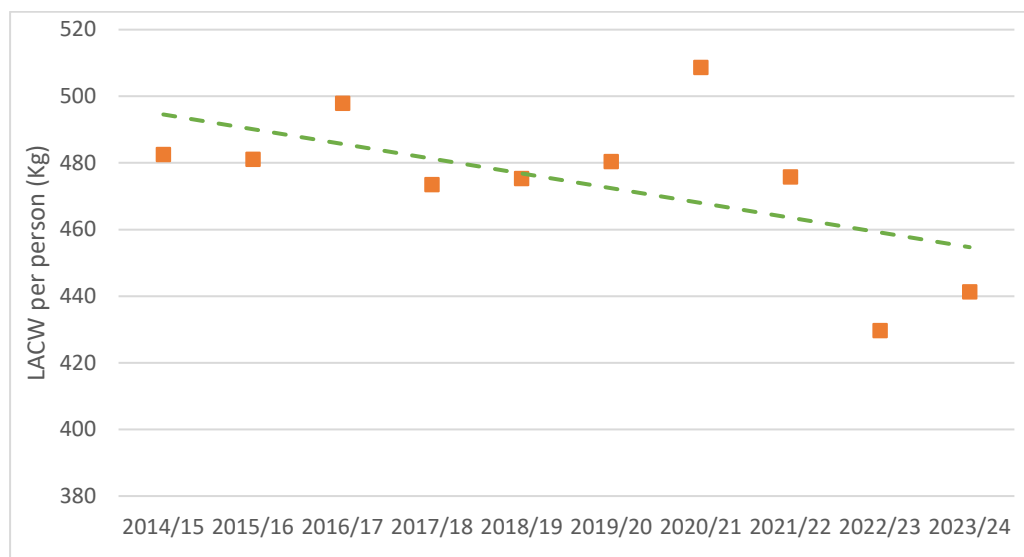


Figure 4: LACW per person in CWaC 2014/15 to 2023/24

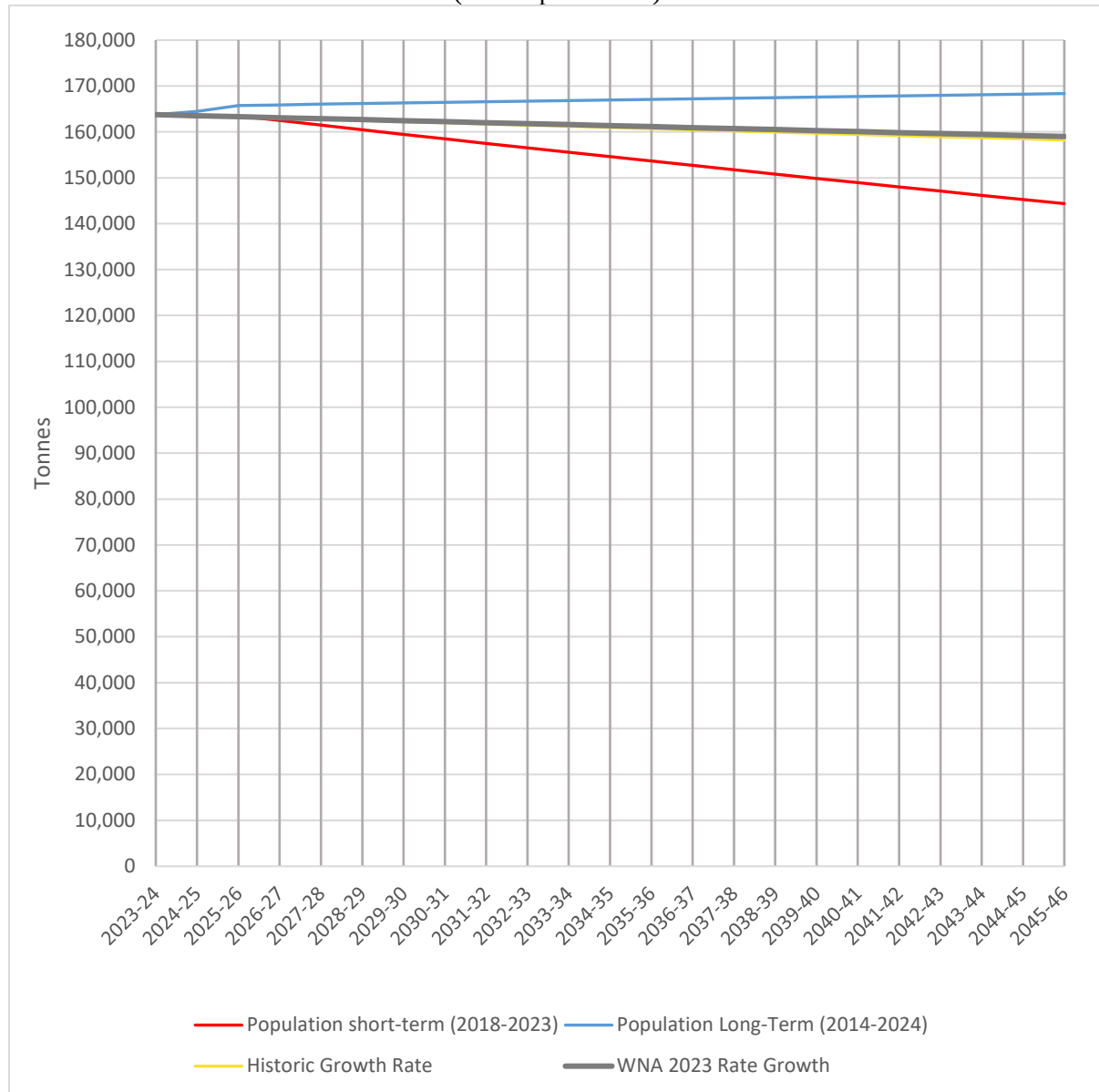
Green dashed line is a trendline NB: y axis not at zero.

- 5.2 Figure 4 shows that Local Authority Collected Waste (LACW) arisings per person in CWaC declined significantly 2022/23 and 2023/24, with per-capita arisings falling to approximately 430 kg per person in 2022/23 and then rising to 440 kg per person in 2023/24. The downward trend is illustrated by the dashed trendline.
- 5.3 Based on the data presented in Figure 4, the average compound annual growth rate (CAGR) for LACW arisings per person over the period 2014/15 to 2019/20 (excluding 2020/21 due to COVID-19 related behavioural impacts) was marginally negative (minus 0.09%), indicating a long-term reduction in waste arisings per person. This CAGR is also reflected over the shorter period between 2021/22 to 2023/24, with an average CAGR of -3.63% per annum.
- 5.4 To update the LACW forecast the long- and short-term per-capita growth rates above were applied to the baseline LACW arisings for 2023/24 and projected to the end of the Plan period. These per-capita growth rates were then combined with the updated annual population growth forecasts for CWaC⁴, to generate overall LACW arisings forecasts.
- 5.5 The outcome was plotted along with growth factors in Figure 5 to create a cone of possibilities:
- Historical LACW Growth of minus 0.16% per annum (see Table 1).
 - Short term LACW per population growth rate (as per Figure 5)
 - Long Term LACW per population growth rate (as per Figure 5).

⁴ CWaC Housing Needs Assessment 2026

In addition the preferred scenario generated in the WNA 2023 predicting an overall fall of c3.21% of LACW arisings over the Plan period has also been plotted from the updated 2023/24 baseline.

Figure 5: ‘Cone of Possibilities’ for Forecast Plan Area LACW Arisings (using 2023/24 baseline)
(tonnes per annum)



5.6 Three out of the four scenarios are showing a falling LACW arisings trajectory. This includes the short-term forecast in which the forecast fall in waste arisings per person more than counteracts the predicted growth in population in CWaC over the Plan period. The long-term forecast shows a small rise in waste arisings over the forecast period (c4,000tonnes). The corresponding values are presented in Table 3.

Table 2: Forecast values for CWaC LACW arising Scenarios modelled (tpa) (in rank order)

	Population Short-Term arisings forecast	Historic Growth Rate projection	WNA 2023 Preferred Scenario Updated Baseline	Population Long-Term arisings forecast
Baseline 2023/24	163,761			
2024/25	163,357	163,505	163,542	164,498
2025/26	163,485	163,250	163,323	165,773
2026/27	162,472	162,995	163,104	165,901
2027/28	161,466	162,740	162,886	166,029
2028/29	160,465	162,486	162,667	166,157
2029/30	159,471	162,232	162,450	166,286
2030/31	158,483	161,979	162,232	166,414
2031/32	157,501	161,726	162,015	166,542
2032/33	156,525	161,473	161,798	166,671
2033/34	155,555	161,221	161,581	166,800
2034/35	154,592	160,969	161,365	166,928
2035/36	153,634	160,718	161,149	167,057
2036/37	152,682	160,467	160,933	167,186
2037/38	151,736	160,216	160,717	167,315
2038/39	150,796	159,966	160,502	167,444
2039/40	149,861	159,716	160,287	167,573
2040/41	148,933	159,467	160,072	167,703
2041/42	148,010	159,218	159,858	167,832
2042/43	147,093	158,969	159,644	167,962
2043/44	146,182	158,721	159,430	168,091
2044/45	145,276	158,473	159,217	168,221
2044/45	144,376	158,225	159,003	168,351

Relating forecasts to waste per person arisings

- 5.7 In order to gauge how realistic the proposed forecasts might be, the waste per person factors implied by each scenario at 2045 have been calculated and then compared against the actual waste per person factor in 2023 of 440kg per person. This is shown in Table 3 below.

Table 3: Waste per person factors implied by the chosen scenarios at 2045 compared to 2023 actual and the percentage change year on year implied (tonnes)

Forecast	Historic	WNA 2023 Growth	Long-Term Growth ⁵	Short-Term Growth	Central value from cone of possibilities
Waste arisings per person factor at 2045 (t/pp)	0.37	0.37	0.39	0.34	0.36
Difference from actual in 2023 over 22 years (t/pp)	-0.08	-0.08	-0.06	-0.11	-0.08
Percentage annual change	-0.15%	-0.13%	0.13%	-0.54%	-0.21%

Findings

- 5.8 The findings from the comparison shown in Table 4 are as follows:
- The historic forecast implies a reduction of 0.08 tonnes per person over the Plan period. This equates to a 0.15% fall in LACW arisings per person year on year;
 - the WNA 2023 growth forecast implies a reduction of 0.08 tonnes per person over the Plan period. This equates to a 0.13% fall in LACW arisings per person year on year.
 - the long-term growth scenario implies a reduction of 0.06 tonnes over the Plan period. This equates to a 0.13% increase per person per year;
 - the short-term growth scenario implies a reduction of 0.11 tonnes per person over the Plan period. This equates to a 0.54% fall per person year on year;
 - the central value from the cone of possibilities forecast implies a reduction of 0.08 tonnes per person over the Plan period. This equates to a 0.21% fall per person year on year.
- 5.9 The above analysis suggests that the most likely range within which actual LACW arisings will fall over the Plan period is bounded by the population short-term arisings forecast and the population long term rate projection. As shown in Table 3, by 2045/46 arisings under the population short-term forecast indicates a more pronounced reduction to **144,376 tonnes**, compared with a 2023/24 baseline of **168,351 tonnes**. Taking the midpoint of these two scenarios gives an indicative arisings level of approximately **156,364 tonnes** by the end of the Plan period, representing a reduction of around **4.5%** relative to the baseline. As this figure is very similar to the 159,003 of the previous WNA 2023 preferred scenario (once updated to the updated baseline) this scenario is still considered to be robust.

⁵ As in footnote 8.

Forecast Conclusion

- 5.10 Updating the WNA 2023 preferred scenario using the 2023/24 baseline arisings value the forecast LACW arisings trajectory sits between the household long-term population forecast and the household short-term arisings forecast. This scenario reflects a cautious planning assumption, positioned within the core range of outcomes illustrated by the surrounding scenarios, and represents a modest but sustained reduction in arisings over the Plan period. On this basis, it is recommended that the WNA 2023 preferred scenario be continued. This represents an average annual growth rate of approximately minus 0.13%.
- 5.11 Under the updated preferred WNA 2023 scenario, LACW arisings are forecast to decline from 163,761 tonnes in 2023/24 to approximately 159,003 tonnes by 2045/46, representing an overall reduction of around 4,500 tonnes (approximately 2.9%) over the Plan period. The annual forecast arisings associated with this scenario are shown in Table 3.

6. CWaC LACW Future Management Capacity Needs

- 6.1 Having identified a preferred forecast, the next step is to establish the current LACW management profile. This may then be used to establish realistic future management targets which then informs identification of any future capacity requirements to ensure net self-sufficiency is met.

Existing LACW Management Profile

- 6.2 Table 4 below shows the management profile of CWaC LACW in 2023/24.

Table 4: LACW Management Profile in CWaC

Source: DEFRA

Route	Tonnes	%
Total Arisings	163,761	
Recycling/ Composting	102,935	62.9%
Energy from Waste ⁶	60,383	36.9%
Landfill	443	<1%

Waste Management Targets

- 6.3 Having established the existing management profile, 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. LACW is all classed as municipal waste (along with waste of a similar nature from commercial sources) and therefore, the municipal waste targets discussed below relate to LACW.

Current Targets

- 6.4 The UK Government has adopted the following targets for the future management of municipal waste, which as stated previously includes both LACW and a significant component of commercial waste:
- 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.
- 6.5 The Government has also set the following targets in the Environmental Improvement Plan 2023 (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,

- 6.6 The target for the reduction in residual waste is enshrined in *The Environmental Targets (Residual Waste) (England) Regulations 2023*⁷ which came into force on 30 January 2023 and is set on a kg per capita⁸ 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.

The Government has also set the following interim targets for the residual waste target to be achieved by December 2030 in its residual waste reduction target delivery plan⁹:

- the total mass of residual waste in the most recent full calendar year to not exceed 437kg per capita
- the total mass of residual waste in the most recent full calendar year to not exceed 25.5 million tonnes
- the total mass of residual municipal waste in the most recent full calendar year to not exceed 333kg per capita of which:
 - the total mass of food waste does not exceed 64kg per capita
 - the total mass of plastic waste does not exceed 42kg per capita
 - the total mass of paper and card waste does not exceed 74kg per capita
 - the total mass of metal waste does not exceed 10kg per capita
 - the total mass of glass waste does not exceed 7kg per capita

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

- 6.7 Considering the above targets the targets proposed in the previous WNA 2023 are considered to remain applicable, as set out in Table 5 below.

Table 5: Proposed Targets for LACW Management in CWaC
Italicised entries are actual values

	Actuals	Milestone Year				
	2023/24	2025	2030	2035	2040	2045
Recycling/composting (floor)	63%	≥65%	≥70%	≥75%	≥75%	≥75%
Other Recovery inc EfW	37%	34%	29%	24%	24%	24%
Landfill (ceiling)	0.3%	≤1%	≤1%	≤1%	≤1%	≤1%

⁷ *The Environmental Targets (Residual Waste) (England) Regulations 2023*
<https://www.legislation.gov.uk/en/uksi/2023/92/made>

⁸ Per head of population in England

⁹ While the Government reaffirmed its commitment to meeting the residual waste reduction target by 2042 <https://www.gov.uk/government/publications/residual-waste-reduction-environment-act-target-delivery-plan/residual-waste-reduction-environment-act-target-delivery-plan>, it has deferred the interim target year from 2028 to 2030. <https://www.gov.uk/government/publications/environmental-improvement-plan-2025/environmental-improvement-plan-eip-2025#annex-2-full-list-of-revised-eip-interim-targets>

Applying the proposed targets to the preferred forecast gives the capacity requirements set out in Table 6 below.

Table 6: Future Management Profile for Forecast CWaC LACW Arisings (tonnes)

	Milestone Year					Plan Period Peak/Cumulative Capacity Requirement
	2025	2030	2035	2040	2045	
Recycling/Composting Target (Floor)	106,008	112,985	119,795	118,534	117,525	119,795 (peak 2035)
Remainder to Landfill Target (Ceiling)	1,631	1,614	1,597	1,580	1,567	32,865 (cumulative)
Other Recovery Remainder	55,450	46,808	38,334	37,931	37,608	55,450 (peak 2025)

- 6.8 This results in a cumulative non-inert landfill requirement for residual waste of c34,500 tonnes over the Plan period (to 2045) that arises as shown in Table 7 below.

Table 7: Cumulative Landfill Requirement in CWaC to 2045

	Landfill Requirement pa	Cumulative Landfill Requirement
2025/26	1,631	2,514
2026/27	1,628	4,141
2027/28	1,624	5,765
2028/29	1,621	7,386
2029/30	1,617	9,003
2030/31	1,614	10,618
2031/32	1,611	12,228
2032/33	1,607	13,836
2033/34	1,604	15,440
2034/35	1,601	17,040
2035/36	1,597	18,637
2036/37	1,594	20,231
2037/38	1,591	21,822
2038/39	1,587	23,409
2039/40	1,584	24,993
2040/41	1,582	26,575
2041/42	1,580	28,155
2042/43	1,578	29,733
2043/44	1,575	31,308
2044/45	1,572	32,880
2045/46	1,567	34,447

6.9 The implications of these requirements are considered further in the Capacity Assessment Overview Report.



Cheshire West & Chester Waste Needs Assessment Update 2026

Appendix C: Commercial & Industrial Waste Management Requirements in Cheshire West & Chester to 2045

Report: Final Issue

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Abbreviations

Abbreviation	Term
AD	Anaerobic Digestion
C & I	Commercial & Industrial Waste
C, D & E / CDEW	Construction, Demolition & Excavation Waste
CWaC	Cheshire West and Chester
DEFRA	Department for Environment, Food and Rural Affairs
EA	Environment Agency
EfW	Energy from Waste
EW C	European Waste Catalogue
HWRCs	Household Waste Recycling Centres
LACW	Local Authority Collected Waste
MRS	Metal Recycling Site
MRF	Material Recycling Facility
RDF	Refuse Derived Fuel
WTS	WasteDataFlow
WDI	Waste Data Interrogator
WNA	Waste Needs Assessment
WPA	Waste Planning Authority
WPRDI	(Wales) Waste Permit Returns Data Interrogator
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.
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.
Biodegradable waste	Waste that can break down over time due to natural biological action/processes, such as food, garden waste and paper.
Commercial Waste	Waste arising from premises which are used wholly or mainly for trade, business, sport, recreation or entertainment, excluding municipal and industrial waste.
Controlled Waste	Waste subject to controls emanating from the EU Waste Framework Directive.
Construction, Demolition and Excavation Waste	Controlled waste arising from the construction, repair, maintenance and demolition of buildings and structures.
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 advice.
European Waste Catalogue	Comprehensive listing of wastes, divided into 20 chapters, largely based on industry sector origin such as Chapter 17 Construction, or Chapter 19 Waste Management, while some are based on material types such as Chapter 15 Packaging. Each waste type is assigned a unique six-digit code. The EWC is transposed into UK law through The List of Wastes (LOW) Regulations. ¹
Green waste	Biodegradable plant waste from gardens and parks such as grass or flower cuttings and hedge trimmings, from domestic and commercial sources suitable for subjecting to 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 it 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 its characteristics.
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.
Household Waste Recycling Centres	A facility that is available to the public to deposit waste not collected through kerbside collection. (otherwise known as a civic amenity site)
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).

¹ <http://www.opsi.gov.uk/si/si2005/20050895.htm>

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 destined 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 term used instead of municipal waste.
Leachate (associated with landfill)	Effluent arising from the breaking down of degradable waste in landfill when liquid (normally rainwater) is introduced. Normally carries pollutants from decomposing waste requiring special collection and treatment.
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 Site/Facility	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 largely extracted from the ore. Management subject to control through the 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 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	The Environmental Targets (Residual Waste) (England) Regulations 2023, 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 Cheshire West & Chester .
Waste Local Plan	A statutory development plan prepared (or saved) by the waste planning authority setting out policies in relation to the management of waste arising within the area and provision of development to manage waste arising within that area.
Waste Planning Authority	The local authority responsible for waste development planning and control. In this case Cheshire West & Chester Council.
Waste Transfer Station	A site to which waste is delivered for bulking prior to transfer to another place for further processing or disposal.

1 Introduction

- 1.1 Cheshire West and Chester (CWaC) Council has contracted BPP Consulting to produce an update to the Cheshire West & Chester Waste Needs Assessment 2023 (WNA) that underpins the preparation of its Local Plan policies relating to waste, updated to cover a Plan period to 2045.

The WNA Update consists of the following sections:

- Management Requirements for Local Authority Collected Waste to 2045.
- Management Requirements for Commercial & Industrial Waste to 2045.
- Management Requirements for Construction, Demolition & Excavation Waste to 2045.
- Management Requirements for Hazardous Waste to 2045.
- Scoping Review of Management Requirements for Other Waste.
- Review of Waste Flows.
- Overview of Management Requirements.

- 1.2 This section is concerned with assessing the projected management requirements for Commercial and Industrial (C&I) waste arising in CWaC to 2045.

Advice on Data

- 1.3 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 (nPPG) 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

- 1.4 It includes a section entitled "Using data to monitor and forecast waste needs", which articulates the principles waste planning authorities are to adopt when using data to plan for the waste management arising in their respective administrative i.e. Plan area:

- 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

Principal Data Sources

- 1.5 The principal data sources used to generate this report are as follows:

Waste Data Interrogator

- 1.6 Operators of sites subject to an environmental permit to manage waste submit returns on the quantities, types and origin of waste received and, where applicable, destination of waste removed from their sites to the Environment Agency. These returns are collated by the Environment Agency 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 2024 WDI (version 1 released Feb 2025) consisting of data for the calendar year 2024 was the most current version available at the time of writing and hence was taken to represent the 'best available data'.

Wastedataflow

- 1.7 Wastedataflow² (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 CWaC covering the four quarters of 2024 has been accessed to ensure comparability between datasets.

Data Presentation

- 1.8 In order to respect the need to avoid "spurious accuracy", the following approach has been taken:
- a) Where actual tonnage data has been accessed, this has been used in the computations.
 - b) Where data has been subject to computation, this has been rounded to the nearest 500.
 - c) 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.
 - d) A threshold of >500 tonnes has been applied to certain computations.

² <http://www.wastedataflow.org/>

2 Estimating CWaC 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 CWaC in 2024. 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 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 waste planning area such as CWaC, with any degree of accuracy, is a challenge. Two different approaches can be taken to estimate a baseline for C&I waste as follows:

- ‘Point of management’ using data related to the management of C&I waste. This is primarily based on records of waste delivered to, and removed from, permitted waste facilities submitted by operators to the Environment Agency (EA). The EA collates this data in its ‘Waste Data Interrogator’ (WDI) on an annual (calendar year) basis. This data now forms the basis for the ‘Reconcile’ method used to estimate C&I waste arisings at national level³.
- ‘Point of production’ using data based on the profile of businesses within an Area and applying waste production factors (related to the different business profiles). This method was used in the national survey undertaken in 2009 that informed the previous approach to national estimates⁴.

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 accounting for any double counting.

Terminology

- 2.3 While this report is concerned with the management of C&I waste arisings it should be noted that waste arising from businesses that is similar in nature and composition to household waste is included under the term ‘municipal waste’. National analysis of waste composition studies indicates that a significant proportion of waste generated by businesses not collected by Local Authorities falls within this definition. Most recent estimates for England as a whole found that around 43% of the total C&I waste stream may be waste of a type that falls under the definition of municipal⁵ and this may amount to 60% of the commercial waste stream. This means that national targets set for municipal waste encompass both LACW and a significant proportion of the C&I waste stream. LACW and C&I waste may be managed at the same facilities and hence consideration of management requirements has been combined in the subsequent assessment.

³ DEFRA 2014, *New Methodology to Estimate Waste Generation by the Commercial and Industrial Sector in England* as amended by *Commercial and Industrial Waste Arisings Methodology Revisions for England* October 2018

⁴ *Commercial and Industrial Waste Survey 2009: Final Report*, Defra May 2011, Available: <http://archive.defra.gov.uk/evidence/statistics/environment/waste/documents/commercial-industrialwaste101216.pdf>

⁵ *National Municipal Waste Composition*, England 2017 WRAP January 2020

3 Methodology

3.1 The methodology used to estimate an updated baseline C&I waste arisings value for 2024 (to be used as a starting point for forecasting C&I waste arisings in CWaC) is based on the national 'Reconcile' methodology, adapted to reflect local circumstances. This national methodology considers a number of datasets, in totality, to capture quantities of C&I waste that are managed rather than produced through:

(1) Permitted waste management facilities (reporting through Environment Agency Waste Data Interrogator (WDI);

(2) taking into account the proportion sent directly for export outside the UK.

Deductions are made to eliminate:

(3) Non-relevant waste streams such as Agricultural, Mining, Construction, Demolition & Excavation Waste (C, D & E), wastewater, and hazardous waste included in the datasets; and

(4) Local Authority Collected Waste (LACW) as reported through WasteDataFlow (WDF).

3.2 In summary the methodology applies the following calculation:

C & I waste arising = (Inputs to permitted facilities inc inputs to energy from waste plants + exports) - (C, D & E waste + mining + agricultural + wastewater + hazardous waste + LACW)

3.3 For the purposes of estimating the baseline arisings for CWaC C&I waste in 2024, the above method has been adapted to reflect a local approach including computations to avoid double counting of waste inputs to 'intermediate' facilities⁶ within CWaC as well as interrogation of anomalous values.

⁶ Intermediate facilities are those where waste does not meet its final fate. That is waste received leaves for onward management at other facilities elsewhere either having been subjected to some form of treatment or just simply bulked up e.g. transfer stations

Step 1: Waste Data Interrogator quantity of waste from CWaC with deductions to eliminate non-C&I waste streams.

3.4 Data relating to all types of waste identified as coming from CWaC in the Environment Agency Waste Data Interrogator (WDI) is displayed by management route in Table 1 below⁷. This shows that the total quantity of waste for 2024 stood at just over 1.1 million tonnes.

Table 1: Waste Attributed as Arising from CWaC (tonnes)

Source: WDI 2024

	Landfill	Recovery to Land	Metal Recycling Sites	Transfer	Treatment	Grand Total
Managed within CWaC	212,414	6,090	8,607	100,018	203,617	530,746
Managed outside CWaC	52,761	1,700	19,756	212,164	320,931	589,312
Totals	265,175	7,790	28,363	312,182	506,548	1,120,058

3.5 Waste identified under waste codes considered to represent C, D & E Waste (Chapter 17 plus EWC 19 12 09 & 20 02 02) and therefore accounted for in the separate estimates of C, D & E waste (in Section 3) are deducted from this total. The quantities remaining after this deduction are displayed by management route in Table 2 below. This shows that the quantity of waste identified as arising from CWaC is reduced by c414,500⁸ tonnes to c705,500 tonnes.

Table 2: Waste Arising from CWaC minus C, D & E Waste (tonnes).

Source: WDI 2024

	Landfill	Recovery to Land	Metal Recycling Sites	Transfer	Treatment	Grand Total
Managed within CWaC	178,236	0	8,607	81,989	146,663	415,496
Managed outside CWaC	17,517	0	16,465	110,932	145,333	290,248
Totals	195,753	0	25,072	192,922	291,996	705,744

3.6 Waste identified under waste codes considered to represent agricultural waste (Chapter 02 01), mining (Chapter 01) and hazardous waste (All codes with *) are accounted for separately and so are also deducted. The quantities remaining after this deduction are displayed by management route in Table 3. This shows that the running total for what may be C&I waste arising from CWaC is reduced by c54,000 tonnes to c652,000 tonnes.

⁷ While waste inputs to a number of other categories of facility are reported through the WDI since 2019, for the sake of comparability these have been excluded from the above table. They are accounted for as appropriate at subsequent steps of the methodology.

⁸ The deduction of C, D & E waste at this stage does not include the c82,500 tonnes unattributed below regional level, attributed to CWaC in the waste stream specific report.

Table 3: Waste Arising from CWaC minus C, D & E Waste, agricultural, mining & hazardous waste.

Source: WDI 2024

	Landfill	Metal Recycling Sites	Transfer	Treatment	Grand Total
Managed within CWaC	178,236	4,881	81,621	146,652	411,390
Managed outside CWaC	4,929	1,156	108,911	125,369	240,365
Totals	183,165	6,037	190,532	272,021	651,755

Step 2: Accounting for Local Authority Collected Waste

- 3.7 While LACW is not distinguishable from C&I by reference to EWC Codes, it is possible to ascertain the quantities of LACW managed at specific sites by cross referencing data with that from WasteDataFlow (WDF). Cross checking between the sites identified and the category assigned where listed in the WDI enables attribution to specific routes, as follows:

Table 4: LACW Received at Permitted Facilities included in WDI Count for Waste Arising from CWaC

Source: WDF 2024 Cross checked with WDI 2024

	Landfill	Metal Recycling Sites	Transfer inc HWRC	Treatment	Grand Total
Managed within CWaC	0	31	56,546	79,133	135,710
Managed outside CWaC	2,156	428	9,249	13,791	25,624
Totals	2,156	459	65,795	92,924	161,334

- 3.8 When values displayed in Table 4 are deducted from the values in Table 3 the remaining value is c490,500 tonnes as shown in total Table 5 below. This may be referred to as the 'gross C&I waste arising' value.

Table 5: Gross C&I Waste Arising from CWaC in 2024

Source: Table 3 minus Table 4.

	Landfill	Metal Recycling Sites	Transfer	Treatment	Grand Total
Managed within CWaC	178,236	4,850	25,075	67,519	275,680
Managed outside CWaC	2,773	728	99,662	111,578	214,741
Totals	181,009	5,578	124,737	179,097	490,421

Step 3: Deduct specific wastes accounted for separately (rather than complete streams)

- 3.9 Landfill leachate and sludges from waste water treatment plants 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 CWaC managed at permitted facilities has also been deducted. This amounted to 115,513 tonnes of waste, of which 5,023 tonnes was managed at treatment sites within CWaC.
- 3.10 Septic tank sludge has also been included in the deduction process at this stage on the basis that it will be managed through waste water treatment facilities rather than conventional waste management facilities. This amounted to 17,345 tonnes, of which 11,731 tonnes was managed at CWaC waste water treatment sites.
- 3.11 Inputs to the Holford Brinefield site have also been deducted given the capacity for this site is not merchant and therefore is not counted in the CWaC capacity assessment. This is 21,139 tonnes.
- 3.12 Deducting these values gives a revised headline value of c336,500 tonnes as shown in Table 6.

Table 6: Gross C&I Waste Arising from CWaC in 2024

Source: Table 5 minus Step 3 values

	Landfill	Metal Recycling Sites	Transfer	Treatment	Grand Total
Managed within CWaC	157,097	4,850	25,075	50,765	237,787
Managed outside CWaC	2,773	728	50,000	45,136	98,637
Totals	159,870	5,578	75,075	95,901	336,424

- 3.13 It was also discovered that a treatment site called Huntington Water Treatment Works located in CWaC had been incorrectly classified as an inert landfill in the WDI 2024⁹. As such the input tonnage of 157,097 has been reassigned to the treatment category. Moreover, comparison of the input tonnage with the output of 14,664 tonnes of sludge from water clarification suggests that inputs are in the form of an effluent or sludge which isn't a true measure of the tonnage requiring onward management. Therefore, the output value has been taken instead. This results in a revised gross C&I waste headline value of c194,000 tonnes shown in Table 7.

⁹ Direct contact with the EA confirmed that the site is in fact a treatment site managing effluent waste.

Table 7: Gross C&I Waste Arising from CWaC in 2024

Source: Table 6 minus revised Huntington Water Treatment Works tonnage

	Landfill	Metal Recycling Sites	Transfer	Treatment	Grand Total
Managed within CWaC	0	4,850	25,075	65,429	95,354
Managed outside CWaC	2,773	728	50,000	45,136	98,637
Totals	2,773	5,578	75,075	110,565	193,991

Step 4: Account for any double counting subtracting value for CWaC 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 CWaC to an initial facility in CWaC, and then again as an input from CWaC 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 original source identity gets lost.

3.15 The national methodology (the 'Reconcile' method) discounts inputs to all types of transfer facility recorded in the WDI on the basis that if the waste is only being transferred there is no processing of the waste hence there is in theory no loss of waste in the movement of waste into and out of the site and a risk of double counting the same tonnage of waste managed through the site at the 'next step' site. This is illustrated in Figure 1 below:

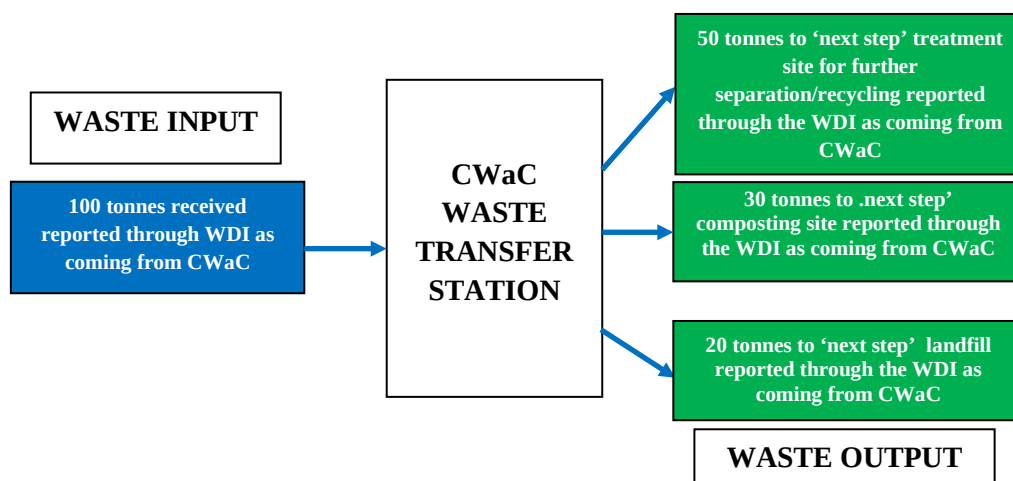


Figure 1: Schematic of Flows for CWaC Waste Transfer Stations Showing Potential Double Counting of Wastes in WDI for 'next step' sites for CWaC waste

3.16 However, relatively few sites classed as transfer stations under the Environment Agency permitting classification actually only operate purely as waste transfer stations, i.e. sites at

which waste is solely received and bulked up for onward management, plus inputs to metal recycling sites may be managed through routes that do not report through the WDI, e.g. exported to steel works abroad or delivered directly to reprocessing sites in England. While the national method includes estimates for exports and movements to reprocessors, it is not possible to disaggregate this data down to Plan Area level. Therefore, the outputs to both transfer and MRS within CWaC that received waste from CWaC in 2024 have been further analysed to determine whether outputs do in fact go to destinations that would otherwise be captured in the WDI or not. This step applies to all sites falling under the classification of transfer/ treatment in the WDI.

- 3.17 Firstly, the values of Plan area C&I waste managed at Plan area WTS and MRS are set to zero. Then the following steps are undertaken to identify any 'lost' tonnage not reported at a 'next step' site:
- The principal sites within the Plan Area classed as WTS and Metal Recycling Sites receiving significant tonnages (>500 tonnes) of C&I waste were identified.
 - Then the principal outputs of these sites were analysed by EWC code and destination WPA.
 - For each tonnage of output waste over 500 tonnes, the input data listed in the WDI by receiving WPA and EWC was cross checked to confirm if a comparable or greater tonnage of that waste type was declared as being received in the destination WPA area from the Plan area.
 - Where a greater or comparable tonnage did not appear as an input to a specific WPA area, the difference between any input value and the Plan Area site output value was recorded on the basis that a shortfall in the WDI entry means the tonnage needs to be counted at the source site i.e. WTS, otherwise it will be lost as a false deduction (unless it appears in another dataset e.g. incineration).
 - Where a greater or comparable tonnage did appear as an input, the WTS and MRS site input was taken as having been accounted at the 'next step' site and therefore was not counted, to avoid double counting of this waste.
- 3.18 Tables 8 and 9 presents the outcome of the analysis for each waste type (EWC) and named destination (WPA) in turn.
- 3.19 Where the receiving WPA is not codeable below regional level a review of entries for destination WPAs within the specified region has been conducted to identify a possible destination. If no WPA within the region is named, then it is assumed that none of the waste has been counted as an input to a site within that region. For waste identified as going outside the UK it is assumed that this travels directly from CWaC and hence hasn't been counted at a 'next step' site and therefore, the whole value has been taken. The same applies for waste that has travelled to Wales because the WDI only relates to England.

Table 8: Destinations & Fates for Principal Outputs (500t or more) of CWaC sites classified as Waste Transfer Stations identified as receiving C&I waste in WDI

Source: WDI 2024

EWC Code	Named Destination (WPA)	WDI Cross check shortfall (tonnes)
15 01 01 Paper and cardboard packaging	Manchester	2,256
	Wales	662
19 01 02 Ferrous materials removed from bottom ash	Manchester	725
	Merseyside	2,437
19 12 02 Ferrous metal	Wales	626
19 12 04 Plastic and rubber	Derbyshire	783
	Manchester	615
	Nottinghamshire	215
	Wigan	793
19 12 05 glass	CWaC	6,214
19 12 12 Processing residues		1,129
	Shropshire	1,371
	Wales	1,811
20 01 01 Paper and cardboard	Manchester	1,575
	Norfolk	4,382
	Sheffield	831
	Stockport	620
20 01 08 Biodegradable kitchen and canteen waste	Dudley	1,454
	Warwickshire	1,581
	West Midlands	6,238
Total shortfall between CWaC site output and out of CWaC WPA sites declared inputs		36,320

Table 9: Destinations & Fates for Principal Outputs (500t or more) of CWaC sites classified as Metal Recycling Sites identified as taking C&I waste

Source: WDI 2024

EWC Code	Named Destination (WPA)	WDI Cross check shortfall (tonnes)
19 12 02 Ferrous metal	Liverpool	4,458
Total shortfall between output and declared inputs		4,458

3.20 The above exercise indicates that some of the output waste from CWaC WTS and MRS do not appear to be accounted for at 'next step' sites. Therefore, instead of completely disregarding the inputs to these sites by zeroing the values displayed (on the basis that the tonnages are managed through 'next step' facilities reporting through WDI as per the national method), the shortfall tonnages derived from the above computation exercise, i.e. 36,320 tonnes for WTS & 4,458 tonnes for MRS have been included. This gives a revised gross C&I waste headline value of c190,000 tonnes as shown in Table 10.

Table 10: Gross C&I Waste Arising from CWaC in 2024

Source: Table 6 minus step 3a values

	Landfill	Metal Recycling Sites	Transfer	Treatment	Grand Total
Managed within CWaC	0	4,458	36,320	50,765	91,543
Managed outside CWaC	2,773	728	50,000	45,136	98,637
Totals	2,773	5,186	86,320	95,901	190,180

Step 5: Deduct waste from intermediate facilities coded under 19 12 12 and 19 12 10

- 3.21 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 CWaC, it is deducted for intermediate sites.
- 3.22 The principal wastes of concern are those coded as refuse derived fuel (RDF) under EWC code 19 12 10 and residues from mechanical treatment coded under EWC 19 12 12. Analysis of the waste removals data in the WDI for intermediate sites within CWaC indicates that the net output of these waste types in 2024 was 44,890 tonnes. The % inputs of C, D & E waste to intermediate sites within CWaC was then applied to the net output of 19 12 12 and 19 12 10 and the resulting value included in the C, D & E waste total reported in Section 3 of this report. The remainder was taken to have arisen from C&I waste. This was then apportioned by the proportion of inputs from CWaC going to intermediate sites within CWaC. The calculations are shown in Table 11 and is illustrated by Figure 2 below:

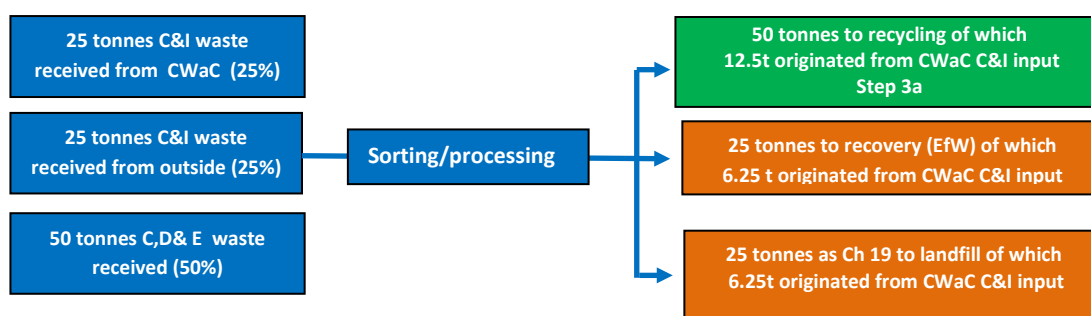


Figure 2: Schematic of CWaC Intermediate site outputs

Table 11: Net output of 19 12 12 + 19 12 10 attributed to CWaC C&I waste to deduct

Source: WDI 2024

	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
	Net output of 19 12 12 and 19 12 10	% CDE inputs	19 12 12 Attributed to CDE	19 12 12 attributed to C&I	% inputs from CWaC	CWaC C&I 19 12 12 + 19 12 10 (Col4 x Col5)
Transfer	5,127	23%	1,185	3,942	80%	3,142
Treatment	39,763	28%	11,230	28,533	26%	7,475
	Total					10,617

3.23 Table 11 shows the result of this calculation is 10,617 tonnes of 19 12 12 and 19 12 10 output from CWaC transfer and treatment sites being attributed to C&I waste originating from CWaC. Given this value is taken to be a double count it has been deducted from the total arisings value split across the CWaC transfer and treatment sites, reducing the total arising value to c179,500 tonnes as shown in Table 12.

Table 12: Gross C&I Waste Arising from CWaC in 2024

Source: Table 10 minus Step 5 values

	Landfill	Metal Recycling Sites	Transfer	Treatment	Grand Total
Managed within CWaC	0	4,458	33,178	43,290	80,926
Managed outside CWaC	2,773	728	50,000	45,136	98,637
Totals	2,773	5,186	83,178	88,426	179,563

Step 6: Deduct incineration or pyrolysis of waste EWC sub chapter

3.24 Non-hazardous residues from the thermal treatment of waste (EWC code 19 01 02 + 19 01 12) needs to be deducted to avoid double counting of waste managed through EfW which is accounted for in Step 5. However, no significant tonnage (>500 tonnes) of this waste type from CWaC was reported in the WDI 2024 as being managed at intermediate sites other than that waste classed as hazardous which is dealt with in a separate report¹⁰, so no further computation has been undertaken.

¹⁰ CWaC WNA Update 2026: *Management Requirements for Hazardous Waste Arising in CWaC to 2045* BPP Consulting March 2026.

Additions

Step 7: Add Inputs to Energy from Waste (EfW)

- 3.25 Examination of WDI 2024 for inputs to EfW facilities indicates that 313,463 tonnes of waste attributed to CWaC was reported as having been received at 5 EfW plants located in England¹¹ one of which is located in CWaC itself, as shown in Table 13 below.

Table 13: Inputs of >1,000t of CWaC Waste to English EfW facilities in 2024

Source: WDI 2024 & WDF 2024

Facility WPA	Site Name + Operator	WDI Total	CWaC LACW
Halton	Runcorn, Viridor Energy Ltd	123,736	17,499
Wakefield	Ferrybridge 1, Enfinium Ferrybridge 1 Ltd	41,593	38,702
Cheshire West & Chester	Ince Bio Power, Bioenergy Infrastructure Services Ltd	18,658	0
Nottingham City	Eastcroft EfW Plant, Wastenotts Ltd	1,268	1,080
Total		185,256	57,280

- 3.26 The 123,736 tonnes received at the Runcorn EfW facility located in Halton was further interrogated given the significant contribution the tonnage represents. This revealed that although a substantial amount of the total inputs was reported as coming from CWaC, waste from Cheshire East (CE) was also received, but not declared. This was discovered as the WDF reported 84,739 tonnes of LACW from CE was sent to the Runcorn EfW facility in 2024 but the WDI only reported 42,782 tonnes of waste received from CE, leaving 41,957 tonnes of CE inputs to be accounted for. Given the close correspondence between CWaC and CE and the lack of an obvious alternative declared source, 41,957 tonnes have been deducted from the CWaC Runcorn tonnage along with 17,499 tonnes of LACW from CWaC. This leaves 64,280 tonnes of C&I waste believed to come from either CWaC or CE received at the Runcorn EfW facility applying the same logic.
- 3.27 In order to apportion the remaining tonnage a spatial analysis has been undertaken by applying a 45-minute travel isochrone (or 'catchment') around the site. Given the relatively high value nature of waste a 45-minute isochrone is considered conservative. It is worth noting that the bulk of CE residual LACW travels there. This generated the isochrone shown in Figure 3.

¹¹ Note that 1 site received <20 tonnes so does not appear in Table 13. Waste that travelled to Wales is dealt with in a subsequent section of this report.



Figure 3: 30 minute and 45-minute travel isochrone from Runcorn EfW facility showing CWaC and CE area

- 3.28 Figure 3 shows that both boroughs are virtually completely included in the 45-minute travel isochrone from the Runcorn EfW facility. Therefore, a 50:50 split has been applied to the remaining 64,280 tonnes, giving 32,140 tonnes attributed to CWaC C&I waste.
- 3.29 Since the WDF reported 39,778 tonnes of CWaC LACW went to the other EfW facilities listed in Table 13 in 2024, this has also been deducted leaving 21,737 tonnes of C&I waste from CWaC going to the other EfW plants in 2024. When this is added to the amount going to Runcorn EfW plant (32,140) gives a total of 53,878t to be added to the running CWaC C&I waste arising value bringing the running CWaC C&I waste arising value to c233,500 tonnes as shown in Table 14.

Table 14: Gross C&I Waste Arising from CWaC in 2024

Source: WDI 2024 & WDF 2024

	Landfill	Metal Recycling Sites	Transfer	Treatment	EfW	Grand Total
Managed within CWaC	0	4,458	33,178	43,290	18,658	99,584
Managed outside CWaC	2,773	728	50,000	45,136	35,220	133,857
Totals	2,773	5,186	83,178	88,426	53,878	233,441

Step 8: Account for waste managed in Wales

- 3.30 Given CWaC's close proximity to Wales and the fact that the WDI only reports waste received and removed from permitted waste management sites located in England, there is a risk of underreporting of CWaC C&I waste if the waste from CWaC was delivered directly to a site in Wales for management. Therefore, the C&I type waste from CWaC reported as being received at sites in Wales, as reported in the Wales Waste Permit Returns Data Interrogator (WPRDI) 2024, has been analysed and compared with CWaC site output data in the WDI Waste Removed dataset to determine whether inputs to Welsh sites from CWaC came direct from CWaC and hence was not reported in the WDI.
- 3.31 Where a greater or equivalent tonnage of waste by EWC code reported in the WDI Waste Removed dataset as an output of CWaC sites appeared as an input to Welsh sites it was taken to have already been counted as an input to the CWaC sites, and where the amount reported by the CWaC sites was less, the difference was taken as being a direct delivery from CWaC to Wales. Any LACW from CWaC that was sent to Wales for management was also deducted. The following steps have been undertaken to identify any directly delivered tonnage:
- a) The principal C&I waste codes (>500 tonnes) received at sites in Wales from CWaC reporting in the WPRDI 2024 were identified;
 - b) For each tonnage of input waste over 500 tonnes, the output data listed in the WDI Waste Removed dataset for CWaC sites was cross checked by EWC and destination to confirm if an equivalent or greater tonnage of that waste type was declared as an output going to Wales (from CWaC);
 - c) Where a greater or equivalent tonnage did not appear as an output from CWaC sites, the difference between the Welsh site input value and the CWaC site output value was taken to be a direct delivery to Wales and the shortfall value from the WPRDI entry was taken;
 - d) Where a greater or equivalent tonnage did appear as an output of a CWaC site, the Welsh site inputs was ignored as it was taken to already be accounted for at the intermediate site in CWaC.

Table 15 presents the outcome of the analysis for each waste type (EWC).

Table 15: Principal Inputs (>500 tonnes) of C&I Waste to permitted Welsh sites from CWaC (WPRDI 2024) and Shortfall with Outputs of CWaC site reporting through WDI 2024

Source: WDI 2024 & WPRDI 2024

EWC Waste Description	Inputs to Wales (WPRDI)	Outputs from CWaC site to Wales (WDI)	Shortfall
Waste glass	667	0	667
Ferrous metal filings with turnings	1,513	0	1,513
Ferrous metal	860	626	233
Non-ferrous metal	908	8	901
Spent fluid catalytic cracking catalysts	4,890	0	4,890
Screenings	646	0	646
Plastic and rubber	509	0	509
Wood	1,308	40	1,267
Minerals (for example sand, stones)	9,250	18,293	0
Other wastes	3,391	2,014	1,377
Paper and cardboard	2,412	670	1,743
Mixed municipal waste	38,037	577	37,461
Total shortfall between input and declared outputs			51,207

3.32 The above exercise indicates that a significant tonnage of CWaC waste (c51,000t) was delivered directly to sites in Wales and hence went unreported in the WDI 2024. A further computation to deduct any potential LACW has been undertaken which reveals 5,139 tonnes was sent to Wales in 2024 and this has been deducted from the 51,207 tonnes shortfall shown in Table 15. Therefore, a value of 46,068 tonnes has been added to the running CWaC C&I waste baseline, apportioned by site management type category – the process is set out in Appendix 3. This gives an estimated value for CWaC C&I waste of c279,500 tonnes in 2024 as shown in Table 16.

Table 16: Estimated C&I Waste Arising from CWaC in 2024 inc Wales

Source: Table 14 plus Step 8 values

	Landfill	Metal Recycling Sites	Transfer	Treatment	EfW	Grand Total
Managed within CWaC	0	4,458	33,178	43,290	18,658	99,584
Managed outside CWaC	4,561	3,172	84,349	51,355	36,488	179,926
Totals	4,561	7,630	117,527	94,645	55,146	279,510

Step 9: Account for waste not attributed below Cheshire in WDI

3.33 Examination of the WDI 2024 waste received dataset indicates that just over half a million tonnes (552,158t) of waste received at permitted facilities in England was not attributed below Cheshire. Of this, 5,747 tonnes was reported as having an origin of Chester, which falls within CWaC and should therefore be included in the calculation, along with a proportion of the unattributed Cheshire waste, that would be classed as C&I waste.

Step 9a Accounting for Waste from Chester

3.34 Examination of the WDI 2024 waste received dataset indicates that of the 5,747 tonnes of waste reported as having an origin of Chester, 2,590 tonnes was classed as hazardous, 2,785 tonnes was classed as HIC waste and 372 was classed an inert waste. Given that hazardous waste is accounted for separately it has been excluded from the further computation. Similarly, the 372t of inert waste was classed under Chapter 17 and should therefore be accounted for in the C, D & E waste estimation exercise reported in section 3 of this report. That left 2,785t of non-hazardous HIC waste to be attributed. Of this tonnage, the two principal waste types are combustible wastes (1,288t EWC 19 02 10) and pre mixed wastes (1,162t EWC 19 02 03) arising from the physico/chemical treatment of waste. Further interrogation of the WDI waste received dataset shows that the bulk of these waste types were managed through Anaerobic Digestion at a facility located in Hartlepool - 1,094t EWC 19 02 10 and 1,134t EWC 19 02 03 respectively. As these wastes arise from waste treatment, a check has been made of the reported outputs of CWaC permitted facility dataset (waste removed) to avoid possible double counting. This did not show any outputs of either type coming from permitted waste facilities located in CWaC reporting through the WDI 2024. Therefore, these combined values (2,229t) have been added to the total 'Treatment outside CWaC' value in Table 17 below giving a revised value for CWaC C&I waste in 2024 of c281,500t.

Table 17: Estimated C&I Waste Arising from CWaC in 2024 inc Chester Unattributed

Source: Table 16 plus waste not attributed below Chester

	Landfill	Metal Recycling Sites	Transfer	Treatment	EfW	Grand Total
Managed within CWaC	0	4,458	33,178	43,290	18,658	99,584
Managed outside CWaC	4,561	3,172	84,354	53,584	36,488	182,154
Totals	4,561	7,630	177,527	96,874	55,146	281,738

Step 9b Accounting for Waste from Cheshire

3.35 Examination of the WDI 2024 waste received dataset indicates that of the 546,410 tonnes reported as having an origin of Cheshire, 89,642t was classed as hazardous, 355,007t was classed as HIC waste and 100,761t was classed an inert waste. Given that hazardous waste is accounted for separately it has been excluded from the further computation. Similarly, 92,085t of inert waste was classed under Chapter 17 and just under 1,000t of soil and stones under Chapter 20 and should therefore be accounted for in the C, D & E waste estimation exercise reported in section 3 of this report. That left 355,007t of non-hazardous HIC waste (plus 8,678t of glass from municipal sources counted as inert) to be attributed.

Step 9b (i) screening out insignificant waste codes and management methods

3.36 Of the tonnage of HIC waste, 95% (339,494t) is accounted for by 32 waste codes received at reporting permitted sites in amounts in excess of 1000t. Of this tonnage, 28,589t was managed through Storage which is taken as an intermediate step towards management through a different method and is therefore discounted. Similarly, just under 10,000 tonnes was managed through permitted sites classed under Processing which are generally reprocessing sites which fall outside the remit of waste uses so that too has been deducted. Finally for this initial screening, c10,000t of sludges from treatment of urban waste water was also deducted as management of that waste is dealt with in a separate Section of this report. That left just under 300,000 tonnes (339,494 minus (28,589+9,042+10,475)) to be attributed between Cheshire West & Chester and Cheshire East.

3.37 In addition, it is considered reasonable to assume that waste managed at facilities located within Cheshire West, and within Cheshire East, actually originated within each of those respective plan areas. This accounts for 49,341t being added to the CWaC total, subject to confirmation of waste type. Similarly, 3,440t of Cheshire waste was managed at CE sites, so that is deducted from the total.

3.38 The remaining tonnages of Cheshire HIC waste to be attributed totalled by management method are summarised in Table 18 below.

Table 18: HIC Waste Not Attributed below Cheshire in 2024 by Management Route (screened)

Source: WDI 2024

	Landfill	Metal Recycling Sites	Transfer	Treatment	EfW	Grand Total
Managed outside CWaC	22,794	118,998	10,068	81,246	5,500	238,606

3.39 Of the tonnage of Cheshire HIC waste managed outside CE or CWaC, 94% (223,796t) is accounted for by 31 facilities that received amounts in excess of 1,000t. These are located in 23 WPA areas. Of this tonnage 79,524t was determined to have most likely come from CWaC rather than CE based on availability of similar capacity within either Plan area - (10,863t Landfill, 49,393t MRS, 5,376 Transfer and 13,891t Treatment) see Appendix 2. Adding these values to Table 17 gives a **total value for CWaC C&I waste of c361,000t** as shown in Table 19.

Table 19: Estimated C&I Waste Arising from CWaC in 2024

Source: Table 17 plus waste unattributed below Cheshire

	Landfill	Metal Recycling Sites	Transfer	Treatment	EfW	Grand Total
Managed within CWaC	0	4,458	33,178	43,290	18,658	99,584
Managed outside CWaC	15,425	52,565	89,726	67,475	36,488	261,679
Totals	15,425	57,023	122,904	110,765	55,146	361,262

Comparison to previous baseline arisings estimates

3.40 The C&I waste baseline arisings value generated of c361,000 tonnes for 2024, is some c2,000 tonnes greater than the value of 359,000 tonnes estimate for CWaC C&I waste generated in 2021 included in the WNA 2023. This suggests a growth of 0.18% per annum. Comparison between each contributing element is shown in Table 20. The difference of waste from sludge is from three sites, Crewe Waste Water Treatment Works (133,605t less), Ellesmere Port Waste Water Treatment Works (32,035t less) and Northwich Waste Water Treatment Works (47,439t less).

Table 20: Baseline Comparison between 2021 and 2024 values on a step by step basis

Source: WDI 2021 & WDI 2024

Component	2021	2024	Comment (if applicable)
Total Waste Arising in WPA (as reported in WDI waste received)	1,405,012	1,120,058	
Minus C,D & E Waste	-400,427	-414,314	
Minus Hazardous Waste	-57,006	-53,989	
Minus LACW	-194,026	-161,334	
Minus Specific Waste	-479,266	-296,430	Difference of 193,079t due to drop in waste in the form of sludge
Plan Area Transfer adjustment	-34,568	-3,811	
Treatment Next Step	-25,234	-10,617	
Addition of EfW	101,916	53,878	Due to 50% less waste assessed as going to Runcorn EfW plant in 2024
Addition of Uncodeable waste	42,350	127,8214	2024 includes addition of Wales and Cheshire waste
Total	358,751	361,262	
Annual Growth Rate		0.18%	

4 Forecasting Future C&I Waste Growth

- 4.1 The WNA 2023 applied a +0.05% per annum growth rate to the 2021 C&I baseline value to generate a central arisings scenario to 2045. This followed a trajectory that tracked a path between the previous WNA growth rate forecast of (-0.2% per annum) and the national DEFRA growth forecast (0.28% per annum).
- 4.2 Using this scenario resulted in projected C&I waste arisings in 2045 of c365,000 tonnes, an increase of c5,500 tonnes over the Plan period. Given that the indicated growth rate between the 2021 and 2024 baseline values of 0.18% per annum falls between the range of values considered previously, and the baseline value is very similar, it is considered that the findings of the WNA 2023 with respect to forecasting remains robust.

5 Projected Management Requirements

- 5.1 Determination of how waste might be managed requires assessment of how the waste in the Plan area is currently managed and then projecting how any future Plan intends waste to be managed through exerting influence on the types of capacity developed during the Plan period.

Baseline Profile

- 5.2 The management profile presented in Table 21 below is based on the management data available through the WDI 2024. Since the WDI does not have an exclusive 'recycling' category it is not possible to establish how much of the waste managed goes on for recycling. Therefore, the principal known fates considered are those management types that would represent a final fate reported in the WDI as follows. That is:
- Composting and AD
 - Landfill
 - EfW and Recovery to Land (together combined as 'other' recovery)

Composting and AD

- 5.3 Of the total quantity of waste sent to composting and AD reported in the WDI 2024, c8,000 tonnes were C&I waste (mostly all of which was from AD sites).

Landfill

- 5.4 As shown in Table 21, in 2024, c15,500 tonnes of C&I waste arising in CWaC was sent to landfill.

'Other' Recovery

- 5.5 As shown in Table 21, in 2024, c55,000 tonnes of C&I waste arising in CWaC was recovered, all of which went to EfW facilities.

Recycling

- 5.6 The difference between the sum of the tonnages of waste managed through the above categories of facilities and the baseline value has been taken to represent the tonnage that went on for recycling via permitted facilities. In 2024 this amounted to c290,500 tonnes (282,866+7,826) as compared with c244,000 tonnes (229,944+13,995) in 2021.

Table 21: Computed C&I Waste Management Profile

Source: WNA 2023 and WDI 2024

Route	2021		2024	
	Tonnes	% of total	Tonnes	% of total
Total Arisings	358,751		361,262	
Landfill	11,875	3%	15,425	4%
'Other' Recovery	102,938	29%	55,146	15%
Composting and AD	13,995	68% ¹²	7,826	80%
<i>Recycling & Reuse (remainder)</i>	<i>229,944</i>		<i>282,866</i>	

¹² Recycling and composting combined as at the same level of the Waste Hierarchy.

6 Management Targets

- 6.1 Having established an existing management profile, 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 The previous WNA cites the following targets for C&I waste:
- 75% recycling by 2020 (floor)
 - 25% landfill by 2020 (ceiling)
- 6.3 There are no specific national targets for the management of C&I waste but the UK Government has confirmed¹³ its commitment to the following targets for municipal waste, which as stated previously includes a significant component of commercial waste (Para 2.3). In particular:
- 55% recycling by 2025; and
 - 60% recycling by 2030; and
 - 65% recycling by 2035; plus
 - 10% limit on landfilling by 2035.
- 6.4 The Government has also set the following targets in the Environmental Improvement Plan 2023¹⁴ (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*¹⁵ which came into force on 30 January 2023 and is set on a kg per capita¹⁶ 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.

¹³ <https://www.gov.uk/government/publications/circular-economy-package-policy-statement/circular-economy-package-policy-statement>

¹⁴ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1168372/environmental-improvement-plan-2023.pdf

¹⁵ *The Environmental Targets (Residual Waste) (England) Regulations 2023*
<https://www.legislation.gov.uk/en/uksi/2023/92/made>

¹⁶ Per head of population in England

- 6.6 The most recent version of the EIP also set the following interim targets for the residual waste target to be achieved by 31 January 2030¹⁷:
- 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 2030:
 - 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 recycling targets is expected to be necessary.
- 6.8 The CWaC C&I waste management profile arrived at for 2024 in Table 21 indicates that an 80% recycling rate is being achieved for CWaC's C&I waste. This achieves the C&I waste recycling target set in the current adopted CWaC Local Plan of 70% by 2025 and it exceeds the Circular Economy Package target set for municipal waste as a whole which includes up to 60% of commercial waste.
- 6.9 Table 21 also indicates that 4% of CWaC C&I waste was sent to landfill in 2024, which is 2% above the expectation of the previous WNA target of 2% by 2025. The 4% however exceeds the Circular Economy Package ceiling for municipal waste as a whole for 2035. Furthermore, given the Environment Act target for a reduction of residual waste of 50% by 2042, going beyond the current Circular Economy package recycling target is likely to be necessary, estimated at 72% by 2042. Based on this, the targets for C&I waste could be more ambitious than set out in the previous WNA. The targets in Table 22 below are proposed.

Table 22: Baseline and Proposed Targets for C&I Waste Management in CWaC

Source: Table 21 plus targets

	Milestone Year				
	2024 ¹⁸	2030	2035	2040	2045
Recycling/composting (floor)	80%	≥82%	≥85%	≥85%	≥85%
Remainder to Landfill (ceiling)	4%	≤3%	≤2%	≤2%	≤2%
Other Recovery (remainder)	15%	15%	13%	13%	13%

¹⁷ While the Government reaffirmed its commitment to meeting the residual waste reduction target by 2042 in the most recent revision of the EIP published December 2025, it did defer the interim target year from 2028 to 2030.
<https://www.gov.uk/government/publications/environmental-improvement-plan-2025/environmental-improvement-plan-eip-2025#annex-2-full-list-of-revised-eip-interim-targets>

¹⁸ Percentages do not add up to 100% due to rounding

Projected Management Requirement for CWaC C&I Waste

6.10 Applying the proposed targets in Table 22 to the C&I waste forecast shown in Table 19 gives the management requirements displayed in Table 23 below.

Table 23: Proposed targets (floors & ceilings) for C&I Waste Management

Source: Table 19 and Table 21

	Current (Table 21)	Milestone Year				Plan Period Peak/Cumulative Capacity Requirement
	2024	2030	2035	2040	2045	
Recycling/Composting Target (Floor)	290,692	297,125	308,766	309,539	310,313	310,313 (peak - rising)
Remainder to Landfill Target (Ceiling)	15,425	10,870	7,265	7,283	7,301	208,420 (cumulative)
Other Recovery inc Recovery to Land Remainder	55,146	50,729	47,223	47,341	47,460	55,146 (peak - falling then static)

6.11 Table 23 shows recycling and composting capacity for C&I waste will be required to manage a peak of c310,000 tonnes from 2035 to the end of the Plan period for the proposed target/floor to be met. The application of the proposed targets would mean a cumulative non-inert landfill requirement of c208,500 tonnes over the Plan period as shown in Table 24 below.

Table 24: Projected Residual C&I Waste Non Haz Landfill Requirement (tonnes)

Source: Table 21

Year	Annual Requirement	Cumulative Requirement
2024	15,425	15,425
2025	14,666	30,091
2026	13,907	43,997
2027	13,148	57,145
2028	12,389	69,533
2029	11,629	81,163
2030	10,870	92,033
2031	10,149	102,183
2032	9,428	111,611
2033	8,707	120,318
2034	7,986	128,304
2035	7,265	135,569
2036	7,269	142,838
2037	7,272	150,110
2038	7,276	157,386
2039	7,280	164,666
2040	7,283	171,949
2041	7,287	179,236
2042	7,291	186,527
2043	7,294	193,821
2044	7,298	201,119
2045	7,301	208,420

Appendix 1: Data from Cheshire split between CE and CWaC

Facility WPA	Site Name	Waste description	Facility Type	Tonnes	CWaC	Comment
Derbyshire	Erin Landfill	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	Landfill	1,138	569	No landfill in either area so assumed 50%
Lincolnshire	Hemswell Cliff Anaerobic Digestion Facility	Materials unsuitable for consumption or processing	Biological Treatment	3,717	0	Biological Treatment facilities in CWaC so most likely CE
		Sludges from on-site effluent treatment	Biological Treatment	879	0	Biological Treatment facilities in CWaC so most likely CE
Northamptonshire	Waste4generation Corby	Combustible wastes other than those mentioned in 19 02 08 and 19 02 09	Biological Treatment	1,133	0	Biological Treatment facilities in CWaC so most likely CE
		Combustible wastes other than those mentioned in 19 02 08 and 19 02 09	Anaerobic digestion	381	331	Attributed 87% of Anaerobic Digestion to CWaC (based on proportion of waste produced in area)
Suffolk	Old Chicory Factory	End-of-life tyres	MRS	3,258	1,629	Attributed 50% to CWaC as both areas produced similar amounts
Middlesbrough	Teesside AD Power Plant	Grease and oil mixture from oil/water separation containing edible oil and fats	Biological Treatment	1,432	0	Biological Treatment facilities in CWaC so most likely CE
Bolton	The Materials Recycling Facility	Bulky waste	Non-Haz Waste Transfer	4	4	Already waste from CWaC going to this site so assuming to be from CWaC
		Mixed municipal waste	Non-Haz Waste Transfer	1,131	1,131	Already waste from CWaC going to this site so assuming to be from CWaC
Bury	Autosave Used Motor Spares	End-of-life vehicles, containing neither liquids nor other hazardous components	Vehicle depollution facility	2,087	2,087	Assumed CWaC as currently no waste from this category reported

		Ferrous metal	Vehicle depollution facility	48	48	Assumed CWaC as currently no waste from this category reported
Lancashire	Hapton Valley Transfer Station	Mixed municipal waste	Recovery of Waste	21	0	Assumed CE as currently waste going to this site
		Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	Recovery of Waste	5,457	0	Assumed CE as currently waste going to this site
		Plastics	Recovery of Waste	119	0	Assumed CE as currently waste going to this site
	Lancashire Waste Recycling Limited	Mixed municipal waste	Physical Treatment	12	0	Assumed CE as currently waste going to this site
		Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	Physical Treatment	1,620	0	Assumed CE as currently waste going to this site
	T R S Tyres Ltd	End-of-life tyres	Non-Haz Waste Transfer	1,480	1,480	Assumed CWaC as currently waste going to this site
	Tom Martin & Co Ltd	Metallic packaging	Metal Recycling	1,026	513	Assumed 50% as both areas produce this waste type
		Metals	Metal Recycling	801	400	Assumed 50% as both areas produce this waste type
Liverpool	Bankfield House	Discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	Metal Recycling	366	183	Assumed 50% as both areas produce metal waste that go to this site
		End-of-life vehicles, containing neither liquids nor other hazardous components	Metal Recycling	1	1	Assumed 50% as both areas produce metal waste that go to this site
		Ferrous metal	Metal Recycling	31,671	15,836	Assumed 50% as both areas produce metal waste that go to this site
		Metals	Metal Recycling	16	8	Assumed 50% as both areas produce metal waste that go to this site

		Non-ferrous metal	Metal Recycling	4,342	2,171	Assumed 50% as both areas produce metal waste that go to this site
	Lower Bank View Waste Management Facility	Aqueous liquid wastes other than those mentioned in 16 10 01	Physical-Chemical Treatment	6,276	1,255	Assumed 20% from CWaC as a larger proportion of this type of waste from CE
		Aqueous suspensions containing paint or varnish other than those mentioned in 08 01 19	Physical-Chemical Treatment	1,452	290	Assumed 20% from CWaC as a larger proportion of this type of waste from CE
		Organic wastes other than those mentioned in 16 03 05	Physical-Chemical Treatment	10	2	Assumed 20% from CWaC as a larger proportion of this type of waste from CE
		Premixed wastes composed only of non-hazardous wastes	Physical-Chemical Treatment	861	172	Assumed 20% from CWaC as a larger proportion of this type of waste from CE
	S Norton & Co Ltd	Ferrous metal	Metal Recycling	65,574	22,454	Assumed 50% as both CE and CWaC send metals to this site minus 10,333 LACW
		Metals	Metal Recycling	18	9	Assumed 50% as both CE and CWaC send metals to this site minus
Salford	Fresh Start Recycling Centre	Bulky waste	Non Haz Waste Transfer / Treatment	1	1	Assumed 63% as more waste of this type from CWaC
		Mixed municipal waste	Non Haz Waste Transfer / Treatment	2,218	1,398	Assumed 63% as more waste of this type from CWaC
		Paper and cardboard	Non Haz Waste Transfer / Treatment	111	70	Assumed 63% as more waste of this type from CWaC
		Plastics	Non Haz Waste Transfer / Treatment	4	2	Assumed 63% as more waste of this type from CWaC
Trafford	Tenax Road, Trafford Park	Discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	Metal Recycling	129	64	Assumed 50% as both areas send waste to this site

		End-of-life vehicles, containing neither liquids nor other hazardous components	Metal Recycling	13	6	Assumed 50% as both areas send waste to this site
		Ferrous metal	Metal Recycling	3,427	1,714	Assumed 50% as both areas send waste to this site
		Metals	Metal Recycling	72	36	Assumed 50% as both areas send waste to this site
		Non-ferrous metal	Metal Recycling	84	42	Assumed 50% as both areas send waste to this site
Buckinghamshire	A S M Metal Recycling Ltd	Ferrous materials removed from bottom ash	Car Breaker	1,194	597	Assumed 50% as neither area has waste going to this code
Oxfordshire	Ardley Energy Recovery Facility	Combustible waste (refuse derived fuel)	Municipal Waste Incinerator	23	0	Assumed from CE as CWaC has its own incinerators
		Mixed municipal waste	Municipal Waste Incinerator	2,795	0	Assumed from CE as CWaC has its own incinerators
Bristol City	Wessex Water, Bristol Treatment Centre	Aqueous liquid wastes other than those mentioned in 16 10 01	Non-Haz Waste Transfer	1,189	594	Assumed 50%, could have come from either area
Birmingham City	Landor Street IRR	Combustible waste (refuse derived fuel)	Haz Waste Transfer	2,071	2,071	Assumed CWaC as waste currently going to this site
		Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	Haz Waste Transfer	95	95	Assumed CWaC as waste currently going to this site
	Minworth S T W	Aqueous liquid wastes other than those mentioned in 16 10 01	Biological Treatment	5,165	0	Biological Treatment facilities in CWaC so most likely CE
Dudley	D G T Metal Recycling Facility - Brewins Way	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	Metal Recycling	2,267	1,133	Assumed 50% as both sites produce waste of this type
	Woodside Works	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	Metal Recycling	4,181	2,090	Assumed 50% as both sites produce waste of this type

Shropshire	Granville/Woodhouse Landfill	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	Landfill	20,589	10,295	No landfill in either area so assumed to be 50%
	Wood Lane Landfill Site	Mixed municipal waste	Municipal Waste Incinerator	28	0	Assumed from CE as CWaC has its own incinerators
		Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	Municipal Waste Incinerator	1,551	0	Assumed from CE as CWaC has its own incinerators
Staffordshire	Stoke Waste Treatment & Transfer Facility	Aqueous liquid wastes other than those mentioned in 16 10 01	Physical-Chemical Treatment	232	98	Assumed 42% as both CE and CWaC send waste to this site in this proportion
		Landfill leachate other than those mentioned in 19 07 02	Physical-Chemical Treatment	847	356	Assumed 42% as both CE and CWaC send waste to this site in this proportion
Stoke-on-Trent City	Strongford ST W	Aqueous liquid wastes other than those mentioned in 16 10 01	Anaerobic digestion	1,231	1,071	Attributed 87% of Anaerobic Digestion to CWaC (based on proportion of waste produced in area)
		Sludges from physico/chemical treatment other than those mentioned in 19 02 05	Anaerobic digestion	4,676	4,068	Attributed 87% of Anaerobic Digestion to CWaC (based on proportion of waste produced in area)
	Truck Tyre Remanufacturing Plant	End-of-life tyres	MRS	2,717	1,359	Attributed 50% to CWaC as both areas produced similar amounts
Warwickshire	Merevale AD Plant	Materials unsuitable for consumption or processing	Biological Treatment	1,152	0	Biological Treatment facilities in CWaC so most likely CE
East Riding of Yorkshire	Changing Waste	Combustible wastes other than those mentioned in 19 02 08 and 19 02 09	Haz Waste Transfer / Treatment	790	0	CE currently send waste to this site
		Materials unsuitable for consumption or processing	Haz Waste Transfer / Treatment	223	0	CE currently send waste to this site
		Premixed wastes composed only of non-hazardous wastes	Haz Waste Transfer / Treatment	20,731	0	CE currently send waste to this site

		Sludges from on-site effluent treatment	Haz Waste Transfer / Treatment	2,866	0	CE currently send waste to this site
		Sludges from washing, cleaning, peeling, centrifuging and separation	Haz Waste Transfer / Treatment	1,214	0	CE currently send waste to this site
North Yorkshire	The Maltings Organic Treatment Facility	Aqueous liquid wastes other than those mentioned in 16 10 01	Biological Treatment / Recovery of Waste	271	135	Assumed 50% although CWaC has its own facilities, it has sent waste to this site
		Materials unsuitable for consumption or processing	Biological Treatment / Recovery of Waste	3,190	1,595	Assumed 50% although CWaC has its own facilities, it has sent waste to this site
		Organic wastes other than those mentioned in 16 03 05	Biological Treatment / Recovery of Waste	96	48	Assumed 50% although CWaC has its own facilities, it has sent waste to this site
		Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	Biological Treatment / Recovery of Waste	21	11	Assumed 50% although CWaC has its own facilities, it has sent waste to this site
		Total		223,796	79,524	

Appendix 2: Methodology for Apportioning Inputs to Wales to Site Categories

The corresponding site category was found for each Input to Wales as shown in Table A.1 below. The LACW values were taken from the separate report in this WNA (LACW report).

Table A.1: Principal Inputs (>500 tonnes) of C&I Waste to permitted Welsh sites from CWaC (WPRDI 2024) and Shortfall with Outputs of CWaC site reporting through WDI 2024

Source: WDI 2024

EWC Waste Description	Inputs to Wales (WPRDI)	Site Category	LACW
Waste Glass	667	Treatment	22
Ferrous metal filings with turnings	1,513	MRS	-
Ferrous Metal	860	MRS	203
Non-ferrous metal	908	MRS	-
Spent fluid catalytic cracking catalysts	4,890	Treatment	-
Screenings	646	Landfill	41
Plastic and rubber	509	Transfer	-
Wood	1,308	Incineration	-
Minerals (for example sand, stones)	1,140	Landfill	-
Minerals (for example sand, stones)	8,110	In/On Land	-
Other wastes	2,474	Landfill	-
Other wastes	917	Transfer	-
Paper and cardboard	2,412	Transfer	2,173
Mixed municipal waste	1,300	Landfill	2,700
Mixed municipal waste	30,637	Transfer	
Mixed municipal waste	5,417	Transfer	
Mixed municipal waste	684	Treatment	

Next, all values for each site category were grouped together to give the Inputs to Wales by Category as shown in Table A.2 below. The LACW from Table A.1 above were subtracted from the Inputs to Wales by Category values. This process arrived at 46,068 tonnes which have been added to the total amount of waste managed outside CWaC, apportioned by site management type category.

Table A.2: Inputs to Wales by Category Excluding LACW Value

Site Category	Landfill	Metal Recycling Sites	Transfer	Treatment	EfW	Totals
Inputs to Wales by Category	1,829	2,647	39,222	6,241	1,267	51,207
Excluding LACW	1,789	2,444	34,349	6,219	1,267	46,068



Cheshire West & Chester Waste Needs Assessment Update 2026

Appendix D: Management Requirements for Construction, Demolition & Excavation Waste in Cheshire West and Chester to 2045

Report: Final Issue

Version: 2.0

Issued: June 2026

BPP Consulting Document Control**Project:** Cheshire West and Chester Waste Needs Assessment Update 2026**Report:** Management Requirements for Construction, Demolition & Excavation Waste in Cheshire West and Chester to 2045**Version Description:** Final Issue**Version No.:** 2.0**Date:** 02.06.2026

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Abbreviations

Abbreviation	Term
AD	Anaerobic Digestion
C & I	Commercial & Industrial Waste
C, D & E / CDEW	Construction, Demolition & Excavation Waste
CWaC	Cheshire West and Chester
DEFRA	Department for Environment, Food and Rural Affairs
EA	Environment Agency
EfW	Energy from Waste
EWG	European Waste Catalogue
HWRCs	Household Waste Recycling Centres
LAA	Local Aggregates Assessment
LACW	Local Authority Collected Waste
MRS	Metal Recycling Site
nPPG	National Planning Practice Guidance
WDI	Waste Data Interrogator
WNA	Waste Needs Assessment
WPRDI	Waste Permit Returns Data Interrogator
WPA	Waste Planning Authority

Glossary of Terms

Term	Definition
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.
Cheshire West and Chester	The Plan area to which this WNA relates.
Commercial Waste	Waste from 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.
Disposal	Deposit of waste that is for the purposes of disposal rather than recovery (for restoration or operational purposes).
Energy from Waste	The capture of the calorific value of waste, 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 information on waste management matters and deals with other matters such as water issues including flood protection.
European Waste Catalogue	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.

Term	Definition
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 combustion of waste. Where energy is recovered referred to as 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).
Local Aggregates Assessment	Annual assessment of the demand for and supply of aggregates in a particular mineral planning authority's area, in this case Cheshire West & Chester City Council.
Local Authority Collected Waste	Waste collected by or on behalf of a local authority. Includes household waste and business waste were collected by a local authority and non-municipal fractions such as construction and demolition waste delivered to HWRCs. The term is used for what was previously referred to as municipal waste.
Mass Balance Method	Method comparing the WDI waste received and waste removed datasets to identify potential shortfalls in incoming waste that may have been converted to recycled aggregate.,
Materials Recycling Site	A facility for sorting recyclable materials from the incoming waste stream.
'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.
National Planning Practice Guidance	Detailed guidance for the application of national planning policy published by the Ministry of Housing, Communities and Local Government.
Recovery	Subjecting waste to processes that recover value including recycling, composting, thermal treatment to recover energy or backfilling of mineral workings.

Term	Definition
Recycling	The reprocessing of materials extracted from the waste stream into a product.
Residual Waste	Waste remaining after materials for re-use, recycling and composting/organic waste treatment e.g. anaerobic digestion have been removed.
The Plan area	The area subject to the Local Plan to which this study relates. In this case Cheshire West & Chester.
Waste Data Interrogator	Annual dataset published by the Environment Agency reporting quantities and types of waste managed at permitted waste management facilities in England.
Waste Needs Assessment	Forecasts waste that will require management by different means in a WPA area over a certain period of time, assesses capacity of the existing facilities available to manage this waste and considers the need for additional facilities to meet the forecast management needs. This underpins the preparation of planning policies for waste.
Waste Permit Returns Data Interrogator	Annual dataset published by Natural Resources Wales reporting quantities and types of waste managed at permitted waste management facilities in Wales.
Waste Planning Authority	The authority responsible for planning for waste within a specific administrative area. In this case Cheshire West & Chester City Council.

1 Introduction

1.1 Cheshire West and Chester (CWaC) Council contracted BPP Consulting to produce an update to the Cheshire West & Chester Waste Needs Assessment (WNA 2023) that was used to underpin the preparation of its Local Plan policies relating to waste for the Plan period to 2045. The CWaC Waste Needs Assessment 2023 relied on data for 2021, while this update is based on data for 2024, the most recent year for which data was available at the time of writing.

1.2 This WNA update consists of the following sections:

1. Review of Management Requirements for Local Authority Collected Waste.
2. Review of Management Requirements for Commercial & Industrial Waste.
3. Review of Management Requirements for Construction, Demolition & Excavation Waste.
4. Review of Management Requirements for Hazardous Waste.
5. Scoping Review of Management Requirements for Other Waste.
6. Review of Strategic Waste Flows in 2024.
7. Overview of Management Requirements.

2 Estimating C, D & E Waste Arisings Baseline

Introduction

- 2.1 This section is concerned with estimating arisings of Construction, Demolition and Excavation (C, D & E) waste arising in CWaC in 2024. It also gives rise to a management profile incorporating the findings of a Waste Attribution exercise. From this, the management requirements identified in the WNA 2023 based on forecast arisings for which management targets were proposed have been checked to confirm they remain robust or not.

Definitions and Context

- 2.2 The CWaC WNA 2023 included the following definition for Construction, Demolition and Excavation (C, D & E) 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.” (Glossary)¹.

- 2.3 Currently there is no requirement on businesses to submit records of waste produced and hence estimating quantities of C, D & E waste arisings for a specific Plan Area is a challenge. Two different approaches can be taken to estimate a baseline for C, D & E waste as follows:
- **‘Point of production’** method which uses data based on the construction activity within an area and applying waste production factors (related to the different types of activity such as new build and refurbishment) derived from Site Waste Management Plans (SWMP). However, as construction activity statistics data is no longer produced at a sub-regional i.e. county level it is not possible to reliably replicate this method.
 - **‘Point of management’** using data related to the quantity of C, D & E waste managed. This largely relies on records of waste delivered to, and removed from, permitted waste management facilities being reported with accuracy. 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 unpermitted sites that don’t report through the WDI, such as the Environment Agency’s exemption register and responses to surveys conducted by Minerals Planning Authorities of the quantity of recycled aggregate sold by producers within their respective Plan area (as part of compiling their LAAs).

¹ Although the definition doesn’t specifically refer to excavation waste, excavation waste is included in the calculations.

3 Methodology

- 3.1 The national methodology for estimating annual waste generation from the Construction, Demolition and Excavation (C, D & E) Sectors for England, (the ‘Point of Management’ method), uses information from four key management routes:
- (1) Waste managed at transfer and treatment facilities (reporting through the Agency WDI).
 - (2) Waste managed by landfill (reporting through the Agency WDI).
 - (3) Waste managed under exemptions (derived from an Environment Agency register and estimated tonnage managed).
 - (4) Waste recycled as aggregate (from a national estimate prepared by the Mineral Products Association).
- 3.2 In order to assess C, D & E waste arisings in the Plan area, the national methodology has been modified to reflect local circumstances, in particular the following modifications have been made:
- Values for Plan area waste classed as C, D & E waste managed through permitted sites in 2021 as reported in the WDI with steps taken to avoid possible double counting and to capture wastes that may have been reclassified as a consequence of processing through intermediate sites.
 - The population of exempt sites registered in CWaC has been established through the Environment Agency held exempt register. Then the estimated value for the quantity of waste managed at the key exemption managing C, D & E waste (‘U1’)² from a government funded study³ was applied.
 - The quantity of waste converted into recycled aggregate has been based on the WDI 2024 ‘mass balance’ method as per the method included in the recently released national guidance developed by Aggregate Working Parties in England for estimating recycled aggregate production⁴, rather than from the Mineral Products Association national estimate.
- 3.3 For the purposes of this exercise C, D & E waste has been taken to include the following waste as per the List of Waste/European Waste Catalogue:
- (1) All of Chapter 17 (Construction & Demolition Waste)
 - (2) 19 12 09 (minerals such as sand, stones)
 - (3) 20 02 02 (soil and stones).
- 3.4 A check has also been undertaken for any waste classified under EWC 19 13 as this includes remediated soils which should be included in the C, D & E waste arisings total if it does arise within the Plan area. However, in this case no tonnage of this waste type was reported as arising in CWaC in the WDI 2024.

² Note the Government has recently announced the proposed revision and tightening of conditions of U1 exemption in its response to the 2018 consultation on “*proposals to tackle crime and poor performance in the waste sector and introduce a new fixed penalty for the waste duty of care*”

³ See footnote 2

⁴ *Recycled Aggregates Data: Guidance on Assessing Levels of Recycled Aggregates* (May 2022)

Inputs to permitted waste management facilities

Step 1: Calculate the tonnage of C, D & E waste from CWaC sent to permitted sites.

- 3.5 The total amount of C, D & E waste reported through the WDI in 2024 as coming from CWaC managed at permitted sites (located within CWaC and elsewhere in England⁵) was c414,500 tonnes. This comprised c115,500 tonnes managed within CWaC, and c300,000 tonnes managed outside CWaC. The breakdown and management routes are shown in Table 1 below.

Table 1: Management of C, D & E Waste from CWaC through Permitted Sites (tonnes)

Source: WDI 2024

	Permanent Deposit to Land				Metal Recycling Sites	Transfer	Treatment	Grand Total
	Landfill			Recovery to Land				
	Haz	Non-haz	Inert					
Managed within CWaC	0	0	34,178	6,090	0	18,029	56,954	115,250
Managed outside CWaC	1,041	15,693	18,509	1,700	3,291	101,232	157,598	299,064
Totals	1,041	15,693	52,687	7,790	3,291	119,260	214,552	414,314

Step 2: Deduct EWC codes relating to hazardous component of C, D & E waste

- 3.6 Requirements for management of hazardous waste arising in CWaC are accounted for separately⁶. Therefore, the hazardous component of the C, D & E waste stream is deducted to avoid double counting. Of the inputs of C,D&E waste from CWaC shown in Table 1, a total of 23,365 tonnes was identified as hazardous waste. When deducted, this leaves a revised total of c390,949 tonnes. The revised values are shown in Table 2.

Table 2: Management of non-hazardous C, D & E Waste from CWaC through Permitted Sites (tonnes)

Source: WDI 2024

	Permanent Deposit to Land			Metal Recycling Sites	Transfer	Treatment	Grand Total
	Landfill		Recovery to Land				
	Non-haz	Inert					
Managed within CWaC	0	34,178	6,090	0	18,029	56,954	115,250
Managed outside CWaC	7,305	18,509	1,700	3,288	101,038	143,859	275,699
Totals	7,305	52,687	7,790	3,288	119,067	200,813	390,949

⁵ The WDI only reports on permitted sites in England. Waste managed at facilities outside England such as Wales or Scotland is reported separately.

⁶ See section 4

Step 3: Quantify waste going to its final fate or leaving the Plan area

Step 3a. C, D & E waste from CWaC managed at permanent deposit sites.

- 3.7 As inputs to Landfill and Recovery to Land involve the permanent deposit of the waste, they are regarded as final points of management (or fate), so these values are taken as final as follows: 59,992 tonnes (combined landfill values in Table 2) + 7,790 tonnes (Recovery to Land value from Table 2) = 67,782 tonnes. Table 3 shows the CWaC C, D & E waste baseline 2024 arising running total as a cumulative value.

Table 3: Non-hazardous (including inert) C, D & E waste from CWaC running total – Step 3a (tonnes)

Source: Table 2

Component	Value	Cumulative Total
Permanent Deposit	67,782	67,782

Step 3b. C, D & E waste from CWaC managed at intermediate sites outside CWaC

- 3.8 As shown in Figure 1 waste from CWaC managed at intermediate sites outside CWaC ceases to be identified as coming from CWaC following receipt at the next management facility ('next step' site).

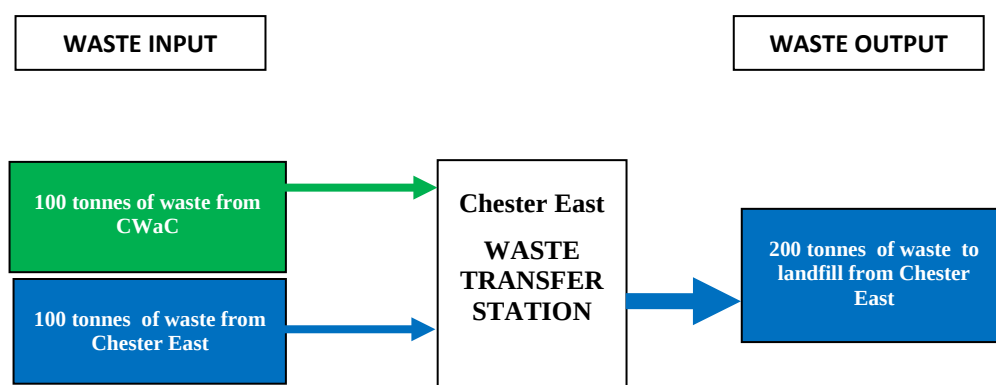


Figure 1: Schematic of how flows of CWaC waste to sites outside CWaC (Chester East used as example) are reported in the WDI.

- 3.9 Hence the tonnage of CWaC waste accepted at intermediate sites outside CWaC for management is also taken to be a 'final value' as follows:

3,288 tonnes (out of Plan area MRS from Table 2) + 101,038 tonnes (out of Plan area transfer from Table 2) + 143,859 tonnes (out of Plan area treatment from Table 2) = 248,185 tonnes.

Table 4 shows the CWaC C, D & E waste baseline arising running total is now c316,000 tonnes.

Table 4: Table 3 plus CWaC waste managed at intermediate sites outside of CWaC running total – Step 3b (tonnes)

Source: Table 3 plus waste managed out of CWaC

Component	Value	Cumulative Total
Permanent Deposit	67,782	67,782
Managed out of CWaC	248,185	315,967

Step 4: Calculate the tonnage of C, D & E waste from CWaC treated in CWaC that may have been subject to reclassification

3.10 Having established the quantity of CWaC C, D & E waste going to a final fate or leaving the Plan area as c316,000 tonnes (Table 4), the quantity of inputs to intermediate sites within CWaC which may be included in the arisings value also needs to be accounted for.

3.11 This value needs to be further interrogated to ensure that it does not:

1. Double count inputs to intermediate sites in CWaC that subsequently get managed at a 'next step' site as CWaC waste and hence over report arisings; nor,
2. misses C, D & E waste that may have been reclassified following processing through these sites and hence under-report arisings. This is because waste leaving an intermediate site may be reclassified as a waste from a waste management process (the relevant waste chapter is 'Chapter 19') rather than Chapter 17 (the code normally applied to C, D & E waste). This is explained by the following example:

'Intermediate' Site 1 in CWaC receives 100 tonnes of CWaC C, D & E waste.

Following treatment e.g. sorting and some processing, the 100 tonnes gets split into:

- 25 tonnes of soil (classed as Chapter 17 waste) which goes for Recovery to Land at Site 2; The 25 tonnes of soil is therefore also recorded at the point of input to the Recovery to Land site as waste arising in CWaC (regardless of whether Site 2 is within or outside CWaC).
- 50 tonnes of recycled aggregate, sold directly for use as an aggregate; this is counted under the recycled aggregate value obtained by the 'mass balance' method as it is not explicitly reported in the WDI as it ceases to be waste⁷;
- 25 tonnes of waste sent to landfill classed as Chapter 19 waste due to the incoming waste having been processed and then reclassified as 'waste from waste management processes'.

⁷ Providing it is produced in accordance with a Factory Production Control Manual that fulfills the Aggregate Quality Protocol requirements.

This is illustrated in Figure 2 below:

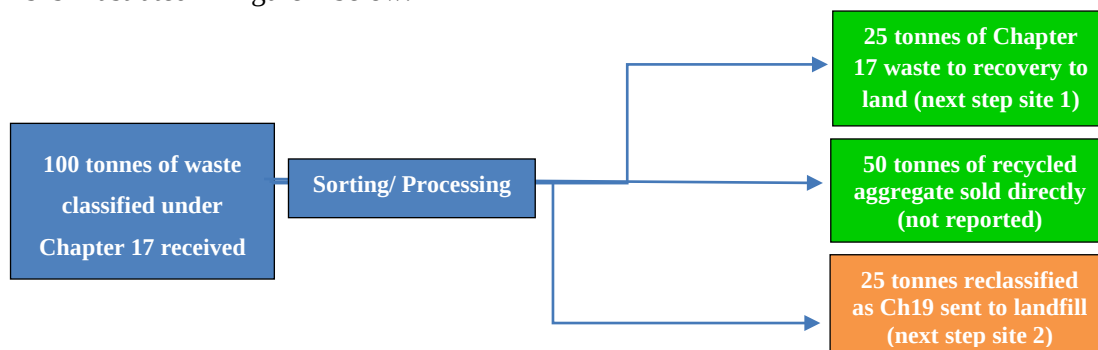


Figure 2: Schematic of intermediate site outputs to track Cheshire West & Chester C, D & E waste fate.

- 3.12 As it is not possible to distinguish from input data inputs to next step/final fate sites as whether they have gone direct from source or via an intermediate site, that element of Chapter 19 waste that came from intermediate sites in the Plan area that may have originated from C, D & E waste from the Plan area has been estimated. This is done by identifying each intermediate site within the Plan area that received C, D & E waste from CWaC that also reported Chapter 19 waste as an output.
- 3.13 The proportion of the Chapter 19 output that might be attributed to the C, D & E waste received arising from CWaC was determined as follows:
- 1) Did the site have a shortfall between the C, D & E waste received and removed of over 500t?
 - 2) Did the site have outputs classed under Chapter 19 of over 500t?
 - 3) If yes, then the percentage of total inputs attributed to CWaC is applied to the outputs of Chapter 19 to give a Chapter 19 'makeup'.
- 3.14 NB: Where the Ch 19 output is greater than the shortfall, only the shortfall value is used. Where the shortfall can't be made up this may be taken to indicate that tonnages of C, D & E Waste have been converted into recycled aggregate which is not generally declared on the permit waste returns and hence reported in the WDI, as it has ceased to be waste.
- 3.15 Applying this method to the CWaC Intermediate sites (Metal Recycling Sites, Waste Transfer Stations & Waste Treatment sites) identified as both receiving C, D & E waste from CWaC and producing Chapter 19 waste in 2024 yielded the following:
- Q1: 5 intermediate waste sites within CWaC were identified as having a shortfall between the inputs and outputs of C, D & E waste of greater than 500 tonnes⁸.
- Q2: Of these sites, 4 had net⁹ outputs of waste classified as Chapter 19 of over 500 tonnes as listed in Appendix 1.
- 3.16 Therefore, there are 4 further additions of potentially missed C, D & E waste reclassified under Chapter 19 at this stage in the computation, hence the entry for this component in Table 5 is c8,000 tonnes.

⁸ 500 tonnes is taken to be a tonnage regarded as significant for the purposes of this exercise.

⁹ "Net" being the difference between any inputs of Ch19 and outputs of Ch19 waste.

Table 5: Table 4 plus Chapter 19 – Step 4 running total

Source: Table 4 plus Ch 19 output

Component	Value	Cumulative Total
Permanent Deposit	67,782	67,782
Managed out of CWaC	248,185	315,967
CWaC intermediate site net Ch 19 output	8,078	324,045

Step 5: Account for C, D & E waste converted into Recycled Aggregate

- 3.17 This section sets out the calculation to quantify C, D & E waste arising in CWaC used to produce recycled aggregate. This has been calculated using methods included in the national guidance developed by Aggregate Working Parties in England for estimating recycled aggregate production¹⁰.
- 3.18 Each year CWaC Council prepares a Local Aggregates Assessment¹¹ (LAA) which reports how much aggregate is sold from CWaC sites and how this relates to the demand for aggregate. For the purpose of estimating recycled aggregate sales in 2024, the WDI has been relied upon.
- 3.19 Given the above and the fact that this report is updating baseline C, D & E waste arisings, the value obtained using the WDI ‘mass balance’ method (see glossary) was taken. The breakdown is shown in Appendix 1.
- 3.20 Appendix 1 shows that c50,500 tonnes of C, D & E waste reported as arising from CWaC is indicated to have been converted into recycled aggregate at four sites when the WDI ‘mass balance’ method is applied. This value has been included in the calculation of C, D & E waste arising running total in Table 6. This gives a CWaC C, D & E baseline 2024 arising running total of c374,500 tonnes.

Table 6: CWaC C, D & E waste after Step 5 running total

Source: Table 5 plus Recycled Aggregates

Component	Value (tonnes)	Cumulative Total
Permanent Deposit	67,782	67,782
Out of CWaC Intermediate	248,185	315,967
In Plan Area Intermediate Chapter 19	8,078	324,045
Recycled Aggregate	50,548	374,592

¹⁰ Recycled Aggregates Data: Guidance on Assessing Levels of Recycled Aggregates (May 2022)

¹¹ https://planningpolicy.cheshirewestandchester.gov.uk/sites/planningpolicy-cheshirewestandchester/files/2025-11/LocalAggregateAssessment2024_CWAC.pdf

Step 6: Estimate the quantity of C, D & E waste managed by exempt waste activities in CWaC

- 3.21 The national Planning Practice Guidance (nPPG) advises that: "...when forecasting construction and demolition waste arisings, the following may be relevant:
- the fact that a sizeable proportion of construction and demolition waste arisings are managed or re-used on-site, or exempt sites, so it is critical that some provision is made for unseen capacity in this way." (emphasis added)
- Paragraph: 033 Reference ID: 28-033-20141016
- 3.22 Regulations were introduced in 2011 which dramatically reduced the maximum quantities of waste that could be managed by activities for which exemptions, rather than environmental permits, could be relied upon, and so the quantity of C, D & E waste managed through exempt activities has reduced substantially. However, as a quantity of C, D & E waste is still expected to be managed at exempt activities, it is still appropriate to give consideration to the contribution some activities may make to management of this stream, and hence to the calculation of arisings.
- 3.23 Exempt activities registered under Paragraph U1 (use of waste in the construction) generally account for the management of the most significant quantities of C, D & E waste by exempt activities. A government funded report¹² estimated a mean value for the quantity of waste managed by an activity registered under U1 as 600 tonnes.
- 3.24 The following steps ensure that management of C, D & E waste managed by activities registered under paragraph U1 is taken into account in the assessment of C, D & E waste arisings in CWaC.

Table 7: Number of activities in CWaC registered as exempt under paragraph U1 2022 to 2024

Source: EA Register of Waste Exemptions

	2022	2023	2024	Total	3-yr Average
Paragraph U1	38	40	42	120	40

- 3.25 Exemption registrations are valid for 3 years, and hence the total population of exempt activities identified in Table 7 above includes any site registered between January 2022 and December 2024. However, a survey of exempt activities undertaken by Surrey County Council in 2017¹³ indicated that those registered under paragraph U1 tend to be used on a 'one-off' basis. While in theory, it is possible that all the exempt activities registered between January 2022 and December 2024 were utilised in 2024 and so the total number could be used to estimate arisings, this is considered unlikely and so instead the total number registered was divided by three to generate a mean annual value of 40 for the number of U1 exempt activities considered to be active in CWaC during 2024.
- 3.26 From the mean number of exempt activities registered under paragraph U1, and applying the national report value of 600 tonnes per exemption, it is estimated that the total quantity of C, D

¹² Refer to footnote 3

¹³ Waste Permitting Exemption Survey by Surrey County Council with support from BPP Consulting (unpublished)

& E waste managed by such activities in CWaC in 2024 was 24,000 tonnes. This value has been included in the CWaC C, D & E baseline arising running total. As shown in Table 8, this results in a CWaC C, D & E baseline 2024 arising running total of c400,000 tonnes.

Table 8: CWaC C, D & E waste after Step 6 running total

Source: Table 6 plus Exemptions

Component	Value (tonnes)	Cumulative Total
Permanent Deposit	67,782	67,782
Out of CWaC Intermediate	248,185	315,967
In Plan Area Intermediate Chapter 19	8,078	324,045
Recycled Aggregate	50,548	374,592
Exemptions	24,000	398,592

Step 7: Account for tonnages not attributed below Cheshire and Chester

Step 7a: Attributing tonnage not attributed below Cheshire and Chester to CWaC

- 3.27 Data quality of the WDI relies on operators of permitted sites reporting inputs down to origin WPA level. A number of sites do not report inputs to that level, preferring to report at sub regional level only under 'Cheshire'. The WDI 2024 reports c93,500 tonnes of C, D & E waste not coded below Cheshire managed through sites reporting through the WDI, some of which may have originated from CWaC. Looking at the data for waste unattributed below Cheshire, it was noted that 370 tonnes of waste going to Treatment facilities had a recorded origin of Chester and given that Chester forms part of CWaC, this tonnage was added to the total of C, D & E waste arising in CWaC (to the 'Cheshire Unattributed' value in Table 10). For the remaining tonnage a further computation process has been undertaken to apportion that tonnage. The breakdown by management route of the Cheshire waste (excluding the Chester waste) is shown in Table 9 below.

Table 9: Waste not attributed below Cheshire (excluding Chester)

Source: WDI 2024

	Landfill	MRS	Transfer	Treatment	Grand Total
Cheshire West & Chester	0	0	225	27,450	27,675
Cheshire East	0	35	1	27,530	27,566
Other receiving WPAs	3,754	2,844	7,905	23,820	38,350
Total					93,591

- 3.28 As C, D & E waste is relatively heavy it tends not to travel far from the place of origin. Therefore, where the unattributed Cheshire waste was managed at a facility located either within CWaC or within CE it was assumed to have come from the Plan area within which the receiving management facility was actually located. This meant that out of that total c93,500 tonnes, c27,675 tonnes was taken to have arisen in CWaC (and c27,566 tonnes were assumed to have originated in CE). The previously mentioned 370 tonnes of Treatment waste attributed to Chester was removed from the Treatment value in the row 'Other receiving WPAs' in Table 9 since that waste has been attributed to CWaC. That left 38,350 tonnes of C, D & E waste to be attributed using the methodology set out in Appendix 2, resulting in 24,641 tonnes managed outside CWaC or CE being attributed to CWaC.
- 3.29 Adding the attributed tonnage to the Chester tonnage and the 'CWaC managed in CWaC' tonnage gives a total addition of 55,686 tonnes (370t + 27,675t + 24,641t). This results in a CWaC C, D & E baseline arising running total for 2024 of c451,500 tonnes as shown in Table 10.

Table 10: CWaC C, D & E waste after Step 7a (addition of unattributed waste) running total

Source: Table 8 plus unattributed

Component	Value (tonnes)	Cumulative Total
Permanent Deposit	67,782	67,782
Out of CWaC Intermediate	248,185	315,967
In Plan Area Intermediate Chapter 19	8,078	324,045
Recycled Aggregate	50,548	374,592
Exemptions	24,000	398,592
Cheshire Unattributed	52,686	451,278

Step 7b: Allocate waste unattributed below Cheshire to categories

- 3.30 Of the waste unattributed below Cheshire, the waste attributed to CWaC needed to be allocated back to the categories in Table 11. The methodology for this allocation process is set out in Appendix 3. Table 11 shows the Cheshire unattributed waste after being allocated to the 'Permanent Deposit' and 'Out of CWaC Intermediate' values.

Table 11: CWaC C, D & E waste after Step 7b (unattributed waste allocated to categories) running total

Source: Table 10 with Cheshire Unattributed allocated to categories

Component	Value (tonnes)	Cumulative Total
Permanent Deposit	70,688	70,688
Out of CWaC Intermediate	297,965	368,653
In Plan Area Intermediate Chapter 19	8,078	376,731
Recycled Aggregate	50,548	427,278
Exemptions	24,000	451,278

Step 8: Account for waste managed in Wales

3.31 Given CWaC's relatively close proximity to Wales and the fact that the WDI only reports waste received and removed from permitted waste management sites located in England, there is a risk of underreporting of CWaC waste if the waste from CWaC was sent directly to a facility in Wales for management. Therefore, the C, D & E type waste reported as being received at sites in Wales, as reported in the Wales Waste Permit Returns Data Interrogator (WPRDI) 2024, has been analysed and compared with WDI CWaC site output data to determine whether inputs to Welsh sites from CWaC came direct from CWaC and hence was not reported in the WDI. Where a greater or equivalent tonnage of waste by EWC code reported in the WDI as an output of a CWaC site appeared as an input to a Welsh site it was taken to have already been counted as an input to the CWaC site, and where the amount reported by the CWaC site was less, the difference was taken as being a direct delivery from CWaC to a Welsh site and therefore needed to be counted in its own right. The following steps have been undertaken to identify any directly delivered tonnage:

- a) The principal C, D & E waste codes (>500 tonnes) received at sites in Wales from CWaC reporting in the WPRDI 2024 were identified;
- b) For each tonnage of input waste over 500 tonnes, the output data listed in the WDI of CWaC sites was cross checked by EWC and destination to confirm if an equivalent or greater tonnage of that waste type was declared as an output going to Wales (from CWaC);
- c) Where a greater or equivalent tonnage did not appear as an output from CWaC sites, the difference between the input value and the CWaC site output value was recorded as a direct delivery to Wales taking the shortfall value from the WPRDI entry;
- d) Where a greater or equivalent tonnage did appear as an output of a CWaC site, the Wales site inputs were ignored as it was already accounted at the intermediate site in CWaC, hence avoiding double counting of this waste.

Table 12 presents the outcome of the analysis for each waste type (EWC).

Table 12: Principal Inputs (>500 tonnes) of C, D & E Waste to permitted Welsh sites from CWaC (WPRDI 2024) vs Shortfall with Outputs of CWaC site reporting through WDI 2024

Source: WDI 2024 (Waste Removed) & WPRDI 2024 (Waste Received)

EWC Code	Inputs to Wales (WPRDI)	Outputs from CWaC site to Wales (WDI)	Shortfall
17 03 01 Bituminous mixtures	1,958	0	1,958
17 01 02 Bricks	4,530	0	4,530
17 04 11 Cables	1,419	9	1,410
17 01 01 Concrete	8,920	0	8,920
17 04 05 Iron and Steel	2,268	58	2,209
19 12 09 Minerals	9,528	18,293	0
17 09 04 Mixed CDE	17,268	51	17,217
17 01 07 Mixed Concrete, Bricks, Tiles, Ceramics	10,372	6,338	4,034
17 05 04 Soils and stones	37,548	1,943	35,605
17 02 01 Wood	1,126	880	245
Total Shortfall between input and declared outputs			76,128

3.32 The above exercise indicates that a significant tonnage (c76,100t) of CWaC C, D & E waste went direct to sites located in Wales and hence goes unreported in the WDI. Therefore, the value of 76,128 tonnes as shown in Table 11 has been added to the CWaC C, D & E waste baseline. **This gives a final baseline C, D & E waste value for 2024 of c527,400 tonnes as shown in Table 13.**

Table 13: CWaC C, D & E waste after Step 8 running total

Source: Table 11 plus waste to Wales

Component	Value (tonnes)	Cumulative Total
Permanent Deposit	70,688	70,688
Out of CWaC Intermediate	297,965	368,653
In Plan Area Intermediate Chapter 19	8,078	376,731
Recycled Aggregate	50,548	427,278
Exemptions	24,000	451,278
Direct to Wales	76,128	527,406

Step 9: Comparison with previous baseline arisings estimates

- 3.33 The C, D & E waste baseline arising value generated of c527,400 tonnes for 2024¹⁴, is some c16,100 tonnes lower than the WNA 2023 value of c543,500 tonnes for 2021.

Comparison of baseline values obtained

Table 14: CWaC C, D & E waste baseline 2021 vs 2024 comparison (tonnes)

Source: Table 13, WNA 2023

Component	2024 Value	2021 Value	Difference	Comment
Permanent Deposit	70,688	61,269	9,419	Increase
Out of CWaC Intermediate	297,965	286,326	11,639	Increase
In Plan Area Intermediate Chapter 19	8,078	0	8,078	Increase
Recycled Aggregate	50,548	78,237	-27,689	Significant Decrease
Exemptions	24,000	14,400	9,600	Increase
Direct to Wales	76,128	103,412	-27,284	Significant Decrease
Total	527,406	543,645	-16,239	Decrease

Relationship between C, D & E waste arisings and house building activity

- 3.34 The WNA 2023 included a review of the previous 3-years WDI data to assess the possible impact of the Covid-19 pandemic on construction activity and resultant C, D & E waste arisings. This found that there was no fall in arisings in 2020 the principal year affected by Covid-19. In addition, a comparison of arisings against house building activity in CWaC during the period was undertaken to determine whether there may be a correlation between construction activity and arisings. This found that although a drop in house building occurred in the CWaC in 2020 and a bounce back in 2021, there appeared to be no direct correlation between the amount of C, D & E waste arising and house building activity in CWaC over that period, in fact if anything any correlation appeared to be inverse.

¹⁴ This compares with 548,000 tonnes predicted to be produced in 2025 in the WNA 2023 forecast, making the prediction c11,000 tonnes higher than the actual value for 2024.

- 3.35 In order to test the WNA 2023 findings, Figure 3 plots CWaC C, D & E top level waste arisings (2019 and 2020) along with the 2024 C, D & E waste arisings value against house building activity in CWaC. This shows that waste arisings were increasing until 2021 then stabilised, whilst house building activity increased significantly in 2022 and then fell in 2023 and remained at a similar level in 2024. As the only directly comparable values for C, D & E waste are those for 2021 and 2024, the only true observation is that while house building increased significantly (38%), C, D & E waste arisings remained at a similar level (decreased by 1%).

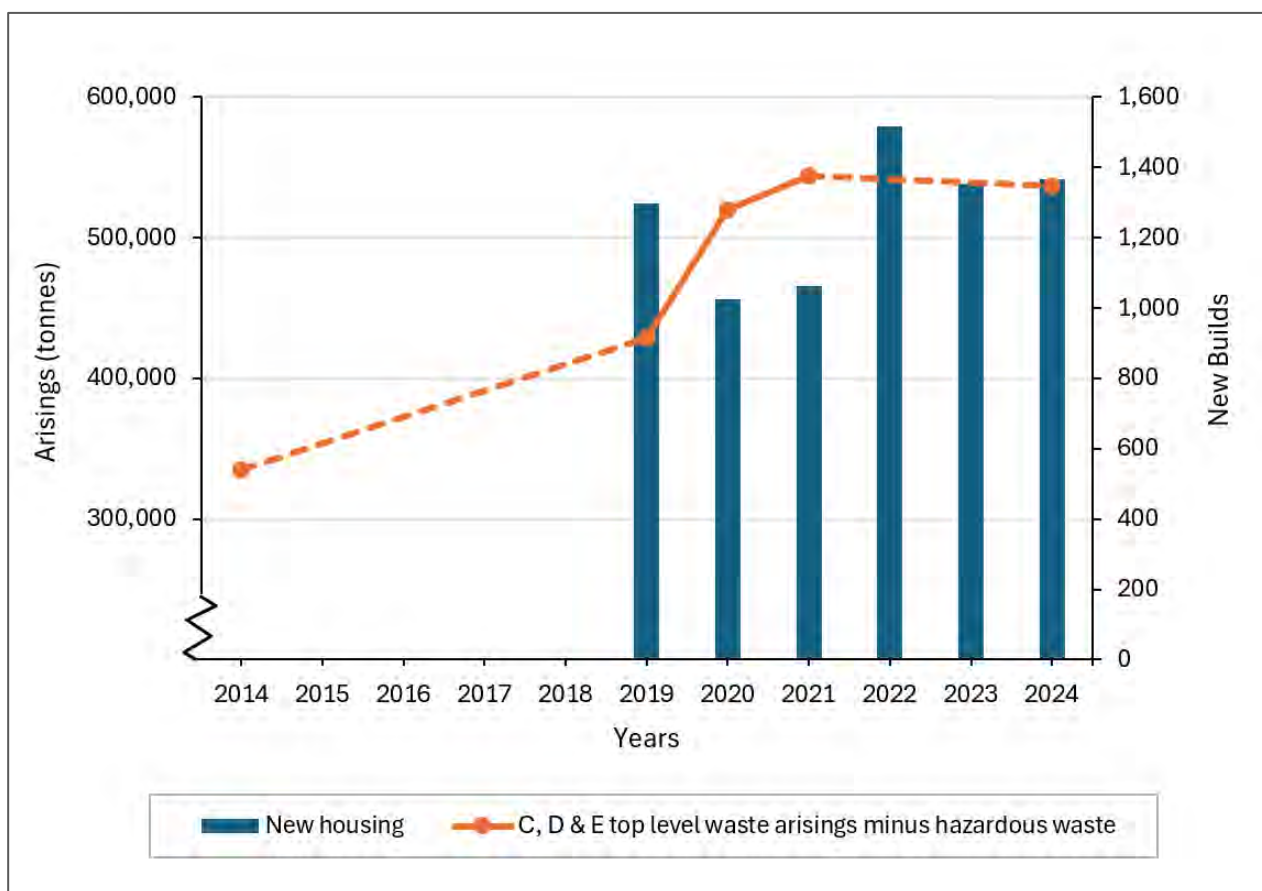


Figure 3: CWaC C, D & E top level waste arisings (orange line) (2014-2024) vs house building in CWaC (blue bars) (2019-2024) (dashed line indicates inferred trajectory)

Source: WDI and CWaCC (Table 2)

4 Forecasting Future C, D & E Waste Growth

Context

- 4.1 The nPPG states when looking to forecast C, D & E waste:

“Waste planning authorities should start from the basis that net arisings of construction and demolition waste will remain constant over time as there is likely to be a reduced evidence base on which forward projections can be based for construction and demolition wastes.”

- 4.2 Hence the starting point for any assessment is that there will be no growth in arisings in the forecast period. In the previous WNA 2023 a growth rate of 0.1% per annum was applied to the Plan period (2021-2045). Since the 2024 baseline value is very similar (only 1% p.a lower) than the 2021 baseline, the forecast does not require an update since the WNA 2023 remains robust.

5 Profiling the Existing C, D & E Waste Management Methods

Backfilling of mineral workings

- 5.1 The WDI allocates tonnages to sites by permit category granted by the Environment Agency. In the case of backfilling of mineral working this might either be a recovery to land permit or a landfill environmental permit. Where a site involving the permanent deposit of waste to land has been determined by the Agency to not qualify for a recovery to land permit under its guidance, it will be classed as a landfill. In that situation inputs to sites involving backfilling of mineral workings are counted as going to landfill in the WDI. However, given that activities such as backfilling of mineral workings are classed as recovery according to Government guidance on the waste hierarchy¹⁵, and sites where this takes place may be classed as a landfills for permitting purposes, there can be a mismatch between the tonnages of waste shown as having gone to landfill and the waste hierarchy orientated targets that might be set out in the waste policies included in the emerging CWaC Local Plan.
- 5.2 Table 15 sets out how the datasets for inputs from CWaC to such sites have been disaggregated to distinguish between tonnages recovered at, as opposed to disposed to, landfill. This has been done on the basis that all inert waste sent to landfill will have actually been used in restoration or to meet operational needs and therefore does not represent disposals. This is supported by the fact that the gate fee charged for this material will be relatively low as compared to non-inert waste, and hence in order to maximise profit gained from filling remaining void a landfill operator can be expected to minimise acceptance of non-inert waste for disposal all things being equal.

Table 15: Allocation of Quantities of reported C, D & E waste from CWaC to permanent deposit to land management categories in 2024

Source: Table 2 & Table 8

Non-Inert Landfill		Inert Landfill	Recovery to Land	Exemptions
Non-inert	Inert	52,687	7,790	24,000
781	6,525			
Disposed to Landfill	Assumed to be Recovered			

- 5.3 Table 15 shows that most of the CWaC C, D & E waste received at non-inert landfill was in fact inert material; this was mainly soils and stones classed under EWC 17 05 04. Table 16 presents the management profile arrived at using the 2024 baseline of c537,000 tonnes.

¹⁵ Applying the Waste Hierarchy: evidence summary (DEFRA., June 2011)

Table 16: C, D & E Waste Management Profile Actual Data 2024

Source: WDI 2024

Route	Purpose	Tonnes	% of known
Recycling & Reuse	Recycled Aggregate (Table 8)	50,548	9%
Recovery	Exemptions	24,000	17%
	Use of Waste/ Recovery to Land	7,790	
	Inert landfill + inert waste to non-inert landfill	59,212	
	Subtotal	91,002	
Non-Inert Landfill	Disposals to non-inert landfill	781	0.1%
	Subtotal	781	
Unknown	Treatment (remainder)	385,076	73%
Total		527,406	

5.4 Table 16 gives the following management profile for C, D & E waste arising in CWaC in 2024:

- 9% of known re-used and recycled;
- 17% of known recovered in some other way;
- <1% of known landfilled;
- 73% to treatment (unknown)

6 C, D & E Waste Composition

- 6.1 The principal distinction in the C, D & E waste stream in terms of management (and so targets) is between inert and non-inert materials, with a further possible distinction between hard and soft inert materials. This can inform the setting of appropriate targets as some types of material are only suited to particular types of management method. For example, only hard inert material can be converted into recycled aggregate, and generally material used in backfill will be soft materials such as soils and sub-soils.
- 6.2 By considering what type of material would be suitable for management through each component of the management profile shown in Table 16 above, and analysis of specific waste codes it is possible to arrive at an indicative breakdown by material type. This is shown in Table 17.

Table 17: C, D & E Waste Composition from Management Profile Actual Data 2024

Source: WDI 2024

Hierarchy Tier	Management Route	Inert		Non-Inert/ Mixed	%
		Hard	Soft		
Recycling/Reuse	Recycled Aggregate	50,548	0	0	10%
Other Recovery	Exemptions	0	24,000	0	19%
	Use of Waste/ Recovery to Land	0	7,790	0	
	Inert Landfill + inert waste to non-inert landfill	0	59,212	0	
Disposal	Non-Inert Landfill	0	0	781	0.2%
Unknown	Treatment	170,604	182,150	32,322	
Totals		225,373	221,151	33,103	
Breakdown		42%	52%	6%	

- 6.3 Table 17 shows an overall inert content of 94%, with 6% identified as non-inert initially¹⁶. This compares with the percentages found in the WNA 2023 as follows:
- Inert Hard 41%,
 - Inert Soft 50%; and
 - Non-Inert/Mixed 9%.

Conclusion

- 6.4 As the above values have not substantially changed from those included in the WNA 2023, it is considered that the management targets set in the WNA 2023 remain robust. As there was no basis on which to change the arisings value and growth rates applied, the projected management requirements for CWaC C, D & E waste remain unchanged.

¹⁶ 'initially' because the bulk of this waste is expected to be a mixture of inert and non-inert components that will undergo treatment, to separate these components out (and thereby minimise onwards management costs). However, when inert materials are mixed with non-inert materials the whole amount is classified as non-inert until separated into its constituent parts.

7 Projected Management Requirement for CWaC C, D & E Waste

7.1 The WNA 2023 proposed the targets shown in Table 18 below. It should be noted that the recently adopted Environment Act target of 50% reduction in residual waste by 2042 includes C, D & E waste residues¹⁷.

Table 18: Proposed Targets (floors & ceilings) for C, D & E Waste Management

Component		2021	2025	2030	2035	2040	2045
Inert	Recovery including Recycled Aggregate, Recovery to Land inc exemptions and inert landfill (floor)	>91%	≥85%	≥85%	≥85%	≥85%	≥85%
Non-inert	Treatment	9%	≤15%	≤15%	≤15%	≤15%	≤15%
	Remainder to Landfill (ceiling)	<1%	≤1%	≤1%	≤1%	≤1%	≤1%

These target values gives the management requirements displayed in Table 19 below.

Table 19: C, D & E Waste Targets Applied to Forecast at Plan Milestone years (tonnes)

Component		2025	2030	2035	2040	2045	Peak/ Cumulative requirement
Inert	Recovery	>463,949	>466,273	>468,609	>470,957	>473,317	473,317 (peak)
Non-inert	Treatment	81,873	82,284	82,696	83,110	83,526	83,526 (peak)
	Remainder to Landfill	<5,458	<5,486	<5,513	<5,541	<5,568	121,289 (cumulative)

7.2 Table 19 shows combined recovery capacity for inert waste will need to grow by at least at c10,000 tonnes over the Plan period for the proposed target/floor to be met, while the ability to treat at least c83,500 tonnes of non-inert waste will be required by the end of the Plan period. If the residual component of the C, D & E waste stream goes to landfill in accordance with the targets/ceiling, this represents a cumulative non-hazardous landfill requirement of c121,500 tonnes to the end of the Plan period as shown in Table 20 below. This material is less suited to diversion to EfW due its less combustible nature, but is suited to pre-treatment to reduce its quantity/weight over time.

¹⁷ Delivering on the Environment Act: new targets announced and ambitious plans for nature recovery (Gov.UK., March 2022)

Table 20: Projected Residual C, D & E Waste Non-Haz Landfill Requirement (tonnes)

Year	Tpa	Tonnes Cumulative
2023	2,216	2,216
2024	3,297	5,513
2025	5,458	10,971
2026	5,464	16,434
2027	5,469	21,904
2028	5,475	27,378
2029	5,480	32,858
2030	5,486	38,344
2031	5,491	43,835
2032	5,497	49,332
2033	5,502	54,834
2034	5,508	60,341
2035	5,513	65,854
2036	5,519	71,373
2037	5,524	76,897
2038	5,530	82,427
2039	5,535	87,962
2040	5,541	93,502
2041	5,546	99,049
2042	5,552	104,600
2043	5,557	110,158
2044	5,563	115,721
2045	5,568	121,289

7.3 The implications of these requirements are considered further in the Capacity Assessment Overview Report.

Appendix 1: Account for C, D & E waste converted into Recycled Aggregate

Table A.1: Intermediate sites within CWaC with a shortfall between CDE inputs >500t also reporting an output of waste under Ch 19

Source: WDI 2024

Facility Type	Site	Shortfall >500t (tonnes)	Net Ch 19 output (tonnes)	% C, D & E waste input from CWaC	Make Up (tonnes) Shortfall vs Ch19 x% from CWaC	Inferred Recycled Aggregate Produced from CWaC waste
Treatment	Ash Aggregates Ltd	131,698	6,459	38%	2,447	47,456
	Northwich Recycling & Demolition	4,489	3,854	100%	3,854	634
Transfer	Cheshire Waste Skip Hire Limited	5,422	1,811	61%	1,100	2,192
	A S H Skip Hire	942	677	100%	677	266
Total					8,078	50,548

Appendix 2: Methodology for allocating waste unattributed below Cheshire

All facilities receiving waste from Cheshire in a quantity of over 1,000t were selected from the WDI 2024. Their tonnages totalled to 27,530t, as shown in Table B.1 below, which needed to be attributed to either CWaC or CE. The methodology used is set out below.

The next step was to identify whether any waste went to each facility in 2024 from either CWaC or CE. This led to three possible scenarios and approaches that were taken in each one:

- a) Waste went to a facility from either CWaC or CE (not both) – shown in yellow in Table B.1 below.

The approach was to assume that the unattributed waste can be attributed to the WPA which has an established connection with the facility in terms of existing flows. For example according to the WDI 2024 it can be seen that waste from CE went to the Roy Hatfield facility but none was reported as coming from CWaC. Therefore the 3,668t of waste unattributed below Cheshire was attributed to CE and not CWaC. Therefore, this value was not added to the running baseline total.

- b) Waste from both CWaC and CE went to a facility – shown in green in Table B.1

In this case it was worked out what percentage of the total tonnage going to the facility was reported as coming from CWaC, as opposed to CE. This percentage was applied to the waste unattributed below Cheshire that went to this facility.

This was only the case for Liverpool Recycling, where according to WDI 2024, 18,291t out of a total of 20,684t came from CWaC which is 88% ($18,291/20,684 \times 100$). Therefore 88% of the unattributed value (1,551t) was attributed to CWaC, giving 1,372t to add to the baseline running total.

- c) Waste from neither CWaC nor CE went to the facility – shown in red in Table B.1

In this scenario there was no basis to attribute the tonnage to either WPA, therefore 50% was attributed to CWaC (leaving 50% to CE) and this value was added to the baseline running total.

Facilities receiving <1,000t account for 10,820t of waste unattributed below Cheshire. As the individual site input figures were not significant, the total 10,820t was allocated between CWaC and CE on an equal split for simplicity. Therefore, 50%, i.e. 5,410t was attributed to CWaC, which was added to the baseline running total.

Table B.1: Allocating waste unattributed below Cheshire

Source: WDI 2024

Facility WPA	Site Name	Operator	Input tonnage unattributed below Cheshire	Inputs from CWaC in 2024	Inputs from CE in 2024	Attributed to CWaC
Salford	Clifton Materials Recycling Facility	National Construction Demolition Ltd	1,086	2,759	0	1,086
Staffordshire	Holditch House	Hamptons Metal Merchants LLP	1,815	0	1,562	0
Stoke-on-Trent City	Mayer Yard	Mayer Earthworks Ltd	3,130	49	0	3,130
Staffordshire	Meece 1 Landfill EPR/BV4967IW	Biffa Waste Services Ltd	2,906	710	0	2,906
Rotherham	Roy Hatfield Limited	Roy Hatfield Ltd	3,668	0	3,146	0
Wigan	J. Fisher & Sons Limited	J. Fisher & Sons Ltd	8,100	1,790	0	8,100
Trafford	Land Off Isherwood Road		2,660	0	0	1,330
Staffordshire	Dove Fields Inert Waste Treatment Facility	A F S Earthmoving And Aggregates LLP	1,620	0	0	810
Derbyshire	Beeson Waste Disposal Ltd	Beeson Waste Disposal Ltd	994	0	0	497
Liverpool	Liverpool Recycling	Hurt Plant Hire Ltd	1,551	18,291	2,393	1,372
Total			27,530			19,231
Proportion of total unattributed waste attributed to CWaC						70%

Appendix 3: Methodology for allocating waste unattributed below Cheshire into categories

Tonnages were allocated to categories as follows:

- a) 370t of waste unattributed below Chester was attributed to CWaC, all came under Treatment and was therefore added to the 'Out of CWaC Intermediate' category in Table 11.
- b) 27,675t of waste unattributed below Cheshire going to CWaC was attributed to CWaC and primarily went to Treatment.
- c) 19,231t of waste unattributed below Cheshire going out of CWaC or CE was attributed to CWaC through the exercise explained in Appendix 2 consisted of 2,906t of Landfill waste and was added to the 'Permanent Deposit' category and the remainder, being Transfer and Treatment was added to the 'Out of CWaC Intermediate' category.
- d) 5,410t of waste unattributed below Cheshire allocated to CWaC as per Appendix 2 consisted primarily of Transfer and Treatment and was therefore added to the 'Out of CWaC Intermediate' category.



Cheshire West & Chester

Waste Needs Assessment Update 2026

Appendix E: Hazardous Waste Management Requirements for Cheshire West & Chester to 2045

Report: Final Issue

Version: v2.0

Issued: June 2026

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Abbreviations and Glossary of Terms

Abbreviations

Abbreviation	Term
APCr	Air Pollution Control Residues
C, D & E / CDEW	Construction, Demolition & Excavation Waste
CE	Cheshire East
CFC	Chlorofluorocarbon
CWEM	Cheshire & Warrington Econometric Model
CWaC	Cheshire West and Chester
CWaC C	Cheshire West & Chester Council
C&I	Commercial and Industrial Waste
DEFRA	Department for Environment, Food and Rural Affairs
DPD	Development Plan Document
EA	Environment Agency
ELVs	End of Life Vehicles
EWC	European Waste Catalogue
GVA	Gross value added
HTI	High Temperature Incinerator
HWI	Hazardous Waste Interrogator
HWRCs	Household Waste Recycling Centres
LACW	Local Authority Collected Waste
MRS	Metal Recycling Sites
nPPG	National Planning Practice Guidance
PI	Pollution Inventory
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RoHS	Restriction of Hazardous Substances Directive
WDI	Waste Data Interrogator
WEEE	Waste Electrical & Electronic Equipment
WNA	Waste Needs Assessment
WPA	Waste Planning Authority

Glossary of Terms

TERM	DEFINITION
Construction, Demolition & Excavation Waste	Controlled waste arising from the construction, repair, maintenance and demolition of buildings and structures.
DEFRA	The UK Government department responsible for developing national waste management policy.
Duty to Cooperate	The duty to cooperate is a legal test that requires cooperation between local planning authorities and other public bodies to maximise the effectiveness of policies for strategic matters in Local Plan making.
End of Life Vehicles	Vehicles classed as waste having been declared as no longer usable and for which a Certificate of Destruction has been issued by DVLA. Deemed hazardous until hazardous components removed via depollution processes.
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 advice.
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 it 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 its characteristics.
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.
Household Waste Recycling Centres	A facility that is available to the public to deposit waste not collected through kerbside collection. (otherwise known as a civic amenity site)
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).
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.
Waste Planning Authority (WPA)	The local authority responsible for waste development planning and control. In this case Cheshire West and Chester Council.
Waste Transfer Station	A site to which waste is delivered for bulking prior to transfer to another place for further processing or disposal.

1 Introduction

- 1.1 Cheshire West & Chester (CWaC) Council has contracted BPP Consulting to produce an update to the CWaC Waste Needs Assessment (WNA) of 2023 in order to ensure its Local Plan policies relating to waste remain relevant and reflect the best available data. This updated WNA consists of the following sections:
1. Local Authority Collected Waste Management Requirements to 2045.
 2. Commercial & Industrial Waste Management Requirements to 2045.
 3. Construction, Demolition & Excavation Waste Management Requirements to 2045.
 4. Hazardous Waste Management Requirements to 2045; and
 5. Scoping report for Other Waste; plus
 6. Review of Strategic Waste Flows
- 1.2 This particular report assesses the future management requirements for hazardous waste predicted to arise in Cheshire West & Chester over the Plan period.
- 1.3 The National Planning Practice Guidance chapter on Waste states that: "*Planned provision of new capacity and its spatial distribution should be based on robust analysis of best available data*." (emphasis added) (Para 035). Therefore, this exercise involves a robust analysis to identify what might be considered to be the "best available data" relating to hazardous waste production and management.

Definitions

- 1.4 The term 'hazardous waste' is used in England, Wales and Northern Ireland to describe waste with hazardous characteristics as set out in the List of Wastes (LoW) Regulations.¹ Certain types of waste are classed as 'hazardous' because they possess properties that are considered to pose a threat to human health or the environment such as toxicity, flammability, corrosiveness and carcinogenicity. Hazardous waste is different to other waste considered as it does not have a discrete source as it is a collection of different materials which are generally collected and managed separately due to their hazardous properties, and which may arise from different sources. For example, fridges containing CFC gases and cathode ray tubes used in TV and computer monitor screens which are classed as hazardous waste may occur in both domestic and commercial waste streams but require separate management from other wastes to minimise the environmental impact of their management.
- 1.5 Hazardous wastes generally arise within the following waste streams depending on their origin:
- Local Authority Collected Waste (LACW)
 - Commercial and Industrial Waste (C&I)
 - Construction and Demolition and Excavation Waste (C, D&E)

¹ List of Wastes (England) Regulations 2005 which came into force on 16th July 2005.
<http://www.legislation.gov.uk/ukxi/2005/895/contents/made>

- 1.6 As the management requirements of wastes classed as hazardous are often different to that of the non-hazardous elements of these waste streams, hazardous waste is planned for separately. As the quantities are considered separately in this report, they have been excluded from the C&I waste, C, D & E waste and LACW stream reports to avoid ‘double counting’.

Data Sources

- 1.7 The Environment Agency's Hazardous Waste Interrogator (HWI) consists of data relating to movements of waste consigned as hazardous aggregated into a single dataset and made publicly available that is updated each year. This includes hazardous waste consigned between producers and disposal/treatment facilities, as well as most consignments between intermediate facilities and final fate sites. While the HWI always specifies the waste origin and destination by Waste Planning Authority (WPA) it does not identify the specific facility at which the waste was managed, whereas the Environment Agency Waste Data Interrogator (WDI) - which reports on inputs to (and outputs from) all permitted facilities in England - does report by receiving facility but may only report origin by source region in some cases. Hence both datasets have been accessed to generate a more complete picture of management routes followed by hazardous waste arising in CWaC. The resulting values have been cross checked with values presented in the Environment Agency's Pollution Inventory through which significant waste and non-waste facilities report their hazardous waste arisings (amongst other matters).

The relationships between the datasets are illustrated in Figure 1.

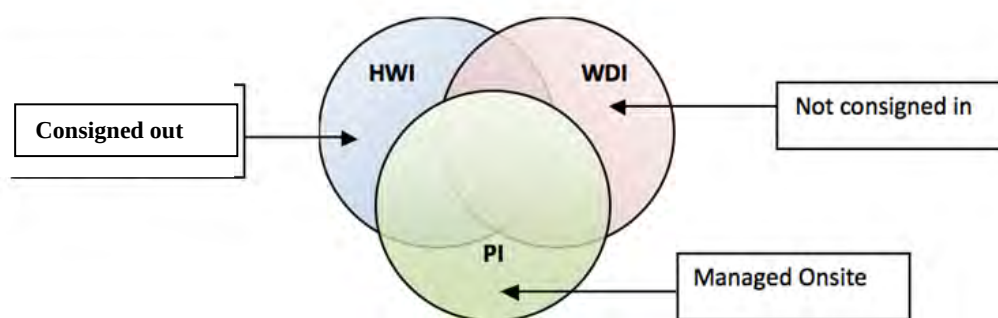


Figure 1: Relationship between Datasets for Hazardous Waste with possible omissions identified

Net Self Sufficiency

- 1.8 There is no expectation in national policy that individual Plan areas be self-sufficient in management capacity for hazardous waste arising within them. This is because different hazardous wastes require management through distinct specialist facilities. For example, asbestos contaminated soil will generally require specialist landfill, whereas oily water from interceptors will require management through a treatment plant, while certain wastes may require high temperature incineration to destroy them. Provision of such facilities may only be viable at a regional, or larger scale.
- 1.9 However, it is still considered appropriate to assess whether the current provision of capacity will be sufficient to meet any emerging future needs within the Plan area.

2 Calculating a Baseline Arisings Estimate

2.1 The WNA 2023 estimated that between 34,500 (excluding waste transferred on) and 44,000 tonnes of hazardous waste was produced in the Plan area and between 107,000 tonnes and 118,000 tonnes of hazardous waste was managed in the Plan area in 2021. This estimate drew on the following sources:

1. The EA Hazardous Waste Interrogator - movements from origin to, and between, permitted waste management sites.
2. The EA Waste Data Interrogator – hazardous waste inputs to permitted waste management sites and removals (in some cases).
3. The EA Pollution Inventory Site outputs - hazardous waste produced by significant industrial sites.

This report presents the outcome of replicating the approach adopted in the WNA 2023, using the above datasets for 2024 (rather than 2021). This found the following:

2.2 The EA Hazardous Waste Interrogator 2024 indicates the following:

- In 2024, c50,500 tonnes of hazardous waste were produced in Cheshire West & Chester²;
- Of this, c3,000 tonnes were managed in Cheshire West & Chester; with
- c48,000 tonnes being managed outside Cheshire West & Chester i.e. exported.

In addition, c108,500 tonnes of hazardous waste were imported to Cheshire West & Chester for management.

The above data shows that more hazardous waste was managed in Cheshire West and Chester than was produced in 2024 (c111,500 tonnes vs c50,500 tonnes), which reflects the picture found in the WNA 2023.

The EA WDI 2024 indicates the following:

- In 2024 c73,000 tonnes of hazardous waste managed at permitted sites (both within and beyond Cheshire West & Chester) were attributed to Cheshire West & Chester as its source³;
- Of this, the EA WDI indicates that only c4,000 tonnes were managed in Cheshire West & Chester, with the difference (c68,500 tonnes) being managed outside the Borough.

² The HWI showed a total of 11,407 tonnes of ‘solid waste from gas treatment’ (9,376 tonnes) and ‘fly ash containing dangerous substances’ (2,031 tonnes) from CWaC. However, the WDI waste removed dataset only shows 4,508 tonnes as an output from two operational incineration plants in CWaC: Ellesmere Port Incinerator and Ince Bio Power. It is believed that the additional tonnage is waste consigned into CWaC for long term storage at the Minosus facility, but actually transferred on to fates outside CWaC instead, and therefore this waste cannot be said to arise from CWaC itself. Therefore, the tonnage that could not be attributed to either incinerator (11,407 minus 4,508 = 6,899 tonnes) was removed from the raw data.

³ The WDI showed a total of 9,866 tonnes of ‘solid waste from gas treatment’ (7,663 tonnes) and ‘fly ash containing dangerous substances’ (2,203 tonnes) was removed from CWaC. For the same reason as cited in Footnote 2 above, the difference (9,866 minus 4,508 = 5,358 tonnes) was removed from the raw data.

- In addition, c113,000 tonnes were imported for management in Cheshire West and Chester.

The above data shows that as found in the WNA 2023, more hazardous waste was managed in Cheshire West and Chester than was produced in 2024 (c117,000 vs c73,000 tonnes).

- 2.3 It should be borne in mind in both cases that the management of hazardous waste from elsewhere in CWaC, may itself give rise to hazardous waste requiring onward management. Examples being Air Pollution Control Residues (APCr) from the Ellesmere Port High Temperature Incinerator (HTI) or waste arising from treatment facilities. It is questionable as to whether such waste ought to be assigned to CWaC as a producer as it arises as a consequence of waste from elsewhere being managed within CWaC. However, as the management activity constitutes economic activity within CWaC outputs of residues from incinerators in particular have been counted as CWaC waste in this exercise.
- 2.4 The Pollution Inventory dataset shows that c41,500 tonnes of hazardous waste were produced by the 25 non-waste installations operating in Cheshire West and Chester reporting through this route. Given that the PI value is lower than either of the totals shown by the other two datasets, it has been assumed that the tonnage of hazardous waste reported through the PI has been captured in the other two datasets and therefore this dataset has been discounted.

Summary of Headline Data

- 2.5 The data from the HWI, WDI and PI datasets shows that hazardous waste arising in Cheshire West and Chester ranges between c50,500 and c73,000 tonnes, of which c40,500 tonnes arose from 6 major industrial sites other than waste management facilities requiring offsite management. The breakdown of management routes as indicated by the WDI and HWI is shown in Table 1. The table compares the most recent (2024) tonnages with the 2021 values used in the previous WNA 2023.

Table 1: Cheshire West & Chester Hazardous Waste Arisings & Management Data

Source: HWI 2021/2024 and WDI 2021/2024 Environment Agency (adjusted for APCr)

Blue indicates values contributing to arisings, pink to Borough management capacity

Data source		Cheshire West & Chester Hazardous Waste Arisings (tonnes)		Hazardous Waste Managed in Cheshire West & Chester (tonnes)		
		Quantity Attributed to CWaC	CWaC waste managed outside CWaC (exports)	Quantity Managed in CWaC Attributed to CWaC	Quantity Managed in CWaC from outside (imports)	Total Managed in CWaC
HWI	2021	42,785	37,951	4,834	101,788	106,621
	2024	50,707	47,861	2,845	108,650	111,496
WDI (inputs from CWaC to all facilities)	2021	35,670	28,823	6,847	110,839	117,686
	2024	72,832	68,727	4,106	113,001	117,106

Discussion

2.6 Table 1 shows that:

- the adjusted values obtained from the HWI and those from WDI for 2024 are significantly different when it comes to waste arising in Cheshire West and Chester (c50,500 vs c73,000 tonnes).
- the WDI 2021 and 2024 quantities of waste arising in CWaC (c35,500 vs c73,000 tonnes) shows a two-fold increase over the three year period. A similar increase can be observed for the waste exported from CWaC (c29,000 vs c69,000 tonnes). A detailed comparison between the WDI values is included in Appendix 1.
- imports to CWaC and the total waste managed in CWaC have remained similar. The consistency in the total waste managed in CWaC suggests that the management capacity has remained constant across the three-year period.
- the differences between HWI 2021 and 2024 values are not considered major, showing an overall consistency between the years.

Integrating HWI and WDI values

2.7 In order to use the best available data, the values that appear in both the HWI and the WDI datasets have been integrated. Precedence is given to the larger value that appears in either dataset on a fate by fate basis. This is on the basis that in some cases inputs to specific sites reported in the WDI may not reported down to WPA level and hence risk being lost. The results of this exercise are shown in Table 2 below.

Table 2: Cheshire West & Chester Hazardous Waste Arisings: WDI Input vs. HWI Values to obtain Integrated values (taking highest individual entry)

Source: WDI 2024 Environment Agency plus HWI 2024 Environment Agency

Fate	WDI CWaC Waste ⁴	HWI CWaC Waste ⁵	Integrated Value
Landfill	21,950	14,861	21,950
Treatment	27,961	10,246	47,000
Recycling/Recovery	19,039	18,082	
Incineration	807	3,106	3,106
Final Fate Total	69,757	46,295	72,056
Transfer	3,085	11,231	11,231
Overall Total	72,842	57,526	83,287

⁴ Adjusted to account for the excess tonnages of APCr referred to in footnote 3.

⁵ Adjusted to account for the excess tonnages of APCr referred to in footnote 2.

- 2.8 When the WDI permitted site input values are integrated with the HWI data for hazardous waste movements, the value increased by roughly c15,300 tonnes to 83,287 tonnes. This higher value takes into account the greater quantities of waste reported as managed through landfill, treatment and recycling/recovery in the WDI and for incineration and transfer fates in the HWI. The reason for combining the values for recycling/recovery and treatment was to eliminate the potential for double counting between the treatment site input reported through the WDI and the tonnage reported as going to recycling/recovery in the HWI.
- 2.9 Apart from the combined recycling/recovery and treatment value (WDI), the final integrated value is a composite of the higher values from the two sources for each management route. This is c83,300 tonnes (or c72,000 tonnes if movement for transfer were to be ignored on the basis that this waste would ultimately go to a 'next step' or 'final fate' site also reported in the data).

Conclusion

- 2.10 Hazardous waste arisings attributable to Cheshire West and Chester for 2024 have been found to be between c72,000 (excluding waste transferred on) and c83,500 tonnes if it is included. This compares with c34,500 and c44,000 tonnes in 2021 a 52% increase in the final fate total and a 47% increase in the overall total.

Discussion of Hazardous Waste Arising Baseline value

- 2.11 The baseline arising value generated for 2024 (c83,500t) is higher than the value obtained for 2021 (WNA 2023) of c44,000 tonnes. Comparison of the values obtained by fate indicates that the increase is primarily due to the doubling of the tonnage managed at both landfill and by treatment/recovery as shown in Table 3 below.

Table 3: Cheshire West & Chester Hazardous Waste Arisings: Comparison between management profile generated for 2021 and 2024 showing difference and percentage change

Source: Table 4 WNA 2023 vs Table 2 above

Fate	2021	2024	Diff	% change
Landfill	10,394	21,950	+11,556	+111
Treatment	21,556	47,000	+25,444	+118
Recycling/Recovery				
Incineration or use as fuel	2,621	3,106	+485	+19
Final Fate Total	34,570	72,056	+37,486	+108
Transfer	9,596	11,231	+1,635	+17
Total	44,166	83,287	+39,121	+89

Composition of Cheshire West and Chester Hazardous Waste

2.12 To determine the source of the difference in values, data for the main types of hazardous waste has been analysed to identify the principal arisings that contribute to the 2024 value. This has been based on the integrated dataset i.e. the source of the preferred value for each of the fates as shown in Table 4. Types of hazardous waste types which occurred in quantities over 1,000 tonnes have been considered.

Table 4: Principal Hazardous Waste Types arising in Cheshire West and Chester in 2021 and 2024 (in rank order by EWC Chapter total in 2024)

Source: WDI 2021, WDI 2024

EWC Chapter	Hazardous Waste Type/Source	WDI 2021	WDI 2024	% Difference
17 - Construction & Demolition Wastes	Construction materials containing asbestos	1,341	7,258	+441%
17 - Construction & Demolition Wastes	Mixtures of, or separate fractions of hard materials containing hazardous substances	<100	1,147	-
17 - Construction & Demolition Wastes	Soil and stones containing hazardous substances	1,577	15,757	+900%
17 - Construction & Demolition Wastes Subtotal		2,918	24,162	
16 - Wastes Not Otherwise Specified	End-of-life vehicles	12,548	18,826	+50%
19 - Waste Treatment Wastes	Bottom ash and slag containing hazardous substances	1,348	5,666	+320%
19 - Waste Treatment Wastes	Sludges from physico/chemical treatment	4,448	2,896	-35%
19 - Waste Treatment Wastes	Solid wastes from gas treatment + fly ash containing hazardous substances + other flue-gas treatment wastes	1,930	4,508	+133%
19 - Waste Treatment Wastes Subtotal		10,644	13,070	
07 - Organic Chemical Process Waste	Aqueous washing liquids and mother liquors	910	4,869	+435%
11 - Chemical Surface Treatment & Metal Coating Wastes	Aqueous rinsing liquids containing hazardous substances	<100	2,648	-
11 - Chemical Surface Treatment & Metal Coating Wastes	Pickling bases	<100	1,091	-
06 - Inorganic Chemical Process Waste	Other bases	1,110	3,156	+184%
13 - Oil Wastes & Wastes of Liquid Fuels	Oily Water	2,221	1,432	-35%
20 - Municipal Wastes	Hazardous WEEE	696	1,053	+51%
Total		28,129	70,308	+150%

2.13 Table 4 shows the following:

- The 2024 total is over double the 2021 total, showing an overall increase in hazardous waste arisings in CWaC over the 3 year period.
- The largest single waste type is 'end-of-life vehicles' (c19,000 tonnes) accounted for 26% of the hazardous wastes that arose in CWaC for 2024. The WNA 2023 showed that in 2021 ELVs were also the primary hazardous waste type produced in CWaC, accounting for 45% of the 2021 total. There has been a significant increase in the quantity of ELVs arising in CWaC managed at permitted facilities between 2021 and 2024. This may be due to scrappage scheme that promoted the replacement of older internal combustion engine vehicles with new electric vehicles. ELVs are only classed as hazardous by virtue of the presence of fluids such

as oil, and once depolluted, the vehicle bodies that constitute the majority of their weight are rendered non-hazardous, leaving a much smaller tonnage of hazardous waste requiring onward management. Comparison of inputs and outputs of the principal sites in CWaC accepting ELVs for depollution shows this, with 3,781t of ELVs accepted as hazardous waste, and only 254t of hazardous waste removed, as compared with 4782t of non hazardous waste (depolluted vehicle bodies and tyres). Hence the true hazardous waste content of ELVs represents only c.7% of the total reported input weight. Therefore it could be said that the full reported weight of ELVs should not be counted towards the CWaC hazardous waste arising as they only require depollution for the bulk to cease to be hazardous in the main.

- Construction and demolition waste such as hazardous soils and stones accounted for c24,000t of the total arising (34%). These arise principally from the redevelopment of brownfield sites with historic contamination which tend to arise on a development site by development site basis, and arisings can be expected to vary from year to year, ultimately tailing off as the stock of historically contaminated sites are redeveloped. It could therefore be said that the 2024 value is an anomaly to the 2021, or vice versa. For this reason a mean value has been taken between the two giving a baseline value of 13,540t to forecast from.
- Wastes from waste treatment include ‘bottom ash and slag containing hazardous substances’ sludges and ‘solid wastes from gas treatment and Fly ash containing hazardous substances and other flue-gas treatment wastes’. These accounted for c13,000 tonnes of the principal waste arisings, which is around 18% of the principal hazardous wastes that arose in CWaC for 2024. These generally arise from waste incineration plants, of which there are three in CWaC.⁶ Outputs of these residues can be expected to be relatively constant over each plant's operational life (c30 yrs) although the 2021 and 2024 values differ by xx so a mean value between the 2 has been taken for forecasting purposes 11,857t.

⁶ Examination of the corresponding site entries in the Pollution Inventory 2024 showed that the three operational sites produced 7,139t bottom ash, 15,658t of air pollution control residues and 4,588t of sludges.

3 Forecasting Future Hazardous Waste Arisings

- 3.1 The National Policy Statement for Hazardous Waste⁷ which remains the most current statement of Government policy on the issue, states that arisings of hazardous waste are expected to increase .
- 3.2 Planning Practice Guidance advises that future hazardous waste arisings be estimated by extrapolating time series data drawn from the HWI. However use of historical HWI data alone to establish possible future trends is not considered reliable. Therefore Plan Area specific forecasts were generated in the WNA 2023 using business sector proxies taken from the Cheshire & Warrington Econometric Model (CWEM)⁸. This found that overall hazardous waste arisings from CWaC were expected to fall over time, nearly halving between 2025 and 2045.
- 3.3 Applying the period growth rates used in the WNA2023 to the starting tonnages for the principal hazardous waste types in 2024 from Table 4, future hazardous waste arisings for the Plan period was calculated at five-year milestones across the Plan period, as shown in Table 5.

Table 5: Forecast Principal Hazardous Waste Arisings in Cheshire West & Chester Applying Sector Proxy

Source: Table 4 & Table 6 WNA 2023

	Actuals	Plan Milestone Year					
Hazardous Waste Type/Source	2024	2025	2030	2035	2040	2045	Comments
End-of-life vehicles & components	15,687	13,271	9,250	5,680	2,101	201	UK ban on selling petrol and diesel cars from 2030/35 will see a reduction in the quantity of internal combustion ELVs.
Oily Water	1,432	1,833	1,374	917	458	0	Oily water arises from interceptors serving areas where IC vehicles are parked., As this type of vehicle declines the arising of oily water is expected to decline.
Construction, Demolition & Excavation	13,540	10,967	8,395	5,822	3,250	678	Legacy contaminated land and hazardous material in building stock expected to have been cleared by 2045.
Wastes from incineration	11,857	11,857	11,857	11,857	11,857	11,857	Static
Other bases	3,156	3,178	3,175	3,153	3,131	3,109	Chemicals proxy
Aqueous washing liquids and mother liquors	4,869	5,117	5,153	5,246	5,340	5,436	Metal finishing proxy
WEEE	1,053	1,224	1,293	1,376	1,464	1,558	Electrical proxy
Total	51,594	47,447	40,497	34,050	27,602	22,839	

⁷ National Policy Statement for Hazardous Waste: A framework document for planning decisions on nationally significant hazardous waste infrastructure Defra June 2013 [Hazardous waste national policy statement - GOV.UK](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/274442/hazardous_waste_national_policy_statement.pdf)

⁸ The Cheshire & Warrington Econometric Model (CWEM), is an economic forecasting model maintained and operated by Cheshire West and Chester Council on behalf of Cheshire & Warrington partners.

- 3.4 As Table 5 only relates to wastes that account for 62% of arisings, a composite growth factor across all the above sectors has been applied to the baseline value to give the values at each of the Plan's milestone years as shown in Table 6 using the 72,056t baseline value (exc waste transfer that may double count).

Table 6: Forecast Hazardous Waste Arisings in Cheshire West and Chester Extrapolating Sector Total (tonnes)

Source: Table 8 & Baseline Arising Output of Reconciliation Process

	Plan Milestone Year				
	2025	2030	2035	2040	2045
Totals from Table 5	47,447	40,497	34,050	27,602	22,839
Composite Growth Rate	-8.04%	-14.65%	-15.92%	-18.94%	-17.26%
Total applying composite growth rate to 2024 baseline value	76,592	65,374	54,967	44,558	36,869
Total applying composite growth rate to 2021 baseline value WNA 2023	41,797	35,892	30,426	24,956	21,472
Difference 2024 vs 2021	+34,795	+29,482	+24,541	+19,602	+15,397

Conclusion

- 3.5 Table 6 shows that the quantity of hazardous waste is expected to fall over time, to end up at a tonnage of c **36,869 tonnes** in 2045 i.e. halved. This compares with a value in 2045 of 21,472t in the WNA 2023. This shows that while the 2021 and 2024 baseline values are significantly different, they are expected to converge over the Plan period. The tonnage values shown in Table 6 have been used to project capacity requirements in the next section of this report based on an assessment of existing capacity within Cheshire West and Chester and management routes followed.

4 Waste Management Capacity in Cheshire West & Chester

- 4.1 This section considers the availability of capacity within CWaC for managing hazardous waste. It provides the basis from which the existing baseline hazardous waste management capacity may be established and, subsequently, from which specific management capacity requirements might be identified. Since the HWI does not attribute waste down to site level, the WDI input values from 2021 and 2024 have been used to ascertain the amount of waste that specific CWaC sites managed to understand what capacity each may offer. Table 7 shows the results with the final column taking the higher value between 2021 and 2024.

Table 7: CWaC Facilities Receiving 500t+ Hazardous Waste Inputs Reporting through the WDI in 2021 and 2024 (tonnes)

Source: WDI 2021 & 2024 Environment Agency

Facility Type	Facility Name/Operator	2021 inputs	2024 inputs	Peak value
Hazardous Waste Incinerator	Ellesmere Port Incinerator, Veolia ES (UK) Ltd	56,492	65,346	65,346
Non-specified Treatment	Ellesmere Port Waste Treatment Facility, Dunton Technologies Ltd	-	12,353	12,353
Chemical Treatment	Brunner-Mond Works, Eco-Option (UK) Ltd	23,413	8,981	23,413
Haz Waste Transfer/Treatment	Ellesmere Port Transformer Oil Regeneration Plant, Haltermann Carless UK Ltd	5,643	7,557	7,557
Haz Waste Transfer	Cheshire Waste Management Centre, Tradebe North West Ltd	4,955	3,890	4,955
Physical Treatment	Dock Yard Rd, Ellesmere Port (Port Oils)	n/a	6,515	6,515
Vehicle Depollution Facility	Unit 7 Indigo Business Park, Oil Sites Road (Jamie McIntyre)	852	1,465	1,465
	Road Three, Winsford (Synetiq Ltd/ IAA UK Auctions Ltd)	2,642	164	2,642
	A Vlies Northwich Metals Ltd	-	2,097	2,097
Totals		93,997	108,368	126,343

- 4.2 Comparing the peak total managed value shown in Table 7 (c126,000 tpa) to the final arising value derived for Cheshire West and Chester c76,500 indicates a surplus in hazardous waste management capacity of c49,500 tpa exists within the Borough, representing 61% headroom between arisings and management capacity. This comes as no surprise given CWaC hosts a number of strategically significant facilities for the management of hazardous waste, one of which being the Ellesmere Port HTI with capacity of up to 100,000tpa and, the presence of the chemicals sector such as Brunner Mond and oil treatment capacity. Moreover, it should also be borne in mind that the inputs to sites in 2024 may neither be truly representative of site capacity i.e. inputs in 2024 may be lower than the peak, nor actually reflect the theoretical capacity that a site may offer, therefore a review of each site's capacity has been undertaken.

- 4.3 Any sites that managed an amount of hazardous waste exceeding 20% of the total peak amount of CWaC hazardous waste managed were included in Table 8. The potential capacity was calculated by taking the percentage of hazardous waste managed at the site in 2024 and applying it to the total peak value. The WDI 3-year peak input (2022-2024) value was compared to the value included in the WNA 2023 plus the permit limit, where known, to arrive at a preferred capacity value as shown in Table 8 below.

Table 8: Updated Capacity of Facilities Permitted to Manage Hazardous Waste in CWaC (tpa)

Source: WNA 2023, WDI 2024 plus Environment Agency permits

Facility Name/Operator	WNA 2023 Value	WDI 3-year Peak (2022-24)	Permit Limit	Preferred Value	Comment
Unit 7 Indigo Business Park, Oil Sites Rd (Jamie McIntyre)	2,499	2,081	2,499	2,499	ELV depollution facility
Land at Brunner-Mond Works, Griffiths Rd (ECO Option (UK) Ltd)	28,507	16,837	-	28,507	Recycler of waste Sulphuric Acid, Ammonia & Ammonium compounds and the production of recovered product-grade liquid Ammonium Sulphate.
Cheshire Waste Management Centre, Oil Sites Road (Tradebe North West Limited)	4,999	4,831	4,999	4,999	Packing, collecting, disposal and recycling of chemical, hazardous, non-hazardous, WEEE and toxic waste.
Ellesmere Port Transformer Oil Regeneration Plant, Bridges Rd (Haltermann Carless UK Ltd)	8,564	8,250	30,000	8,564	Regeneration of used transformer oils.
Ellesmere Port Incinerator, Bridges Rd (Veolia ES (UK) Limited)	100,000	70,635	100,000	100,000	High temperature incineration of hazardous and low level radioactive waste.
Ellesmere Port Waste Treatment Facility (Dunton Technologies Ltd)	n/a	12,353	100,000	100,000	33,000 for biological treatment and 67,000 for manual picking of asbestos waste
Land/premises at, Cart Rd (A.Vlies Northwich Metals Limited)	4,999	2,097	4,999	4,999	ELV depollution facility with metal recycling.
Dock Yard Rd, Ellesmere Port (Port Oils)	n/a	7,817	35,000	35,000	Waste oil treatment for recovery.
Road Three, Winsford operated by Synetiq Limited	2,642	164	-	2,642	Now operated by IAA UK Auctions Limited and reported removal of 3,250 depolluted ELVs and 254t of hazardous waste. The low input and high output indicates that it accepts vehicles for assessment prior to determining if they are ELVs, and then depollutes those that are determined to be ELVs.
Grand Total				287,210	

- 4.4 With respect to hazardous waste management capacity in Cheshire West and Chester excluding landfill, comparing the updated capacity value (c287,000tonnes) to the final arising value derived suggests a surplus of between c210,500 tonnes per annum at the start of the Plan period and c250,100 tonnes per annum in 2045 the end of Plan period.

Hazardous Waste Landfill

- 4.5 In addition to the above, there is capacity offered by Winsford Rock Salt Mine Waste Disposal Facility. This facility is a long-term storage underground facility but is classed as a landfill by the Environment Agency. The Agency's remaining landfill capacity datasheet for 2024 gives a remaining capacity value of c1,329,500 m³. This value will decrease over time as the capacity is occupied. The WDI 2024 shows inputs of c15,000 tonnes to the associated waste transfer station which is destined for long term storage as its fate in 2024.

Management Capacity Conclusion

- 4.6 Cheshire West and Chester host a number of facilities that manage significant quantities of hazardous waste, including treating such wastes. The combined capacity offered by these facilities equates to at least 287,000 tonnes per annum, an increase on the 152,000tpa of capacity found in the WNA 2023. A number of these facilities are niche taking hazardous wastes as a raw material for manufacturing processes. In doing so these operators provide strategically significant management capacity for a number of niche waste streams arising from within the region and beyond.
- 4.7 While there is no national policy expectation that net self-sufficiency ought to be pursued for hazardous waste it is important that each hazardous waste stream produced in significant quantities within the Borough will be adequately catered for throughout the Plan period. For this reason, the role of facilities beyond CWaC in the management of certain types of hazardous waste arising in the Plan area is considered in the following section.

5 Management Routes Followed by CWaC Hazardous Waste

- 5.1 This section assesses the management routes followed by hazardous waste arisings from Cheshire West and Chester. As the previous section covered capacity within Cheshire West and Chester, this section focuses on waste produced within, but managed outside, Cheshire West and Chester. The HWI is used as the primary source, cross checked with the WDI to identify the specific receiving site where possible. This exercise is important to identify WPAs hosting receiving facilities with whom CWaC should engage under the Duty to Co-operate to establish if the current patterns of management can continue for the Plan period. If such engagement suggests that certain types of waste cannot continue to be managed at certain facilities in future, then this may indicate CWaC should plan for the management of that waste stream within its own boundaries.
- 5.2 Table 2 shows that the HWI identified c57,500 tonnes of hazardous waste leaving Cheshire West and Chester for management in 2024. This was managed at facilities located within a wide range of WPAs (c87). Applying a significance threshold, whereby only WPAs receiving over 500 tonnes of waste are considered, reduces the number of receiving WPAs down to 17, with Lancashire being the principal recipient (c16,000 tonnes) followed by Leeds (c10,500 tonnes), Knowsley (c3,500 tonnes) and Liverpool (c2,500 tonnes). This is presented in rank order in terms of WPA tonnage and fate in Table 9 overleaf.
- 5.3 In summary:
- the tonnage exported from Cheshire West and Chester in 2024 was c57,500 tonnes as compared with 43,000t in 2021; and
 - Lancashire remained the principal recipient of hazardous waste from Cheshire West and Chester in 2021 and 2024.
 - 6 WPAs managed tonnages greater than 500t in 2024, whereas they didn't in 2021; and
 - 4 WPAs managed tonnages greater than 500t in 2021, whereas they didn't in 2024.
- 5.4 The above indicates that the bulk of flows in 2021 continued in 2024 (c70% of 500t+), with some flexibility shown for certain wastes. This suggests a degree of resilience to the strategic flows from CWaC.

Table 9: WPAs Receiving over 500 tonnes of Hazardous Waste from CWaC (in rank order 2024)

Source: HWI 2024 Environment Agency & WNA 2023

Deposit WPA	Waste Fate						Grand Total 2024	Grand Total 2021
	Recovery	Treatment	Transfer for Recovery	Incineration without energy recovery	Transfer for Disposal	Landfill		
Lancashire	1,087	0	284	0	41	14,556	15,969	10,194
Leeds	10,374	113	0	5	3	0	10,495	<500
Knowsley	82	1,706	618	0	1,016	0	3,421	3,777
Trafford	82	2,087	354	0	542	0	3,066	1,930
Liverpool	793	1,082	497	0	69	0	2,441	1,165
Bristol City	0	0	51	0	2,106	0	2,157	<500
Salford	51	1,241	589	0	51	0	1,933	2,366
Staffordshire	64	1,219	385	0	15	0	1,684	1,754
Redcar & Cleveland	0	1,607	0	0	24	0	1,631	<500
Solihull	0	0	1,615	0	0	0	1,615	<500
Derbyshire	809	251	80	0	141	0	1,281	968
Wakefield	750	0	4	0	2	0	756	<500
Sefton	709	0	0	0	18	0	727	951
Hampshire	4	0	1	682	0	0	686	648
Nottingham City	305	314	0	0	60	0	680	<500
Cambridgeshire	567	40	29	0	38	0	673	3,386
Stockton-on-Tees	-	-	-	-	-	-	<500	3,834
Cheshire East	-	-	-	-	-	-	<500	1,154
Stoke on Trent City	-	-	-	-	-	-	<500	1,069
Gloucestershire	-	-	-	-	-	-	<500	670

6 Conclusion on Cheshire West & Chester's Hazardous Waste Management Requirements

- 6.1 The reconciliation process has indicated that c76,500 tonnes of hazardous waste was produced in Cheshire West and Chester in 2024, a significant increase on the c43,000t in 2021 found in the WNA 2023. However the tonnage is predicted to fall to c37,000 tonnes by the end of the Plan period.
- 6.2 Currently, all reported hazardous waste arising in Cheshire West and Chester appears to be effectively managed with no obvious stresses in the system.
- 6.3 The capacity assessment indicates that the combined site capacity in Cheshire West and Chester is at least 287,000 tpa, indicating sufficient waste management capacity for the management of Cheshire West and Chester's waste at the end of the Plan period, assuming all sites identified continue to offer capacity for the duration of the Plan period. It is recommended that key sites be safeguarded through policy where the potential loss of capacity through either redevelopment or constraint is resisted unless equivalent compensatory capacity provision is made.



Cheshire West & Chester

Waste Needs Assessment Update 2025/26

Appendix F: Scoping of 'Other' Waste Streams

Report: Final Issue

Version: v2.0

Issued: June 2026

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Abbreviations

Abbreviations	Terms
AD	Anaerobic Digestion
AMR	Authority Monitoring Report
AMP	Asset Management Plan
C & I	Commercial & Industrial Waste
CWaC	Cheshire West and Chester
DEFRA	Department for Environment, Food and Rural Affairs
EA	Environment Agency
EfW	Energy from Waste
EWC	European Waste Catalogue
HLW	High Level Radioactive Waste
LACW	Local Authority Collected Waste
PPG	Planning Practice Guidance
STC	Sludge Treatment Centre
STW	Sewage Treatment Works
UU	United Utilities Group PLC
VLLW	Very Low Level Radioactive Waste
WDF	WasteDataFlow
WDI	Waste Data Interrogator
WNA	Waste Needs Assessment
WPA	Waste Planning Authority
WRMP	Water Resource Management Plan
WW	Welsh Water
WwTW	Wastewater Treatment Works

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 where organic matter including green waste and food waste is broken down by bacterial action in the absence of air, producing a gas (biogas) and nutrient rich solid or liquid (digestate). The biogas can be used as a fuel and digestate can be applied to land as a fertiliser.
Authority Monitoring Report	Local planning authority document that reports on the effectiveness of local planning policies, to be produced on an annual basis.
Asset Management Plan	An asset management plan produced by sewerage and water undertaking for approval by Ofwat includes an assessment of what assets make up the water, sewer or storm system in a particular area and plans to meet future needs within agreed budgets.
Biodegradable 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
Controlled Waste	Waste subject to controls emanating from the EU Waste Framework Directive.
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	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 such as grass and hedge trimmings, from domestic and commercial sources suitable for composting.
High Level Radioactive Waste	The highly radioactive by-product of nuclear reactor operations and fuel reprocessing, requiring permanent isolation and cooling
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).
Local Authority	Waste collected by or on behalf of a local authority. Includes household waste and waste

Collected Waste	delivered to HWRCs. LACW is the definition used in statistical publications, which previously referred to municipal waste.
Ofwat	The regulatory body responsible for overseeing the privatised water and sewage industry in England and Wales.
Planning Practice Guidance	An online resource that provides detailed context and guidance on implementing the national planning policy in England
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.
Sewage Treatment Centre	A place which processes sewage sludge—a by-product of wastewater treatment—using methods like anaerobic digestion to create nutrient-rich biosolids for agriculture and biogas for renewable energy
Sewage Treatment Works	A process which reduces the volume, water content, and pathogen levels of sewage solids, transforming them into stable biosolid products for disposal or reuse, typically through thickening, digestion, and dewatering
The Plan area	The area subject to the Local Plan to which this study relates. In this case the Borough of Cheshire West and Chester City.
Very Low Level Radioactive Waste	A sub-category of low-level radioactive waste containing trace amounts of radioactivity, usually originating from nuclear site decommissioning or industrial processes
Waste Needs Assessment	Forecasts waste that will require management by different means in a WPA area over a certain period of time, assesses capacity of the existing facilities available to manage this waste and considers the need for additional facilities to meet the forecast management needs. This underpins the preparation of planning policies for waste.
Waste Data Flow	A web-based reporting system used by English local authorities to report LACW management data to central government
Waste Data Interrogator	Dataset published by the Environment Agency annually reporting quantities and types of waste managed at permitted waste management facilities in England.
Waste Planning Authority	The authority responsible for planning for waste within a specific administrative area. In this case Cheshire West and Chester 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.
Water Resources Management Plans	Statutory documents that all water companies must produce at least every 5 years intended to set out how they will achieve a secure water supply while also enhancing the environment.

1 Context

- 1.1 BPP Consulting LLP was commissioned by Cheshire West and Chester Council to update the 'Waste Needs Assessment' (WNA 2023) for Cheshire West and Chester (CWaC) - the CWaC Waste Needs Assessment (WNA) Update 2026 (CWaC WNA 2026). This work is being carried out in the context of the National Planning Policy for Waste (NPPW) and the waste chapter of the national Planning Practice Guidance (nPPG), which expects that:

"Planned provision of new capacity and its spatial distribution should be based on robust analysis of best available data and information, and an appraisal of options." (emphasis added)¹

- 1.2 This report forms part of a suite of reports that constitute the CWaC WNA 2025, consisting of the following reports:

- Local Authority Collected Waste Management Requirements to 2045;
- Commercial & Industrial Waste Management Requirements to 2045;
- Construction, Demolition & Excavation Waste Management Requirements to 2045;
- Hazardous Waste Management Requirements to 2045;
- Scoping Review of 'Other Waste' Management Requirements in 2024; and
- Review of Strategic Waste Flows in 2024.

- 1.3 This report is the Scoping Review of 'Other Waste' Management Requirements that assesses possible management needs for 'Other' waste streams as follows:

- Wastewater
- Agricultural Waste
- Low-level radioactive waste.

- 1.4 As the nPPG advises that Waste Planning Authorities (WPAs) should seek to plan for these streams, this scoping report assesses the quantities that may arise within each stream and how well existing arrangements may cope in future, and whether it is necessary to provide for them expressly and therefore account for them in the WNA Update in detail.

- 1.5 While established data sources inform the generation of estimates for the principal waste streams, the data to estimate arisings of the 'other' streams is less readily available. As a result, quantifying and forecasting arisings is problematic. Given the lack of robust data, this scoping assessment comprises a review of the corresponding report produced as part of the CWaC WNA 2023 and provides updates where more current information is available.

¹ National Planning Policy for Waste. (DLUHC November 2016)

2 Wastewater

Context

- 2.1 Whilst Wastewater Treatment Works (WwTW) are classed as waste development and therefore planning applications relating to their provision are determined by the WPA, the assessment of the need for future wastewater management capacity is led by the water and sewerage undertakers through their DWMPs and corresponding AMPs. . NPPG advises that early discussions take place between local planning authorities and water and sewerage undertakers, so that proposed growth and environmental objectives, set out in the utility company business plans² are taken account of in local plans, and vice versa.
- 2.2 In CWaC, United Utilities Group PLC (UU) and Dwr Cymru (Welsh Water) are the designated sewerage and water undertakers with responsibility for providing wastewater treatment capacity. Every five years these water and sewerage undertakers are required to submit to the water regulator, Ofwat, business plans known as Asset Management Plans (AMPs) that set out the services and infrastructure improvements the undertaker is planning to make and how these are to be funded. Ofwat sets price limits for the next five years based around these AMPs. Certainty of infrastructure provision over the medium and long terms can only be gained when future funding is secured through Ofwat's asset management plan review process. The current AMP period (known as AMP8) runs from 1 April 2025 to 31 March 2030 and does not therefore cover the whole Plan period to 2045³.
- 2.3 Water and sewerage undertakers are also required under the Environment Act 2021 to produce a Drainage and Wastewater Management Plan (DWMP). These are 25-year strategic plans setting out how each intends to ensure the drainage and wastewater system infrastructure within each respective area is fit for purpose. These statutory plans inform the Asset Management Plan (AMP) process and provide the evidence base for identifying future infrastructure requirements and investment priorities. Both United Utilities and Welsh Water have published draft DWMPs following public consultation, with final plans expected to be published in line with regulatory requirements.
- 2.4 This Waste Needs Assessment update draws upon the following key evidence sources:
- United Utilities AMP8 (2025–2030) business plan, including investment commitments relevant to CWaC.⁴
 - United Utilities Drainage and Wastewater Management Plan (DWMP)⁵, outlining long-term capacity, resilience, climate-risk and environmental requirements.

² <https://www.gov.uk/guidance/water-supply-wastewater-and-water-quality>

³ AMP8 covers the period from 1st April 2025 to 31st March 2030. The Price Review in 2024 is where water companies will agree the AMP8 Business Plan with Ofwat for the following 5-year period.

⁴ <https://www.unitedutilities.com/corporate/about-us/our-future-plans/our-business-plan-submissions/our-business-plan-submissions-for-2025-2030/>

⁵ <https://www.unitedutilities.com/corporate/about-us/our-future-plans/Our-long-term-plans/>

Planning for Wastewater

- 2.5 Waste planning policy must consider two distinct aspects of wastewater management:
1. Wastewater treatment capacity – the ability of WwTWs and the wider network to accommodate existing and planned development.
 2. Bioresources (sludge) treatment capacity – the facilities required to treat, transport or recycle the solid residues generated through wastewater treatment.

The Purpose of this Section

- 2.6 In view of the above two aspects of wastewater management are addressed in this report:
1. The sufficiency of capacity to treat wastewater itself; and
 2. The sufficiency of capacity to manage the solid wastes (sewage sludge) that arise from the treatment process.

Terminology

- 2.7 Sewage, specifically refers to wastewater containing human waste while wastewater is a broader term encompassing all water that has been used or contaminated by human activities, including domestic, industrial, and commercial sources. Both are treated and managed in the same facilities. Sludge treatment refers to the processing and stabilisation of the semi-solid by-product produced during wastewater or sewage treatment, often to enable its use or disposal as a bioresource. For the purpose of this report, the term wastewater is used as default except where the term sewage sludge is used in the name of a particular facility.
- 2.8 Similarly, facilities that undertake wastewater treatment may be referred to either as Sewage Treatment Works (STW) or Wastewater Treatment Works (WwTWs). This report uses WwTW as the default, although if sites are named as STWs, that name may appear when making specific reference to a particular facility. Similarly, facilities where wastes resulting from wastewater treatment are subsequently treated may be referred to as Sludge Treatment Centres.

Waste water treatment capacity

2.9 This section sets out the plans of each sewerage undertaker as it affects CWaC.

United Utilities

2.10 United Utilities (UU) is the primary water and sewerage undertaker for Cheshire West and Chester, being responsible for wastewater collection, treatment and sludge management across the majority of CWaC. Figure 1 sets out UU's operating area. Within CWaC, the company operates an extensive network of wastewater treatment works (WwTWs), pumping stations, combined sewer overflows (CSOs), storm storage assets, and bioresources facilities linked to regional sludge-treatment centres.



Figure 1: United Utilities service area⁶

2.11 UU has proposed a £13.7 billion capital and operational programme for AMP8 (2025–2030)⁷ across its wider Northwest region. This includes major statutory programmes focused on:

⁶ <https://www.unitedutilities.com/corporate/about-us/what-we-do/>

- Storm-overflow reduction and spill-frequency control
- Compliance improvements at wastewater treatment works
- Network resilience upgrades
- Environmental water-quality enhancements

Welsh Water

- 2.12 Welsh Water (WW) is the sewerage undertaker for the western parts of Cheshire West and Chester, including the city of Chester, Farndon and surrounding communities. As shown on Figure 2 below.



Figure 2: Welsh Water Service Area

- 2.13 WW has proposed a significant capital investment programme for AMP8 (2025–2030) totalling approximately £4 billion, with around £2.5 billion dedicated to environmental protection and improvement, reflecting a major step up from previous investment periods. This includes expanded investment in its wastewater network, sewerage infrastructure and river water quality enhancements across its operating area.⁸
- 2.14 Within Cheshire West and Chester specifically, Welsh Water has delivered and planned targeted wastewater improvements that include works at Chester WwTW, where storm storage capacity is being increased to enhance resilience during heavy rainfall and reduce pressure on

⁷ <https://www.unitedutilities.com/corporate/newsroom/latest-news/record-13.7bn-investment-in-the-pipeline-for-north-west/>

⁸ <https://www.dwrcymruplans.com/>

local watercourses, and at Farndon WwTW, where treatment upgrades improve the quality of discharged effluent into the River Dee.⁹

Inputs of Other Waste to Wastewater Treatment Works in CWaC

- 2.15 WwTWs can provide a valuable function in managing wastes, other than wastewater, that arise in liquid and sludge form such as septic tank emptyings. WwTWs that receive such waste normally require an environmental permit. Review of the data presented in the WDI 2024 indicates that Ellesmere Port and Northwich WwTW in CWaC received waste other than wastewater and sludges from its treatment, for treatment as shown in Table 1. It may be that inputs to the Sludge Treatment Centre at Ellesmere Port double count input to the WwTW located there, as outputs from the WwTW may then be processed there.

Table 1: >500 tonnes Inputs of Other Waste to CWaC Permitted WwTW (exc. 19 08 05)¹⁰

Source: WDI 2024

Site Name	Waste Code	EWc Waste Description	Total Tonnes
Ellesmere Port (Little Stanney) WwTW	19 07 03	Landfill leachate	58,680
	19 08 99	Unspecified wastes	364
	20 03 04	Septic Tank sludge	9,986
Ellesmere Port (Little Stanney) WwTW STC	19 06 06	Digestate from Anaerobic Digestion	6,036
	19 02 06	Sludges from physico/chemical treatment	76,666
	19 09 02	Sludges from water clarification	608
Northwich WwTW	20 03 04	Septic tank sludge	1,745
Huntingdon WwTW (permitted as closed inert landfill)	19 09 02	Sludges from water clarification	157,097
Total			311,163

Management of Sewage Sludge from CWaC Wastewater Treatment Works

- 2.16 Sludge resulting from the treatment of wastewater at a WwTW is normally termed 'sewage sludge' or in some cases 'bioresources'. Sewage sludge undergoes three stages of treatment, primary treatment is the first phase of sewage treatment, followed by secondary and finally tertiary treatment. Some WwTW only offer primary treatment capacity and so the sludge may then be moved on to sites that offer secondary and tertiary treatment capacity. These 'next step' sites are often referred to as Sludge Treatment Centres (STCs). This section examines the current capacity of wastewater treatment works for sludge management and the possible requirements for future capacity.

⁹ <https://www.dwrcymruplans.com/cheshire-west-and-chester/>

¹⁰ WwTWs located at Chester and Farndon do not appear to be subject to environmental permits.

Sludge Treatment Centres

- 2.17 The WDI 2024 shows that 173,375 tonnes of sewage sludge was managed at the Ellesmere Port STC in 2024. In addition two WwTWs located outside CWaC received sewage sludge arising from CWaC WwTWs during the 2024 reporting year. Table 3 shows together these WwTWs received just over 100,000 tonnes of CWaC sewage sludge.

Table 2: Principal permitted sites outside CWaC receiving CWaC sewage sludge (>500 tonnes)

Source: WDI 2024

Facility WPA	Operator	Facility Name	Tonnes Received
Cheshire East	United Utilities	Crewe WwTW	54,284
Lancashire	United Utilities	Lancaster WwTW	49,662

- 2.18 This shows that the management of sewage sludge from CWaC WwTWs takes place both at Sludge Treatment Centres located within and outside CWaC. This is unsurprising as inter area flows are normal within utility service areas, where different types of treatment work capacity are optimised across a network that transcends WPA boundaries.

Conclusion

- 2.19 The WNA 2023 found that the findings of the WNA 2016 and consequential policy in the adopted Local Plan still held in regard to wastewater and sewage waste treatment needs.
- 2.20 This review of more up to date evidence, from current and emerging AMPs, Water Resources Management Plans and Drainage and Wastewater Management Plans indicates that both undertakers are planning substantial investment in wastewater infrastructure during AMP8 (2025–2030), with a strong emphasis on network resilience, environmental compliance, storm overflow reduction and upgrades to existing wastewater treatment works both within and outside CWaC. Within CWaC, targeted improvements are planned at key facilities, including Chester and Farndon WwTWs.
- 2.21 The available data does not identify an apparent strategic requirement for new standalone wastewater treatment works within the Plan area. Instead, future capacity needs are expected to be met through optimisation and enhancement of existing assets, supported by regional sludge treatment arrangements that extend beyond administrative boundaries.
- 2.22 The management of sewage sludge remains integrated within wider bioresources networks operated by the undertakers, with interim storage and agricultural recycling providing complementary capacity.

3 Agricultural Waste

- 3.1 Agricultural land use is extensive and remains a defining feature of Cheshire West and Chester. The fertile soils and mild climate support a strong livestock-based farming sector, with dairy farming historically and currently the dominant agricultural activity, complemented by beef cattle and sheep production. Large areas of permanent pasture and grassland are used for grazing and fodder crops, while arable farming plays a more limited role, typically focused on cereals and forage crops. This agricultural profile influences the nature of waste arisings in the Plan area, with organic materials such as manure from intensive livestock rearing requiring management. The Environment Agency's public register shows that there were 8 livestock rearing in CWaC permitted as installations in 2025.

Context

- 3.2 *The Waste Management (England and Wales) Regulations 2006* brought agricultural waste under legislative control for the first time. Prior to this a significant proportion was managed on farms by burning or depositing into farm tips which became illegal under the 2006 Regulations.
- 3.3 In advance of the introduction of the regulations the following research projects were undertaken in an attempt to establish quantities and composition of arisings from this stream and understand management arrangements in place at the time, with a view to identifying management needs at the national level:
- 1998 survey reported in a 2001 Environment Agency report.¹¹
 - Agricultural Waste Survey reported in 2003 Environment Agency report.¹²
- 3.4 These remain the most current sources of data available for the stream as a whole and therefore continue to be relied upon when seeking to generate local estimates for planning purposes.
- 3.5 Following the introduction of the regulations, certain agricultural waste is considered more likely to be managed in the same way as the commercial and industrial waste stream, thus placing some additional capacity requirements on the network used to manage this stream.
- 3.6 In order to identify whether waste from agricultural sources needs separate consideration in the emerging Waste Local Plan, the following three aspects have been considered:
1. The nature of different agricultural wastes;
 2. the likely current level of arisings;
 3. the way in which the arisings are managed.

¹¹ Environment Agency (2001). *Towards Sustainable Agricultural Waste Management*. Environment Agency R&D Technical Report P1-339. <https://www.gov.uk/government/uploads/.../geho0003bieo-e-e.pdf>

¹² Environment Agency *Agricultural Waste Survey 2003*
www.voluntaryinitiative.org.uk/importedmedia/library/1082_s4.pdf

The Nature of Different Agricultural Wastes

- 3.7 To be regarded as agricultural, waste must have been produced on a 'farm' in the course of 'farming'. Agricultural waste takes both 'natural' (or organic) and 'non- natural' forms.

Natural Agricultural Waste Arisings

- 3.8 Agricultural waste largely comprising manures and slurries from livestock farming. Under long-standing UK practice, when these materials are spread on land as fertiliser they are considered by-products rather than waste and therefore their management arrangements fall outside control the waste planning system.¹³ However, a recent High Court judgment in *NFU v Herefordshire Council* has clarified that manures may be classified as 'waste' under the retained EU Waste Framework Directive where they are not used directly as fertiliser, are moved off-farm for treatment, or are handled in ways that go beyond normal agricultural activity.¹⁴ This case was in the context of a local plan that included policies relating to the development of intensive livestock units giving rise to such wastes. Since other natural wastes remain outside formal control, it is considered that they are unlikely to enter the formal waste management system and therefore need to be planned for through the CWaC Local Plan. Therefore, this report focuses on non-natural waste arisings.

Non-Natural Agricultural Waste Arisings

- 3.9 'Non-natural' agricultural waste is waste other than 'natural' organic waste arising from farming activities. This includes discarded pesticide containers, plastics, tyres, batteries, clinical waste, old machinery, waste oil and packaging waste. Non-natural waste arisings may also include organic waste such as crop residues.
- 3.10 The only recognised source of national estimates for arisings of non-natural agricultural waste available is the 2001 Environment Agency Report which presents estimates of arisings down to the regional level for 1998. For the North West region as a whole, the report estimated that approximately 17,300 tonnes of non-natural agricultural waste was produced on an annual basis.

¹³ Defra, *Farming Rules for Water* and associated guidance on manure use (regulatory controls outside waste planning).

¹⁴ *National Farmers Union v Herefordshire Council* [2023] EWHC (Admin) – clarification of manure classification under the Waste Framework Directive.

Agricultural Waste Management Options

- 3.11 The 2006 DEFRA ‘Waste Minimisation Manual: A Practical Guide For Farmers & Growers’¹⁵ identifies three principal routes for managing agricultural waste as follows:

1. arrange for removal to an appropriately permitted facility.
2. apply for a permit to manage waste on-farm.
3. register an appropriate exemption to recover or dispose of certain waste on-farm.

Each route is considered below.

Agricultural Waste managed at Permitted Sites

- 3.12 The WNA 2021 reported c26,000 tonnes of agricultural waste arose in CWaC and concluded that:

“Given that the vast majority of the agricultural waste is treated on-site, there are limited requirements for CWaC to consider treatment capacity within the WPA region.”

- 3.13 The CWaC Local Plan (2015) took the position that:

“This policy also encourages the development of on farm anaerobic digestion plants for the management of agricultural waste on farm units. This supports current practise for the management of agricultural waste in the borough, where a large amount of agricultural waste is produced but very little leaves the farm for management.”

Update

- 3.14 Review of the WDI 2024 identified 15,737 tonnes of waste arising from agricultural sources in CWaC managed at permitted sites. Virtually all was managed via anaerobic digestion (AD) at a single site located in CWaC named Holme Farm operated by J H Willis & Son Ltd, for which agricultural waste accounted for c15,000tpa of total input of c90,000tpa. While a number of other facilities reported receiving agricultural waste from CWaC, the amounts were below 500 tonnes and hence considered to be insignificant in this context.

Applying for a permit

- 3.15 Where agricultural waste is being managed on a farm on an ongoing basis or in sufficient quantities an environmental permit may be required. Where a permit is granted by the Environment Agency the quantities of waste managed through such facilities would be reported through the WDI and hence captured for the purposes of quantifying this waste stream. Permitted facilities may also require express planning consent.
- 3.16 In addition, intensive livestock units such as pig or poultry farms are subject to environmental permitting with requirements to provide for management of waste produced. There are 8 such units permitted in CWaC.¹⁶

¹⁵ DEFRA 2006 Product code PB 11674

¹⁶ Review of the Environment Agency installation permit register indicates that 7 locations keeping 40,000 units of poultry or more , one keeping 2,000 head of pigs plus were permitted in CWaC in 2026.

Agricultural Waste Managed via Exempt Activities

3.17 Exemptions that apply include the ability to burn waste in the open (D7), spreading waste to benefit agricultural land (U10) and the use of waste in construction (U1), which covers the use of waste hardcore to maintain farm tracks and roads. However, these exemptions may also be used to cover activities taking place on farmland involving waste from non agricultural sources. The specific exemptions that relate solely to the management of agricultural waste are as follows:

- Deposit of agricultural waste consisting of plant tissue under a Plant Health notice.
- Treatment of sheep dip for disposal.
- Treatment of non-hazardous pesticide washings by carbon filtration for disposal.
- Spreading pig and poultry ash mixed with manure on farmland.¹⁷

3.18 While exemptions are subject to quantity limits, they do not report, so quantities of waste managed through these routes can only be estimated. It should also be noted that the Government has undertaken an extensive review of permitting exemptions and is introducing charging and other changes¹⁸ that may affect the availability of these outlets in the future.

Table 3: Cheshire West and Chester Registered Exemptions

Source: Environment Agency Exemption Register 2024

Exemption	Activity	Numbers
T24	Anaerobic digestion on farms	Up to 6
U10	Spreading waste to benefit agricultural land	7-267
U14	Mixing ash back into soil	Up to 63
U15	Mixing pig and poultry ash with manure	1-24
D4	Depositing diseased crops under a Plant Health Notice	Up to 84

3.19 Table 3 sets out the number of exemptions for specific agricultural activities registered in CWaC in 2024. The exemption register only lists two exemptions - for U10 (7) and U15 (1)- as standalone registrations in locations in CWaC. All others are registered as part of a group of exemption registrations. This is why Table 3 shows a range for the number of exemptions registered in each category.

3.20 Due to the imprecise and non-specific nature of registered exemptions it is not possible to attribute tonnages managed through these routes. However, it may be reasonable to assume that some of the waste managed through some exemptions that don't involve the final fate (S, T and U categories) eventually ends up at permitted facilities and the tonnages are recorded in the WDI. The waste may have been mixed with non-agricultural waste during the course of collection and may therefore not be declared as coming from agricultural sources at the 'next

¹⁷ <https://www.gov.uk/government/publications/waste-exemptions-how-to-choose-register-and-pay/waste-exemption-charges#annex-b>

¹⁸ Reforming the waste exemptions system, DEFRA, July 2025.

<https://www.gov.uk/government/publications/reforming-the-waste-exemptions-system/reforming-the-waste-exemptions-system>

step' site. Due to this, no attempt to calculate the total agricultural waste managed at exempt sites has been made.

Planning Applications in CWaC for Agricultural Waste Facilities

- 3.21 One additional on-farm waste management facility has been granted planning permission since 2021. This is for an anaerobic digestion (AD) plant utilising cattle manure and slurry produced on the farm estate plus some waste bedding from local chicken farmers to generate biogas.¹⁹

Conclusion

- 3.22 The agricultural waste arising from CWaC in 2024 that may require formal management is estimated to be c15,500 tonnes, somewhat less than the c26,000t in 2021. This waste appears to be provided for. The tonnages managed through exemptions may add to the arisings figure but the quantities are unknown and it is likely that some is reported in the WDI as non agricultural at 'next step' sites.
- 3.23 Overall, there is no evidence to suggest a specific shortfall in management capacity for agricultural waste within CWaC. Existing permitted and exempt arrangements, together with recently consented additional on-farm anaerobic digestion capacity, indicate that the current system is capable of managing agricultural waste arisings effectively. There is therefore no identified need for the emerging Local Plan to allocate additional sites specifically for agricultural waste management, beyond maintaining a supportive policy framework that enables appropriate on-farm facilities to come forward where justified. Hence the findings of the WNA 2023 still hold.

¹⁹ The AD plant is located on Lea Manor Farm, an existing dairy farm and the Biomethane plant will be sited on land adjoining Grange Farm.

4 Low-Level Radioactive Waste

Context

- 4.1 Solid radioactive waste is categorised into three principal categories (and a sub category) according to its level of radioactivity (and the consequential heat) it produces. These categories are:
- **High-level radioactive waste (HLW)** waste which can generate significant heat as a result of its radioactivity, and so this factor has to be taken into account in the design of storage or disposal facilities.
 - **Intermediate level radioactive waste (ILW)** has lower levels of radioactivity than HLW and does not generate sufficient heat for this to determine the design of storage or disposal facilities.
 - **Low level radioactive waste (LLW)** is radioactive waste having a low radioactive content. LLW makes up more than 90% of the UK's radioactive waste by volume but contains less than 0.1% of the total radioactivity. Within the definition of LLW, there is a sub-classification, known as Very Low Level radioactive waste (VLLW).
 - **Very low-level waste (VLLW)** is a sub-category of low-level radioactive waste containing very small amounts of radioactivity. The 2024 *Managing Radioactive Substances and Nuclear Decommissioning* policy framework distinguishes between **low-volume VLLW**, which may be disposed of with ordinary refuse subject to authorisation, and **high-volume VLLW**, which may be disposed of in suitably permitted landfill or on-site disposal facilities, with controls focused on the total quantity disposed of at a site.²⁰

Context in CWaC

- 4.2 CWaC hosts a site producing LLW at Capenhurst, this is operated by Urenco UK Ltd. The adopted Local Plan states the following:
- “Whilst Cheshire West and Chester have a site (Capenhurst) producing intermediate level radioactive waste, very low-level radioactive waste can be produced from many non-nuclear industrial sites including hospitals, universities, research facilities and the oil and gas industries. This policy does not cover radioactive wastes that arise in Cheshire West and Chester as the detailed waste management plan of the Capenhurst facility provides for all of its arisings. The volumes created at the other facilities whilst uncertain, are very small and indications are that it is handled in the most appropriate way”*
- 4.3 The WNA 2023 concluded that the findings of the WNA 2016 still held. This stated the following:
- “ The quantities of radioactive waste are small and not sufficient to justify the development of new waste management facilities. Advice from the Planning Inspectorate is that policies on the management of this waste stream are unlikely to be needed unless there is specific interest in the development of facilities from operators in the area.”*

²⁰ Department for Energy Security and Net Zero (DESNZ) (2024), *Managing Radioactive Substances and Nuclear Decommissioning: UK Policy Framework*, para. 8.19, pp. 38–39.

Policy Relevant to CWaC Arisings

- 4.4 The primary national Government policy document relevant to CWaC due to the presence of nuclear sector facilities is the ‘*UK Strategy for the Management of Solid Low Level Waste from the Nuclear Industry*’²¹ published in February 2016. The three main strategic themes include:
- the application of the waste hierarchy;
 - the best use of existing LLW management assets;
 - the need for new fit-for-purpose waste management routes
- 4.5 In May 2024, the Department of Energy Security and Net Zero (DESNZ) published *Managing Radioactive Substances and Nuclear Decommissioning*, which replaces earlier policy statements on the management of solid low-level radioactive waste and related nuclear decommissioning policies.²² The framework confirms that low-level radioactive waste (LLW) should continue to be managed through a range of disposal routes, including treatment and disposal via the Low-Level Waste Repository (LLWR) at Drigg, appropriately permitted landfill facilities, and, where justified, on-site disposal of large volumes of LLW and very low-level waste (vLLW) as part of nuclear site decommissioning.²³ The policy also clarifies that Geological Disposal Facilities (GDFs) are intended primarily for higher activity wastes and are not expected to manage significant quantities of LLW. The updated framework, therefore, reinforces the need for flexibility in planning for LLW management, consistent with the waste hierarchy and the principles of proximity and self-sufficiency.²⁴
- 4.6 The LLW strategy is primarily aimed at non-nuclear industry waste producers, the environment agencies and waste planning bodies and:
- Provides guidance and background information to enable planning authorities to make informed decisions on planning applications and to respond to concerns from their communities;
 - clarifies the respective roles of waste producers, the environment agencies, planning authorities and the Nuclear Decommissioning Authority to enable decisions to be made that properly recognise the responsibilities of others; and,
 - informs waste producers and regulators of how the regulatory framework applies to LLW, particularly the need for producers of LLW to produce waste management plans, consider waste minimisation at source and apply the waste hierarchy.

²¹https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/497114/NI_LLW_Strategy_Final.pdf

²² Department for Energy Security and Net Zero (DESNZ) (2024), *Managing Radioactive Substances and Nuclear Decommissioning: UK Policy Framework*, para. 8.19, pp. 38–39.

²³ [Managing Radioactive Substances and Nuclear Decommissioning: UK policy framework](#)

²⁴ [Managing radioactive substances and nuclear decommissioning - GOV.UK](#)

Low-Level Radioactive Waste from Non-Nuclear and Nuclear Sources

- 4.7 The majority of radioactive waste that is not classed as high or intermediate level is produced by sectors outside the nuclear industry and hence is termed 'non-nuclear'. Most radioactive waste produced by non-nuclear sources contains very low levels of radioactivity and is therefore classed as VLLW. The majority of this material is similar in its physical and chemical nature to general wastes from household, commercial or industrial sources.

Non-Nuclear Sources

- 4.8 Non-nuclear sources of LLW include healthcare, pharmaceuticals, research, higher education establishments, as well as oil and gas facilities, occasional industrial users and land contamination sites. Individually, these sectors generate relatively small volumes of radioactive waste, but collectively they constitute a consistent, nationally significant waste stream.
- **Hospitals and Healthcare** – Solid LLW arises primarily from traces of radiopharmaceuticals used in diagnostic and therapeutic medicine. This includes used syringes, vials, absorbent materials, and protective equipment contaminated with minute amounts of radioactive material. While much of this waste is managed through the clinical waste stream (typically incineration), hospitals are increasingly encouraged to segregate LLW from non-radioactive clinical waste to ensure that only materials requiring radioactive disposal are treated as such.²⁵
 - **Pharmaceutical and Biotechnology Industry** – These sectors use radioactive isotopes for product development, research, and quality control. Resulting LLW typically consists of laboratory plastics, sharps, gloves, and absorbent materials. The volume is modest but continuous. Waste is managed under the *Environmental Permitting (England and Wales) Regulations 2016* through permits issued by the Environment Agency.
 - **Research and Education** – Universities and research institutions use radioactive tracers to study chemical and biological processes. Their LLW is similar in composition to hospital waste, consisting of disposable laboratory materials and small amounts of scintillation fluids. In agricultural and veterinary research, waste may also include contaminated plant material or animal bedding, which requires special packaging and disposal through authorised facilities.²⁶
 - **Oil and Gas Decommissioning** - The decommissioning of oil and gas facilities can generate low-level radioactive waste (LLW), particularly where naturally occurring radioactive materials (NORM) have accumulated within equipment, pipework, tanks or associated infrastructure. The 2024 *Managing Radioactive Substances and Nuclear Decommissioning* policy framework recognises this as an established but generally low-volume waste stream, which is typically managed through permitted treatment and disposal routes, including specialist facilities and, where appropriate, suitably authorised landfill. Waste planning authorities are not expected to allocate specific sites for this

²⁵ Environment Agency (2023) *Guidance on the Management of Radioactive Waste from Hospitals and Medical Practices*, EA Regulatory Guidance Note RGN 2.

²⁶ UK Radioactive Waste Inventory (2022) *Detailed Data Report*, Department for Energy Security and Net Zero and Nuclear Decommissioning Authority, February 2023.

waste stream but should ensure that local policy allows access to appropriate permitted facilities where required.²⁷

- 4.9 **Contaminated Land** - Radioactive waste can also arise from the remediation of sites historically affected by legacy industrial or medical activities. These wastes are often bulky soils with very low but measurable levels of contamination. The Government's LLW strategy does not expect waste planning authorities to make specific site allocations for such arisings, given their **sporadic and site-specific nature, but** recommends that local plans acknowledge the potential for such waste and ensure that **appropriate disposal routes (e.g., permitted landfill)** are available if required.²⁸

Management of VLLW and LLW

Very Low-Level Waste (Exempt Waste)

- 4.10 A site producing or managing less than 50 m³ of VLLW per year is classed as a 'low volume VLLW source' and as such is exempt from reporting quantities of waste produced and managed. VLLW from such sources is not required to be managed separately and so is expected to be managed in the same manner as general waste produced on the source site. As a result, any waste management facility in the UK may accept small volumes of VLLW mixed in with the other wastes depending on whether source sites fall within their catchment. However, VLLW is rarely (if ever) declared as such in any waste returns submitted so there are no specific records of its management to draw on. The LLW strategy states that Government considers that the present arrangements for low volumes of exempt VLLW are satisfactory and does not expect WPAs to make specific provision for the management of VLLW in their waste plans.

Low-Level Waste

- 4.11 When considered on its own, the small quantity of LLW produced in the UK is insufficient to drive the provision of dedicated management facilities via the market. Therefore, the national LLW Strategy concludes that producers of these wastes will nearly always have to rely on waste management networks provided for other large volume wastes. This can be problematic as the public perception of the risks associated with the management of LLW can deter waste facility operators from providing such a service.

²⁷ Department for Energy Security and Net Zero (DESNZ) (2024), *Managing Radioactive Substances and Nuclear Decommissioning: UK Policy Framework*, paragraph 8.123, page 64.

²⁸ Department for Levelling Up, Housing and Communities (2021) *National Planning Policy for Waste*, Paragraph 7, and DESNZ et al. (2021) *UK LLW Strategy* (Section 3.2.2).

- 4.12 Most disposal of LLW requires a permit to be held by both the waste producer and the operator of the waste management facility that receives it. LLW can go either to a landfill as a 'controlled burial', the national Low Level Waste Repository (LLWR) located in Cumbria at Drigg, or may be dealt with by incineration (with or without energy recovery). To extend its life, use of the national LLWR is reserved for particular types of LLW, so LLW disposal usually takes place at specially authorised facilities used for the management of other types of waste.. While operators of appropriate facilities may apply to take LLW at any time, in England there are currently only three landfill sites granted permits to do so as was the case in 2023²⁹.³⁰
- 4.13 It should also be noted that Capenhurst itself has planning permission for the treatment of up to 5,000 tpa of VLLW and LLW from off-site sources along with 2,000tpa sourced from on-site, so provides some capacity for the management of this waste stream³¹.

Planning for the Management of LLW

- 4.14 The same principles in relation to the above as set out in the WNA 2023 with recognition that *"...each and every local authority cannot necessarily be self-sufficient in the matter of waste management."*³²

Production and Management of LLW in CWaC

A review of radioactive source permits records granted by the EA shows no change from 2023 with 7 authorisations held by 6 entities within CWaC. In addition there are still 3 entities holding permits in CWaC.

Conclusion

- 4.15 This review has found that nothing substantial has changed regarding radioactive waste in CWaC since the WNA 2023 and therefore the findings of the previous WNA 2016 and consequential policy in the adopted Local Plan still hold.

²⁹ No records indicate there are any incinerators permitted to dispose of LLW in England.

³⁰ Low Level Waste Repository Ltd (LLWR Ltd) (2024), *About us*, GOV.UK; Department for Energy Security and Net Zero (DESNZ) (2024), *Managing Radioactive Substances and Nuclear Decommissioning: UK Policy Framework*.

³¹ CWaC AMR., 2022.

³² LLW Strategy key point page 17

5 Overall Conclusion

- 5.1 Review of the above data sources allows the following conclusions to be reached about the need to provide for 'other wastes' in the preparation of the CWaC Local Plan:
- Wastewater and the associated sludge appear to be catered for adequately through arrangements made by United Utilities and Welsh Water, the statutory sewerage undertakers for CWaC. It is considered that the findings should be confirmed with these water utilities to determine whether the current Local Plan policy on wastewater and sewage treatment capacity provision remains sound.
 - Agricultural waste – CWaC is not considered to generate enough waste that would warrant a specific separate provision, assuming the continuation of the existing arrangements, including the exemption regime.
 - Radioactive waste – This review has found a small number of permitted sources of non-nuclear radioactive waste within CWaC plus some treatment capacity already provided at Capenhurst. This strongly suggests that any specialist capacity need has already been met and therefore the current policy in the Local Plan on the matter remains sound.
- 5.2 Based on the above, it is considered that there is no need for the WNA to undertake further in-depth assessment of the 'other waste' streams arising in CWaC.



Cheshire West & Chester Waste Needs Assessment 2026

Appendix G: Review of Strategic Waste Flows from CWaC 2022-2024

Report: Final Issue

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Abbreviations

Abbreviation	Term
AD	Anaerobic Digestion
C & I	Commercial & Industrial Waste
C, D & E / CDEW	Construction, Demolition & Excavation Waste
CWaC	Cheshire West and Chester
EA	Environment Agency
EfW	Energy from Waste
ELV	End-of-Life Vehicle
HWRCs	Household Waste Recycling Centres
LACW	Local Authority Collected Waste
MRS	Metal Recycling Site
MRF	Material Recycling Facility
nPPG	national Planning Practice Guidance
NPPW	National Planning Policy for Waste
WDI	Waste Data Interrogator
WNA	Waste Need 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.
Composting	A process in which biodegradable waste (such as green waste and kitchen waste) is broken down in aerobic conditions by naturally occurring micro-organisms to produce a material suitable for use as a soil improver.
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.
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.
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).
Inert Landfill	Landfill site permitted to only accept inert waste for disposal.
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).

Local Authority Collected Waste	Waste collected by or on behalf of a local authority. Includes household waste and business waste were 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.
Materials Recycling Facility	A facility for sorting recyclable materials.
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.
Planning Practice Guidance	Detailed guidance for the application of national planning policy published by the Ministry of Housing, Communities and Local Government.
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.
The Plan area	The area subject to the Waste Local Plan to which this study relates. In this case the Borough of CWaC.
Waste Data Flow	The web-based system for data reporting by UK local authorities to government.
Waste Data Interrogator	Annual dataset published by the Environment Agency reporting quantities and types of waste managed at permitted waste management facilities in England.
Waste Needs Assessment	Forecasts waste that will require management by different means in a WPA area over a certain period of time, assesses capacity of the existing facilities available to manage this waste and considers the need for additional facilities to meet the forecast management needs. This underpins the preparation of planning policies for waste.
Waste Planning Authority	The authority responsible for planning for waste within a specific administrative area. In this case CWaC 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. Introduction

- 1.1** The purpose of this report is to confirm whether the assessment of strategic flows of waste from Cheshire West & Chester (CWaC) in 2021 undertaken as part of the WNA 2023 remains robust. This report presents the outcome of an assessment of movements of waste (a.k.a. waste flows) between the administrative area of CWaC and other Waste Planning Authority (WPA) areas in England¹, to determine which movements may be regarded as strategic (or strategic in the future). Identifying movements that may be strategic is a necessary step in determining whether the spatial strategy underpinning the waste local plan policies included in the emerging local plan can rely on such movements over the Plan period. If not, then specific provision for additional capacity to be developed within the Plan area to address potential shortfalls may be required. Where strategic movements are identified, the relevant WPAs have been contacted to establish whether movements into the receiving facilities within their area can be relied upon and the outcome of this exercise is summarised in Appendix 1 of this report.
- 1.2** The principal data source used, the Environment Agency (EA) Waste Data Interrogator (WDI), reports on inputs to sites located in England subject to environmental permits the EA has issued. The WDI 2024 has been used as it contains the most recent data available at the time of writing this report.
- 1.3** Engagement with WPAs normally involves consideration of the following:
- Whether historical flows of waste identified as potentially strategic are likely to continue;
 - Barriers to the continuation of waste exports due to, for example, exhaustion of finite capacity and cessation due to time limited availability at receiving facilities;
 - Whether new flows of waste from the Plan area are likely to take place. This takes the above factors into account as well as any changes in capacity that the management of waste arising in CWaC currently relies on (situated either within or beyond CWaC) and changes in contractual arrangements.
- 1.4** Advice is provided to support CWaC Council in its engagement activities by recommending which WPAs be contacted about which waste movements and what follow up actions may be needed given the engagement activities that have already taken place as part of the Plan making process so far.

¹ While the waste stream specific assessment exercises indicate that tonnages of CWaC waste flow to facilities located in Wales, because the Duty to Cooperate only applied to English WPAs this exercise has only extended to English WPAs.

2. Waste as a Strategic Issue

- 2.1** The management of waste generally transcends administrative boundaries, with waste arising in one WPA area often being managed at facilities located in another. Waste management facilities may have catchments that extend beyond the boundary of the Plan area within which they are situated. Such flows are recognised in relation to the disposal of waste and recovery of mixed municipal waste in particular in the National Planning Policy for Waste that expects WPAs to:

"...plan for the disposal of waste and the recovery of mixed municipal waste in line with the proximity principle, recognising that new facilities will need to serve catchment areas large enough to secure the economic viability of the plant;²" .

The Duty to Cooperate

- 2.2** Section 33A of the *Planning and Compulsory Purchase Act 2004* (as amended by section 110 of the *Localism Act 2011*) required Councils in England that produce development plan documents to cooperate with relevant local planning authorities, county councils and bodies or other persons as prescribed. The Duty to Cooperate (aka 'the Duty') imposed, a duty to: *"engage constructively, actively and on an ongoing basis"*. The Duty applied to the *preparation of development plan documents*, insofar as they relate to a *"strategic matter"*. A strategic matter is defined as *"sustainable development or use of land that has or would have a significant impact on at least two planning areas including... in connection with infrastructure that is strategic..."* (S33A(4)). Therefore, waste management between Plan areas may qualify as a strategic matter.

- 2.3** The updated National Planning Policy Framework (December 2024) expects that Local Plans include 'non-strategic' and 'strategic' policies, and explains that strategic policies should:
- "... set out an overall strategy for the pattern, scale and design quality of places and make sufficient provision for ...infrastructure "* and this includes *"for...waste management"* ³.

It also goes on to specify that:

"In order to demonstrate effective and on-going joint working, strategic policy-making authorities should prepare and maintain one or more statements of common ground, documenting the cross-boundary matters being addressed and progress in cooperating to address these."⁴

- 2.4** The *Levelling up and Regeneration Act 2023* includes provision for the revocation of the DtC and this has now been confirmed through a Ministerial Statement⁵. However, it is anticipated that whatever replacement mechanism is put in place, an assessment of strategic flows of waste will need to be undertaken for plan making purposes.

² Paragraph 4.

³ Paragraph 20.

⁴ Paragraph 28.

⁵ Statement made on 27 November 2025 by The Minister of State for Housing & Planning, Matthew Pennycook MP <https://questions-statements.parliament.uk/written-statements/detail/2025-11-27/hcws1104>. The Minister has also written to the Planning Inspectorate confirming the revocation relates to the current plan-making system and that local planning authorities should continue to collaborate across their boundaries, including on unmet development needs from neighbouring areas

3. CWaC Net Self Sufficiency

- 3.1** Self-sufficiency in terms of waste, as outlined in Article 16 of the retained EU Waste Framework Directive⁶, refers to the principle that each Member State of the European Union should aim to manage and dispose of its own waste within its borders, to the extent possible. This encourages Member States to take responsibility for their own waste and is designed to reduce the need for cross boundary waste movements, which can create inequalities between countries and waste tourism. Even though the UK has now exited the EU, the principle still applies at national level to the UK as a whole⁷.
- 3.2** The principle of self-sufficiency has been adapted for local waste planning purposes to establish how much management capacity should be provided in each waste Plan area. The addition of the term 'net' recognises that movements of waste occur between waste Plan area, as the management of waste arising within a specific Plan area is not generally restricted to administrative boundaries. Movements can be beneficial for optimising the waste management system where economies of scale apply. This means there is no expectation that each tonne of waste produced in a particular Plan area is to be managed within that Plan area. Rather that, overall, there should be a balance of provision. The objective of net self-sufficiency ensures that there is sufficient capacity to manage the tonnage of waste equivalent to that predicted to arise within a particular Plan area. The degree to which a Plan area is net self-sufficient can be established by comparing the available capacity within the Plan area against the projected capacity requirements.
- 3.3** In addition to the above, the management of waste by disposal, or the recovery of mixed municipal waste is also subject to the proximity principle⁸ which seeks to ensure waste is managed at one of the nearest appropriate facilities. National guidance acknowledges that such facilities may be located outside a particular Plan area.

Export and Imports of Waste to and from CWaC

- 3.4** In order to ascertain the possible state of net self-sufficiency in CWaC in 2024 the tonnages of CWaC waste managed at permitted facilities both located within CWaC and located outside CWaC, as well as the tonnage of waste coming from outside CWaC managed within CWaC have been compared. The data is displayed in Table 1 alongside that for 2021 which informed the previous assessment which arrived at a conclusion that CWaC achieved net self-sufficiency in 2021.

⁶ <https://eur-lex.europa.eu/eli/dir/2008/98/oj>

⁷ As transposed into English law through *The Waste (England and Wales) Regulations 2011* as amended.

⁸ Paragraph 4 of *National Planning Policy for Waste*.

Table 1: Tonnages of CWaC waste managed in permitted facilities within and outside CWaC, and tonnage of waste imported to CWaC facilities

Source: WDI 2021 and 2024

Year	CWaC arisings		Managed in CWaC		
	Total waste arising in CWaC	CWaC waste managed outside CWaC	CWaC waste managed in CWaC	Waste imported to CWaC	Total Managed in CWaC
2021	1,915,538	1,141,369	774,169	1,148,361	1,922,530
2024	1,674,126 ⁹	954,142 ¹⁰	719,984	1,099,586	1,819,570

3.5 Table 1 shows that c720,000 tonnes of CWaC's waste were managed in CWaC in 2024. This compares with c954,000 tonnes managed outside the Plan area. This export is offset by the import of waste from outside CWaC for management of c1,099,500 tonnes. **Hence CWaC appears to have continued to remain net self-sufficient.** Figure 1¹¹ displays visually the balance between imports and exports by waste management method and waste type¹² in CWaC¹³.

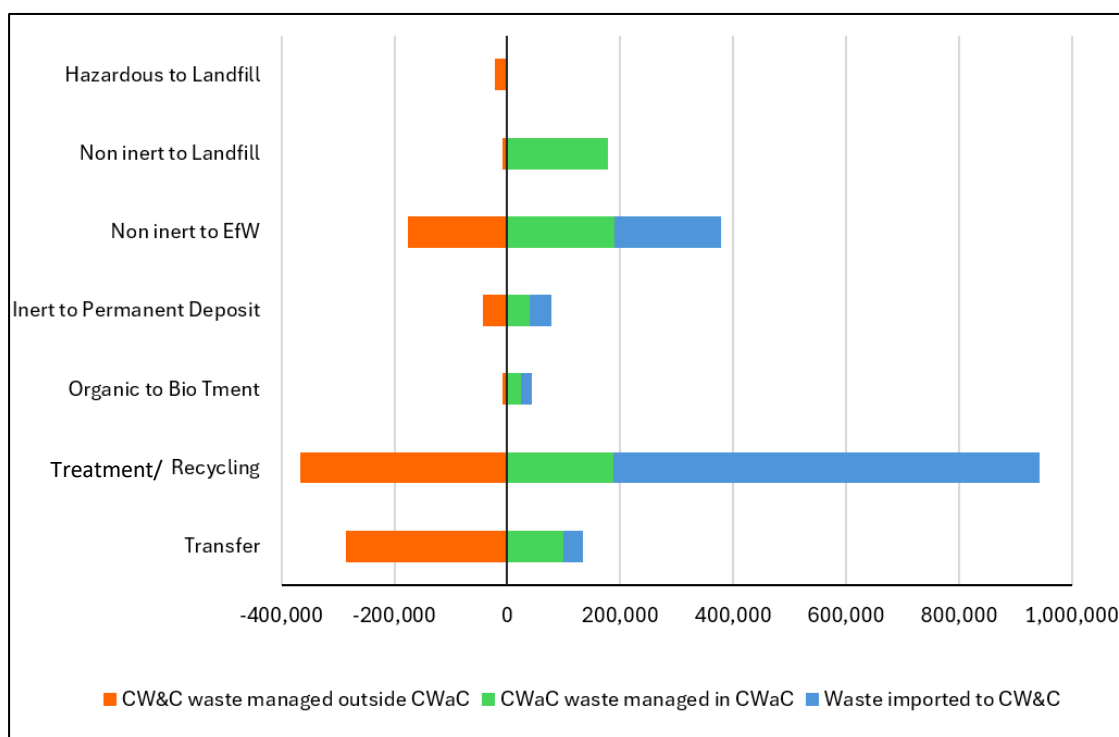


Figure 1: Waste import and export balance in CWaC 2024 by management method and waste type where known (tonnes)

⁹ Includes 131,725 tonnes of CWaC waste identified as having been managed in Wales in separate C, D & E (85,656t) and C & I (46,068t) waste stream sections.

¹⁰ As in footnote 9.

¹¹ Note that Figure 1 includes tonnages of waste exported to Wales included in the C, D & E and C&I waste stream sections.

¹² Non inert to EfW includes inputs to Fawley High Temperature Incinerator (HTI) and Ince Bio Power Plant (biomass).

¹³ Note that Figure 1 includes waste unattributed below Cheshire attributed to CWaC using the waste attribution exercise.

4. Strategically Significant Waste Flows from CWaC

- 4.1** A key matter to address when assessing the robustness of the Plan strategy upon which the waste policies contained in the emerging local plan were predicated, is to confirm that flows of waste to waste management facilities beyond CWaC considered to be strategically significant will continue to be available for the duration of its Plan period and hence can be relied upon. The focus for engagement is therefore to address outgoing waste flows and these are considered in the following section.

Applying significance thresholds

- 4.2** To identify what constitutes a ‘strategic’ level of waste movement the thresholds based on those adopted by WPAs that form the North West Waste Planning Advisory Group used in the previous assessment have been applied as a starting point.
- 4.3** Table 2 below shows movements of waste from CWaC in 2024 (latest data available) to other WPAs (in rank order) where one or more of the above thresholds have been met or exceeded.

Table 2: Destination WPAs of Inert, Non-inert and Hazardous Waste exports from CWaC in alphabetical order applying flows significance thresholds 2024.

Source: WDI 2024

N.B. Entries highlighted are those where thresholds have been met or exceeded

	Receiving WPA	Hazardous	Inert	Non-inert	Response
1	LB Bexley	113	<10,000	<5,000	
2	Bolton	124	<10,000	<5,000	
3	Cheshire East	<100	41,992	67,276	Received
4	Derbyshire	942	<10,000	<5,000	
5	Doncaster	227	<10,000	<5,000	
6	East Riding of Yorkshire	<100	<10,000	5,420	Received
7	Gloucestershire	4,206	<10,000	<5,000	Received
8	Halton	<100	124,688	156,397	Received
9	Hampshire	275	<10,000	<5,000	Received
10	Kirklees	299	<10,001	<5,000	Received
11	Knowsley	3,299	18,715	<5,000	Received
12	Lancashire	10,428	<10,000	54,017	
13	Leeds	8,731	<10,000	<5,000	
14	Liverpool	521	23,936	<5,000	Received
15	Nottingham City	674	<10,000	<5,000	Received
16	Redcar and Cleveland	1,209	<10,000	<5,000	Received
17	Rotherham	217	<10,000	<5,000	
18	Salford	1,845	<10,000	8,263	Received
19	Sandwell	14,695	<10,000	<5,000	Received
20	Sheffield	170	<10,000	<5,000	
21	Shropshire	<100	<10,000	7,285	
22	Solihull	576	<10,000	<5,000	Received

23	South Gloucestershire	234	<10,000	<5,000	
24	Staffordshire	9,848	<10,000	8,647	
25	Stockton-on-Tees	272	<10,000	<5,000	
26	Stoke-on-Trent City	531	<10,000	15,498	
27	Telford and Wrekin	148	<10,000	<5,000	
28	Trafford	302	22,632	6,443	Received
29	Wakefield	<100	<10,000	41,615	Received
30	Walsall	356	<10,000	<5,000	
31	Warrington	<100	18,364	22,958	
32	Warwickshire	182	<10,000	<5,000	
33	Wigan	<100	<10,000	15,223	Received
34	Wirral	603	<10,000	<5,000	Received
35	Wolverhampton	102	<10,000	5,404	

- 4.4** Of the 35 WPAs identified as having accepted strategically significant tonnages of waste at the time of writing only 7 WPAs have responded to the enquiry letter acknowledging the identified flows may be strategic, while 12 WPAs responded indicating the identified flows did not raise any strategic issues. Overall, the responses are positive and suggest that there are no known reasons why the current facilities will not remain operational during the plan period. Some respondents suggested that they consider 100t to be a more suitable threshold for hazardous waste than the 500t used. Most of the respondents agreed to further engagement should it be required.
- 4.5** As compared with the 35 WPAs identified in Table 1 as having accepted waste in excess of the significance screening thresholds in 2024, a total of 28 WPAs did so in 2021. This indicates that overall CWaC's reach to WPAs further afield increased in the past three years. A detailed comparison between the 2021 and 2024 waste flows for these WPAs is included in Appendix 1. It should also be noted that this table does not account for flows of the additional tonnages of 'Cheshire waste' attributed to CWaC in the Waste Stream specific reports.
- 4.6** Detailed examination of the totals indicates that movements of waste from CWaC that might be classed as strategically significant i.e. met or exceeded the screening thresholds went to the sites shown in the following tables. It is considered that where strategic flows went to a small number of sites the strategic reliance is greater than if distributed across a large number of sites. This therefore suggests that flows to such sites are of greater strategic importance to the Plan strategy. Conversely where inputs to individual sites fell below the threshold they have been excluded from further analysis even if the total tonnage going to the host WPA exceeded the threshold.
- 4.7** A detailed analysis by principal waste streams has been conducted using 2024 data, as shown in Table 3 below.

CWaC Hazardous Waste Destinations

4.8 The principal destination WPAs receiving strategically significant quantities of hazardous waste from CWaC in 2024 are shown in Table 3 below.

Table 3: Destination sites for CWaC Hazardous Waste Exports 500t or more in 2024 in Rank Order by WPA (total tonnage managed)

Source: WDI 2024

WPA	Management method	Site Name	Principal Waste Type (500t or more)	Tonnes
Sandwell	Treatment	Edwin Richards Quarry – Soil Treatment Centre	Construction materials containing asbestos + soil and stones	13,072
	MRS	A & A Auto Dismantlers	ELVs	1,168
Staffordshire	Landfill	Meece 1 Landfill	Soil and stones	8,388
	Treatment	Stoke Waste Treatment & Transfer Facility	Other bases	1,326
Lancashire	Landfill	Whitemoss Landfill	Bottom ash and slag + Sludges from physico/chemical treatment + Soils and stones	9,385
Leeds	Treatment	Aggregates Manufacturing Facility (Leeds)	Fly ash + Solid waste from gas treatment	8,605
Gloucestershire	Landfill	Wingmoor Farm	Fly ash and other flue-gas treatment wastes	4,194
Knowsley	Treatment	Acornfield Road Waste Management Centre	Aqueous rinsing liquids	3,159
Salford		CSG Lanstar (Cadishead)	Wastes containing dangerous sulphides	1,594
Redcar and Cleveland		Industrial Effluent Treatment Works	Aqueous washing liquids and mother liquors	1,185
Derbyshire		Ilkeston Waste Treatment and Transfer Facility	Multiple waste types (sub 500t)	720
Nottingham City		Crossgate Drive Clinical Waste Treatment Facility	Potentially infectious clinical waste	674
Wirral	MRS	Neptune Car Spares Ltd	ELVs	599
Solihull	Treatment	Cornets End Recycling Facility	Soil and stones	576

4.9 Table 3 shows the three dominant flows were contaminated soil and stones going to hazardous waste landfill, solid wastes from gas treatment going both to treatment and hazardous waste landfill and construction materials containing asbestos going for treatment (probably prior to landfill). This waste was primarily managed at 5 sites hosted by 5 different WPAs, indicating strategic relationships between CWaC and the following Councils: Sandwell Borough Council, Staffordshire County Council, Lancashire County Council, Leeds City Council and Gloucestershire County Council.

4.10 There has been an increase in the number of strategically significant flows of hazardous waste from CWaC between 2021 and 2024. Whereas in 2021 the facility receiving the largest tonnage of hazardous waste for management from CWaC was Whitemoss hazardous waste landfill (receiving c7,500 tonnes of waste (principally sludges from physico/chemical treatment + bottom ash), in 2024 this facility actually received a greater tonnage of CWaC hazardous waste (c9,300t) but was outstripped by the hazardous waste treatment facility at Edwin Richards Quarry which received c13,000 tonnes of construction materials containing asbestos + contaminated soil and stones. It should however be noted that flows of construction related hazardous wastes can be sporadic in nature due to their dependency on the types of sites subject to development in a Plan area in any particular year. In contrast to these flows, waste such as solid wastes from gas treatment can be expected to arise in consistent quantities for the life of the source facility (often energy from waste plants).

CWaC Inert Waste Destinations

4.11 The principal destination WPAs receiving inert waste from CWaC in excess of 10,000t are shown in Table 4 below.

Table 4: Destination sites for CWaC Inert Waste exports c10,000t or more in 2024

Source: WDI 2024

Facility WPA	Management method	Site Name	Principal Waste Type (10,000t or more)	Total
Halton	Treatment	Grundy & Co Excavations Ltd	Bricks + concrete + soil and stones	81,000
	Transfer/ Treatment	G S H Waste Recycling Ltd	Mixed construction and demolition wastes	43,567
Cheshire East		Nick Brookes Demolition & Waste Disposal	Mixed construction and demolition wastes	41,972
Trafford	Treatment	Land Off Sinderland Road	Soil and stones	20,842
Knowsley	Landfill	Cronton Quarry		18,494
Liverpool	Treatment	Liverpool Recycling		18,291
Warrington		A D S Recycling	Multiple waste types (sub 10kt)	14,789

4.12 Table 4 shows the following:

- of the c633,000 tonnes of inert/C,D&E waste found to have been produced in CWaC in 2024 (as reported in the separate waste stream specific report for C, D & E waste), a tonnage equivalent to around a third was exported and this waste was primarily managed at 7 sites hosted by 6 different WPAs as shown in Table 4.
- The dominant flows were mixed C, D & E waste for transfer/treatment and soil and stones for treatment.¹⁴

When compared to 2021 data (see Appendix 1), the dominant flows are similar apart from concrete which arose in a more significant quantity in 2021.

¹⁴ Bricks and concrete each made up 21kt in 2024 so were considered to be less significant

CWaC Non-Inert Waste Destinations

4.13 The principal destination WPAs hosting facilities receiving non-inert waste from CWaC in 2024 are shown in Table 5 below.

Table 5: Destination sites for CWaC Non-Inert Waste exports 5,000t or more in 2024 in rank order

Source: WDI 2024

Facility WPA	Management method	Site Name	Principal Waste Type (5,000t or more)	Total
Halton	Incineration	Runcorn Energy from Waste Facility	RDF	123,736
	Transfer/Treatment	G S H Waste Recycling Ltd	Mixed municipal waste + other wastes	26,567
Cheshire East	Treatment	Crewe Waste Water Treatment Works	Sludges from treatment of urban waste water + septic tank sludge	63,397
Lancashire	Transfer/Treatment	Lancaster WwTW Sludge Treatment Facility	Sludges from treatment of urban waste water	50,677
Wakefield	Incineration	Ferrybridge 1	RDF	40,326
East Riding of Yorkshire	Treatment	Gibson Lane Site	Mixed municipal waste	26,567
Warrington		A D S Recycling		16,865
Wigan	Transfer/Treatment	Boden And Davies Limited	Wooden packaging	9,630
Salford		Clifton Materials Recycling Facility	Other wastes	7,414
Shropshire	Incineration	Wood Lane Landfill Site	Mixed municipal waste	6,197
Wolverhampton	Transfer/Treatment	Neachells Lane Transfer Station	Street-cleaning residues	5,404

4.14 Table 5 shows the following:

- c377,000 tonnes of non-inert waste produced in CWaC in 2024 was exported and this was primarily managed through 11 sites hosted by 10 different WPAs. It should be noted that Table 5 includes waste arising from C&I sources, LACW sources + urban waste water treatment sludges. Therefore, the values shown are not directly comparable to the arisings datasets presented in the waste stream specific reports.
- The dominant flows were RDF for incineration, sludges from treatment of urban waste water destined for transfer and treatment (internal flows to United Utilities) and mixed municipal waste for treatment.

4.15 When compared to the 2021 data, where the dominant outward flow of non-inert waste was that classed under 19 12 12 (sorting residues) going for incineration (a total of c243,500t), that waste now appears to have been reclassified as RDF (under EWC code 19 12 10). There has also been a significant fall in total exports to Halton standing at c164,000t in 2024. It should also be noted that the movements of sludges to WwTW are internal flows between United Utility sludge management facilities and are accounted for in the 'Other Waste' Scoping Review report¹⁵ instead.

¹⁵Other Waste Scoping Review Update BPP Consulting June 2026.

5. Summary

- 5.1** In total 32 facilities/sites have been identified as receiving what may be regarded as strategically significant quantities of waste from CWaC in 2024. These were located in 23 WPA areas. This compares with a total of 49 facilities/sites identified as receiving strategically significant quantities of waste from CWaC located across 24 WPA areas in 2021. This suggests that not only is waste travelling further, it is travelling in more significant quantities to strategically significant facilities. This may indicate that a minimum tonnage of waste may be needed to justify contracts involving longer distance haulage. On the other hand it might indicate that a number of the greater number of more concentrated facilities have closed since 2021.
- 5.2** Where they are still to respond to the enquiry letter the host WPAs ought to be contacted to confirm the following:
1. Whether the facilities identified as receiving waste were still operational given the dataset is for 2024.
 2. Any planning reasons that might mean the acceptance of wastes cannot continue, such as consent conditions and end dates; or if the site has been earmarked in Plans for redevelopment.
 3. Whether the host WPA has any specific policies about providing for the management of waste that arises outside their respective Plan area.
 4. Whether any Statements of Common Ground have been entered into with other WPAs concerning continued availability of capacity at the facility in question that might compromise continued access for CWaC's waste.
- 5.3** It is understood the outcomes of the above engagement is in the process of being documented, and Statements of Common Ground may be sought with WPAs hosting facilities taking strategically significant quantities of waste for which ongoing access is to be relied upon during the Plan period as appropriate.

Appendix 1: Destination WPAs of Inert, Non-inert and Hazardous Waste exports from CWaC in rank order applying significance thresholds 2024 and 2021.

Source: WDI 2024 and 2021

N.B. Entries highlighted in **yellow** are those where exports increased significantly and entries in **blue** are those where exports have fallen significantly from 2021 to 2024.

Receiving WPA	Hazardous		Inert		Non-inert		Comments
	2024	2021	2024	2021	2024	2021	
Bolton	124	133	<10,000	34,385	<5,000	7,133	Inert waste and non-inert waste exports from CWaC to Bolton fell below the significance thresholds between 2021 to 2024 severing the strategic relationship.
Cheshire East	<100	899	41,992	10,705	67,276	176,161	Out of the 2024 total of CWaC inert waste going to CE, 20,332t were mixed C, D & E waste going to Nick Brookes Demolition & Waste Disposal (operated by Nick Brookes). As a comparison, WDI 2023 shows 19,304t of this waste type going to this facility, showing that the 2024 export to Nick Brookes is not a one-off significant value. Out of the 2024 total of CWaC non-inert waste going to CE, 54,284t were sludges from treatment of urban waste water going to Crewe Waste Water Treatment Works (United Utilities Water Ltd).
Derbyshire	942	609	<10,000	<10,000	<5,000	16,470	The non-inert waste exports from CWaC fell below the significance threshold between 2021 and 2024. The 2021 non-inert waste export from CWaC primarily consisted of 12,282t of textiles going for treatment to Sapphire Specialised Fuel Plant.
Gloucestershire	4,206	0	<10,000	0	<5,000	0	Exports of hazardous waste from CWaC exceeded the significance threshold between 2021 and 2024. The bulk of the increase was, 3,856t of 'fly ash and other flue-gas treatment wastes' exported to landfill at Wingmoor Farm (S Grondon Waste Ltd) ¹⁶ . As a comparison, WDI 2023 shows 3,880t of this waste type going to this site.
Halton	<100	<100	124,688	138,691	156,397	272,009	Non-inert waste exports from CWaC to Halton decreased significantly from 2021 to 2024 (nearly halved) but still exceeded the significance threshold. In 2024, 118,358 tonnes of RDF waste went for incineration at Runcorn Energy from Waste Facility (Viridor Energy Ltd).
Hampshire	275	642	<10,000	<10,000	<5,000	<5,000	Exports of hazardous waste from CWaC fell below the significance threshold between 2021 and 2024. All of the 2024 total of CWaC hazardous waste going to Hampshire went to Fawley High Temperature Incinerator (Tradebe Fawley Ltd).
Kirklees	299	853	<10,000	0	<5,000	<5,000	Exports of hazardous waste from CWaC fell below the significance threshold between 2021 and 2024.
Knowsley	3,299	867	18,715	27,698	<5,000	<5,000	Out of the 2024 total of hazardous waste going from CWaC to Knowsley, 1,909t were 'aqueous rinsing liquids' which went for treatment to Acornfield Road Waste Management Centre (Future Industrial Services Ltd) that has been permitted under IED since at least 2008. As a comparison, WDI 2023 shows 2,260t of this waste type going to this site.
Lancashire	10,428	8,953	<10,000	<10,000	54,017	<5,000	Out of the 2024 total of hazardous waste going from CWaC to Lancashire, 5,474t were sludges and bottom ash and slag which went to Whitemoss Landfill (Whitemoss Landfill Holdings Ltd). As a comparison, WDI 2023 shows that 8,801t of these waste types went to this site. Out of the 2024 total of non-inert waste going from CWaC to Lancashire, 49,662t were sludges from treatment of urban waste water which went to Lancaster WwTW Sludge Treatment Facility (United Utilities Water Ltd). In WDI 2023 there are no exports of this waste type and none to this site. This is likely to an internal transfer between UU WwTW.

¹⁶ The WDI 2024 waste Removed dataset does now show any of this waste type leaving a permitted site to go to landfill in Gloucestershire.

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Leeds	8,731	2,996	<10,000	0	<5,000	<5,000	Out of the 2024 total of hazardous waste going from CWaC to Leeds, 8,605t were fly ash and solid wastes from gas treatment which went for treatment at Aggregates Manufacturing Facility (O.C.O Technology Ltd) that has been permitted under IED since 2018. Of this 3,603t was solid waste from gas treatment coming from the Ince Bio Power Plant. As a comparison, WDI 2023 shows that 8,130t of these waste types went to this site.
Liverpool	521	1,044	23,936	<10,000	<5,000	<5,000	Inert waste exports exceeded the 10,000t significance threshold between 2021 and 2024. Out of the 2024 total, 12,058t were soil and stones which went for treatment to Liverpool Recycling (Hurt Plant Hire Ltd) ¹⁷ . As a comparison, WDI 2023 did not show exports to this site or operator or waste type.
Nottingham City	674	0	<10,000	0	<5,000	0	Exports of hazardous waste from CWaC exceeded the 500t significance threshold between 2021 and 2024. Out of the 2024 total of hazardous waste going from CWaC to Nottingham City, 669t was potentially infectious clinical wastes which went to Crossgate Drive Clinical Waste Treatment Facility.
Redcar and Cleveland	1,209	0	<10,000	0	<5,000	0	Exports of hazardous waste from CWaC exceeded the 500t significance threshold between 2021 and 2024. Out of the 2024 total, 1,185t were aqueous washing liquids and mother liquors which went for treatment at Industrial Effluent Treatment Works (Northumbrian Water Ltd) that has been permitted under IED since 2006. As a comparison, WDI 2023 did not show any CWaC exports of this waste type to this WPA (the total exports were only 28t).
Rotherham	217	660	<10,000	<10,000	<5,000	<5,000	Exports of hazardous waste from CWaC fell below the 500t significance threshold between 2021 and 2024.
Salford	1,845	2,288	<10,000	<10,000	8,263	<5,000	Exports of non-inert waste from CWaC exceeded the 5,000t significance threshold between 2021 and 2024. Out of the 2024 total, 7,414t was 'other waste from mechanical treatment' – 19 12 12, which went to Clifton Materials Recycling Facility (National Construction Demolition Ltd). As a comparison, WDI 2023 showed 3,510t of the same waste type going to the same site. Hazardous waste exports from CWaC fell over the same period.
Sandwell	14,695	1,035	<10,000	<10,000	<5,000	<5,000	Exports of hazardous waste from CWaC increased significantly between 2021 and 2024. Out of the 2024 total, 13,072t were construction material containing asbestos and soils and stones, which went for treatment to Edwin Richards Quarry – Soil Treatment Centre (Waste Recycling Group Ltd) which has been subject to an IED permit since 2016. As a comparison, WDI 2023 shows that 24,275t of construction material containing asbestos went to that facility. This is a one-off waste type so annual variation unsurprising.
Shropshire	<100	1,138	<10,000	<10,000	7,285	9,813	Exports of hazardous waste from CWaC fell below the 500t significance threshold between 2021 and 2024.
Staffordshire	9,848	1,428	<10,000	<10,000	8,647	5,638	Exports of hazardous waste and non-inert waste from CWaC increased significantly between 2021 and 2024. Out of the 2024 total of hazardous waste going from CWaC to Staffordshire, 8,388t were soil and stones which went to Meece 1 Landfill (Biffa Waste Services Ltd). As a comparison, WDI 2023 only showed 788t of this waste type going to this facility. This is a one-off waste type so annual variation unsurprising.
Stockton-on-Tees	272	1,406	<10,000	0	<5,000	<5,000	Exports of hazardous waste from CWaC fell below the 500t significance threshold between 2021 and 2024.
Warwickshire	182	1,761	<10,000	0	<5,000	<5,000	Exports of hazardous waste from CWaC fell below the 500t significance threshold between 2021 and 2024.

¹⁷ Permit now held by Fox Brothers (Leyland) Ltd. Permit granted in 24/04/2012.