



# **Cumberland and Westmorland & Furness Waste Needs Assessment 2025/26**

## **Management Requirements for Hazardous Waste in Cumberland to 2045**

Report: Final Issue

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## Abbreviations and Glossary

### Abbreviations

| Abbreviation               | Term                                               |
|----------------------------|----------------------------------------------------|
| <b>C, D &amp; E / CDEW</b> | Construction, Demolition & Excavation Waste        |
| <b>CFC</b>                 | Chlorofluorocarbon (gases)                         |
| <b>DEFRA</b>               | Department for Environment, Food and Rural Affairs |
| <b>EA</b>                  | Environment Agency                                 |
| <b>ELVs</b>                | End of Life Vehicles                               |
| <b>EWC</b>                 | European Waste Catalogue                           |
| <b>GVA</b>                 | Gross value added                                  |
| <b>HTI</b>                 | High Temperature Incineration                      |
| <b>HWI</b>                 | Hazardous Waste Interrogator                       |
| <b>HWRCs</b>               | Household Waste Recycling Centres                  |
| <b>IED</b>                 | Industrial Emissions Directive                     |
| <b>LACW</b>                | Local Authority Collected Waste                    |
| <b>LDF</b>                 | Local Development Framework                        |
| <b>MRS</b>                 | Metal Recycling Sites                              |
| <b>nPPG</b>                | National Planning Practice Guidance                |
| <b>PI</b>                  | Pollution Inventory                                |
| <b>WDI</b>                 | Waste Data Interrogator                            |
| <b>WEEE</b>                | Waste Electrical & Electronic Equipment            |
| <b>WNA</b>                 | Waste Needs Assessment                             |
| <b>WPA</b>                 | Waste Planning Authority                           |

## Glossary of Terms

| Term                                                   | Definition                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Construction, Demolition &amp; Excavation Waste</b> | Waste arising from construction and demolition activities, including excavation during construction, mainly consisting of inert materials such as soils, stone, concrete, and brick. This waste stream also contains non-inert elements such as wood, metals, plastics, cardboard and plasterboard                          |
| <b>DEFRA</b>                                           | The UK Government department responsible for developing national waste management policy.                                                                                                                                                                                                                                   |
| <b>Duty to Cooperate</b>                               | 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.                                                                                                            |
| <b>End of Life Vehicles</b>                            | 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.                                                                                                       |
| <b>Environment Agency</b>                              | The body responsible for the regulation of waste management activities through issuing Environmental 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.   |
| <b>Hazardous Waste Landfill</b>                        | 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.                                                                                                 |
| <b>Hazardous Waste</b>                                 | 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.                                       |
| <b>Household Waste</b>                                 | 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- referred to as Local Authority Collected Waste (LACW). |
| <b>Household Waste Recycling Centres</b>               | A facility that is available to the public to deposit waste not collected through kerbside collection (otherwise known as a civic amenity site).                                                                                                                                                                            |
| <b>Incineration</b>                                    | The controlled combustion of waste. Energy may also be recovered in the form of heat (see Energy from Waste).                                                                                                                                                                                                               |
| <b>Landfill (including land raising)</b>               | 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).                                                                                                                                                                   |
| <b>Other Recovery</b>                                  | Subjecting waste to processes that recover value by means other than recycling and composting – mainly thermal treatment to recover energy.                                                                                                                                                                                 |
| <b>Recovery</b>                                        | Subjecting waste to processes that recover value including recycling, composting or thermal treatment to recover energy.                                                                                                                                                                                                    |
| <b>Recycling</b>                                       | The sorting and separate storage of materials extracted from the waste stream for reprocessing either into the same product or a different one.                                                                                                                                                                             |
| <b>Vehicle depollution</b>                             | Removal of hazardous components from End of Life vehicles. May only take place at authorised facilities permitted to do so.                                                                                                                                                                                                 |
| <b>Waste Planning Authority (WPA)</b>                  | The local authority responsible for waste development planning and control. In this case Cumberland Council.                                                                                                                                                                                                                |
| <b>Waste Transfer Station</b>                          | A site to which waste is delivered for bulking prior to transfer to another place for further processing or disposal.                                                                                                                                                                                                       |

## 1. Introduction

- 1.1 In 2022 a Waste Needs Assessment (WNA) was produced for Cumbria as a whole on behalf of Cumbria County Council using data for 2020. Since then, in 2023, Cumbria County Council has been split into two unitary authorities: Cumberland Council and Westmorland and Furness Council (W&F). This report forms part of a suite of documents that present the outputs of the joint Cumberland and Westmorland & Furness WNA 2025 consisting of the following documents:
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.
- 1.2 This report relates to management requirements for hazardous waste arising in Cumberland. This has been assessed by establishing an arising estimate for the baseline year of 2023 and then projecting arisings forward to 2045. Due to the variable nature of hazardous waste and differing management requirements, forecasts have been generated on a waste type-by-type basis. A separate mirror report has been produced for Westmorland & Furness.
- 1.3 The term ‘hazardous waste’ is used to describe waste that possess properties considered to pose a threat to human health and/or the environment such as toxicity, flammability, corrosiveness and carcinogenicity. Hazardous waste arises from different sources so does not occur as a discrete waste stream, being more a collection of different materials, which are generally collected and managed separately according to their differing hazardous properties. For example, fridges containing CFC gases and cathode ray tubes used in TV and computer monitor screens are classed as hazardous, as are oily water, interceptor wastes and undepolluted scrap (‘End of Life’) vehicles. Each of these waste types normally require management by distinctly different methods and hence provision of different types of facilities. Moreover, these items and materials can arise in different waste streams and so the hazardous component of each of the main origin streams i.e. Construction, Demolition & Excavation (C, D & E), Commercial and Industrial (C&I) and Local Authority Collected Waste (LACW) are considered together in this report. To avoid double counting, the quantity arising in each is deducted from the estimate of the origin stream arisings reported elsewhere in the WNA.

## 2. Data Sources

### The Environment Agency Hazardous Waste Interrogator (HWI) 2023

2.1 Legislation requires that the relevant waste regulation authority<sup>1</sup> be notified when hazardous waste is moved. The notification takes the form of a consignment note that details the quantities and destination of the waste. This means that the following movements of hazardous waste are recorded and reported to the relevant regulatory body:

1. From producer sites directly to disposal/treatment facilities;
2. From producer sites to transfer facilities for bulking up and onward management; and,
3. From treatment facilities to final disposal sites.

In England this data is aggregated by the Environment Agency (EA) and made available in the form of the Hazardous Waste Interrogator (HWI) published on an annual basis with a delay of c9 months.

2.2 The reporting method means that the HWI dataset may be incomplete for the following reasons:

- Consignment notes are not issued when hazardous waste is managed on the site of its production by the producer or same operator.
- Where the producer of hazardous waste is a householder the requirement to consign does not apply. Therefore, where the receiving site operates under an Environmental Permit, (and reports through the WDI<sup>2</sup>), waste will only either be recorded on arrival, or when it is removed (as opposed to its point of arising). For example, undepolluted End of Life Vehicles (ELV)<sup>3</sup> will often not be consigned from their origin when being scrapped because the owner of a vehicle is not required to do so and hence this initial movement is not recorded in the HWI. However, it would be recorded as hazardous waste on arrival at the vehicle de-pollution site by the permit holder, as an input of waste to a site with an Environmental Permit, and it is then reported through the WDI. Another example is any hazardous waste such as a lead acid batteries brought to a household waste recycling site (HWRC) will not be consigned in but will normally be consigned out by the operator/permit holder.

Both above circumstances can result in under-reporting of hazardous waste through the HWI.

2.3 This under-reporting risk may be balanced by aspects of the hazardous waste consignment process that allows for the possibility of over-reporting of arisings. For example, if waste is moved to an intermediate management site within Cumberland and then moved on to a further site it will be consigned twice, when leaving its origin and then when leaving the intermediate site, and so double counted. Also, the person consigning hazardous waste may not have facilities to precisely measure the quantity of waste they are passing on and so may estimate the amount per load. This may result in a discrepancy between the quantity recorded as having been consigned from the source e.g. a half-full drum may be recorded by the drum's total capacity, and the quantity actually recorded as having been received at the waste management site which would normally have a reliable measurement method such as a weighbridge.

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<sup>1</sup> For England this is the Environment Agency.

<sup>2</sup> Some permitting exemptions allow the receipt of certain hazardous wastes, and these sites do not report through the WDI.

<sup>3</sup> Undepolluted ELVs are classed as hazardous by virtue of the presence of oils, fluids and batteries within them.

- 2.4 To address the limitations associated with the HWI outlined above and ensure use of the best available data as required by national Planning Practice Guidance (nPPG), data from the WDI and the Pollution Inventory (PI) has also been consulted.

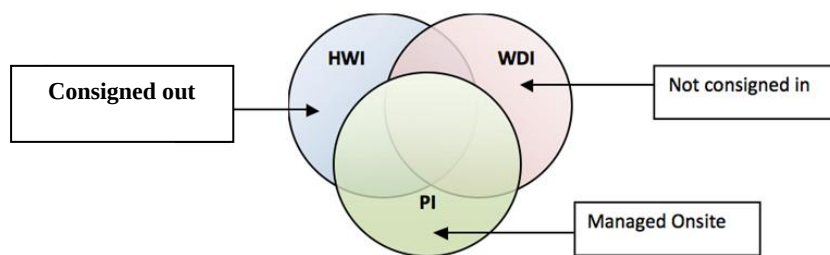
### **The Environment Agency Waste Data Interrogator (WDI) 2023**

- 2.5 The values for inputs to permitted intermediate sites as reported through the WDI do not always correspond to outputs from those sites and there can be discrepancies. These can be attributed to a lack of comprehensive reporting of inputs to certain facilities, or treatment having taken place that reduces the volume of hazardous waste such as ELVs received at vehicle depollution sites are rendered non-hazardous following depollution, leaving a much smaller tonnage of hazardous waste to go for onward management. Comparing the WDI output value with the input value can therefore reveal such discrepancies. In some cases, for the same type of hazardous waste, output values are greater than input values. In these cases, the output value may be capturing a more complete picture and hence result in a more accurate estimate of arisings.

### **The Environment Agency Pollution Inventory (PI) 2023**

- 2.6 The EA PI captures data on waste arising from certain industrial installations, regulated under the Industrial Emissions Directive (IED)<sup>4</sup> permitting regime. Such installations may manage their waste onsite or send their waste for offsite management. This dataset shows c4,500 tonnes of hazardous waste was produced by one non-waste industrial installation operating in Cumberland reporting through this route in 2023. However, given this is a significantly lower value to that already reported in the WDI and HWI, no value has been taken forward.

- 2.7 The relationships between the datasets are illustrated in Figure 1.



**Figure 1: Relationship between Datasets for Hazardous Waste**

- 2.8 Notably while the HWI always specifies the waste origin and destination by Waste Planning Authority (WPA) and District it does not identify the specific facility at which the waste has been managed, whereas the WDI may only report by originating region but does report inputs and outputs by individual facility. Hence both the WDI and HWI datasets have been accessed to generate a comprehensive picture of arisings and fates of Cumberland's hazardous waste in 2023 from which forecasts to 2045 can then be generated.

<sup>4</sup> Retained EU legislation.

### 3. Estimating a Baseline Arisings Value

3.1 To generate a baseline estimate of hazardous waste arising in Cumberland in 2023 the following datasets have been accessed:

1. The Environment Agency (EA) Hazardous Waste Interrogator (HWI) 2023<sup>5</sup> - movements.
2. The EA Waste Data Interrogator (WDI) 2023<sup>6</sup> – hazardous inputs to permitted management sites.
3. The EA Waste Data Interrogator 2023 – hazardous outputs from permitted management sites.

3.2 The HWI 2023 reports the following:

- In 2023, 32,498 tonnes of hazardous waste (of all types) were reported as having been produced in Cumberland;
  - of this, 2,982 tonnes were managed in Cumberland; with the difference (29,516 tonnes) managed outside Cumberland i.e. exported.

In addition,

- 2,767 tonnes of hazardous waste were imported to Cumberland for management.

3.3 The WDI includes waste reported under both Cumberland and W&F, as well as Cumbria as a whole as follows:

- Cumberland: 6,782 tonnes
- Cumbria as a whole: 34,634 tonnes
- Westmorland & Furness 6,605 tonnes

3.4 Data still appears under Cumbria because the EA reporting template is still to be updated to reflect the fact that Cumbria no longer exists as an administrative entity, and operators may have still to update their recording practices to reflect that too. Therefore, it is necessary to adopt a method to approximate how much of the waste reported as arising from Cumbria as a whole in the WDI, may have actually arisen from each of the unitary authority areas in 2023 respectively. To do so, the proportion of arisings reported in the HWI as coming for Cumberland and W&F has been applied. This produced the following figures:

- In 2023, 31,895 tonnes of hazardous waste were attributed to Cumberland in total being managed at permitted sites (both within and beyond Cumberland)<sup>7</sup>:
  - of this, 4,757 tonnes were managed in Cumberland with the difference (27,138 tonnes) being managed outside Cumberland i.e. exported.

In addition,

- 3,144 tonnes of hazardous waste from Cumbria as a whole attributed as arising outside Cumberland, were imported to Cumberland for management<sup>8</sup>.

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<sup>5</sup> This reports data for 2023 but was published in 2024 and is the latest data available at the time of writing.

<sup>6</sup> As in footnote 4.

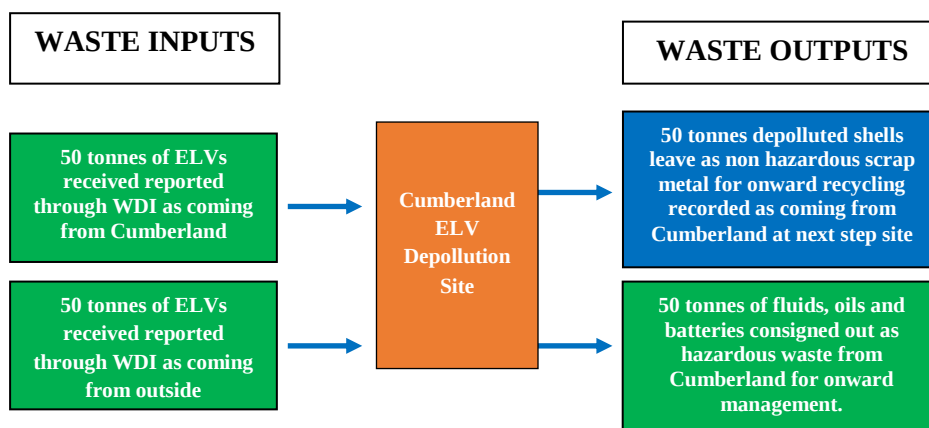
<sup>7</sup> 6,782 tonnes from Cumberland + 25,113 tonnes reported from Cumbria as a whole attributed to Cumberland by using the proportion of waste arising in Cumberland reported in the HWI of 73%.

<sup>8</sup> Of the 7,770 tonnes reported as going to sites in Cumberland for management in the WDI, 6,116 tonnes was reported as having arisen in Cumbria, i.e. not attributed to either Cumberland or W&F. If one deducts the proportion of waste arising in

## Outputs from Cumberland to permitted sites reporting in the WDI

3.5 Outputs of hazardous waste from Cumberland permitted waste sites reporting through the WDI will be identified as having arisen within Cumberland (by virtue of the location of the site itself regardless of its original source). For example, undepolluted ELVs are classed as hazardous when received but once depolluted, the ELV shell ceases to be hazardous while the extracted hazardous components will leave the depollution site as hazardous waste for onward management. Those components that arise from depollution sites operating in Cumberland will be reported as hazardous waste arising in Cumberland regardless of where the ELV that underwent depollution actually arose from. Moreover, if the ELV arose from Cumberland, the hazardous outputs will be counted as arising from Cumberland, presenting a risk of double counting.

This is illustrated in Figure 1.



**Figure 2: Illustrative Schematic of flows of ELV's to, and resulting from, a Cumberland ELV depollution site**

3.6 The WDI 2023 reports that 16,199<sup>9</sup> tonnes of hazardous waste were removed from permitted sites located within Cumberland in 2023.

## Summary of Headline Data

3.7 Table 1 sets out the values above in the HWI and WDI after the attribution adjustment for the 'Cumbria as a whole' dataset.

Cumberland reported in the HWI of 76% that leaves 3,144 tonnes of waste reported as arising in Cumbria that is then being attributed to Cumberland.

<sup>9</sup> A site called Etterby Scrapyard reported c24,000 tonnes output of lead batteries in WDI 2023. Direct enquiry of the Environment Agency revealed this was a data entry error and should have been 24 tonnes, hence the value was deducted to give the revised output total shown.

**Table 1: Cumberland Hazardous Waste Arisings & Management Data**

Blue indicates values contributing to arisings, pink to managed within Cumberland

Source: HWI 2023 and WDI 2023 after attribution adjustment

| Data source                                       | Cumberland Hazardous Waste Arisings (tonnes) |                                                        | Hazardous Waste Managed in Cumberland (tonnes)          |                                                       |               |
|---------------------------------------------------|----------------------------------------------|--------------------------------------------------------|---------------------------------------------------------|-------------------------------------------------------|---------------|
|                                                   | Quantity Managed Attributed to Cumberland    | Of which Quantity Managed outside Cumberland (exports) | Quantity Managed in Cumberland Attributed to Cumberland | Quantity Managed in Cumberland from outside (imports) | Total Managed |
| HWI                                               | 32,498                                       | 29,516                                                 | 2,982                                                   | 2,767                                                 | 5,749         |
| WDI<br>(inputs from Cumberland to all facilities) | 31,895                                       | 27,138                                                 | 4,757                                                   | 3,144                                                 | 7,901         |
| WDI<br>(outputs from Cumberland facilities)       | 16,199                                       | >13,019 <sup>10</sup>                                  | <3,180 <sup>11</sup>                                    | n/a                                                   |               |

3.8 Table 1 shows that after the attribution adjustment, the arisings reported in the HWI and the WDI are virtually identical (32,498t vs 31,895t), with only marginally more waste being reported as arising in Cumberland through the HWI than the WDI input and marginally more of this waste managed within Cumberland according to the WDI than is reported through the HWI (4,757 vs 2,982 tonnes).

3.9 Given the HWI reports the hazardous waste arising data by the two unitary authorities specifically and shows a slightly larger arising value than the WDI, the HWI has been taken forward as the most comprehensive dataset and hence is considered to represent the ‘best available’ data for the purposes of forward planning for this waste stream in Cumberland (and W&F) respectively.

<sup>10</sup> Greater than (>) given the outputs managed in Cumbria (3,180 tonnes) are not reported down to unitary authority level in the WDI 2023 so this represents the output tonnage from Cumberland sites managed outside Cumbria as a whole..

<sup>11</sup> Less than (<) as this is the total output of hazardous waste from Cumberland sites managed in Cumbria as a whole, rather than that just managed in Cumberland. The WDI 2023 does not include the two unitary authorities as destination WPAs, but rather still reports it all as going to Cumbria as a whole.

## Management Flows

3.10 Table 2 shows the WPAs that actually received 500 tonnes or more of hazardous waste from Cumberland by fate and waste type as reported in the HWI 2023.

**Table 2: WPA's Receiving Hazardous Waste from Cumberland in 2023 (500t or more)**

Source: HWI 2023

| Deposit WPA          | HWI Total (tonnes)         | Fate                     | Principal Hazardous Waste Type (>500 tonnes) |
|----------------------|----------------------------|--------------------------|----------------------------------------------|
| Stoke-on-Trent City  | 19,198                     | Recovery                 | Track ballast + soils and stones             |
| Stockton-on-Tees     | 3,041                      | Transfer (R) + treatment | ELV depollution waste + bituminous waste     |
| Lancashire           | 1,758                      | Transfer (R)             | WEEE                                         |
| Gateshead            | 1,165                      | Recovery                 | Waste containing CFCs                        |
| Redcar and Cleveland | 661                        | Landfill                 | Asbestos                                     |
| <b>Total</b>         | <b>25,824<sup>12</sup></b> |                          |                                              |

3.11 Table 2 shows the principal WPA receiving Cumberland hazardous waste in 2023 was Stoke-on-Trent City, and this waste primarily consisted of track ballast (c17,000 tonnes) plus soils and stones going for recovery.

## Conclusions

### Cumberland Hazardous Waste Arisings in 2023

3.12 Hazardous waste arisings attributable to Cumberland for 2023 have been found to be c32,500 tonnes, according to the HWI 2023. This value is greater than the arising value reported in the Cumbria WNA 2022<sup>13</sup> for Cumbria as a whole of c26,500 tonnes in 2020 based on the WDI<sup>14</sup> and c22,500 tonnes in the HWI 2020. The principal source of this increase is track ballast waste arising from Cumbria as a whole increasing to c18,000 tonnes in 2023 compared with c1,000 tonnes in 2020 as reported in the HWI. This is believed to be because the classification of track ballast changed from non-hazardous to hazardous in the intervening years. If track ballast were to be disregarded to make the datasets comparable, the 2023 tonnage for 'Cumbria as a whole' would reduce to c27,000 tonnes (of which the Cumberland value would reduce to c14,500 tonnes being a subset of 'Cumbria as a whole').

<sup>12</sup> The difference between the total value and the total tonnage reported, is that managed at a variety of sites in quantities less than 500 tonnes.

<sup>13</sup> Hazardous Waste Management Requirements in Cumberland to 2037 BPP Consulting 2021

<sup>14</sup> Total hazardous waste from Cumbria as a whole inc. Cumberland and W&F as reported in the HWI 2023 is c44,000 tonnes.

### **Cumberland Management Capacity and Net Self Sufficiency Balance**

- 3.13 This assessment has found that in 2023 the quantity of hazardous waste arising within Cumberland, c32,500 tonnes, significantly exceeded the amount of hazardous waste reported as having been managed within Cumberland, estimated to be between c5,500 tonnes (WDI) and c8,000 tonnes (HWI). Given more waste is produced than is managed this indicates Cumberland is not net self-sufficient in hazardous waste management capacity, based on the snapshot of waste managed in 2023. However, it would not be appropriate to draw a conclusion solely from annual input data, as the quantity of waste managed at sites permitted to manage hazardous waste in the particular year of 2023, it not necessarily representative of their true capacity.
- 3.14 Therefore, it is necessary to assess the actual capacity of sites within Cumberland for the management of hazardous waste. It is also noted that there is no national policy expectation that Plan areas be net self-sufficient in hazardous waste management capacity recognising that it is a 'larger than local' strategic issue under the Duty to Cooperate. This is considered in more detail in Section 5 of this report.

## 4. Forecasting Future Hazardous Waste Arisings

### National Policy

4.1 The 2013 National Policy Statement for Hazardous Waste<sup>15</sup> states that arisings of hazardous waste are expected to increase for the following reasons:

- Continuing consumer demand for consumer durables containing hazardous materials.
- Increasing use of producer responsibility schemes, such as those provided for Waste Electrical and Electronic Equipment (WEEE) which require the separate collection of WEEE resulting in more hazardous items being removed from the mixed municipal waste stream, collected separately as hazardous waste.
- Changes to the list of hazardous properties in the revised Waste Framework Directive and changes to the European Waste List, leading to increases in the amount of waste managed as “hazardous”.
- There are still uses in which components that become hazardous waste may be unavoidable for the foreseeable future. For example, the use of oil in internal combustion engines.

4.2 It should also be noted that additional Persistent Organic Pollutants (POPs) bearing materials are being added to the POPs Regulations 2007, which will also lead to an increase in reported hazardous arisings over time.

### Defining Growth Factors for Hazardous Waste arising in Cumberland

4.3 While nPPG advises that future hazardous waste arisings be estimated by extrapolating time series data, in this instance from the HWI, reliance on historical data to establish possible future trends is not considered to be entirely reliable due to frequent changes in the definition of hazardous waste and refinement of regulatory guidance which has tended towards increasing the range and quantity of waste being classed as hazardous and thereby 'artificially boosting' quantities of arisings year on year meaning the annual datasets are not directly comparable. That is to say the dataset for 2020 for example would capture a more limited range of hazardous wastes than the 2023 dataset, so if the value shown by the more recent dataset is greater this is not necessarily because quantities of the hazardous waste arising in 2020 actually increased.

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<sup>15</sup> National Policy Statement for Hazardous Waste: A framework document for planning decisions on nationally significant hazardous waste infrastructure Defra June 2013

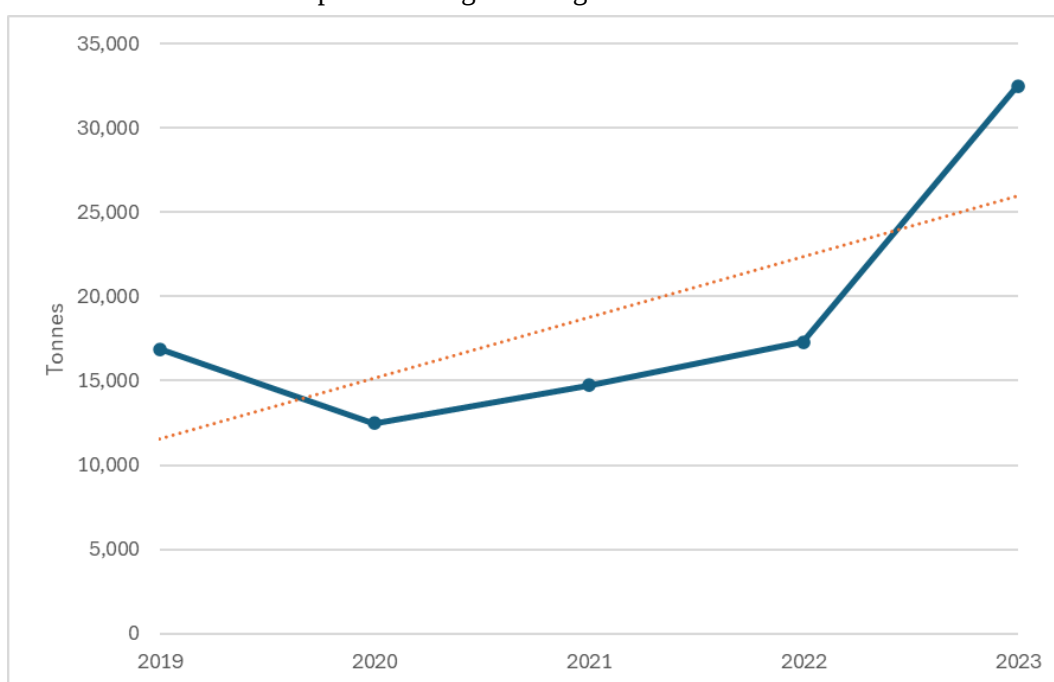
4.4 This confounding factor is illustrated by the year on year rising values for hazardous waste produced in Cumberland from 2020 to 2023, with arisings in 2019 being an exception<sup>16</sup>, as shown in Table 3.

**Table 3: Hazardous Waste Arising in Cumberland Over the 5-year Period to 2023**

Source: HWI

| Year | Arisings (tonnes)    |
|------|----------------------|
| 2019 | 16,877               |
| 2020 | 12,464               |
| 2021 | 14,728               |
| 2022 | 17,310               |
| 2023 | 32,498 <sup>17</sup> |

4.5 These values have been plotted in Figure 3 to generate a data trend line.



**Figure 3: Hazardous Waste arising (tonnes) in Cumberland as recorded by the HWI (2019-2023)**

4.6 The trend line shown on Figure 3 indicates a year on year increase in hazardous waste over the 5-year time period. However, given the large increase in hazardous waste arisings due to the reporting of hazardous track ballast in 2023, it would not be appropriate to solely rely on this projection for forecasting of future hazardous waste arisings for Cumberland. Therefore, a waste type by waste type assessment has been undertaken.

<sup>16</sup> c2,000 tonnes of the 4.5k tonnes difference is attributed to premixed waste reported in 2019 which appears to have been a one-off. This went to a site in Allerdale for recovery. The remaining 2.5k tonnes was distributed across a range of waste types. The lower values for 2020 and 2021 may be due to the COVID-19 pandemic suppressing production in 2019-2020.

<sup>17</sup> Note that track ballast arisings of c18,000 tonnes is distorting this value and if it was to be removed would reduce the total arisings from Cumberland down to c14,500 tonnes (less than the 2021 and 2022 arisings) resulting in a negative growth rate.

## Composition of Cumberland Hazardous Waste

4.7 Table 4 below presents the principal arisings of hazardous wastes in Cumberland by type for 2023 based on the assessed HWI dataset. Hazardous waste types arising in a quantity greater than 500 tonnes have been aggregated into the three categories, which together account for 83% of total arisings as reported through the HWI.

**Table 4: Principal Hazardous Waste Types arising in Cumberland in 2023**

*Source: HWI 2023*

| Hazardous Waste Type/Source                                       | Total         |
|-------------------------------------------------------------------|---------------|
| Construction, Demolition & Excavation<br>Waste inc. track ballast | 21,550        |
| Waste Electrical & Electronic Equipment                           | 3,227         |
| Vehicle Maintenance inc ELV components                            | 2,226         |
| <b>Total</b>                                                      | <b>27,003</b> |

- C, D & E waste includes c18,000 tonnes of track ballast, c1,500 contaminated soils and stones, c1,000 tonnes asbestos contaminated waste and c1,000 tonnes of bituminous waste.
- Hazardous Waste Electrical & Electronic Equipment (WEEE) consists primarily of 'discarded electrical and electronic equipment' at c2,000 tonnes and 'discarded equipment containing chlorofluorocarbons i.e. fridges at c1,500 tonnes.
- Vehicle maintenance waste including End of Life Vehicles (ELVs) and c2,000 'mineral-based non-chlorinated engine, gear and lubricating oils'.

## Forecasting Arisings of Cumberland Hazardous Waste by Type

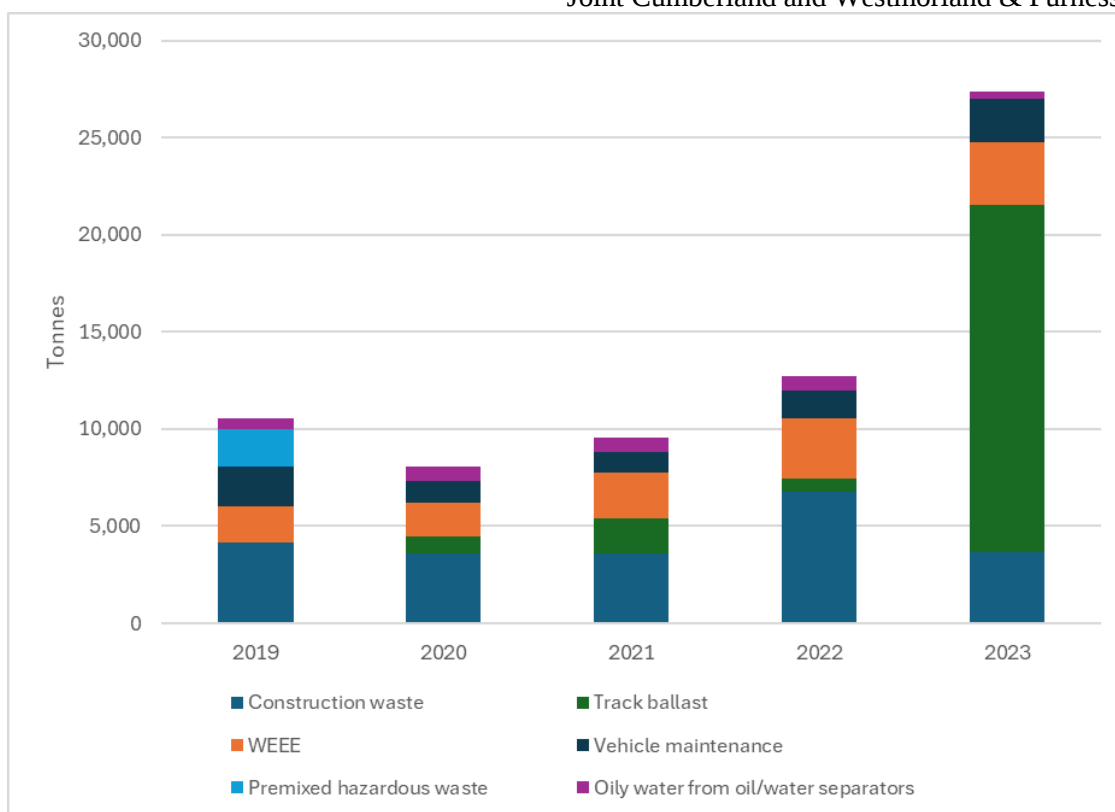
4.8 The Cumbria WNA 2022 applied a zero-growth forecast for the early part of the Plan period (2019 to 2025), with a fall of half percent per annum in the latter half (2026 to 2037). To discern if this remains a robust forecast, the data for arisings of the principal types of hazardous waste reported in the HWI as having arisen in Cumberland over the most recent 5 year period for which data is available<sup>18</sup> has been reviewed and are presented in Table 5 and Figure 4.

**Table 5: Principal Hazardous Waste Arisings in Cumberland >500 tonnes 2019 – 2023 plus annual growth rates**

Source: HWI 2019 -2023

| Hazardous Waste Type/Source                  | 2019          | 2020         | 2021         | 2022          | 2023          | Mean annual growth rate |
|----------------------------------------------|---------------|--------------|--------------|---------------|---------------|-------------------------|
| Construction, Demolition & Excavation Waste  | 4,149         | 3,615        | 3,629        | 6,005         | 3,652         |                         |
|                                              |               | -12.87%      | +0.38%       | +65.49%       | -39.18%       | +3.46%                  |
| Track ballast                                | 0             | 870          | 1,805        | 650           | 17,898        |                         |
|                                              |               | -            | +107.47%     | -64.02%       | +2655.73%     | +899.73%                |
| WEEE inc WEEE containing chlorofluorocarbons | 1,869         | 1,703        | 2,326        | 3,160         | 3,227         |                         |
|                                              |               | -8.85%       | +36.58%      | +35.83%       | +2.11%        | +16.42%                 |
| Vehicle Maintenance inc ELV                  | 2,053         | 1,118        | 1,065        | 1,377         | 2,226         |                         |
|                                              |               | -45.55%      | -4.76%       | +29.35%       | +61.64%       | +10.17%                 |
| Premixed hazardous waste                     | 1,934         | 0            | 0            | 0             | <500          |                         |
|                                              |               | -            | -            | -             | -             | -                       |
| Oil water from oil/water separators          | 522           | 777          | 732          | 781           | 398           |                         |
|                                              |               | +48.94%      | -5.81%       | +6.75%        | -49.10%       | +0.19%                  |
| <b>Total</b>                                 | <b>10,526</b> | <b>8,083</b> | <b>9,557</b> | <b>12,744</b> | <b>27,401</b> |                         |

<sup>18</sup> It should be noted that this includes 2019 and 2020 during which the COVID- 19 pandemic occurred.



**Figure 4: Principal Hazardous Waste Component Arisings in Cumberland 2019-2023**

Source: HWI

4.9 Qualitative consideration of likely trends in arisings in each of the principal component wastes shown in Figure 4 has been undertaken as set out below:

- Figure 4 shows the main source for variability in hazardous waste arisings is track ballast waste. Track ballast originates principally from the maintenance of railway tracks which may occur on an occasional (non-annual) basis, this maintenance work can be expected to extend below Cumberland but may be brought to an aggregation point e.g. rail sidings, located in Cumberland, from which it is consigned on. Given it is not possible to predict when such activity might take place, and the other hazardous C, D & E waste types have also fluctuated over the period, it is suggested that taking the average of total hazardous C, D & E waste arisings across the five-year period of c8,600 tonnes as a starting point to forecast from on a conservative basis. Although there is a reasonable expectation that over time C, D & E waste arisings will reduce as historical land contamination (source of contaminated soils) is remediated and the asbestos in the building stock is removed, given the historical arisings show an increase each year, it is recommended to hold hazardous C, D & E waste constant over the period rather than assume a decline over time as was taken to be the case in the Cumbria WNA 2021.
- WEEE has fluctuated over the period with an average growth of +16.42% per annum. While WEEE arisings can be expected to increase with growing sales of electronic devices in line with disposable income, given the phase out in use of hazardous materials in new devices/appliance, the hazardous component is expected to fall. The bulk of arisings currently requiring management are fridges containing CFCs, and TV/monitor screens using CRT technology. Both technologies have been phased out, hence this can be expected to fall over time as the existing stock diminishes.

- Vehicle maintenance waste has fluctuated over the period with an average growth of +10.17% per annum. Oils arising from conventional vehicle maintenance and depollution activities can be expected to fall with the transition in the vehicle fleet to electric vehicles. Electric vehicles<sup>19</sup> are expected to account for 20% of new car sales in 2025, with a ban on sales of conventional vehicles by 2030 now proposed by Government<sup>20</sup>. While some of the current conventional vehicle stock will remain in use beyond 2035, the shift to EVs can be expected to depress any growth in arisings in this sector.

Given the above, it is considered the forecast for these two waste streams (held constant for the first part of the Plan period (to 2035) and fall by half a percent per annum in the latter half (2035 to 2045) in the Cumbria WNA 2021 remains robust.

- Oily water from oil/water separators presents a lesser amount of the total waste and premixed wastes peaked in 2019 but did not arise in 2020 – 2022 and only a small amount <500 tonnes arose in 2023. These two waste streams and the other waste arising <500 tonnes have been held constant over the Plan period to 2045.

The growth forecasts based on these assumptions are presented in Table 6:

**Table 6: Forecast Hazardous Waste Arisings in Cumberland to 2045**

*Source: Baseline Arising plus discussion above*

| Hazardous Waste Type/Source            | Plan Milestone Year |               |               |               |               |
|----------------------------------------|---------------------|---------------|---------------|---------------|---------------|
|                                        | 2025                | 2030          | 2035          | 2040          | 2045          |
| Construction, Demolition & Excavation  | 8,609               | 8,609         | 8,609         | 8,609         | 8,609         |
| Vehicle Maintenance inc ELV components | 2,226               | 2,226         | 2,226         | 2,171         | 2,118         |
| WEEE                                   | 3,227               | 3,227         | 3,227         | 3,147         | 3,069         |
| <i>Subtotal</i>                        | <i>14,062</i>       | <i>14,062</i> | <i>14,062</i> | <i>13,927</i> | <i>13,795</i> |
| Other wastes                           | 5,495               | 5,495         | 5,495         | 5,495         | 5,495         |
| <b>Total Projected Arisings</b>        | <b>19,556</b>       | <b>19,556</b> | <b>19,556</b> | <b>19,421</b> | <b>19,290</b> |

## Conclusion

4.10 The forecast assumptions result in a decrease in hazardous waste arisings from 2035 to 2045 resulting in a baseline arising of **c19,300 tonnes** in 2045. This reflects the best available data combined with an assessment of factors likely to affect arisings as set out above. These values have therefore been used to project management capacity requirements using an assessment of existing management capacity within Cumberland as a starting point.

<sup>19</sup> EVs contain large amounts of lithium-ion batteries which can present a fire risk but are not presently classified as hazardous when waste.

<sup>20</sup> Phasing out the sale of new petrol and diesel cars from 2030 and Support for the Zero Emission Transition (DEFRA., December 2024).

## 5. Hazardous Waste Management Capacity in Cumberland

5.1 This section considers the availability of management capacity within Cumberland for managing hazardous waste. It provides the basis on which the existing hazardous waste management capacity may be established and, subsequently, from which specific management capacity requirements might be identified. Quantities of hazardous waste inputs to sites recorded in the WDI across 3 years and the EA permitted site listing have been reviewed and compared to that reported in the Cumbria WNA 2022 to establish each site's most representative capacity i.e. the notional capacity shown in Table 7 below. Inputs to sites identified as non-hazardous waste transfer stations and any HWRC's have been ignored, as hazardous inputs will only be accepted on an incidental basis, and they will be accepting other waste streams, accounted for elsewhere. Inputs of hazardous waste to three other sites were also ignored on the basis that their primary input was non-hazardous (hazardous <25%).

**Table 7: Notional Capacity of Facilities Permitted to Manage Hazardous Waste in Cumberland (tonnes per annum)**

Source: WDI

| Facility Type                | Facility Name/Operator          | Cumbria WNA 2021 3 yr peak (2018-2020) | WDI peak 2021-2023 | Permit limit | Preferred value |
|------------------------------|---------------------------------|----------------------------------------|--------------------|--------------|-----------------|
| Vehicle Depollution Facility | Plot B Risehow Ind Est          | 2,195                                  | 1,995              | -            | 2,195           |
|                              | Branthwaite Vehicle Dismantlers | 5,186                                  | 2,319              | -            | 5,186           |
|                              | Escott Works                    | 363                                    | 196                | -            | 363             |
|                              | Willowholme Industrial Estate   | 278                                    | 125                | -            | 278             |
| Metal recycling              | Recycling Lives Workington      | 0                                      | 399                | -            | 399             |
| Haz Waste Transfer           | Distington Hazardous WTS        | 6,568                                  | 5,707              | 24,999       | 24,999          |
| Hazardous Waste Treatment    | Lillyhall Industrial Estate     | 1,450                                  | 1,897              | -            | 1,897           |
| <b>Total</b>                 |                                 |                                        |                    |              | <b>35,316</b>   |

5.2 Comparing the notional overall management capacity value (c35,500 tonnes) to the peak arising value for Cumberland (c19,500 tonnes Table 6) suggests a surplus of hazardous waste management capacity of c16,000 tpa within Cumberland. Although it should be noted that the bulk of management capacity is from a single site at Distington, which is a waste transfer facility only.

5.3 Cumberland hosts a non-hazardous waste landfill with a stable non-reactive hazardous waste (SNRHW) cell at Lillyhall. The EA dataset for remaining landfill void shows there is 791,528m<sup>2</sup> of void remaining in total at the end of 2023. The WDI 2023 shows c28,500 tonnes of waste were deposited at Lillyhall landfill in 2023, of which, 162 tonnes were hazardous. Lillyhall Landfill's operational period ends in 2029 with an additional year for restoration to 2030<sup>21</sup>.

<sup>21</sup> Lillyhall landfill radioactive substances permit variation: decision document. 15 July 2021.

## Management Capacity Conclusion

- 5.4 Cumberland hosts a number of facilities that manage hazardous waste including final fate treatment and landfill. The combined notional capacity offered by facilities within Cumberland to manage hazardous waste equates to c35,500 tonnes per annum.

## Conclusion on Cumberland's Hazardous Waste Management Capacity Requirements

- 5.5 The updated hazardous waste baseline for 2023 is c32,500 tonnes. Given all reported hazardous waste arising in Cumberland appears to be effectively managed and the forecast predicts a fall in hazardous waste by the end of the Plan Period, this suggests that there are no obvious stresses in the system that might require provision of additional capacity within Cumberland.
- 5.6 The capacity assessment indicates that the combined notional capacity of the principal sites receiving hazardous waste in Cumberland is c35,500 tpa, as compared with a peak forecast arising of c19,000tpa indicating a theoretical surplus of capacity for the management of Cumberland's hazardous waste throughout the Plan period. This assumes all sites identified continue to offer capacity through to the end of the Plan period i.e. 2045. It is recommended that the principal sites be safeguarded through policy whereby potential loss of capacity in future through either redevelopment or constraints, is discouraged unless equivalent compensatory capacity is demonstrated. It should also be noted that as hazardous waste management is a strategic issue any management needs for hazardous waste arising in Westmoreland & Furness ought to be given consideration as part of this assessment.