North East Lincolnshire Waste Needs Assessment 2026

Management Requirements for Commercial & Industrial Waste Generated in North East Lincolnshire to 2045

Version: Client Review

Issued: May 2026

BPP Consulting Document Control

Project: North East Lincolnshire Waste Needs Assessment 2026

Report: North East Lincolnshire C &I Waste Management Requirements to 2045

Version Description: Client Review

Version No: 1.0

Date: May 2026

Version No.	Version Description	Author	Date	Reviewed	Date
1.0	Client Review	Alan Potter (Partner)	12.05.2026	*Client contact*	
1.1	Post client Review for sign off				
2.0	Final issue	Alan Potter (Partner)			

Contents

Table of Tables

Abbreviations and Glossary of Terms

Abbreviations

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

Glossary of Terms

Term	Definition
Agricultural Waste	Waste produced on a 'farm' in the course of 'farming'. Agricultural waste takes both 'natural' (or organic) and 'non- natural' forms e.g. plastics.
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 as a fuel, 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.
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 as a fuel.
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.
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	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.
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).
(retained) EU 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 Facility (MRF)	A facility for sorting recyclable materials.
'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 use 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 North East Lincolnshire.
Waste Planning Authority (WPA)	The local authority responsible for waste development planning and control. In this case North East Lincolnshire Council.
Waste Transfer Station	A site to which waste is delivered for bulking prior to transfer to another place for further processing or disposal.

Introduction

1.1. North East Lincolnshire Council commissioned BPP Consulting to produce an updated Waste Needs Assessment for North East Lincolnshire using data for 2024 (hereinafter referred to as the NEL WNA 2026). This updates the WNA 2015 produced by BPP Consulting and ENERGIE/Cofely using 2013 data.

1.2. The NEL WNA 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;
5. Scoping report for Other Waste;
6. Review of Strategic Flows; and
7. Overview Report.

This report is concerned with determining future management requirements for Commercial and Industrial (C&I) Waste in North East Lincolnshire to 2045.

Principal Data Sources

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

Waste Data Interrogator

1.4. `Operators of all sites permitted to manage waste submit returns on the quantities, types and origin of waste received and, where applicable, destination of waste removed at each site. These returns are collated by the Environment Agency (EA) and are included in a national dataset known as the Waste Data Interrogator (WDI), waste received and waste removed. This is released approximately nine months after the end of the calendar year to which the data relates. The 2024 WDI (composed of data for the calendar year 2024) was the most current version available at the time this WNA was commissioned (version 1 released Feb 2025).

Wastedataflow

1.5. Wastedataflow (WDF) is a web-based data entry portal for local authorities to report on local authority waste management arrangements to central Government on a quarterly basis. The data input is used to report on national recycling and landfill diversion performance as well as local authority league tables on recycling rates etc following independent quality checking. While Councils normally report in financial years, as the EA WDI reports for calendar year the data for North East Lincolnshire covering the four quarters of 2024 has been accessed to ensure comparability between datasets.

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 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

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

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

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

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

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

This Report

1.3 This report updates the data for C&I waste management in NEL that formed part of the evidence base that supported production of the waste section of the North East Lincolnshire Local Plan adopted in 2018 (adopted NEL Local Plan). This was based on a WNA produced in 2015 using 2013 data.

1.4 The methodology for achieving this involves the following:

- estimating baseline C&I arisings;
- assessing the management profile, including routes & targets;
- forecasting arisings to 2045; and,
- assessing existing capacity available to manage C&I waste in accordance with Plan objectives and targets and, in doing so, identifying any projected capacity gaps.

1.5 The approach taken and the results are described in detail in the following sections.

Estimating C&I Waste Baseline Arisings

Introduction

2.1 This section of the report is concerned with estimating arisings of Commercial and Industrial (C&I) waste in North East Lincolnshire in 2024. From this, future arisings are forecast and appropriate management targets proposed to then determine what future management requirements may exist or be expected to 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 Plan area, 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 production'** using data based on the profile of businesses within an area and the application of waste production factors (related to the different business profiles). This method was used in the Defra national survey undertaken in 2009 that informed the previous approach to national estimates.[1]
- **'Point of management'** using data related to C&I waste managed. This relies on records of waste delivered to, and removed from, permitted waste facilities. The Environment Agency (EA) collates this data submitted by operators in its 'Waste Data Interrogator' (WDI) on an annual (calendar year) basis[2]. This approach is now used to estimate C&I waste arisings at national level and is referred to as the 'Reconcile' method.[3]

2.3 The North East Lincolnshire Waste Needs Assessment 2015 applied both approaches to generate an estimated baseline values of C&I waste produced in North East Lincolnshire in 2013 as follows:

- Point of Management c260,000t (259,870t); and
- Point of Production c310,2000t.

The higher value was used as the basis for forecasting arisings for which need was planned in the adopted NEL Local Plan.

Definitions

2.4 The adopted North East Lincolnshire Local Plan includes the following definition of C&I waste:

"...this waste stream is produced by businesses. It is collected and managed on a commercial basis by private waste management companies." (Page 252 Para 16,2)

[1] *Commercial and Industrial Waste Survey 2009: Final Report*, Defra May 2011.

[2] Waste Received and Waste Removed datasets available to download https://www.data.gov.uk/dataset/81f9d676-e77c-4d68-ab0c-b67e0b0b353e/2024-waste-data-interrogator

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

2.5 Since 2010 the term 'municipal waste' applies to both Local Authority Collected Waste (LACW) and waste of a similar nature and composition that may arise from non household sources such as business premises[4]. It has been estimated that up to 60% of commercial waste could fall within that definition. Under the European Waste Catalogue (aka List of Wastes) this waste is generally classed under Chapter 20, and given the WDI uses EWC codes to categorise wastes, it isn't possible to distinguish between tonnages that arose from LACW sources as opposed to other sources by looking at this dataset alone, hence a series of computations must be undertaken.

Methodology

2.6 The methodology used to estimate this updated baseline C&I waste arisings value is based on the national 'Reconcile' methodology, adapted to reflect local circumstances. This methodology considers a number of datasets, in totality, to capture quantities of commercial and industrial waste that are managed rather than produced, through:

- Permitted waste management facilities (reporting through Environment Agency Waste Data Interrogator including waste sent to Energy from Waste plants in England);
- taking into account the quantity sent directly for export, in this case outside North East Lincolnshire.
- excluding waste streams accounted for elsewhere in the WNA such as Agricultural, Mining, Construction, Demolition & Excavation Waste (C, D & E), wastewater and hazardous waste included in the source datasets; and
- discounting local authority collected waste managed through WDI reporting facilities (as reported through WasteDataFlow5) including waste managed through HWRCs.
- in addition, computations are carried out to avoid double counting of waste inputs to 'intermediate' facilities[6] within North East Lincolnshire.

[4] *Local authority collected waste – definition of terms* Defra September 2011 https://www.gov.uk/guidance/local-authority-collected-waste-definition-of-terms

5 http://www.wastedataflow.org/

[6] Intermediate facilities are those which do not provide the final fate of waste. That is waste received at these sites leaves for onward management at other facilities elsewhere. Inputs to these sites are reported through the Waste Received dataset of the WDI and outputs in the Waste Removed dataset of the WDI.

Step 1: Make deductions in waste recorded in the Waste Data Interrogator as arising from North East Lincolnshire to eliminate non C&I waste streams.

2.7 The starting point is to download all data relating to waste originating from North East Lincolnshire set out in the Environment Agency WDI 2024 Waste Received dataset. While the range of facilities reporting through the WDI has been extended since 2019 to include combustion, incineration and reprocessing, these categories have initially been omitted, in order to retain comparability between the step by step values obtained for 2024 and those generated for 2013, prior to inclusion of these categories. Some additions for these facility types are made later in the methodology as per 2013. The data values for waste originating in North East Lincolnshire obtained for the limited categories extracted from the Waste Received dataset is displayed by destination and management route in Table 1 below. This shows that the total quantity of waste reported as originating from North East Lincolnshire managed through permitted sites reporting through the WDI for 2024 stood at c437,000 tonnes.

2.8 Waste identified under waste codes considered to represent C, D & E Waste (EWC Chapter 17 plus EWC 19 12 09 & 20 02 02) and therefore accounted for in the separate baseline estimates of C, D & E waste[7] need to be deducted from the totals in Table 1. The quantities remaining after this deduction are displayed by management route in Table 2 below and this shows that the quantity of waste attributed as arising from NEL in 2024 is reduced to just over c317,000 tonnes. The reduction is c120,000 tonnes, compared to c91,500t in 2013 (which excluded code 20 02 02 which was a further 1,547 tonnes)

Table 1 Waste Arising from North East Lincolnshire (tonnes)

Source WDI 2024

	Landfill	Metal Recycling Sites	Transfer	Treatment	Recovery to land	Grand Total
NE Lincs arisings managed at NE Lincs sites	11,937	9,350	56,521	60,175	10,919	**148,902**
NE Lincs arisings managed at sites outside NE Lincs	127,988	13,777	1,613	144,663	0	**288,042**
Totals	**139,925**	**23,127**	**58,134**	**204,838**	**10,919**	**436,944**

2.9 Waste identified under waste codes considered to represent C, D & E Waste (EWC Chapter 17 plus EWC 19 12 09 & 20 02 02) and therefore accounted for in the separate baseline estimates of C, D & E waste8 need to be deducted from the totals in Table 1. The quantities remaining after this deduction are displayed by management route in Table 2 below and this shows that the quantity of waste attributed as arising from NEL in 2024 is reduced to just over c317,000 tonnes. The reduction is c120,000 tonnes, compared to c91,500t in 2013 (which excluded code 20 02 02 which was a further 1,547 tonnes).

[7] *North East Lincolnshire C ,D & E Waste Management Requirements* WNA 2026 BPP Consulting April 2026

[8] *North East Lincolnshire C ,D & E Waste Management Requirements* WNA 2026 BPP Consulting April 2026

Table 2 Waste Arising from North East Lincolnshire minus C, D & E Waste (tonnes).

Source: WDI 2024

	Landfill	Metal Recycling Sites	Transfer	Treatment	Recovery to land	Grand Total
NE Lincs arisings managed at NE Lincs sites	0	3,921	46,085	50,736	0	100,741
NE Lincs arisings managed at sites outside NE Lincs	111,521	12,919	1,523	90,410	0	216,373
Totals	**111,521**	**16,840**	**47,608**	**141,146**	**0**	**317,115**

3.1 Waste identified under waste codes considered to represent agricultural waste (EWC Chapter 02 01), mining (EWC Chapter 01) and hazardous waste (all codes with *) are accounted for separately and so are also deducted. The tonnages remaining after this deduction are displayed by management route in Table 3 which shows that the quantity of waste arising is reduced to c293,000 tonnes. This process was not done in 2013 but would have removed a further 8,149 tonnes from the 2013 baseline.

Table 3 Waste Arising from North East Lincolnshire minus C, D & E Waste, agricultural, mining & hazardous waste (tonnes).

Source: WDI 2024

	Landfill	Metal Recycling Sites	Transfer	Treatment	Grand Total
NE Lincs arisings managed at NE Lincs sites	0	2,530	45,205	47,014	94,749
NE Lincs arisings managed at sites outside NE Lincs	111,501	11,418	1,145	74,193	198,256
Totals	**111,501**	**13,948**	**46,350**	**121,207**	**293,006**

Step 2: Make deductions to account for Local Authority Collected Waste

3.2 Local Authority Collected Waste (LACW) is not distinguishable from Commercial and Industrial Waste by reference to EWC Codes. It is, however, possible to cross reference data from Wastedataflow (WDF), the reporting portal for waste collection and disposal authorities which in North East Lincolnshire's case is reported through the North East Lincolnshire Council. Where sites reported receiving municipal waste from NEL equal to or exceeding the tonnage reported in the WDI as that reported in the WDF, the amount corresponding to the tonnage of LACW reported through WasteDataFlow was deducted. Where the amount reported through the WDF exceeded the tonnage reported in the WDI, only the tonnage reported in the WDI was deducted. The outcome of this process is summarised in Table 4:

Table 4 Local Authority Collected Waste Received at Intermediate Facilities included in Waste Arising from North East Lincolnshire in WDI (tonnes).

Source: WasteDataFlow 2024 & WDI 2024

	Metal Recycling Sites	Transfer	Treatment
NE Lincs arisings managed at NE Lincs sites	840	31,750[9]	5,732
NE Lincs arisings managed at sites outside NE Lincs	0	0	224

When values displayed in Table 4 were then deducted from the totals in Table 3, giving the running gross total for C&I waste of c254,500 tonnes as shown in Table 5 below.

Table 5 Gross C&I Waste Arising from North East Lincolnshire (tonnes).

Source: Table 3 minus Table 4.

	Landfill	Metal Recycling Sites	Transfer	Treatment	Grand Total
NE Lincs arisings managed at NE Lincs sites	0	1,690	13,635	41,282	**56,607**
NE Lincs arisings managed at sites outside NE Lincs	111,501	11,418	1,145	73,969	**198,033**
Totals	**111,501**	**13,108**	**14,780**	**115,251**	**254,640**

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

3.3 Landfill leachate is expressly excluded from the national reporting method, therefore the value for leachate from North East Lincolnshire managed at permitted facilities has also been deducted. This amounts to 66,398 tonnes of waste, which was delivered to 3 treatment sites, one located in NE Lincs and two outside NE Lincs, in Kingston upon Hull and Leeds. In addition waste arising from wastewater treatment plants ie sewage sludge would normally be excluded as it is accounted for in the 'Other Waste Scoping Report', but in this case no tonnage of this waste was attributed to NEL in the WDI 2024, so no deduction was made.

3.4 When these values are deducted from the total in Table 5 the running gross total for C&I waste is c188,500 tonnes as shown in Table 6.

[9] including waste accepted at HWRCs.

Table 6 Gross C&I waste Arising in North East Lincolnshire minus specific waste accounted for separately

Source: Table 5 minus landfill leachate and sludges from WWTW

	Landfill	Metal Recycling Sites	Transfer	Treatment	Total
NEL arisings managed at NEL sites	0	1,690	13,635	0	**15,325**
NEL arisings managed at sites outside NEL	111,501	11,418	1,145	48,853	**172,916**
Total	**111,501**	**13,108**	**14,780**	**48,853**	**188,242**

Step 4: Make adjustments to account for intermediate sites (inc. waste transfer stations).

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

Deduct movements of waste arising in North East Lincolnshire to transfer stations within North East Lincolnshire:

3.6 The national methodology (the 'Reconcile' method) discounts inputs to all types of transfer facility recorded in the WDI. This step applies to transfer sites as well as all sites falling under the classification of transfer/ treatment in the WDI. Since some processing takes place at many sites classed by the EA as waste transfer sites, it was not considered appropriate to simply deduct all inputs on the assumption that they would reappear at a 'next step' site in the same form i.e., classified under the same EWC code.

3.7 Instead, inputs to sites identified in the WDI under the category of waste transfer within North East Lincolnshire were assessed against declared outputs, with the difference between inputs and outputs taken to be tonnage 'lost' as a result of some processing taking place on the transfer site. The difference between input and output is counted as an arising, and not deducted. Given such sites often accept waste from beyond North East Lincolnshire, it is necessary to attribute the tonnage lost. This has been done by assessing the proportion of the input reported as arising from North East Lincolnshire and then applying that proportion (percentage) to the tonnage lost.

3.8 For example, a North East Lincolnshire waste transfer site received 200 tonnes, 100 tonnes of which comes from North East Lincolnshire, therefore inputs from North East Lincolnshire represent 50% of the total. It is then taken that 50% of the output value has arisen from North East Lincolnshire waste and has been attributed to it.

Table 7 Waste Data Interrogator Value minus Transfer Station double counting

Source: Table 6 minus EA WDI 2024 North East Lincolnshire site outputs

Dataset	2024 Tonnage
Value from Table 6	13,635
Total input to NEL transfer stations (ex CDE, LACW, Haz, Agri, sludges & leachate)	163,450[10]
NEL input to NEL transfer stations	33,791
% of NEL transfer Stn input from NEL(Line 2/1)	21%
Output from NEL transfer stations	140,031
Tonnage of output attributed to NEL input (9%) deducted to avoid double counting (line 4 x line 3)	-28,949

3.9 As the resulting value of 28,949 tonnes exceeds the total for NEL transfer value shown in Table 6, the value shown for NEL transfer has been set to zero as shown in Table 8.

Table 8 : Gross C&I Waste Arising in North East Lincolnshire (tonnes)

	Landfill	Metal Recycling Sites	Transfer	Treatment	Grand Total
NE Lincs arisings managed at NE Lincs sites	0	1,690	0	0	**1,690**
NE Lincs arisings managed at sites outside NE Lincs	111,501	11,418	1,145	48,853	**172,916**
Total	**111,501**	**13,108**	**1,145**	**48,853**	**174,607**

Step 5: Deduct Waste from Intermediate Facilities

3.10 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 North East Lincolnshire, it is deducted for intermediate sites.

3.11 The principal stream of concern is wastes coded as refuse derived fuel (RDF) under EWC code 19 12 10 and that resulting from mechanical treatment (Coded under EWC 19 12 12). Analysis of the waste removals data in the WDI for intermediate sites within North East Lincolnshire of these waste types indicates that 49,044[11] tonnes was produced by such sites in 2024, of which 37,444 tonnes was attributed to C&I waste inputs. The total 19 12 10 and 19 12 12 attributed to C, D & E waste to be deducted is from 3 transfer sites, Gilbey Road Transfer Station (1,955), H Cope & Sons (2,003) and Rear's of No's 2 & 3 Cold Stores (3,642), which is 7,600 tonnes in

[10] Inputs and Outputs from DFDS Seaways have been excluded as the waste is simply received as RDF and stored dockside for export overseas, so doesn't undergo any processing, to include it would distort the true picture.

[11] DSDF Seaways again excluded from figures (see footnote 8)

total. As both the transfer and treatment values are already at zero there is no change to the value in Table 8.

Additions

Step 6: Account for waste received at incineration facilities

3.12 The Waste Incinerator Returns which since 2019 form part of the WDI, identify waste received at incineration plants in England coming from North East Lincolnshire in 2024. The only plant identified as receiving over 500 tonnes of waste from North East Lincolnshire was the EfW plant operated by Newlincs Development Ltd which accepted 51,306 tonnes of NEL waste in 2024. As 41,711 tonnes of this waste was LACW, the difference of 9,595 tonnes was taken to be the net amount of NEL C&I waste sent to EfW in 2024. This tonnage has been added to the total in Table 9 to arrive at an overall NEL C&I waste arising value of just over c184,000 tonnes in 2024.

Table 9 Gross C&I Waste Arising plus North East Lincolnshire waste sent to Incinerators.
Source: Table 9 plus EA Waste Incineration data in WDI 2024

	Landfill	Metal Recycling Sites	Transfer	Treatment	EfW	Total
NE Lincs arisings managed at NE Lincs sites	0	1,690	0	0	9,595	11,286
NE Lincs arisings managed at sites outside NE Lincs	111,501	11,418	1,145	48,853	0	172,916
Total	**111,501**	**13,108**	**1,145**	**48,853**	**9,595**	**184,202**

Step 7: Accounting for waste managed through Exemptions

3.13 While the original national Reconcile method considered inputs to facilities exempt from environmental permitting likely to handle C&I waste, the method has subsequently been revised[12] to exclude exemptions. This is on the basis that most waste passing through exempt sites will have either arisen from, or go to, a permitted site, and as such will be reported through the WDI at some point in its management. Therefore, no estimation has been made for this category of activity.

Step 8: Accounting for Waste attributed to Yorks & Humber

3.20 Sites within North East Lincolnshire received 11,897 tonnes of waste in 2024 that was not attributed below Yorks & Humber region level (of a total of 6.5Mt), i.e., was not attributed to a specific Plan Area origin. Of this, 11,656t was classed as non-hazardous HIC waste, all of which went to sites classed as intermediate sites in North East Lincolnshire. As all the NEL LACW is accounted for via Wastedataflow, 11,656t has been added to the total on the

[12] *Commercial and Industrial Waste Arisings Methodology Revisions for England* DEFRA October 2018 https://www.gov.uk/government/statistics/uk-waste-data

conservative assumption that C&I waste will tend to be managed at the nearest appropriate facility and hence, even though not attributed, the waste is taken to have actually arisen from within North East Lincolnshire.

3.21 The outcome of this process is an estimated baseline value of c196,000 tonnes of C&I waste generated in North East Lincolnshire in 2024.

Table 10 Gross C&I Waste Arising in North East Lincolnshire plus Uncoded Waste

	Landfill	Metal Recycling Sites	Transfer	Treatment	EfW	Grand Total
NE Lincs arisings managed at NE Lincs sites	0	1,690	11,515	140	9,595	**22,942**
NE Lincs arisings managed at sites outside NE Lincs	111,501	11,418	1,145	48,853	0	**172,916**
Total	**111,501**	**13,108**	**12,661**	**48,993**	**9,595**	**195,858**

Step 9: Check for Anomalous Values

3.22 Having looked further into the tonnage of 111,501 landfilled, the majority of this (108,666t) was calcium based reaction wastes from titanium dioxide production (EWC 06 11 01). Interrogation of the Environment Agency Pollution Inventory shows the 06 11 01 waste all came from the Stallingborough Titanium Dioxide Site, Laporte Road operated by Tronox Pigment UK Ltd and was deposited at Campwood Landfill in North Lincolnshire. This is a specialised waste flow and cannot be managed further up the waste hierarchy as is generally the case. It is not considered appropriate to include it within the general waste total as it is not amenable to being driven out of landfill. For comparison to corresponding values were 116,491 tonnes in 2013 and 47,911 tonnes in 2019 respectively.

3.23 Gilbey Road Transfer Station located in Grimsby NE Lincs operated by Biffa Waste Services receiving predominately mixed municipal waste (c30,500t) all reported in the WDI as coming from Lincolnshire. However given this site primarily serves the Grimsby area, Biffa already having a depot at Lincoln serving Lincolnshire, the tonnage reported through the WDI has been taken to be attributed to Lincolnshire in error and has been reassigned to NEL. This will add 33,294 tonnes to the transfer value.

3.24 The outcome of these changes gives an estimated baseline **of c120,500 tonnes of C&I waste** generated in North East Lincolnshire in 2024 as shown in Table 11.

Table 11 Gross C&I Waste Arising in North East Lincolnshire plus adjustments

	Landfill	Metal Recycling Sites	Transfer	Treatment	EfW	Grand Total
NE Lincs arisings managed at NE Lincs sites	0	1,690	44,809	140	9,595	**56,235**
NE Lincs arisings managed at sites outside NE Lincs	2,834	11,418	1,145	48,853	0	**64,250**
Total	**2,834**	**13,108**	**45,954**	**48,993**	**9,595**	**120,485**

3.25 Table 12 presents the original values in the WNA 2015 using 2013 data, plus revised 2013 values replicating the same methodology used for 2024. In addition, the methodology has been replicated for the year 2019 to allow triangulation of baseline values for comparison on a step-by-step basis.

Table 12 Baseline Comparison between 2013 Original, 2013 Adjusted 2019 and 2024 values on a step by step basis

Component	2013 Original	2013 Adjusted	2019	2024	Comment
Starting Total Reported as Arising in NE Lincs in WDI	***358,802***	***358,802***	***440,368***	***436,994***	
Minus C, D & E Waste	-91,280[13]	-92,827	-211,702	-119,829	2013 adjusted include 1,547 tonnes from code 20 02 02 - soil from municipal sources.
Minus Hazardous Waste	0[14]	-7,990	-23,137	-24,109	Value not reported in WNA 2015.
Minus LACW	-63,370	-20,815	-37,461	-38,366	2013 adjusted excludes EfW LACW figure.
Minus Specific Waste	0	-7,893	-53,264	-66,398	Value not deducted in WNA 2015.
Plan Area Transfer adjustment	0	-29,794	-29,794	-13,824	Value not deducted in WNA 2015.
Treatment Next Step	-67,041	-67,041	0	0	
Addition of EfW	+52,300	+9,781	+10,428	+9,595	2013 original EfW doesn't have LACW deduction, it was included in the minus LACW figure.
Addition of Uncodeable Waste	0	+78,242	+4,490	+11,656	Value not deducted in WNA 2015.
Anomalies Adjustment	**0**	**-84,120**	**-14,052**	**-75,373**	
C&I baseline value	**189,409**	**136,308**	**101,846**	**120,485**	
Difference			**-25%**	**+18%**	

[13] CDE waste arisings were assessed to be c175,500t in WNA 2015using a point of production methodology.

[14] Hazardous waste arisings were assessed to be c76,000t in the WNA 2015.

Baseline Conclusion

3.26 As shown in Table 12 there is significant variation between the annual values obtained. Therefore, it is proposed that a mean across the three values (using the 2013 adjusted value) be taken to generate a baseline value for the purposes of forecasting future management requirements. This would give a starting baseline value of **c119,500tpa.**

3.27 All values obtained are significantly lower than the 2013 C&I waste baseline value used in the evidence base of the adopted Local Plan of 310,191 tonnes. However, the 2013 value used was generated using a 'Point of production' based methodology which can no longer be reliably replicated due to the lack of granularity in certain datasets. As a result, a new national methodology has been developed using a Point of Management approach that largely relies upon the WDI datasets. Therefore, it is considered that a Point of Management approach ought to be adopted going forward, to align with national practice. When that method is replicated for 2013 it gives rise to a baseline value of c136,500t.

4. Forecasting Future C&I Waste Arisings

4.1 Having established a baseline value for C&I waste arising in North East Lincolnshire, future management capacity requirements may be determined by;

- forecasting how much C&I waste may be produced in future, and,
- how that waste might be managed accounting for how the waste is currently being managed and how North East Lincolnshire Council might wish the waste to be managed through exerting influence on the types of capacity that come forward. The section that follows addresses both in turn.

4.2 When forecasting C&I waste arisings national Planning Practice Guidance states the following:

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

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

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

Hence in 2014 when the PPG was published, there was an expectation that a positive growth rate be applied and that a number of scenarios be explored if necessary.

Developing a C&I Waste Arising Forecast for North East Lincolnshire

Growth Rate Applied in WNA 2015

4.3 The WNA 2015 considered three scenarios for the purposes of forecasting future C&I waste arisings as follows:

- Scenario 1: The baseline or Business as Usual scenario of +0.35% per annum;
- Scenario 2: A preferred scenario with a growth rate of +0.67% per annum; and
- Scenario 3: A high scenario with a growth rate of +1.05% per annum;

Following consideration of trends a rate between business as usual and the preferred scenario of +0.5% for annum was preferred for forecasting purposes.

Indicated Growth Rates Based on Arisings Baselines

4.4 In contrast to the above, comparison between the value obtained for 2024 of 0.120 million tonnes with the value of 0.136 million tonnes for 2013 indicates a fall of around 0.016 million tonnes over an eleven-year period. This equates to minus 1% growth per annum.

4.5 Given that data presented by Defra to monitor progress on the resource productivity indicator set in Environmental Improvement Plan[15] reproduced in Appendix 1 evidences the break in linkage (decoupling) between resource input (and waste output) even though the economy continues to grow, as measured using Gross Value Added, adoption of a negative growth rate would not be entirely unreasonable. However, for the purposes of conferring flexibility in the forecasts a static growth rate is proposed (taking a line between the WNA2015 preferred growth rate of 1%pa and that indicated by the value of minus 1% pa). Hence the total tonnage of C&I waste forecast to arise in North East Lincolnshire in 2045 would remain around c119,500 tonnes from the 2024 mean arising value.

[15] https://www.gov.uk/government/collections/environmental-improvement-plan

5. Existing NEL C&I Waste Management Profile

5.1 To establish realistic future management targets which then informs future capacity requirements it is first necessary to understand how the C&I waste produced in North East Lincolnshire is currently managed.

Baseline Profile

5.2 The management profile presented in Table 13 is based on the management data available through the WDI 2024. Since waste identified as undergoing treatment may go on for recycling, landfill or energy recovery, the principal management types considered are those that would represent a final fate as follows:

- Landfill
- EfW and Recovery to Land
- Composting
- Metal Recycling

Landfill

5.3 As shown in Table 13 below, in 2024, after adjustment for titanium dioxide waste c2,830 tonnes of C&I waste arising in North East Lincolnshire were disposed of to landfill.

'Other' Recovery

5.4 As shown in Table 13 in 2024, c9,600 tonnes of C&I waste arising in NEL was recovered, all of which was sent to EfW facilities.

Composting/biowaste

5.5 As shown in Table 13, in 2024, c.1,000 tonnes of C&I waste arising in NEL were sent to permitted composting/biowaste sites.

Metal Recycling

5.5 As shown in Table 13, in 2024, c13,000 tonnes of C&I waste arising in NEL were sent to permitted metal recycling sites, all of which is assumed to go on for recycling.

Other Recycling and Reuse

5.6 The difference between the sum of the tonnages for the above categories and the baseline value has been taken to represent the tonnage that went on for recycling. In 2024 this amounted to c84,000 tonnes as shown in Table 13 below.

Table 13 : Computed C&I Waste Management Profile

Route	Tonnes	%	
Total Arisings	*120,485*		
Landfill	2,843	2%	2%
'Other' Recovery	9,595	8%	8%
Composting/Biowaste	10,948	9%	90%
Metal Recycling	13,108	11%	
Recycling & Reuse (remainder)	83,999	70%	

5.7 Table 13 shows that if it is assumed that four principal management routes for which data is available are utilised the percentage of C&I waste recycled/ reused/ composted stands at 90% (including that inferred), while 'other' recovery i.e. waste sent to energy from waste either directly or as RDF stands at 8%, with the proportion landfilled standing at 2%.

6. Proposed Management Targets

6.1 Having established an existing management profile for North East Lincolnshire, the next step is to consider what management profile may be desirable and achievable and therefore what waste management targets ought to be set in the Plan to achieve that management profile.

6.2 There are no national targets for the management of C&I waste but the UK Government has confirmed[16] its commitment to, the following targets for municipal waste, which as stated previously includes a significant component of commercial waste in particular:

- 55% recycling floor by 2025; and
- 60% recycling floor by 2030; and
- 65% recycling floor by 2035; plus
- 10% ceiling limit on landfilling by 2035.

6.3 The Government has also set the following targets in the Environmental Improvement Plan 2023[17] (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,

6.4 The target for the reduction in residual waste is enshrined in *The Environmental Targets (Residual Waste) (England) Regulations 2023*[18] which came into force on 30 January 2023 and is set on a kg per capita [19] 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.

[16] https://www.gov.uk/government/publications/circular-economy-package-policy-statement/circular-economy-package-policy-statement

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

[18] *The Environmental Targets (Residual Waste) (England) Regulations 2023* https://www.legislation.gov.uk/en/uksi/2023/92/made

[19] Per head of population in England

6.5 The EIP also set the following interim targets for the residual waste target to be achieved by 31 January 2030[20]:

- 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%.

Given the above, going beyond the current municipal waste focussed targets is expected to be necessary[21].

6.6 Taking the above targets into account and the management profile, the following targets for the future management of C&I waste in North East Lincolnshire are set out in Table 14 below.

Table 14 : Proposed Targets for C&I Waste Management in North East Lincolnshire

Italicised values from Table 13

	Milestone Year					
	2024	**2025**	**2030**	**2035**	**2040**	**2045**
Recycling/composting (floor)	*90%*	≥90%	≥90%	≥90%	≥91%	≥92%
Other Recovery	*8%*	8%	8%	8%	8%	7%
Remainder to Landfill (ceiling)	*2%*	≤2%	≤2%	≤2%	≤1%	≤1%

[20] 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

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

6.7 The proposed targets have been arrived at as follows:

- Recycling: The current computed composite recycling/composting rates of 90%. As this already exceeds the recycling rate of 72% required to be met for the halving residual waste target in 2042 this is expected to be maintained and then improved in the latter period by two percentage points (as shown in the latter two milestones).
- Landfill: It is understood that there will be a need to landfill some C&I waste through to 2045 at a reducing rate. As landfill is currently only at 2% this has remained constant to 2040 from which it reduces to 1%.
- Other Recovery: Taking the remainder after the recycling floor target and the landfill diversion ceiling has been met while paying regard to the halving residual waste target combining both landfill and Other Recovery in this context so reducing by one percentage point in the last period.

Projected Management Requirements for North East Lincolnshire's C&I Waste

6.8 Applying the management targets presented in Table 14 to the forecast arising values in Table 13 gives the management requirements for the Plan Milestone years set out in Table 15.

Table 15: C&I Waste Management Requirements derived by applying Proposed Targets in Table 13 to the Forecast at Plan Milestone years in Table 14

	Current (Table 13)	Milestone Years (tonnes)				Peak Requirement Difference (tpa) / Cumulative Requirement (tonnes)
	2024	2030	2035	2040	2045	
Recycling/composting	*108,096*	107,550	107,550	108,745	109,840	109,840⇧
Other Recovery	*9,595*	9,560	9,560	9,560	8,365	9,595⇩
Remainder to Landfill	*2,834*	2,390	2,390	1,195	1,195	441,741

6.9 Table 15 indicates the following peak capacity requirement for the Plan period:

- c110,000 tpa of recycling/composting at 2045; and
- c9,500 tpa Other Recovery 2030 to 2035 declining to c8,500 tpa in 2045.

In addition, a cumulative non-inert landfill requirement of c441,500t at 2045 as shown in Table 17.

Provision for recycling/ biowaste management

6.10 In the past, provision for recycling has been taken to mean provision of waste management facility capacity to sort mixed materials (normally referred to as DMR/MDR) through a Materials Reclamation/Recycling Facility (MRF). However, where materials are separated at source, facility requirement may reduce to a transfer station where the source separated materials (e.g. paper, plastic) are stored separately prior to onward bulk delivery to a reprocessor such as a paper mill. Given the introduction of the requirement of separate collection of materials as a default through Simpler Recycling, it may not be necessary for further material sorting capacity to be made within North East Lincolnshire. Rather the forecast need for material separation might be met by existing facilities that offer bulking capacity for separately collected materials.

6.11 In contrast to this, biowaste management does require specific facilities if it is to be delivered locally. Hence additional consideration has been given to what the biowaste management capacity requirement that arises from the proposed targets set out above might mean. The C&I waste stream has been assessed to contain up to 13% organic waste[22]. Given the introduction of separate food waste collections for households and businesses as part of the roll out of Simpler Recycling by 2026/7[23], and the interim target for the food waste content of municipal residual waste to reduce by 50% by 2028 it can be assumed that all biowaste within the C&I stream would be effectively captured for separate treatment by 2030. This then yields the management capacity requirements for the biowaste component shown in Table 16 with the remaining recycling requirement after biowaste management is deducted.

Table 16: Forecast Biowaste Management Requirement with Separate Biowaste Collection and remaining recycling requirement for NEL

	Waste Management Requirements at Milestone Years (tpa)				
	2024	**2030**	**2035**	**2040**	**2045**
Total (from Table 15)	*108,056*	107,550	107,550	108,745	109,940
Biowaste @13%	*10,948*	13,982	13,982[24]	14,137	14,292
Recycling Remainder	*97,108*	93,569	93,569	94,608	95,648

6.12 Table 16 shows the combined peak biowaste management capacity requirement for North East Lincolnshire would be c14,500tpa at 2045 with an initial requirement of c14,000 tpa in 2030. This would represent a small biowaste treatment facility, and economies of scale would suggest that a larger facility serving a wider catchment may be more economic, with operational AD plants being around 40,000tpa capacity as a minimum.

[22] *Commercial and Industrial Waste Survey 2009: Final Report*, Defra May 2011.

[23] *Simpler Recycling in England: policy update* Defra November 2024

[24] Value same as 2030, as overall recycling /composting rate held constant as per Table 14 and static arisings forecast.

Provision for non-inert landfill

6.13 The application of the proposed targets set out in Table 16 would mean a cumulative non-inert landfill requirement to 2045 of c41,500t, as shown in Table 17 below.

Table 17: Predicted Non-Inert Waste Landfill Requirement for C&I Waste to 2045

Year	Annual Requirement	Cumulative Requirement
2025	2,760	2,760
2026	2,686	5,446
2027	2,612	8,058
2028	2,538	10,596
2029	2,464	13,061
2030	2,390	15,451
2031	2,390	17,841
2032	2,390	20,231
2033	2,390	22,621
2034	2,390	25,011
2035	2,390	27,401
2036	2,151	29,552
2037	1,912	31,464
2038	1,673	33,137
2039	1,434	34,571
2040	1,195	35,766
2041	1,195	36,961
2042	1,195	38,156
2043	1,195	39,351
2044	1,195	40,546
2045	1,195	**41,741**

Appendix 1: National Resource Productivity Data

Resource productivity in England measured as Gross value added (GVA) £s per kg of raw material consumption (excluding fossil fuels) has improved in both the long term (2001 to 2020) and short term (2015 to 2020). Comparing the values for 2001 and 2020 shown in Figure A3.1 below indicates that resource productivity has improved by at least a third.

The trendline on Figure A3.1 below suggests that resource productivity over the period has improved by over a third i.e. each £ of GVA from economic activity has been generated using only a two thirds of resource input required to generate that £ as required at the beginning of the century.

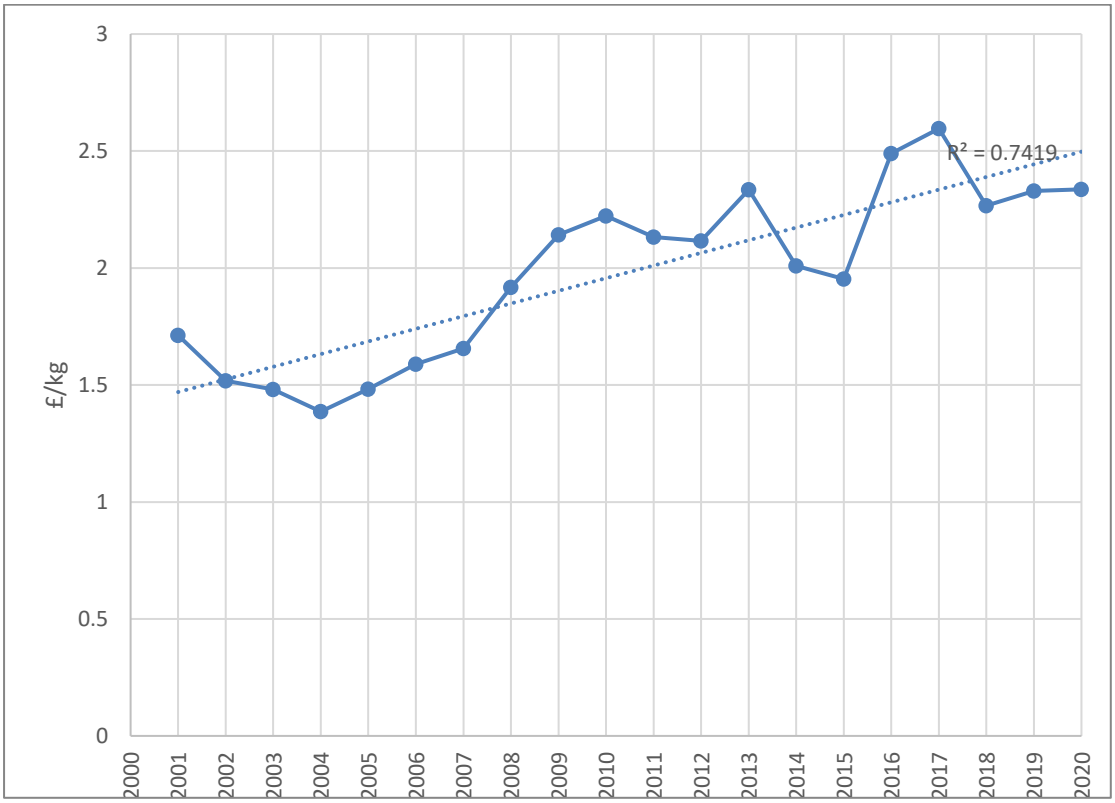

Figure A3.1 Raw material consumption in England 2001-2020 (Regional gross value added by industry)

Source: Defra https://oifdata.defra.gov.uk/themes/resource-use-and-waste/J2/

The above confirms that a direct relationship between GVA and C&I waste arisings does not exist. Noting that the above relates to material inputs to generate a unit GVA, this does not actually account for any improvement in efficiency in the actual use of these materials that may result in a reduction in their wastage, and hence C&I waste production. And in fact every additional £s worth of GVA generated should only be taken to account for between no more than two thirds of the rate of growth indicated by GVA itself. Hence the value of 3.8% used in the DCC forecast should be adjusted to reflect this, meaning any growth should only be taken to be no more than 2.5% pa.

It should be noted that the above calculation is based on the kg of material input to the economy to produce a £ of GVA, rather than output as waste. Given that material costs and waste management costs have both risen significantly over the period it can be expected that less wastage of that reduced resource input will also occur, so a lower GVA growth value should be taken as an absolute maximum when applied to waste production.