

Lincolnshire Minerals & Waste Local Plan - Evidence Base

Lincolnshire Waste Needs Assessment Update
2025/26 - Overview Report

Final Issue: v2.0

Issued: April 2026

Prepared on behalf of
Lincolnshire County Council

BPP Consulting Document Control

Project: Lincolnshire Waste Needs Assessment Update (2025/26) - Overview Report

Version Description: Final Issue

Issued: 27.04.2026

Version No.	Version Description	Author	Date	Reviewed	Date
1.0	Client review	Alan Potter (Partner)	07.04.2026	Richard Leonard (Client Contact)	15.04.2026
1.1	Post Client review for sign off	Alan Potter (Partner)	21.04.2026	Richard Leonard (Client Contact)	23.04.2026
2.0	Final Issue	Alan Potter (Partner)	27.04.2026		

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Executive summary

This report presents the outcome of the Lincolnshire Waste Needs Assessment (WNA 2025/26) update exercise undertaken by BPP Consulting. This updates the WNA 2021 that forms part of the evidence base supporting the review of the Lincolnshire Minerals and Waste Local Plan. The WNA seeks to establish whether a predicted need for additional waste management capacity exists in Lincolnshire. It does this by quantifying and characterising the principal waste streams arising and producing forecasts/estimates of the amount of such waste that needs to be managed, whilst considering the potential contribution existing available waste management capacity within Lincolnshire may make going forward to 2045.

This WNA (WNA 2025/6) found that a total of over 2.2 million tonnes of waste arose within Lincolnshire in 2023. This compares with c2.11 million tonnes in 2019 presented in the WNA 2021. The quantities of principal categories of waste arising in 2023 are shown in Figure 1 below:

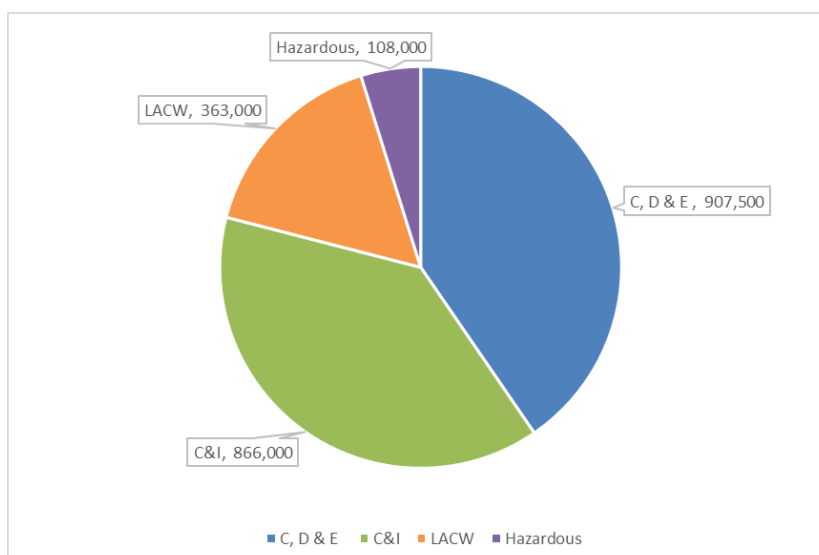


Figure 1: Quantities of Principal Waste Types Arising in Lincolnshire 2023 (tonnes)

This Waste Needs Assessment Update has found that:

- 1 there appears to be sufficient consented capacity to meet the projected requirement for non-inert recycling/ composting and inert aggregate recycling through to 2045;
- 2 a predicted shortfall in 'other recovery' capacity in the initial milestone year is expected to switch into surplus by 2030;
- 3 a projected surplus in permanent deposit to land capacity for non-inert waste to 2045; and
- 4 a shortfall of permanent deposit to land capacity for inert waste is projected to emerge by 2035, although its actual emergence is subject to a number of uncertainties.

Abbreviations & Glossary of Terms

Abbreviations

Abbreviation	Term
AD	Anaerobic Digestion
AMR	Authority Monitoring Report
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
MRF	Material Recycling Facility
MWLP	(Lincolnshire) Minerals & Waste Local Plan
nPPG	national Planning Practice Guidance
NPPW	National Planning Policy for Waste
RDF	Refuse Derived Fuel
WDF	WasteDataFlow
WDI	Waste Data Interrogator
WNA	Waste Needs Assessment
WPA	Waste Planning Authority

Glossary of Terms

Term	Definition
Agricultural Waste	Waste produced on a 'farm' in the course of 'farming'. Agricultural waste takes both 'natural' (or organic) and 'non- natural' forms e.g. plastics.
Anaerobic Digestion	A process to manage organic matter including green waste and food waste broken down by bacteria in the absence of air, producing a gas (biogas) and nutrient rich solid or liquid (digestate). The biogas can be used to generate energy, 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 used wholly or mainly for trade, business, sport, recreation or entertainment.
Construction, Demolition & Excavation Waste	Controlled waste arising from the construction, repair, maintenance and demolition of buildings and structures.
Energy from Waste	The conversion of the calorific value of waste into energy, through applying thermal treatment of some sort. May also include the production of gas used to generate energy.
Environment Agency	The body responsible for the regulation of waste management activities through issuing permits to control activities that handle or produce waste. It also provides up-to-date information on waste management matters.
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	A dedicated landfill site where hazardous waste may be disposed.
Hazardous Waste	Waste requiring special management under the Hazardous Waste Regulations 2005 due to it posing potential risk to public health or the environment. 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 street sweepings, and litter bins.
Household Waste Recycling Centres	A facility that is available to the public to deposit waste not collected through kerbside collection (otherwise known as a civic amenity sites).
Incineration	The controlled burning of waste. Energy may also be recovered in the form of heat (see Energy from Waste).
Industrial Waste	Waste arising from any factory and from any premises occupied by an industry (excluding mines and quarries).
Inert Landfill	Landfill site permitted to only accept inert waste for disposal.
Landfill (including land raising)	The permanent disposal of waste to land, by the filling of voids or similar features, or the construction of landforms above ground level (land-raising).
(retained EU) Landfill Directive	European Union requirements restricting landfilling of biodegradable municipal waste, requiring pre treatment of all waste landfilled and

	separate disposal of hazardous, and non hazardous and inert wastes.
Local Authority Collected Waste	All waste collected by or on behalf of a local authority. Includes household waste. LACW is the definition used in statistical publications, which previously referred to municipal waste.
Materials Recycling Facility (MRF)	A facility for sorting recyclable materials.
Non-inert Landfill	A landfill permitted to accept non-inert (biodegradable) wastes. May only accept hazardous waste if a special cell is constructed.
Other Recovery	A subset of recovery on the waste hierarchy below recycling and composting. Includes energy from waste and backfilling of mineral workings.
Recovery	Subjecting waste to processes that recover value including recycling, composting or thermal treatment to recover energy.
Recycling	Extracting materials from the waste stream for reprocessing into products (the same e.g. glass bottles) or a different one e.g. aggregate)..
Recovery to land	Activities involving the permanent deposit of inert waste for specific purposes not classed as disposal. May include backfilling of mineral workings.
Refuse Derived Fuel	A fuel produced to a contract specification by processing the combustible fraction of waste.
Residual Waste	<i>The Environmental Targets (Residual Waste) (England) Regulations 2023</i> , defines residual waste as any waste other than excluded waste that is (a) sent to landfill in the United Kingdom; (b) put through incineration in the United Kingdom; (c) used in energy recovery in the United Kingdom; or (d) sent outside the United Kingdom for energy recovery.
Waste Local Plan	A statutory development plan prepared (or saved) by the waste planning authority setting out policies in relation to the management of waste arising within the area and provision of development to manage waste arising within that area.
Waste Planning Authority (WPA)	The local authority responsible for waste planning and development management. In this case Lincolnshire County Council.
Waste Transfer Station	A site to which waste is delivered for bulking prior to transfer to another place for further processing or disposal.

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1 Introduction

- 1.1 This report presents the outcomes from the update of the Lincolnshire Waste Needs Assessment (WNA) exercise undertaken by BPP Consulting in 2025/26. This WNA updates the WNA 2021 that forms part of the evidence base supporting the review of the Lincolnshire Minerals and Waste Local Plan. The objective of this WNA is to establish future waste management requirements and assess whether existing capacity will be sufficient to meet these needs or whether additional capacity needs to be planned for in Lincolnshire over and above that identified in the WNA 2021.
- 1.2 It quantifies and characterises the principal waste streams arising in the Plan Area and forecasts/estimates the amount of waste that needs to be managed into the future, whilst taking into account the contribution of the consented and permitted waste management capacity that exists within Lincolnshire already. This work is undertaken in the context of the National Planning Policy for Waste (NPPW)¹ and the national Planning Practice Guidance² (nPPG), which expects:
- "Planned provision of new capacity and its spatial distribution should be based on robust analysis of best available data."*
(nPPG Para 035 Reference ID: 28-035-20141016).
- 1.3 To achieve this the following steps have been followed:
- a) Scope target waste streams;
 - b) Generate robust baseline waste arisings values for each principal waste stream;
 - c) Generate realistic and meaningful forecasts of future waste arisings for each;
 - d) Identify appropriate relevant targets for the management of each principal waste stream e.g. to ensure that waste is managed in accordance with the waste hierarchy;
 - e) Assess current capacity within Lincolnshire;
 - f) Quantify future capacity needs accounting for cross boundary movements of waste;
 - g) Establish any associated future gaps in waste management capacity to meet forecast needs; and
 - h) Identify facility requirements to fill any identified projected gap.
- 1.4 The Lincolnshire Waste Needs Assessment (WNA) 2025/26 consists of an overall main report and five waste stream specific supporting reports, namely:

¹ <https://www.gov.uk/government/publications/national-planning-policy-for-waste>

² <http://planningguidance.planningportal.gov.uk/blog/guidance/waste/>

- a) Local Authority Collected Waste Management Requirements to 2045;
- b) Commercial & Industrial Waste Management Requirements to 2045;
- c) Construction, Demolition & Excavation Waste Management Requirements to 2045;
- d) Hazardous Waste Management Requirements to 2045; and
- e) Scoping review of management requirements for 'Other Waste' to 2045.

1.5 Since arrangements for the management of Low Level Radioactive, Agricultural, Liquid Waste and Wastewater have been found to be sufficient in the Other Waste Report³, these streams have not been considered further. The waste streams considered in detail in this exercise, are therefore as follows:

- Local Authority Collected (household/ formerly municipal);
- Commercial & Industrial;
- Construction, demolition & excavation; and
- Hazardous.

Principal Data Sources

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

Environment Agency Waste Data Interrogator (WDI)

1.7 Operators of all sites in England formally permitted to manage waste are required to submit returns on the quantities, types and origin of waste received and, where applicable, destination of waste removed at their sites. These returns are collated by the Environment Agency (EA) annually and are included in a national dataset known as the Waste Data Interrogator (WDI) - waste received and waste removed. This dataset is released approximately nine months after the end of the calendar year to which the data relates. It distinguishes between those sites that are subject to Standard Rules permits with a fixed capacity specified by type, as opposed to those sites subject to bespoke permits where a site's annual capacity has been separately assessed by the EA. The 2023 WDI (version 1 released Sep 2024) consisting of data for the calendar year 2023 was the most current version available at the time this updated WNA was commissioned.

³ BPP Consulting Waste Needs Assessment 2025/26 *Scoping report for Other Waste Report 5* BPP Consulting March 2026.

Environment Agency Hazardous Waste Data Interrogator (HWI)

- 1.8 In the UK producers and managers of hazardous waste must notify the environmental regulator for the country in which they are located (in England this is the EA) of movements of waste classed as hazardous. This data is collated and reported in the Hazardous Waste Interrogator (HWI). Data is currently reported down to the receiving local area (defined by council or unitary authority) rather than by receiving site. The HWI (HWI 2023) released in September 2024, was the most current version available at the time this updated WNA was commissioned.

Environment Agency Remaining Landfill Void

- 1.9 The EA provides an annual listing of remaining void at landfills permitted under the Environmental Permitting Regulations. The dataset used to inform this project covered the period to the end of 2024. It does not account for void that might be used for landfill, which at that date, had not been granted an environmental permit such as void being created through active mineral working. This means some void with planning consent but no permit is not included. This additional void has been added on the advice of LCC.

Lincolnshire County Council Planning Records

- 1.10 The County Council keeps records of all sites consented for a waste use in Lincolnshire.

Quantities of Waste Produced in Lincolnshire

- 1.11 The WNA has found that just over 2.2 million tonnes of wastes arose within Lincolnshire in 2023. The principal components are:
- Local Authority Collected Waste c363,000 tonnes
 - Commercial & Industrial Waste c866,000 tonnes
 - Construction, Demolition & Excavation c907,500 tonnes
 - Hazardous Waste c108,000 tonnes
- 1.12 The profile is illustrated in Figure 1 of the Executive Summary of this report.

2 Capacity Assessment Overview

- 2.1 As the WNA 2021 used the WDI over a 5-year period 2015-2019 the capacity of waste management facilities in Lincolnshire has been re-assessed by undertaking a review of data as reported through the annual editions of the WDI (2020-2023) released since, to identify if peak inputs have increased since the WNA 2021 was produced. This has been embellished by reference to planning consents and environmental permits where relevant input limits are specified and these too may have changed.
- 2.2 There may be some instances where sites have the benefit of planning consent for a waste use but do not benefit from an environmental permit, because the operation falls outside the permitting regime and operate under exemptions instead. Returns for waste received at these sites are not submitted to the Agency and therefore such sites are not included in the WDI. In such cases, the planning consent capacity values have been taken where known/specified.
- 2.3 Facilities where waste recycle is reprocessed into product, such as glass-furnaces and paper mills, were not included in this assessment exercise as they are not considered to be waste development under the relevant regulations⁴ and therefore are not to be planned for in a waste local plan.
- 2.4 Examination of the above datasets along with the EA online public register to identify all sites subject to an environmental permit for waste in 2025 indicate the following capacity types exist within the Plan area:
- 2.5 Non-inert Waste
- Organic Waste Treatment inc composting and anaerobic digestion;
 - Mixed Waste Recycling in the form of sorting sites inc MRFs;
 - Material specific recycling such as metal recycling sites (MRS);
 - Other Recovery for residual waste inc energy from waste (EfW);
 - Non-Hazardous Landfill (for residual waste plus some inert),
- 2.6 Inert Waste
- Recycling in the form of recycled aggregate production sites (RAF);
 - Permanent deposit to land sites in the form of Inert Landfill, Recovery to Land sites and Non hazardous landfill (restoration - see above).
- 2.7 Hazardous Waste
- Waste Transfer & Treatment (no final fate facilities).

⁴ The Town and Country Planning (Prescription of County Matters) (England) Regulations 2003 SI 2003 No. 1033

Sources of Facility Capacity Data

- 2.8 As a starting point a list of all permitted waste sites was downloaded from the EA online public register to identify all sites subject to an environmental permit for waste in 2025. This was then cross checked with the WDI 2023 entries. The 4-year peak input (2020-2023) reported through the WDI was then assessed on a site-by-site basis. For any sites that managed a significant amount of hazardous waste (greater than 20% of the total peak amount of waste managed in latest year of data available in the WDI) this was deducted from the preferred capacity value taken for non-hazardous waste, to ensure that hazardous waste management capacity provided by these sites was not compromised.
- 2.9 To allow for the possibility that the peak input value to intermediate waste sites in any particular year is not an absolute limit, a 15% 'freeboard' was added to the peak input values shown in the 4-year WDI dataset for those types of facilities not subject to an absolute input limit (such as an anaerobic digestion vessel). This adjustment is intended to reflect the maximum realistic throughput of a facility, as opposed to theoretical capacity that may be indicated by, for example, the site's Environmental Permit. Planning consents issued by Lincolnshire County Council were also referred to. These sources of data were used to arrive at an assessed annual capacity value in the following way:
- 2.10 Where the planning permission or bespoke permit limit gave an express limit reasonably close to the peak value (+15%), the prescribed planning limit or bespoke permit limit was taken to apply as that represents the authorised capacity. Where both planning consent and bespoke permit limit were identified, the greater capacity limit of the two was taken. Where the bespoke permit limit exceeded the planning consent limit there is no implied approval to the exceedance, just an acknowledgement that the Environment Agency has assessed the site as being capable of managing a greater tonnage than that assessed through the development management planning process.
- 2.11 Where the peak input value (+15%) was significantly greater than consented or permitted, the peak input value was taken on the basis that the site has the operational capacity to manage this amount of waste. There is no implied approval to the exceedance, just an acknowledgement of what actually occurred.
- 2.12 Where the peak input value (+15%) was significantly less (deviated by more than 50%) than that consented, the peak input value was taken on the basis that the site could only manage that quantity of waste on an ongoing basis i.e. on a precautionary basis.

- 2.13 Where no limit was specified under planning but was specified under a bespoke permit, the permit limit was taken on the basis that the Environment Agency has assessed the site's capability to manage the tonnage specified, except where the actual peak input value exceeded the permit limit.
- 2.14 Where no limit was specified under either planning or permit, the peak input value recorded over 5 years (+15%) was taken on the basis that the site could manage that quantity of waste on an ongoing basis.
- 2.15 This updated WNA includes a review of the latest 4 years of WDI input data (2020-2023) available at the time the update was commissioned. For sites where reported inputs had increased in the more recent 4-year dataset (2020 – 2023), from the peak reported input in 2015-2019 (+15% as appropriate), the capacity value has been updated to reflect this.

Assumed void space to tonne conversion factors

- 2.16 Where waste is destined for landfill, it is necessary to account for the fact that mass does not necessarily equal volume. That is to say that 1 tonne of waste may not occupy 1 m³ of capacity. Estimates of landfill void requirement therefore need to account for the density of waste material under consideration.
- 2.17 For the purposes of this WNA it has been assumed that 1.5 tonnes of inert waste can be accommodated within one cubic metre of void, while a single tonne of non inert residual waste may be accommodated within one cubic metre of void. This latter value is greater than that of 0.85 t/m³ applied historically, as very little 'black bag' waste is now sent direct to landfill, most, if not all, will have undergone some pre-treatment (as required by the Landfill Directive), making it significantly more dense than untreated mixed municipal (and similar wastes).

3 Existing Capacity in Lincolnshire by Method

Organic Waste Treatment (Composting, Anaerobic Digestion)

3.1 Various types of facility exist to recycle organic waste including open windrow composting, in-vessel composting (IVC) and anaerobic digestion (AD). Windrow composting is used primarily for the processing of garden and green waste and other vegetation. Kitchen and commercial food waste can only be processed in enclosed systems such as IVC and AD facilities to meet the requirements of the Animal By-Products Regulations.

3.2 Taking the sites reporting through the WDI in the period 2020-2023 shows the following facilities operating in Lincolnshire:

14 Anaerobic Digestion Plants as compared with 9 plants in total reported in the WNA 2021 (3 receiving waste and 6 consented but not reporting in 2019). Of the 14:

- 8 offered management capacity for agricultural organic waste of c61,000 tpa;
- 4 offered management capacity for food waste arising from either LACW/ C&I source of c199,500 tpa; and
- 1 offered management capacity for either agricultural organic and/or LACW/ C&I waste of c32,500 tpa.
- 1 AD facility offering 25,000 tonnes of agricultural organic waste capacity was identified as being subject to planning permission but no permit.

8 Composting Sites as compared with 7 sites in total reported in the WNA 2021 (5 receiving waste and 2 consented but not reporting in 2019):

- 7 of which offered management capacity for green waste arising from either LACW/ C&I sources of c122,000 tpa; and
- 1 offered management capacity for either agricultural and/or LACW/ C&I green waste of c37,500 tpa.

3.3 These sites are listed in Tables 1 and 2 below.

Table 1: AD for Waste Capacity in Lincolnshire (tonnes)

Site Name	Operator	Cited capacity in Planning	WNA 2021 Peak Input	2020-2023 Peak WDI Input	Max Peak Capacity LACW/ C&I	Max Peak Capacity Agricultural Waste
Hemswell Cliff	Hemswell Biogas Ltd	90,000	99,930	128,033	128,033	-
Nocton Fen Farm	Dyson Farming Ltd	28,000	-	30,376	30,376	-
East Kirkby, Spilsby	AEL Biogas Limited	-	6,955	651	6,955	-
Holdingham, Sleaford	Holdingham Biogas	34,300	Not operational	7,535	34,300	-
Total LACW/ C&I AD Capacity					199,664	-
Holbeach Hurn	Holbeach Biogas Ltd	-	-	32,726	26,181 ⁵	6,545
Total LACW/ C&I + Agricultural AD Capacity					26,181	6,545
Clapgate Farm	Clapgate Farm Energy Ltd	15,000	4,052	1,317 ⁶	-	15,000
Grange Farm	R H J (Farms) Ltd	-	-	12,254	-	12,254
Laburnum House	Wildmore Renewables Ltd	9,500	-	11,879	-	11,879
Scrivelsby Biomass	Scrivelsby Biomass Ltd	11,000	-	890	-	5,500 ⁷
Decoy Farm	Material Change Ltd	30,000	-	5,179	-	5,179
Limestone Farming	Singleton Birch Ltd	-	-	6,057	-	6,057
Manor Farm	Manor Farm Community Energy Ltd	24,000	2,783	737	-	2,783
Pimlico Farm	Brocklesby Energy Company Ltd	-	-	2,498	-	2,498
Station Farm AD Facility	Staples Brothers Ltd	25,000	-	-	-	25,000
Total Agricultural AD Capacity					-	86,150

⁵ c12% inputs agricultural in WDI 2023 – so 80% of peak inputs taken for C&I/ LACW capacity.

⁶ Inputs reported in the WDI to this site shows 224,233 tonnes received at the site in 2020. It has been assumed that this tonnage is anomalous so the peak input (2023) was taken.

⁷ 50% of the capacity is for energy crops so 50% of the planning consent value has been taken.

Table 2: Composting Capacity in Lincolnshire (tonnes)

Site Name	Operator	Cited capacity in Planning/Permit	WNA 2021 Peak Input	2020-2023 Peak WDI Inputs	Max Peak Capacity LACW/ C&I	Max Peak Capacity Agricultural Waste
Sturgate Airfield	Land Network (Gainsborough) Ltd	-	5,956	4,678	5,956	-
South Elkington Estate	Land Network (North East Lincolnshire) Ltd	-	13,959	13,114	13,959	-
Ansons Farm	M E C Recycling Ltd	-	23,485	21,288	23,485	-
Greenaway Green Waste Services	Mr & Mrs J Ashe T/A Greenaway Waste Services	-	7,778	7,918	7,918	-
Honey Pot Lane Composting site	New Earth Solutions (West) Ltd	25,000	24,986	22,945	25,000	-
Binbrook Airfield	Enva Resource Management Ltd	-	-	10,899	10,899	-
Clarkeson Organic Recycling, Wells Road, Riby	Clarkeson Recycling Ltd	25,000 ⁸	-	13,682 ⁹	25,000 ¹⁰	-
LACW/ C&I Composting Capacity					112,217	-
Decoy Farm Composting Site	Material Change Ltd	-	-	37,690	34,675 ¹¹	3,015
Agri + LACW/ C&I Composting Capacity					34,675	3,015

3.4 In addition to the above, there are 3 anaerobic digestion plants for which planning consent has been granted, one of which was subject to an Environmental Permit at the time of writing but had not reported through the WDI during the period 2019-2023. Capacity is only known for 2, one being exclusively for agricultural waste, leaving additional capacity for management of organic waste from the LACW/C&I streams of c120,000 tpa. This capacity would be additional to the above assessed capacity LACW/C&I streams when implemented. These sites are listed in Table 3.

⁸ As per the permit limit for composting but the planning allows for 50,000 tpa.

⁹ Approximately 50% of total inputs in 2023, the remainder of which was either wood processed for recovery c25% or CDE waste that may have been accepted to blend with the compost produced and sold on as a product.

¹⁰ 5,277 tonnes of recycled aggregate inferred to have been produced using WDI data as presented in Appendix 1 of CDE report in 2023 removed from consented capacity and included in Table 10.

¹¹ c8% inputs agricultural in WDI 2023 – so 92% of peak inputs taken to be C&I/ LACW capacity.

Table 3: Lincolnshire Operational AD Capacity (tonnes)

Waste stream	Site Name	Operator	Cited capacity in Planning	Max Capacity	Date Planning Granted
Industrial - non merchant	Bridge Road Food Factory ¹²	Princes Ltd	-	-	Nov 2019
LACW/C&I	Burton Lane, Easton Former Christian Salvesen Ltd site		120,000	120,000	Feb 2025
Agric	Land East of A1, Gonerby Moor	Moor Bio-Energy Ltd	33,000	-	

Conclusion

3.5 The above review indicates that in total there is c588,500 tpa of consented capacity capable of processing organic waste in Lincolnshire, of which c492,500 tpa is capable of managing the organic fraction (biowaste) arising from the LACW and/or C&I waste streams (199,664 +26,181+120,000 AD Capacity + 112,217+34,675 Composting capacity). **This is an increase of c113,000 tpa of total available capacity, and c132,000 tpa of biowaste treatment capacity on the WNA 2021.**

¹² Whole factory is subject to an IED Environmental Permit 2023 covering the operation of the food factory and associated AD plant that deals with onsite waste and effluent.

Material Recycling Facilities (MRF)

- 3.6 When recyclates such as plastics, metals, paper, cardboard, glass are collected together as mixed streams, or 'comingled', the collected material needs to pass through a materials recycling facility (MRF), to separate the individual material streams for onward reprocessing. The level of complexity of a MRF operation depends on the level of segregation of the feedstock i.e., the recyclable materials when collected. The increasing trend towards collection of comingled materials requires MRFs with a greater level of sophistication in separation. This results in the capital cost of such facilities rising and the per tonne processing costs dropping with size - economies of scale - mean that fewer larger facilities tend to be developed.
- 3.7 Review of the WDI in the last 4 years shows 4 operational MRFs as compared with 3 reported in the WNA 2021:
- 3 operational MRFs offering capacity to manage both LACW and C&I waste, of c475,000 tpa; and
 - 1 operational MRF offering capacity to manage both LACW, C&I waste but also producing recycled aggregates.
- as set out in Table 4 below.

Table 4: Lincolnshire LACW & C&I MRF Capacity (tonnes)

Site Name	Operator	Cited capacity in Planning/ <i>Permit</i>	WNA 2021 Peak Input	2020-2023 Peak Input +15%	Max Peak Capacity
The Recycling Centre Market Deeping	New Earth Solutions (West) Ltd	75,000	-	53,512	67,948 ¹³
Baston Fen	P M K Recycling Ltd	50,000	43,235	41,226	50,000
Barkston Copper Hill Industrial Estate	New Earth Solutions (West) Ltd	350,000	246,947	332,168	350,000
Caythorpe Materials Recycling Facility	New Earth Solutions (West) Ltd	200,000	153,039	187,847	174,880 ¹⁴
Total Operational MRF Capacity					642,828

¹³ 7,052 120 tonnes of recycled aggregate inferred to be produced from the WDI mass balance of 2023 data (see Appendix 1 of CDE waste report) removed from permit limit capacity and included in Table 10.

¹⁴ 25,120 tonnes of recycled aggregate inferred to be produced from the WDI mass balance of 2023 data (see Appendix 1 of CDE waste report) removed from permit limit capacity and included in Table 10.

Conclusion

- 3.8 The above review indicates that in total there is c643,000 tpa of operational capacity in Lincolnshire capable of processing recyclates arising from the LACW and C&I waste streams. This represents **an increase of c33,000tpa of MRF capacity on the WNA 2021.**

Material Specific Recycling Capacity

- 3.9 When recyclates such as plastics, metals, paper, cardboard, glass are collected separately the individual material streams can go directly for reprocessing back into a raw material. This is the point at which the material ceases to be waste, but in most cases the receiving site must still be permitted until the material has been converted.
- 3.10 Review of the WDI in the last 4 years shows 13 operational specialist recycling facilities, the same ones reported in the WNA 2021 plus an additional 3 sites managing food waste oil, plastic rubber and wooden pallets:
- 4 operational specialists sites handling plastics sourced from either LACW and C&I waste streams offering a total of c179,000 tpa of capacity (plus 1 so-called plastic site managing predominantly hazardous waste in 2023);
 - 4 tyre recycling facilities offering c35,500 tpa of capacity;
 - 2 operational waste oil recycling facilities offering c9,500 tpa of capacity (hazardous);
 - 1 operational facility offering c1,000 tpa of waste food oil treatment capacity; and
 - 1 operational facility offering c14,500 tpa waste wood treatment capacity.

As set out in Table 5 below.

Table 5: Lincolnshire LACW & C&I Waste Material Specialist Recycling Capacity in (tonnes)

Site Name	Operator	Cited capacity in Planning	WNA 2021 Peak Input	2020-2023 Peak WDI Input +15%	Max Peak Capacity
Specialist Plastic Recyclers					
Hemswell Business Park	Clean Tech Europe Ltd	-	72,617	74,338	74,338
Bourne	Enva Plastics Ltd	40,000	32,572	30,593	20,000 ¹⁵
Autby House MRF	J & A Young (Leicester) Ltd	50,000	27,921	25,539	50,000
Belvoir Way	Luxus Ltd	-	8,604	47,411	47,411
Laurel House	Midwest Polychem Ltd	-	-	7,318	7,318
Total Plastics Recycling Capacity					199,067
Tyre Recyclers					
Bardney Tyre Recycling Facility	Artic Trucking Co Ltd	-	2,682	1,519	2,682
South Fen Road, Pinfold Ind Est	Bulldog Remoulds Ltd	-	2,576	4,081	4,081
Reed Point	Envirotyre UK Ltd	10,400	10,409	14,570	14,570
Gonerby Road	Vacu-Lug Traction Tyres Ltd	-	10,036	14,283	14,283
Total Tyre Recycling Capacity					35,616
Waste Oil Recyclers					
Ark Road	EF Biofuels	2,400	330	78	2,400
Lincolnshire Waste Oil	LWOL Ltd	5,000	5,109	7,149	7,149
Total Waste Oil Capacity					9,549
Food Waste Oil Recyclers					
Elliot House	Ethicoil Limited	-	-	938	938
Total C&I Food Waste Oil Capacity					938
Wood Waste Recyclers					
Barr Farm, Main Road	Spalding Pallets Ltd	-	-	14,607	14,607
Total Wood Waste Capacity					14,607
Total Specialist Capacity					259,777

3.11 A site at New Mills was granted planning permission to recycle 600 tonnes of plastics, but the applicant Condor Recycling is understood to now be insolvent.

¹⁵ c50% of inputs plastics and the remainder is hazardous premixed waste, therefore 50% of capacity counted in the separate hazardous waste report.

Conclusion

3.12 The above review indicates that in total there is c260,000 tpa of consented capacity in Lincolnshire capable of recycling specific wastes from the LACW and C&I waste streams. Deducting the sites managing predominantly hazardous waste, whose capacity has been assessed in the separate report, leaves c250,000 tonnes for the specialist management/recycling of certain wastes arising in the LACW and C&I waste streams. This is **an increase of c44,000tpa of capacity on the WNA 2021**

Metal Recycling Capacity

3.13 Scrap metal principally comes from industrial sources along with demolition and construction activity. End of life vehicles (ELVs) come from all sources including households. The WDI shows that in Lincolnshire 13 metal recycling sites (MRS) received waste in at least one year of the 5-year period (2019-2023). Furthermore, a MRS reported in the WNA 2021 has not reported inputs in the WDI since 2017 but still holds a permit, and one site classed as an MRS in the WDI was found to be accepting primarily hazardous plastics. The MRSs are listed in Table 6 overleaf with their assessed capacities, 3 are additional since the WNA 2021

Table 6: Lincolnshire LACW & C&I Metal Recycling Capacity (tonnes)¹⁶

Site Name	Operator	Cited capacity in Planning	WNA 2021 peak input	2020-2023 Peak Input +15%	Max Capacity
Metal Recycling Sites					
Orange House	2 Recycling Ltd	25,000	10,289	15,145	25,000
Land At New Bungalow	A Riddel & Sons Scrap Metal & Skip Hire Ltd	50,000	0	3,416	50,000 ¹⁷
Plot 7 (aka 6a) Dale Street	City Scrap Ltd	-	3,012	16,511	16,511
EMR Lincoln	European Metal Recycling Ltd	-	15,734	31,066	31,066
East Road Salvage ATF	Messrs Howes & Garrick	-	51,975	-	51,975
Lincolnshire Processed Scrap Metal	J & Y Bullen, J & D Croft	-	187	4,939	4,939
5a, Fen Road, Holbeach	Nationwide Metal Recycling Ltd	-	4,303	5,080	5,080
Broadfield Lane Industrial Estate (T Shooter (Boston))	Enicor Limited (Previously Operated by Peterborough Metal Recycling)	-	4,591	7,052	7,052
Port of Boston, The Docks	Enicor Ltd (Previously Operated by Peterborough Metal Recycling)	-	18,491	6,347	18,491
The Ranch Scrapyard	Mr D A Boswell - T/A S G Boswell & Sons	-	21,349	4,428	21,349
George Street ATF & Fridge Storage Site	Unimetals Recycling (UK) Ltd (Previously Operated by Sims Group UK Ltd)	-	2,549	3,655	3,655
Coningsby	Wastecare Ltd ¹⁸	-	-	1,600	1,600
Waste Away Solutions Ltd Transfer Station	Dvlr Scrap Metal Recycling Ltd	-	-	1,867	1,867
BW Riddle ATF & Scrap Yard	Peterborough Metal Recycling Ltd	-	-	131,320	131,320
Total Metal Recycling Capacity					323,330

¹⁶ The EA exemption register was checked to see if there are any T9 exemptions registered in Lincolnshire in 2023. These were then cross checked with the Scrap metal dealers register. No sites were found on both registers so no additional sites were identified.

¹⁷ WNA 2021 took the planning limit.

¹⁸ Primarily received batteries (not lead acid batteries which would be classed as hazardous waste).

Conclusion

- 3.14 The above review indicates that in total there is c323,500 tpa of consented capacity in Lincolnshire capable of recycling metal wastes from the LACW, C&I and C, D & E waste streams. This is **an increase of c107,500 tpa of metal recycling capacity on the WNA 2021**.
- 3.15 In addition to the MRS sites listed, there were 10 operational dedicated ELV authorised treatment facilities (ATF) in Lincolnshire. 1 ELV ATF held a permit but made no return in the WDI 2023. As ELVs are classed as hazardous waste until they have been depolluted, the capacities of sites primarily/ exclusively managing ELVs have not been counted here, on the basis that their capacity is accounted for in the separate hazardous waste report.

Transfer Capacity

- 3.16 Waste transfer capacity refers to the reception and bulking of collected wastes, both residual and separated recyclates, prior to onward management elsewhere, generally final fate but also further processing. Transfer capacity can be accommodated at dedicated sites or at sites where other waste management activities take place. For example, sites accepting C&I waste for onwards transfer may also accept skip waste for recycling.
- 3.17 The WNA 2021 counted 7 sites as providing transfer capacity, however this update has undertaken closer examination of the sites to determine if any separation for recycling occurs at the sites classed as transfer in the WDI as follows. Whilst the WDI (2019 – 2023) included 62 sites under the transfer site category, closer examination of the inputs and fates of the outputs of these sites (WDI waste removed dataset) revealed some separation and processing for recycling takes place. Of these sites:

- 7 sites were found to be undertaking some recycling and so have been included in Table 9;
- 12 are Household Waste Recycling Centres (HWRCs) counted in Table 8;
- 11 were assessed to be converting C, D & E waste to recycled aggregate and have thus been included in Table 10 (that relates solely to inert waste recycling capacity);
- 8 were assessed to be skip waste recycling capacity accounted in Table 11;
- 4 were primarily managing hazardous wastes and are therefore counted in the separate hazardous waste report;
- 4 were assessed to be accepting specialist wastes and are accounted for in Table 5;
- 1 was assessed to be MRF accounted for in Table 4;
- 3 were assessed to be lagoons so accounted for in the Other Waste report;
- 1 was assessed to be an MRS accounted for in Table 6;
- 1 site's permission ended in November 2022 so has been excluded.

3.18 That left 10 sites and these have been taken to be operating as transfer site and as such are listed in Table 7 along with a site classed as hazardous waste transfer/ treatment site but from an interrogation of the inputs and the outputs appears to be accepting non-hazardous waste for transfer.

Table 7: Lincolnshire LACW & C&I Waste Transfer Capacity (tonnes)

Site Name	Operator	Permitted Capacity	WNA 2021 peak input	2020-2023 Peak WDI Input +15%	Max Capacity	Notes
Lincoln Central Depot	Biffa Environmental Municipal Services Ltd	18,623	1,942	38,812	38,812	Reported as MRF in the WDI 2023 but analysis of outputs indicated operates as WTS
Lincoln Waste Management	M. Davies	-	-	5,921	5,921	
M & M Services	M & M Patrick t/a M & M Services	-	11,102	-	11,102	Previously counted as non-inert CDE recycling in the WNA 2021 but review of inputs in 2019 shows the fate as transfer for disposal.
Sleaford WTS	Lincolnshire County Council (LCC)	50,300	25,522	27,521	50,300	These sites serve as intermediate bulking locations for kerbside collected DMR and residual LACW prior to onward transport to EFW/MRFs so facilitate recovery
Boston WTS		72,753	60,412	69,163	72,753	
Gainsborough WTS		45,300	29,711	32,018	45,300	
Grantham WTS		64,038	50,407	54,356	64,038	
Louth WTS		-	53,222	52,954	53,222	
Port Of Boston	New Earth Solutions (West) Ltd	100,000	-	89,086	100,000	
North Warren Road Depot	West Lindsey District Council	-	-	853	853	
Woodbridge Road Ind Est, Sleaford	Waste Away Solutions Ltd		6,781	1,867	6,781	Classed as hazardous transfer/ treatment site in the WDI, no longer holds a permit.
Total					449,082	

3.19 Table 7 lists 11 dedicated transfer sites in Lincolnshire offering c449,000 tonnes of capacity.

3.20 There are 12 HWRCs provided by Lincolnshire County Council. Since the WNA 2021 it appears a HWRC at Leadenham closed and a new site at Tattershall has opened. HWRCs also provide capacity that may be counted as transfer capacity as waste delivered by the public to these sites is segregated, bulked and then transported for onward management. Review of the WDI 2023 Waste Removed dataset for HWRC outputs reveals 70% went for recycling, 1% went direct to landfill and 29% was sent for incineration. Therefore, 70% of the inputs have been counted as contributing towards the overall recycling capacity in Lincolnshire, leaving 30% toward transfer. The assessed capacities are shown in Table 8.

Table 8: Lincolnshire HWRC Capacity (tonnes)

Site Name	WNA 2021 peak input +15%	2020-2023 Peak WDI Input +15%	Preferred Peak Capacity
Boston	9,624	8,178	9,624
Bourne	5,671	5,423	5,671
Gainsborough	4,901	4,126	4,901
Grantham	7,444	6,932	7,444
Great Northern Terrace	14,560	11,325	14,560
Kirkby On Bain ¹⁹	4,845	2,542	4,845
Leadenham	1,494	0	0
Louth ²⁰	7,577	7,055	7,577
Market Rasen	2,974	3,579	3,579
Skegness	5,749	4,967	5,749
Sleaford	6,103	6,111	6,111
Spalding	11,924	7,860	11,924
Tattershall	-	3,578	3,578
Total			85,563

3.21 Applying the assessed recycling (70%) and disposal (30%) capacity to the total capacity in Table 8 gives **c60,000 tpa recycling and c25,500 tpa transfer capacity.**

Conclusion

3.22 The above review indicates that when the HWRC capacity is added to the WTS capacity in Table 7 there is c475,000 tpa of consented capacity in Lincolnshire capable of receiving LACW and C&I waste for transfer. This is **an increase of c86,000tpa of transfer capacity on the WNA 2021.**

¹⁹ Peak input +15% identical in the update as the peak value is in 2019 which both WNAs include.

²⁰ As in footnote 16.

Remaining Recycling Capacity

3.23 The next section assesses a number of sites classed as treatment sites in the WDI. These have been included in Table 9 below along with the sites classed as transfer in the WDI but which on closer examination of whose output fates, reveal some separation and processing for recovery takes place.

Table 9: Lincolnshire Capacity that Supports Recycling (tonnes)

Site Name	Operator	Planning/ <i>Permitted</i> <i>(italicised)</i> capacity	WNA 2021 Peak Input +15%	2020- 2023 Peak Input +15%	Max Capacity	Notes
Tollemarche Road, Grantham	Veolia ES (UK) Ltd	40,000	-	21,859	40,000	
Four Acre Farm	MG Skip Hire & Recycling Ltd	25,000	-	1,961	1,961	
Clarkeson Organic Recycling	Clarkeson Recycling Ltd	30,000	-	28,690	7,500	Wood processed for recovery c25% inputs WDI 2023
Unit 9 Spratt Close	Datashred Lincs Ltd	5,200	-	-	5,200	Operates under S1, S2 & T4 Exemptions
Falcon House, Unit 14A	Recycling4you Ltd	3,000	-	-	3,000	
Bourne WTS	Bullimores Sand And Gravel Ltd	-	11,650	14,157	14,157	Counted as transfer capacity in WNA 2021 but classed as treatment in WDI 2023
Nursery Road Transfer Station	CSF Demolition Ltd ²¹	-	-	9,704	9,704	
Leadenham Waste Transfer Station	Lincwaste Ltd	-	-	1,076	1,076	
Port of Sutton Bridge	C. R O Ports Sutton Bridge Ltd	-	-	22,461	22,461	
Bourne C A & WTS	Mr B M Mossman	-	-	37,870	37,870	
Barrowby Waste Storage & Recycling Site	Lincolnshire County Council (LCC)	-	-	34,116	34,116	

²¹ Mixture of HC&I waste and CDE wastes. 25% inputs are wastes that could be converted to RA not listed in LAA

Old Great North Road, Great Gonerby	Bower Recycling Ltd	-	-	761	761	
Mowbeck Way Alexandra Road	South Kesteven District Council	-	-	586	586	
Lincoln Road Transfer Station	M E C Recycling Ltd	-	-	4,266	4,266	
Park Farm	G.H. By Products (Derby) Ltd	-	-	15,462	15,462	Operation involves silos & lagoon
Casing Shed, Cherry Hold Road	Bulldog Remoulds Ltd	-	-	3,810	3,810	
Glebe Farm	East Lincs Recycling Solutions Ltd	5,000	-	-	5,000	
Unit 36 Hassall Road Industrial Estate	Carousel Recycling Ltd	5,000	-	-	5,000	Holds a T4 exemption until 2028
Total					211,930	

3.24 Table 9 shows that there was c212,000 tpa of consented capacity capable of recycling wastes from the LACW and C&I waste streams mostly, in Lincolnshire. Furthermore, a site at 12-16 Redstone Industrial Estate operated by T&B Containers Ltd has been granted permission to recycle cardboard and plastic packaging with capacity of 11,280 tonnes. As well as this, a site called Environcom England operated by Enva E-waste England managing WEEE holds a permit but has not reported any inputs in WDI but has consented capacity of 23,000tpa. When both sites are combined with the c212,000 tonnes value from Table 9, this gives additional recycling capacity of c246,000 tonnes. **This capacity is additional to that counted in the WNA 2021.**

CDEW Recycling Capacity

Inert and Non inert recycling capacity

3.25 The Lincolnshire WNA 2025/6 C, D & E waste report identifies a total of 26 facilities contributing towards recycled aggregate/ soil production (the relevant table is reproduced in Appendix 1 of this report). This is an increase from the 22 facilities identified in the WNA 2021. However, the increase may not all be due to sites commencing operation during the intervening years but rather a reflection of the composition of the waste inputs received in 2023²² as compared with the inputs in 2019 (upon which the WNA 2021 relied). The sites identified as producing recycled aggregates in 2023 are listed in Table 11 along with their capacities plus the following additional sites:

- three sites identified as holding permits but not having reported inputs in the WDI;
- two additional sites with planning permission granted and permit reported inputs in 2023 for the first time;
- five sites which did not appear in the C, D & E waste report but are sites believed to be capable of producing recycled aggregate;
- one site has not reported inputs in the WDI for the last 4 years but still holds a permit;
- one site was not identified in the C, D & E waste report as producing recycled aggregate as inputs were bituminous materials only;
- one site holds a physical treatment facility permit but still reports under recovery to land in the WDI, planning permission confirms the site has capacity to recycle aggregates.

²² Only sites that received feedstock suitable for conversion to recycled aggregate were counted.

Table 10: Permitted Sites in Lincolnshire receiving C, D & E waste suitable for producing Recycled Aggregate and Soils (tonnes)

Site Name	Operator	Cited capacity in Planning/ <i>Permit</i> <i>(italicised)</i>	WNA 2021 peak input ²³	2020-2023 Peak Input +15%	Preferred Max Capacity Value (tpa)	Notes
The Grange, Caistor Road	Marriot Building Groundworks	2,000	-	-	2,000	Holds a permit but no inputs in the WDI
Plots 50-54, Fairfield Ind Est	Grantham Industries Ltd	74,999	-	34,602	34,602	
Gainsborough Skip Hire, Laughton Lane, Morton	Ian Eccleshare T/A Gainsborough Skip Hire	-	-	4,621	4,621	
Holly Tree Farm	Sid Dennis And Sons Ltd	-	-	17,891	17,891	
Lindum Waste Recycling, Skellingthorpe Road, Saxilby	Lindum Group Ltd	-	-	55,969	55,969	
Materials Recycling Facility, Station Road, Caythorpe	New Earth Solutions (West) Ltd	-	-	187,847	25,120 ²⁴	
Mushroom Farm Materials Recycling Facility	Grantham Industries Ltd	-	-	33,770	33,770	
Part Of O S Field No 0023	Andrew Glen Riddell	-	-	14,370	14,370	
Tessmill - Woodland Drive	Tessmill Ltd	-	2,569	2,358	2,569	Counted as a Skip Waste Recycling Site in WNA 2021
The Recycling Centre	Paul James Riddell	-	63,234	18,226	63,234	
Westville Waste Recycling Centre	Forceshift (Contracting) Ltd	-	-	23,793	23,793	
Whisby Road	Daniel Charles Aggregates Ltd	-	-	12,177	12,177	
Tattershall Thorpe Plots 56 & 73, Woodhall Spa Quarry,	Holcim UK Ltd (Previously Operated by Aggregate Industries Ltd)	20,000	-	5,991	20,000	

²³ Few entries as the WNA 2021 did not include a Table listing the assessed capacities of recycled aggregate sites instead relying on the LAA at the time.

²⁴ Total taken from Appendix 1 of CDE report, remaining taken as MRF capacity in Table 5.

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Brauncewell, Sleaford	Brauncewell Quarries Ltd	-	-	73,021	73,021	
Building 3, Roe House	New Earth Solutions (West) Ltd	50,000	-	23,053	50,000	
Clarkeson Organic Recycling, Wells Road, Riby	Clarkeson Recycling Ltd	50,000	-	32,993	5,277 ²⁵	
Colsterworth Triangle Quarry	Construction & Environmental Services Ltd	-	-	4,681	4,681	
Tattershall Road, Kirkby on Bain	Ford & Son Ltd	-	-	4,254	4,254	
Highfield Quarry	Welton Aggregates Ltd	75,000	-	50,222	75,000	
Kirk's Quarry	Daniel Charles Aggregates Ltd	-	-	63,716	63,716	
The New House, Broad Fen Lane	Laffey's Ltd	-	-	19,701	19,701	
Land off Station Road	Hargreaves (UK) Services Ltd	-	-	58,380	58,380	
Longwood Quarry	Longwood Quarries Ltd	35,000	-	1,792	1,792	
Slippery Gowt Transfer Yard	Total Aggregates Ltd	52,532	-	30,476	52,532	
South Witham Quarry	G. Webb Haulage Ltd	-	-	79,308	79,308	
The Old Bottle Yard	Ultimate Demolition and Construction Service Ltd	5,000	-	6,995	6,995	
The Recycling Centre, Unit 2, Northfields Industrial Est	New Earth Solutions (West) Ltd	75,000	-	53,512	7,052 ²⁶	
Baston No1 Quarry	Hanson Aggregates	40,000	-	-	40,000	Holds a permit but no inputs in the WDI
Land off Thorseby Road, Fulstow, Louth	Eco Green Manure Ltd	-	-	165	165	Permit granted 2023
Spalding Road, Bourne	JJ Mac Ltd	70,000		1,058	1,058	

²⁵ Recycled Aggregate value taken from Appendix 1 of CDE waste report. The site is classed as a composting site and the inert material accepted may either be used to blend with compost product (soils) for sale as a product or may be used to produce recycled aggregate.

²⁶ Total taken from Appendix 1 of CDE report, remaining taken as MRF capacity in Table 5.

Swinderby Quarry	Cemex UK Materials Ltd	75,000	-	4,240	4,240	Planning permission expires March 2027.
Hobleys Yard	Claire Townsend	75,000	-	276	276	
Great Ponton Quarry	Harmston Waste Management Ltd	50,000	-	46,408	50,000	
Caenby Hall WTS	Fox (Owmby) Ltd	25,000		26,620	26,620	
Mansgate Hill, Nettleton	Mansgate Quarry Products Ltd	50,000	-	9,611	9,611	
Dunston Quarry	Len Kirk Plant Hire Ltd	75,000	-	104,894	-	Planning permission ceased in 2025
Copper Hill Quarry	Ancaster Copper Hill Stone Ltd	15,000	-	-	15,000	No inputs for the last 4 years but still holds a permit.
Baston Asphalt Plant	Midland Quarry Products Ltd	125,000 75,000	-	37,742	37,742	Bituminous waste inputs
South Thoresby Quarry	Grantham Industries Ltd	30,000	-	-	30,000	Reported in the WDI as recovery to land but subject to a physical treatment permit. Holds planning for 30,000tpa recycled aggregate capacity
West Drove, Gedney Hill, Spalding	Monksview Demolition Ltd	20,000	-	-	20,000	Holds a permit but no inputs in the WDI
Total					1,114,486	

3.26 Table 10 shows recycling capacity in Lincolnshire for inert C, D & E waste stands at c1.1Mtpa.

3.27 There is also permission granted at The Old Pig Farm for the development of a facility to produce recycled asphalt. However, it is not clear what capacity this site would provide as the permission is still to be implemented. One site at Park Farm Quarry Tattershall holds planning permission for inert recycling but has not yet been implemented and does not hold a permit²⁷.

²⁷ LCC database states capacity of 30,000 tonnes.

Non inert CDEW Recycling Capacity

- 3.28 Of the 26 sites identified in the C, D & E waste report²⁸, 13 sites reported receiving mixed skip waste (EWC 17 09 04) and capacity of these sites combined offer a total maximum capacity of c410,500 tonnes per annum. These 13 sites were assumed to convert 80% of their input to inert product by weight, leaving 20% as non-inert materials either destined for recycling: such as metals and wood, or disposal as trommel fines and residual waste. If it is assumed that half of the 20% of non-inert inputs is recycled, this gives an initial non inert CDEW recycling capacity of c41,000 tpa for Lincolnshire. Deducting the c41,000 tpa from the c1,114,500 tpa of capacity shown in Table 10, leaves c1,073,500 tpa for recycled aggregate production capacity. **This is an increase of c331,000tpa of recycled aggregate capacity on the WNA 2021**
- 3.29 In addition, there are 8 consented skip waste transfer sites that do not apparently undertake recycled aggregate production offering capacity of c50,000 tpa (as compared with 8 sites in the WNA 2021. 1 of which no longer appears to hold a permit, and 2 have been recategorised). Analysis of fates of inputs indicate that a recycling rate of 93% is achievable. Applying this value to the total capacity of c49,500 tpa gives a recycling capacity of c46,500 tpa. Adding the c41,000 tpa from the 13 sites identified as producing recycled aggregate that received mixed skip waste in 2023, gives a total of c87,500 tpa. **This is a reduction of c3,500tpa of capacity on the WNA 2021.**

²⁸ Reference to the CDE waste report as the method applied in the WNA 2021 was replicated.

Table 11: Lincolnshire Skip Waste Recycling Capacity in Lincolnshire (tonnes)

Site Name/Location	Operator	Cited capacity in Planning	WNA 2021 Peak 5-year input WDI	2020-2023 Peak WDI Input +15%	Max Capacity
Unit 17 Westminster Ind Est,	County Waste Services (Lincs) Ltd (Kwik Skips)	-	3,429	3,640	3,640
Westminster Road Ind Est, North Hykeham	C Swain t/a Lincs Rubbish Clearance	-	2,768	1,919	2,768
Tunnel Bank	Messrs M & L Gamble	-	3,194	-	3,194
Camp Farm	Mr S E & G A Thompson	-	2,134	1,756	2,134
The Warehouse, Riverside Ind Est	Silver Skips Lincolnshire Ltd	35,400	4,157	7,252	7,252
Whisby Road, North Hykeham	Len Kirk Plant Hire Ltd	-	10,339	-	10,339
Transfer Station, Slippery Gowt Lane, Wyberton	Total Aggregates Ltd	72,753	-	18,311	18,311
Westminster Road, North Hykeham	P Davison 'T/a The Orange Skip Company			2,433	2,433
Total Skip Waste Recycling Capacity					50,071

Liquid Waste Treatment Capacity

- 3.30 Table 2 of the Other Waste Scoping Report presents a summary of capacity of the different types of facilities managing liquid waste within Lincolnshire. In total in 2023, there was capacity for managing liquid waste of around c251,000tpa which accounted for c60% of Lincolnshire arisings in 2023 requiring management. However, it is understood that the single largest producer, Christian Salveson has now ceased trading, reducing arisings to be managed by c110,000 tpa, to c310,000 tpa. As the management of liquid waste is a specialist activity confirmation of the continued availability of capacity at the key receiving sites outside Lincolnshire, hosted by Nottinghamshire County Council and North Lincolnshire Council should suffice.

Hazardous Waste Management Capacity

- 3.31 Table 8 of the hazardous waste capacity assessment presents a summary of capacity of the different types of facilities managing hazardous waste within Lincolnshire. In total, at the end of 2023, there was capacity for managing hazardous waste of around c92,500 tonnes per annum. The assessment indicates that capacity exceeds the predicted arisings of between 55,000tpa in 2023 falling to c51,000 tpa in 2045 suggesting that, overall, Lincolnshire will continue to be net self-sufficient in hazardous waste management capacity for the forecast period.

Intermediate Capacity Summary

3.32 Table 12 presents a summary of intermediate capacity for managing waste in Lincolnshire. This was over c3.6M tonnes as compared with 2.2M tonnes in 2019. It should be noted that any capacity assessment only presents a snapshot at a particular point in time as the permitted estate is in a state of flux with sites closing and new sites coming on stream over time.

Table 12: Lincolnshire Intermediate Waste Management Capacity, 2023 (tonnes per annum)

Capacity Type	Facility Type	Operational capacity	Difference on WNA 2021
LACW/ C&I waste Organic Treatment	AD	345,845	+138,845
	Composting	146,892	+120,892
LACW/C&I waste Recycling	MRF	642,828	+32,828
	Material Specific Recycling	250,228	+44,228
	Metal Recycling	323,330	+107,525
	LACW Recycling (HWRC)	59,894	0 ²⁹
	LACW/ C&I Waste Recycling	246,210	- ³⁰
	Combined Subtotal	2,015,227	+750,422
CDEW Recycling	Inert Recycling inc Recycled Aggregate	1,073,446	+330,946
	Non-inert Recycling	87,301	-3,394
	Combined Subtotal	1,161,052	+327,552
LACW/C&I Waste Transfer	LACW/ C&I Waste Transfer	449,082	+143,196
	LACW Transfer (HWRC)	25,669	-57,198
	Subtotal	474,751	+85,998

Final Fate Capacity

3.33 The types of facilities explored thus far provide 'intermediate' capacity where waste is processed/ sorted prior to management at its 'final fate' destination. This section accounts for the capacity provided by sites where waste meets its final fate (other than where waste is converted into useful materials e.g. compost or recycle). This includes landfill and 'Other Recovery' facilities. It should be noted sites where waste materials are used in the manufacture of products, such as glass or paper are not counted in this WNA.

²⁹ All HWRC capacity was counted as transfer capacity in the WNA 2021.

³⁰ The WNA 2021 did not include a Table of sites that support recycling as shown in Table 9.

Energy from Waste Capacity

3.34 Table 13 shows the available energy from waste capacity in Lincolnshire classed as 'Other Recovery'.

Table 13: Permitted/Operational Energy from Waste Capacity in Lincolnshire 2023

Facility Name	Operator	Consented Capacity (tpa)	WNA 2021	2020-2023 Peak WDI Input	Max Capacity	Notes
Boston Energy Production Facility (Gasification)	Biomass UK No.3 Ltd	137,000 (planning) 86,400 permitted	8,772	22,278	137,000	Consented for waste wood and RDF
Sleaford Renewable Energy Plant	GREP1 Ltd	>6,000	5,952	52	5,952	Input predom straw but some waste wood
Lincolnshire Energy from Waste Facility	FCC Environment (Lincolnshire) Ltd	c178,000	WDI 2019 & WDF shows 166,000t LACW and 11,500t C&I	184,831	190,000 ³¹	Residual waste. Actual tonnage limited by heat load.
Total					332,952	

3.35 Table 13 shows there is Energy from Waste capacity in Lincolnshire for up to c333,000 tpa of suitable waste.

Permanent Deposit to Land Capacity

3.36 Permanent deposit to land capacity consists of the following site types as permitted by the EA:

- Inert waste landfill capacity;
- Recovery to land capacity; and
- Non-inert waste landfill capacity (including inert waste restoration requirements)

³¹ Capacity increased under permission 26/0054/CCC

Permanent Deposit to Land Capacity -Inert Waste

3.37 Table 14 presents the consented permanent deposit to land capacity for inert waste:

Table 14: Consented Inert Waste Permanent Deposit to Land Capacity in Lincolnshire

Site Type	Site	Remaining Void WNA 2021 (m3)	Updated Remaining Void (m3) EA end of 2024	Remaining capacity (tonnes)	Comment
Inert Landfill (From EA remaining void dataset end 2024 plus EA permit application)	Brauncewell Quarry	1,230,832	- ³²	1,177,813	Extraction permission expires 21 February 2042. Remaining void from WNA 2021 minus inputs to 2023
	Warren Landfill	270,000	unknown	310,500	Site inactive, but void space technically still remains.
	Colsterworth Triangle	560,000	-	900,000	Value taken from Permit application.
Recovery to Land (taken from EA Approved Waste Recovery Plans deducting reported inputs)	Manby Airfield (issued 2013)	unknown	NA	0	Believed to have been completed
	South Thoresby	70,000	NA	145,000	Revision to restoration profile (PL/0010/25) states 81,000m3 (=145,000t) to be imported to the site. Subject to permit for physical treatment (Table 10).
	South Witham Quarry (East)	160,000	NA	75,083	
	Creeton Quarry, (issued 2018)	275,000	NA	?	
	Boston Landfill (issued 1993)	unknown	NA	?	Believed to have been completed as no WDI inputs.
Total				2,608,397	

3.38 Table 14 shows that there is just over c2.6 M tonnes of consented capacity for the permanent deposit of inert waste in Lincolnshire. This is a reduction of 2.425Mt of capacity on the WNA 2021, with the closure of Harmston Quarry and Whisby Quarry during the intervening period.

³² No entry in Environment Agency Remaining Landfill Void dataset 2024. Working limestone extraction quarry consented through to 2042 at c200,000 tpa extraction rate. (Lincs LAA) so void and associated fill requirement will follow extraction.

Non-Inert Landfill

3.39 Data sourced from the Environment Agency was primarily used and verified against information provided by Lincolnshire County Council. The EA Remaining Landfill Void dataset for 2024 identifies 6 permitted non-hazardous waste landfill with remaining capacity to accept non-inert waste in Lincolnshire. In 2024, 3 landfills, reported as providing capacity in the WNA 2021, Middlemarsh, Kirby on Bain and Gainsborough are reported as having no remaining capacity in the EA dataset³³. However non-inert landfill sites will accept an amount of inert waste for restoration and operational purposes. However, when such sites reach capacity for non-inert waste any remaining requirement for inert waste for restoration may not be recorded in the Agency dataset. So for example while both Kirkby on Bain³⁴ and Gainsborough Landfills³⁵ have ceased accepting non-inert waste Environment Agency Compliance Assessment Reports record that both sites continue to accept inert waste for restoration purposes, however the remaining void is unknown. In addition, capacity at Boston landfill has been listed in the dataset.

3.40 The sites identified as offering remaining void in the EA dataset are listed in Table 15.

³³ Kenwick landfill permission expired as set out in previous WNA 2021.

³⁴ Kirby on Bain CAR Report PP3430BK/0587783 dated 26/11/2025 states "Soils are still being received at site for reprofiling of the capped layer. However, input of soils is slow and large tonnage of material are still required."

³⁵ Gainsborough LF CAR Report YP3030BT/0589785 dated 11/12/2025 states: "FCC intends to undertake further capping works in 2026, which will include topping up the soil depths in the 2025 capping area."

Table 15: Permitted Non-inert Landfills in Lincolnshire with remaining void end 2024³⁶

Facility Name	Remaining void m3 (end 2019)	Remaining void m3 (end 2024)	Calculated capacity for inert waste (restoration)	Notes
Boston	Not listed in WNA 2021	268,516	268,516	In restoration – all inputs inert in the last 5 years. All remaining void is taken to be for inert waste for restoration.
North Hykeham	334,011	143,278	143,278	
Colsterworth	3,531,782	3,533,008 ³⁷	529,951	
Leadenham	>112,267	1,310,874	196,631	
Whisby	2,595,652	2,595,652	389,348	No inputs reported in the WDI since 2018.
Total	>6,573,712	>7,851,328	1,527,724	

3.41 Table 15 shows the total remaining void at the end of 2024 amounts to nearly 8Mm³. Allowing for a 15% surcharge plus all remaining void at the Boston and N Hykenham landfills for restoration purposes (c1.53Mm³) this leaves at least c6.32Mm³ of disposal capacity for non-inert waste.

³⁶ Nettleton Bottom landfill permission has lapsed and the site is dormant. In the absence of planning permission, capacity has been ignored.

³⁷ Increase in void from 2019 value.

4 Assessing the Capacity Gap in Lincolnshire

Net Self Sufficiency

- 4.1 Lincolnshire County Council is planning for waste on the basis that overall, there will be sufficient capacity to manage the tonnage of waste equivalent to that predicted to arise within the Plan area over the Plan period. This does not necessarily mean that every tonne of waste produced in a Plan area ought to be managed within that Plan area, rather that overall, there should be a balance of provision.

Waste Management Requirements

- 4.2 The future management requirements for waste produced in Lincolnshire are set out in the background waste stream specific assessments and have been brought together in Table 16.

Table 16: Lincolnshire Non Inert Waste Management Requirements at Forecast Milestone years (tonnes)³⁸

Highlighted cells indicate peak requirement

Management Method	Waste Stream	2025	2030	2035	2040	2045	Peak and Cumulative Capacity Requirement (tonnes)
Recycling & Composting	LACW	206,385	229,685	250,414	274,289	298,784	298,784
	C&I	528,300	560,500	619,400	666,500	719,400	719,400
	CDEW	46,129	46,129	46,129	46,129	46,129	46,129
	Total	780,814	836,314	915,943	986,918	1,064,313	1,064,313
Residual waste Energy Recovery	LACW	160,146	138,336	125,207	107,756	89,635	160,146
	C&I	198,100	192,400	186,700	172,000	130,800	198,100
	Total	358,246	330,736	311,907	279,756	220,435	358,246
Residual waste Non-Inert Landfill	LACW ³⁹	9,221	9,441	9,631	9,796	9,959	<u>201,883</u>
	C&I	99,100	83,700	42,400	21,500	21,800	<u>1,100,700</u>
	CDEW	9,226	9,226	9,226	9,226	9,226	<u>193,746</u>
	Total	111,547	102,367	61,257	40,522	40,985	<u>1,496,329</u>

³⁸ All the values are generated through the processes described in the waste stream specific reports that form part of the supporting evidence base to this WNA.

³⁹ Based on a 2.5% landfilling rate going forward as reported in the LACW report.

- 4.3 The projected management capacity requirements have been compared with the assessed capacity within the Plan area, in order to ascertain if any capacity gap is likely to emerge during the forecast period. While the assessment of need has been conducted on a waste stream-specific basis within each report, the matching with capacity exercise cannot be conducted in such a precise way, since the same facility may manage waste from a number of different waste streams. For example, sites receiving CDEW may also receive C&I waste and LACW for transfer. This means it may be necessary to interpret between the identified needs and the existing available capacity to identify any projected capacity shortfall.
- 4.4 How the waste management capacity requirements in Table 16 might be met is discussed below.

Recycling & Organic Waste Treatment Capacity Requirement

- 4.5 Recycling and organic waste treatment (aka composting and anaerobic digestion) are taken to sit at the same tier of the waste hierarchy and therefore a combined set of targets are proposed. This approach is reflected in the capacity requirements presented in Table 16 above. It should however be noted that more waste specific needs such as additional organic waste treatment capacity may emerge as separate food waste collections are rolled out in response to the Government's Simpler Recycling initiative.
- 4.6 Recycling of waste involves the provision of a waste material of a suitable quality so it can be used to substitute for virgin materials as a feedstock in a manufacturing process. For example, the use of newspapers to replace virgin timber pulp for newsprint production or the use of glass cullet in place of silica sand to produce glass bottles. Recycling generally occurs at the manufacturing site, which is referred to as the reprocessor. The key contribution that waste management facilities make is providing for materials to be delivered to reprocessors in a form and to a quality that enables their use as a substitute feedstock.
- 4.7 The waste management capacity requirements to support the achievement of recycling targets for LACW and C&I waste streams varies depending on the collection method used. In particular, whether materials are separated at the point of collection and so are collected using segregated collection vehicles or whether recycle is co-mingled at the point of collection.

- 4.8 Where materials are collected at source separated, it is possible for them to be delivered to and bulked up within a depot/waste transfer station, from where the bulk recyclates are then transported directly to reprocessing sites. In contrast to this, where materials are collected 'co-mingled' they will need to be processed through a MRF for separation and it would be from there that the recyclates are sent on to reprocessors. Co-mingled materials may also be bulked at intermediate sites (transfer stations) before being transported on to a MRF for processing.
- 4.9 Therefore, it should not be assumed that a tonne of waste destined to be recycled necessarily requires an equivalent tonne of MRF capacity to be provided. Rather provision of bulking capacity might suffice for source separated recyclate from the LACW and C&I waste streams in particular. In that context waste transfer capacity capable of managing c475,000 tpa of has been identified.
- 4.10 In contrast to recycling, composting or treatment of organic waste requires specific waste management facilities (other than home composting). The type of facility required is largely determined by the nature of the organic waste requiring treatment. In particular if the organic waste contains any waste that might be subject to the Animal By products Order⁴⁰, it needs to be processed through an in-vessel system, rather than an open windrow composting facility.
- 4.11 Table 17 shows the capacity requirements for non-inert waste recycling and composting set out in Table 16, applying the milestones utilised to calculate management profiles across the Plan period presented in the individual waste stream reports. When compared against the total assessed management capacity (Table 12), the estimated peak requirement of c1,064,500 tonnes is significantly less than the Plan Area recycling/composting capacity. This shows that no shortfall of capacity is predicted during the forecast period.

⁴⁰ The Animal By-Products Order 1999 SI1999 No. 646 <https://www.legislation.gov.uk/uksi/1999/646/contents/made>

Table 17: Lincolnshire Waste Recycling & Composting Management Capacity Requirement at Milestone years (tonnes)

Waste Stream	2025	2030	2035	2040	2045	Peak Capacity Requirement rounded
LACW	206,385	229,685	250,414	274,289	298,784	298,784
C&I ⁴¹	528,300	560,500	619,400	666,500	719,400	719,400
CDEW	46,129	46,129	46,129	46,129	46,129	46,129
Total	780,814	836,314	915,943	986,918	1,064,313	1,064,313
<i>Plan Area Recycling Capacity (Table 12)</i>	2,102,833	2,102,833	2,102,833	2,102,833	2,102,833	
Surplus/ Shortfall	+1,322,019	+1,266,519	+1,186,890	+1,115,915	+1,038,520	

⁴¹ The forecast C&I waste tonnages are greater than that used in the WNA 2021 as the starting baseline for 2023 was 19% greater than that generated in 2019 - although a mean was taken across 3 years to moderate the increase, it still results in a significantly higher baseline from which future arisings were forecast

Non inert Residual Waste Management

4.12 Predicted management capacity requirements for non-inert residual waste at forecast milestone years are shown in Table 18. The peak quantity of residual waste for which management capacity is predicted to be needed is c476,000 in 2025. There is a peak energy recovery capacity requirement of c358,000 tonnes in 2025 declining to c220,500 tonnes in 2045 and a total cumulative landfill requirement of c1.5 million tonnes in 2045.

Table 18: Lincolnshire Residual Waste Management Capacity Requirement at Forecast Milestone years (tonnes)

Management Method	Waste Stream	2025	2030	2035	2040	2045	Peak or Cumulative Capacity Requirement (tonnes) rounded
Energy Recovery	LACW	160,146	138,336	125,207	107,756	89,635	160,146
	C&I	198,100	192,400	186,700	172,000	130,800	198,100
	Total	358,246	330,736	311,907	279,756	220,435	358,246
Non Inert Landfill	LACW	9,221	9,441	9,631	9,796	9,959	<u>201,883</u>
	C&I	99,100	83,700	42,400	21,500	21,800	<u>1,100,700</u>
	CDEW	9,226	9,226	9,226	9,226	9,226	<u>193,746</u>
	Total	111,547	102,367	61,257	40,522	40,985	<u>1,496,329</u>
Grand Total		475,793	433,103	373,164	320,278	261,420	

Table 19: Lincolnshire Residual Waste Management Other Recovery Capacity Requirement at Forecast Milestone years (tonnes)

	2025	2030	2035	2040	2045
Total from Table 18	358,246	330,736	311,907	279,756	220,435
Capacity (Table 13)	332,852	332,852	332,852	332,852	332,852
Surplus/ Shortfall	-25,294	+2,216	+21,045	+53,196	+112,517

4.13 Table 19 shows that there is a predicted small shortfall in 'other recovery' capacity in the initial milestone years with a predicted surplus arising from 2030 onwards.

Inert Waste Management

Recycled Aggregate Production Capacity

4.14 It is estimated that around c907,500 tonnes of C, D & E waste was produced in Lincolnshire in 2023, the majority of which was inert. Inert waste can be managed through two principal routes depending on the nature of the waste - recycled to aggregate/ topsoil or deposited for beneficial purposes on land, (recovery to land). The peak quantity of waste requiring conversion to aggregate when applying the proposed targets is assessed to be c553,500 tpa in 2045. This compares with combined capacity at the facilities producing recycled aggregate or soil of c1,073,500 tonnes (c1,069,000 tonnes in 2030 due to permission expiry in 2027⁴²). Hence, as shown in Table 20, this indicates that there is sufficient consented capacity in Lincolnshire to meet the requirement of the proposed targets. The capacity surplus may offset shortfalls arising elsewhere.

Table 20: Lincolnshire Inert C, D & E Waste Recycling Capacity Requirement at Forecast Milestone years (tonnes)

	2025	2030	2035	2040	2045
Recycled Aggregate	369,036	415,165	461,295	507,424	553,554
<i>Consented Capacity (Table 12)</i>	1,073,446	1,069,206	1,069,206	1,069,206	1,069,206
Total	+704,410	+654,041	+607,911	+561,782	+515,652

⁴² Planning permission expiry at Swinderby Quarry in 2027.

Permanent Deposit to Land Capacity

- 4.15 The forecast cumulative requirement for inert permanent deposit to land management capacity over the forecast period is set out in Table 18 of the C,D&E waste management requirement report. This amounts to 8.5Mt at 2045. When divided by 1.5 tonnes per m³ (mass to volume of inert waste) this equates to c5.7Mm³ of void. Table 14 of this report identifies 6 consented permanent deposit to land sites in Lincolnshire (in 2024) that together offer inert waste void of c1.74Mm³ capable of accommodating c2.61 Mt.
- 4.16 In addition, Table 15 of this report shows 5 non-inert waste landfills with over c7.9Mm³ of remaining void in total. These require inert waste for operational use and restoration material, plus two landfills identified as being in restoration (so their remaining void has been taken entirely for inert waste), together would provide a further c1.53Mm³ of void equating to 2.3Mt of inert waste management capacity. Hence the projected shortfall in inert waste void stands at c2.43Mm³ (5.7Mm³ minus (1.74Mm³ inert + 1.53Mm³ non-inert lf)) or c.3.645Mt of management capacity.
- 4.17 The capacity requirement was calculated on the basis of a split in inert C, D & E waste arisings between hard material suited to conversion into recycled aggregates, and soft materials that may require permanent deposit capacity if they can't be retained on the site of production. If the composition of inert C, D & E waste requiring offsite management were to change, and a greater proportion/tonnage is hard material, then the surplus of recycled aggregate production capacity identified in Table 20 above may be deployed. This would mean that any shortfall in inert waste management capacity may reduce by a further c0.5Mt (0.33Mm³) leaving a deficit equivalent to 2.1Mm³ of void or 3.145Mt of inert waste management capacity.
- 4.18 Table 21 shows the projected depletion of Lincolnshire permanent deposit to land capacity for inert waste. This assumes that the combined capacity will be available to accommodate the annual requirement. On this basis Lincolnshire permanent deposit to land capacity for inert waste capacity is shown to be exhausted in 2035.

Table 21: Lincolnshire Inert C, D & E Waste Deposit to Land Capacity Depletion(tonnes)

Year	tpa	Inert permanent deposit capacity (tonnes)	Tonnes Cumulative
Inert landfill + Recovery to land + 15% non-inert landfill (*1.5) - Table 14 & Table 15		4,899,983	
2025	498,198	+4,401,785	498,198
2026	488,972	+3,912,813	987,170
2027	479,746	+3,433,066	1,466,917
2028	470,521	+2,962,546	1,937,437
2029	461,295	+2,501,251	2,398,732
2030	452,069	+2,049,182	2,850,801
2031	442,843	+1,606,339	3,293,644
2032	433,617	+1,172,722	3,727,261
2033	424,391	+748,331	4,151,652
2034	415,165	+333,166	4,566,817
2035	405,939	-72,773	4,972,756
2036	396,713	-469,486	5,369,469
2037	387,487	-856,974	5,756,957
2038	378,262	-1,235,235	6,135,218
2039	369,036	-1,604,271	6,504,254
2040	359,810	-1,964,081	6,864,064
2041	350,584	-2,314,665	7,214,648
2042	341,358	-2,656,023	7,556,006
2043	332,132	-2,988,155	7,888,138
2044	322,906	-3,311,061	8,211,044
2045	313,680	-3,624,741	8,524,724

Residual Non-inert Waste Disposal Capacity

4.19 As shown in Table 18 and 23 the cumulative landfill disposal requirement for Lincolnshire residual non-inert waste to 2045 is estimated to be just less than c1.5 M tonnes (estimated at 1 tonne per m³). This is significantly less than the non-inert waste landfill capacity that exists (c6.3Mm³) after 1.5Mm³ of void is occupied by inert waste for restoration purposes. Hence there is sufficient capacity to accommodate the Plan area needs for the forecast period.

Table 22: Predicted Depletion of Lincolnshire Non-inert Landfills over forecast period

Year	CDE	LACW	C&I	Annual Total	Non-inert landfill capacity minus 15% inert	Cumulative Total
Remaining capacity					6,323,604	
2025	9,226	9,221	99,100	117,547	+6,206,057	117,547
2026	9,226	9,265	96,020	114,511	+6,091,546	232,057
2027	9,226	9,309	92,940	111,475	+5,980,072	343,532
2028	9,226	9,353	89,860	108,439	+5,871,633	451,971
2029	9,226	9,397	86,780	105,403	+5,766,230	557,374
2030	9,226	9,441	83,700	102,367	+5,663,862	659,742
2031	9,226	9,479	75,440	94,145	+5,569,717	753,887
2032	9,226	9,517	67,180	85,923	+5,483,794	839,810
2033	9,226	9,555	58,920	77,701	+5,406,093	917,511
2034	9,226	9,593	50,660	69,479	+5,336,613	986,990
2035	9,226	9,631	42,400	61,257	+5,275,356	1,048,248
2036	9,226	9,664	38,220	57,110	+5,218,246	1,105,358
2037	9,226	9,697	34,040	52,963	+5,165,283	1,158,321
2038	9,226	9,730	29,860	48,816	+5,116,466	1,207,137
2039	9,226	9,763	25,680	44,669	+5,071,797	1,251,806
2040	9,226	9,796	21,500	40,522	+5,031,275	1,292,329
2041	9,226	9,829	21,560	40,615	+4,990,661	1,332,943
2042	9,226	9,861	21,620	40,707	+4,949,953	1,373,651
2043	9,226	9,894	21,680	40,800	+4,909,153	1,414,451
2044	9,226	9,927	21,740	40,893	+4,868,260	1,455,344
2045	9,226	9,959	21,800	40,985	+4,827,275	1,496,329

4.20 In fact, the remaining non-inert landfill capacity after Lincolnshire's forecast non-inert landfill need is met would amount to at least c4.8Mm³, as shown in Table 22. This surplus capacity might actually be used to accommodate the shortfall in inert waste management capacity if restoration needs are such. Table 23 below shows the inputs to non-hazardous landfills in the most recent 3 years, split between non-inert and inert inputs.

Table 23: Inputs to non-hazardous landfill in the most recent 3 years

Source: WDI 2022-24

		2022	2023	2024
Colsterworth	Non-inert	-	-	-
	Inert	98,453	93,934	163,269
Leadenham	Non-inert	206,684	139,669	96,759
	Inert	29,447	4,742	9,348
Kirkby on Bain	Non-inert	-	-	-
	Inert	14,173	9,318	49,322
Gainsborough	Non-inert	114,211	175,893	45,055
	Inert	29,415	13,479	35,038

4.21 Table 23 shows that a number of landfills permitted for non-hazardous waste have consistently accommodated volumes of inert waste in recent years.. This evidence supports the proposition that such capacity may end up being used to accommodate inert waste.

Capacity Gap Summary

4.22 The findings from the preceding waste management capacity gap assessment in Lincolnshire are shown in Tables 24 and 25 below.

Table 24: Lincolnshire Built Capacity Gap Analysis (tonnes)

Capacity Type	Waste Management Capacity Gap				
	2025	2030	2035	2040	2045
Recycling & Composting (Table 17)	+1,322,019	+1,266,519	+1,186,890	+1,115,915	+1,038,520
Energy Recovery (Table 19)	-25,294	+2,216	+21,045	+53,196	+112,517
Aggregate Recycling (Table 20)	+704,410	+654,041	+607,911	+561,782	+515,652

Table 25: Lincolnshire Permanent Deposit Capacity Gap Analysis (M tonnes)

Capacity Type	Waste Management Capacity Gap				
	2025	2030	2035	2040	2045
Inert landfill (Table 21)	+4.40	+2.05	-0.73	-1.96	-3.62
Non-inert landfill (Table 22)	+6.21	+5.66	+5.28	+5.03	+4.83

4.23 It should be noted that the surplus in non-inert landfill capacity, shown in Table 25 could be used to accommodate the projected deficit in inert waste permanent deposit to land management capacity from 2035 as illustrated in Table 23. In addition, with the surplus of capacity identified in managing recycled aggregates provides flexibility should the inert waste actually arise in a form suited to management by that route.

Conclusion

4.24 This Waste Needs Assessment Update has found that:

- a) There appears to be sufficient consented capacity to meet the non-inert recycling/ composting requirement and inert aggregate recycling requirement. This has increased significantly since the wna 2021.
- b) There is a predicted shortfall in 'other recovery' capacity in the initial milestone year but it is small and is expected to switch into surplus by 2030.
- c) There is a projected surplus in permanent deposit to land capacity for non-inert waste; and
- d) A projected shortfall of permanent deposit to land capacity for the management of inert waste is expected to emerge by 2035, although its actual emergence is subject to a number of uncertainties such as actual composition of inert waste, its possible use in the restoration of Lincolnshire's non-inert landfill sites and the trend towards retention of excavation materials on development sites.

Appendix 1 Permitted Sites in Lincolnshire receiving C, D & E waste suitable for producing Recycled Aggregate and Soils (WDI 2023)

Site Name	Hard Materials	Mixed skip	80% mixed skip	Subtotal (Hard+ 80%)	Soil	Total (Subtotal + soil)
G B M Waste Management (Fairfield Estate)	2,486	5,703	4,562	7,048	4,274	11,323
Gainsborough Skip Hire, Laughton Lane Morton	57	0	0	57	1,395	1,452
Holly Tree Farm	0	0	0	0	2,257	2,257
Lindum Waste Recycling, Skellingthorpe Road, Saxilby	2,627	34,904	27,923	30,550	3,405	33,954
New Earth Solutions, Materials Recycling Facility, Caythorpe	5,007	22,530	18,024	23,031	2,089	25,120
Mushroom Farm Materials Recycling Facility	4,350	7,815	6,252	10,602	2,867	13,468
A Riddel, Part Of O S Field No 0023	610	613	490	1,100	239	1,339
Tessmill, (Skip Hire) - Woodland Drive	0	283	227	227	277	504
The Recycling Centre, Hemmingby Lane, Horncastle	15	1,713	1,371	1,385	1,101	2,486
Westville Waste Recycling Centre	385	12,307	9,846	10,231	665	10,896
Kirk's Yard, Paving Way, Whisby Road	4,363	0	0	4,363	5,803	10,166
Transfer Total	19,900	85,868	68,694	88,594	24,371	112,965
Tattershall Thorpe Plots 56 & 73, Woodhall Spa Quarry, Tattershall Road	899	0	0	899	2,264	3,163
Brauncewell Quarry, Sleaford	11,343	0	0	11,343	33,569	44,912
Building 3, Roe House	27	5,285	4,228	4,255	456	4,710
Clarkeson Organic Recycling, Wells Road, Riby	753	2,972	2,378	3,131	2,145	5,277
Colsterworth Triangle Quarry	4,070	0	0	4,070	0	4,070
Tattershall Road, Kirkby on Bain, Ford & Son Ltd	867	0	0	867	1,127	1,994
Highfield Quarry	0	0	0	0	15,355	15,355
Kirk's Quarry	8,497	0	0	8,497	41,768	50,265
Laffy's, The New House, Broad Fen Lan	5,014	36	29	5,043	6,800	11,843
Land off Station Road	1,931	0	0	1,931	48,788	50,719
Longwood Quarry	117	0	0	117	1,160	1,277
Slippery Gowt Transfer Yard	6,912	0	0	6,912	12,994	19,906
South Witham Quarry	15,561	0	0	15,561	47,717	63,278
The Old Bottle Yard	4,065	260	208	4,273	1,717	5,990
Unit 2, Whitley Way, The Recycling Centre	1,450	5,951	4,761	6,211	842	7,052
Treatment Total	61,506	14,504	11,603	73,109	216,702	289,810
Grand Total	81,406	100,371	80,297	161,703	241,073	402,776