North Lincolnshire Local Plan (2020 to 2038)

Local Waste Needs Assessment

September 2020

Contents

1. INTRODUCTION & BACKGROUND

Introduction

1.1 Nearly all activities create waste, whether it is the production or consumption of goods and services as part of the economy and wider society. This means that it needs to be managed in the most appropriate and sustainable manner. Waste is a resource rather than something that is to be disposed of, whilst its management is seen as being a part of efforts to reduce carbon emissions and combatting climate change. Government policy, set out in the National Waste Strategy (2013) clearly points towards a zero waste economy. This means that material resources like waste are re-used, recycled or recovered wherever possible, and only disposed of as the last option.

1.2 This Waste Needs Assessment (WNA) has been prepared to inform the emerging North Lincolnshire Local Plan (2020 to 2038). Its purpose is to provide an initial understanding of the level of need for the provision of waste infrastructure and activities in the area over the plan period.

1.3 As an initial evidence-based document to support plan making, this assessment seeks to identify the key waste related issues in North Lincolnshire as well as identifying the areas where further work will be required as the emerging Local Plan develops. This assessment will be a “living document” that will be updated as work on the new Local Plan for North Lincolnshire takes place.

Background

1.4 North Lincolnshire Council is a unitary authority, meaning that it is responsible for all local government functions in its area, including planning and waste collection/disposal. In its role as a Waste Planning Authority (WPA), the council is responsible for preparing planning policies for waste and determining planning applications for waste development. As a Waste Collection Authority (WCA) and Waste Disposal Authority (WDA), it is responsible for collecting waste from households and some businesses and its management/disposal.

Purpose of the Local Waste Needs Assessment

1.5 This Local Waste Needs Assessment has been prepared to support the development of the North Lincolnshire Local Plan (2020 to 2038). It will consider:

- Current waste arisings in North Lincolnshire covering each of the main waste streams
- Current levels of demand for waste management capacity in North Lincolnshire, as well as the existing management capacity that is delivered from existing sites, covering the main waste streams;
- Current level of movement of waste, by waste type, into and out of North Lincolnshire and the identification of any key cross boundary flows.
- Forecasts of the likely increases or decreases in arisings in each waste stream over the projected plan period.
- An identification of additional waste management capacity requirements and surplus waste management capacities over the plan period for each of the waste streams identified to give an indication of the key matters the Local Plan will need to address.
- The identification of the areas where the current level of information is lacking, and /or the identification of matters that will need further investigation to ensure that the new Local Plan is supported by a robust evidence base.

2. POLICY CONTEXT

2.1 The policies and proposals for waste management in the North Lincolnshire Local Plan (2020 to 2038) sit within a wider policy context. Much of this is driven by European Union policies that have been transposed into UK legislation and regulations. This section of the assessment outlines the waste related policy and guidance at these levels.

European Policy

2.1 Article 28 of the Waste Framework Directive (2008) obliges EU member states to develop waste management plans, who in turn can request that regional and local authorities to so. The directive also sets a number of targets including a 50% recycling target for household waste by 2020, and a target to reuse, recycle or recover 70% of non-hazardous CD&E waste by 2020. The Landfill Directive (1999) also sets a target for the reduction of biodegradable municipal waste (BMW) sent to landfill. It requires that by 2020, the amount of BMW (by weight) sent to landfill should be 35% of the amount of BMW produced in 1995.

2.2 The Waste Framework Directive also enshrines the waste hierarchy into law. It sets out the preferred means of dealing with waste, although prevention (i.e. not creating the waste in the first place) is the first step. The following diagram illustrates it.

Figure 1: The Waste Hierarchy

Prevention

- Using less material in design and manufacture
- Keeping products for longer, re-use.
- Using less hazardous material

Preparing for Re-use

- Checking, cleaning, repairing, refurbishing whole items or spare parts

Recycling

- Turning waste into a new substance or product. Includes composting if it meets quality protocols

Recovery

- Includes anaerobic digestion, incineration with energy recovery, gasification and pyrolysis which produce energy (fuels, heat and power) and materials from waste; some backfilling operations;

Disposal

- Landfill and incineration without energy recovery.

2.3 The Directive also clarifies the application of the "*proximity principle*" and supports the "*self-sufficiency principle*" for waste management. Member states are required to "*establish an integrated and adequate network of waste disposal installations and of installations for recovery of mixed municipal waste collected from private households*." This also includes situations where municipal collection covers waste from other producers. The network must enable waste to be disposed of, or be recovered, in one of the nearest appropriate installations, by means of the most appropriate methods and technologies, in order to ensure a high level of protection for the environment and public health. It does not apply to waste not involved in municipal collection such as industrial or construction wastes.

2.4 The Directive also requires that the network be designed in such a way as to enable the EU as a whole to move towards the aim of self-sufficiency in waste disposal and the recovery of waste. The Waste (England and Wales) Regulations 2011 (as amended) transpose the Directive into English and Welsh law.

2.5 The Industrial Emissions Directive (Directive 2010/75/EU) was adopted in 2010. Based on seven previously existing directives, including the Integrated Pollution Prevention and Control Directive, it aims to achieve a high level of protection of human health and the environment through the reduction of harmful industrial emissions across the EU, utilising Best Available Techniques (BAT). It prevents and controls pollution into air, water and land to avoid generating waste from large industrial installations.

2.6 The Mining Waste Directive (Directive 2006/21/EC) introduced measures for safe management of waste resulting from the extraction, treatment and storage of mineral resources and the working of quarries. It outlines a number of requirements to ensure protection of the environment and human health, depending on the risks posed by the type of waste. All waste producers regulated by the Directive are required to submit a waste management plan with aims to prevent or reduce waste generation or encourage waste recovery and safe waste disposal.

2.7 The European Hazardous Waste Directive (91/689/EEC) was replaced by the revised European Waste Framework Directive (2008/98/EC). Within this Directive, there is a need for additional record keeping, monitoring and control obligations when managing hazardous waste. Mixing of hazardous substances is banned in order to prevent risks for the environment and human health.

2.8 The Circular Economy Package (2018) seeks to address the whole cycle of waste from production and consumption to waste management and the market for secondary raw material. The package, amongst others, also provides revised legislative proposals to the Waste Framework Directive Targets above of:

- A common EU target for recycling 60% of municipal waste by 2025; and
- A common EU target for recycling 65% of municipal waste by 2030.

National Policy

Waste Management Plan for England

2.9 The Waste Management Plan for England was published in December 2013. Together with the emerging new Local Plan for North Lincolnshire, they meet the requirements of Article 28 for there to be a waste management plan in place within EU Member States. It sets out the Government's ambition to work towards a more sustainable and efficient approach to resource use and management. In particular, it seeks to deliver a zero waste economy. Measures are included to ensure that the 2020 targets from the Waste Framework Directive.

2.10 It advises that all local planning authorities should have regard to both the waste management plan for England and the national waste planning policy when discharging their responsibilities to the extent that they are appropriate to waste management. Waste planning authorities remain responsible for developing local authority waste plans as part of their wider strategic planning responsibilities, in support of the Waste Management Plan for England.

National Planning Policy Framework (NPPF)

2.11 The National Planning Policy Framework was originally published in March 2012 and was revised and re-published in July 2018 and again in February 2019. It sets out the Government's policy on a wide range of planning issues and provides the overarching context of local planning policy. It establishes a presumption in favour of sustainable development. However, it does not include policies for sustainable waste management; however, it is an important consideration for waste planning as it sets out the national policy framework for all other aspects of planning and sustainable development.

National Planning Policy for Waste

2.12 In October 2014, the Government published the National Planning Policy for Waste, which should be read in conjunction with the National Planning Policy Framework, the Waste Management Plan for England and the National Policy Statements for Waste Water and Hazardous Waste. The Planning Practice Guidance for Waste was also issued in October 2014.

2.13 The National Planning Policy for Waste (NPPW) sets out that positive planning plays a pivotal role in delivering the country's waste ambitions thorough:

- delivery of sustainable development and resource efficiency, including provision of modern infrastructure, local employment opportunities and wider climate change benefits, by driving waste up the waste hierarchy;

- ensuring that waste management is considered alongside other spatial planning concerns, such as housing and transport, recognising the positive contribution that waste management can make to the development of sustainable communities;

- providing a framework in which communities and businesses are engaged with and take more responsibility for their own waste, including by enabling waste to be disposed of or, in the case of mixed municipal waste from households, recovered, in line with the proximity principle;

- helping to secure the re-use, recovery or disposal of waste without endangering human health and without harming the environment; and

- ensuring the design and layout of new residential and commercial development and other infrastructure (such as safe and reliable transport links) complements sustainable waste management, including the provision of appropriate storage and segregation facilities to facilitate high quality collections of waste.

2.14 The NPPW is divided into five sections exploring aspects of planning for waste:

- Evidence base;
- Identifying need for waste management facilities
- Identifying suitable sites/areas
- Determining planning applications, and
- Monitoring and reporting.

It also includes two appendices that set out the Waste Hierarchy and criteria for site identification/selection respectively.

Planning Practice Guidance

2.15 There is accompanying planning practice guidance that provides more detail on aspects of implementing both the legislation and policy on waste planning. These include:

- the use of a proportionate evidence base
- identification of need for waste management facilities
- identification of suitable sites and areas for waste management facilities
- determining planning applications; and
- monitoring of waste development

National Policy Statements

2.16 Sitting alongside the NPPF, NPPW and the National Waste Management Plan are the National Policy Statements (NPSs). These provide the primary basis for decisions by the National Infrastructure Directorate (and the relevant Secretaries of State) on applications received for certain defined Nationally Significant Infrastructure Projects (NSIPs). NSIPs are defined in the Planning Act 2008.

2.17 The NPSs set out the government's policy on different types of national infrastructure development and, in England and Wales, NPSs are a material consideration in decision making on applications that fall under the Town and Country Planning Act 1990 (as amended). Whether, and to what extent, the NPSs are material considerations will be judged on a case-by-case basis. Some of the relevant elements of the individual NPSs have been set out below.

- **EN-1: Overarching National Policy Statement for Energy (2011)**: this overarching government policy applies to energy developments of 50 megawatts and above. This includes energy from waste developments. It also sets out key considerations that should be taken into account when preparing and assessing large-scale energy proposals, including waste.

- **EN-3: National Policy Statement for Renewable Energy Infrastructure (2011)**: This NPS taken together with the Overarching National Policy Statement for Energy (EN-1) provides the primary basis for decisions on applications it receives for energy from waste developments, with a capacity of more than 50MW.

- **National Policy Statement for Hazardous Waste (2013)**: The Hazardous Waste National Policy Statement (NPS) sets out the government policy on the development of nationally significant infrastructure for the management of hazardous waste.

- **National Policy Statement for Waste Water (2012)**: The Planning Act 2008 sets out the thresholds for nationally significant infrastructure in the waste water sector to which this NPS will be relevant. The Act

empowers the examination of applications and subsequent decisions on the following waste water NSIPs in England:

- Construction of waste water treatment plants which are expected to have a capacity exceeding a population equivalent of 500,000 when constructed; or
- Alterations to waste water treatment plants where the effect of the alteration is expected to be to increase, by more than a population equivalent of 500,000, the capacity of the plant.

Other Regulatory Regimes

2.18 Whilst the planning system controls the development and use of land in the public interest, including consideration of the impacts on the local environment and amenity, there is a range of legislation and other regulatory regimes that apply to waste and the waste industry.

2.19 The Environmental Protection Act 1990, Part II provides the basis for licensing controls and other provisions aimed at ensuring that waste handling, disposal and recovery options do not harm the environment. It also states that responsibility for waste rests on all parties involved in its management; from the original producer to everybody who handles it up until its full recovery or disposal. To this end it introduced the 'Duty of Care'. The Waste Management (England and Wales) Regulations 2006 introduced amendments to the Act, including an extension of the definition of industrial waste to include agricultural and mining and quarrying waste, which therefore become controlled wastes.

2.20 The Environment Agency (EA) is the main regulator of waste management in England. Among its responsibilities are the determination of applications for environmental permits required under Article 23 of the revised Waste Framework Directive; and carrying out inspection and other compliance assessment activities. The Planning Practice states that waste planning authorities should assume that these regimes will operate effectively.

2.21 The majority of waste facilities require an Environmental Permit (Waste Management License). The permit will aim to prevent pollution through the use of measures to prohibit or limit the release of substances to the environment to the lowest practicable level. It also ensures that ambient air and water quality meet standards that guard against impacts to the environment and human health. Many permits include placing restrictions on the level of waste that can be managed at facilities on an annual basis.

2.22 The EA is a key consultee on planning applications for waste management and treatment facilities. They will provide advice to the council on relevant matters within their remit that can be considered as part of the overall decision-making process.

2.23 Pre-application discussions with the EA can also help developers identify and respond to any key issues that could affect planning and/or permitting decisions when they are locating and designing developments. Applicants are encouraged, but are not required, to submit their application for planning permission and an environmental permit at the same time to minimise the extent of additional work and ensure integrated and timely decisions. Further advice can be found in the EA's Guidance for Developments Requiring Planning Permission and Environmental Permits (October 2012).

Duty to Co-operate & Cross Boundary Considerations

2.24 The Localism Act 2011 introduced the Duty to Co-operate. It requires planning authorities and other public bodies to engage constructively, actively and on an ongoing basis to deal with strategic cross boundary issues as part of preparing Local Plans. Waste is a strategic matter.

2.25 North Lincolnshire Council seeks to work in a positive manner with neighbouring local planning authorities and key public bodies as part of this duty, in developing planning policy and other matters. In relation to waste matters, the council is a member of the Yorkshire & Humber Waste Planning Officers Group.

Local Policy

Local Planning Policy

2.26 Policy at the local level consists of the adopted Local Development Framework (LDF) Core Strategy (June 2011), Housing & Employment Land Allocations DPD (March 2016), Lincolnshire Lakes Area Action Plan (May 2016) and the "saved" policies of the North Lincolnshire Local Plan (May 2003). There are also a number of Supplementary Planning Guidance notes and Supplementary Planning Documents that support the policies in these documents. This policy framework will be superseded by the North Lincolnshire Local Plan (2020 to 2038).

Municipal Waste Management Strategy (MWMS)

2.27 The MWMS, issued in May 2012, guides the future management of waste under the control of North Lincolnshire Council from 2012 to 2029/30. It builds on previous strategies published in 2002 and 2008 respectively. It completes the process of assessing the options available for residual waste treatment, using tools and information that were not available to the council in 2008 such as the Environment Agency's Waste and Resources Assessment Tool for the Environment (WRATE) life-cycle analysis tool.

2.28 The WRATE tool was used in the MWMS to assess the options available much more accurately than had been the case previously. This strategy presents a detailed assessment of the options available using the life-cycle methodology, and this, together with a range of other decision-making tools, has informed the Council on which options to follow in the short, medium and long-term.

2.29 The MWMS does not provide a strategy for the management of the other waste streams – especially commercial/industrial waste, and construction, demolition, and excavation waste. The Council is not statutorily obliged to provide a waste management service for these types of waste, which are instead covered by private business. The new Local Plan needs to be flexible enough to accommodate any changed circumstances arising from the implementation of the Waste Management Strategy, and the procurement of any long-term contracts.

3. WASTE STREAMS

3.1 There are a number of different waste streams, and these are described below:

- **Local Authority Collected Waste (LACW) –** previously known as Municipal Waste or Municipal Solid Waste (MSW), this is waste collected by the council in its role as the Waste Collection Authority. This is primarily waste produced by householders but can include street litter, waste delivered to Council recycling points, Council office waste, Household Waste Recycling Site waste, and some commercial waste from shops and smaller trading estates where local authority waste collection agreements are in place (Trade Waste).

- **Commercial & Industrial Waste (C&I) -** commercial waste is that arising from premises that are used wholly or mainly for trade, business, sport, recreation or entertainment. (Note - If a local authority has waste collection agreements in place it will be classed as LACW), whilst industrial waste arises from factories and industrial plants.

- **Construction, Demolition & Excavation Waste (CDEW)** - waste arising from construction, maintenance, and demolitions of buildings, roads and other structures.

- **Hazardous Waste** - wastes that pose a greater risk to the environment and human health. These are a sub-set of the other waste streams but are subject to a strict control regime.

- **Low Level (Non-Nuclear) Radioactive Waste (LLR)** - waste produced by activities such as x-ray photography, clinical and laboratory testing, oil and gas industry

- **Agricultural Waste** – waste arising from farming or forestry activities.

- **Waste Water/Sewage Sludge -** waste produced from washing, cleaning, and hygienic activities applied to waste water and sewage effluents

4. DATA SOURCES

4.1 There are a number of data sources that can be used to identify current and future waste arisings as well as capacity of waste management/treatment facilities. However, it should be noted that information about different waste types is often difficult to obtain, with the exception of Local Authority Collected Waste (LACW) and Hazardous Waste.

4.2 The main sources of information on LACW arising are the council's waste management team, DEFRA Waste Statistics and Waste Dataflow. The Environment Agency's Waste Data Interrogator (WDI) and Hazardous Waste Data Interrogator (HWDI), which have been published annually since 2007 are also key sources of information. The data contained in the WDI and HWDI is based on returns from permitted waste sites, although it does not include information on waste dealt with by exempt sites.

4.3 The WDI and HWDI used as basis of this document relate to 20177 The WDI was most recently updated in March 2020 to cover the 2018 period. However, that update was not published in time for the data within it to be used to inform this document. Future WNAs will continue to be updated in line with the most recently available WDI information.

5. CURRENT WASTE ARISINGS & MANAGEMENT

5.1 The National Planning Policy for Waste highlights the need to collect and share data on waste arisings. It highlights that account should be taken on waste arisings across neighbouring waste planning authority areas and any nationally identified waste management requirements. The Planning Practice Guidance also highlights the importance of understanding waste arisings within the planning authority area, including imports and exports, as a baseline for identifying any need for new facilities.

5.2 The WDI shows that 2,948,757 tonnes was received at permitted waste management facilities in North Lincolnshire during 2017. Of this 915,634 (31%) tonnes originated in North Lincolnshire with remainder being imported from elsewhere. The largest quantities originated from:

- Yorkshire & Humber Region (Unknown Origin): 694,683 tonnes
- Lincolnshire: 396,982 tonnes
- Doncaster: 381,276 tonnes
- North East Lincolnshire: 209,041 tonnes
- South Yorkshire (Unknown Origin): 58,578 tonnes
- Manchester: 54,477 tonnes
- Leeds: 51,028 tonnes
- East Riding of Yorkshire: 22,808 tonnes
- Barnsley: 22,134 tonnes
- Outside UK: 19,779 tonnes

5.3 The WDI also includes data on the quantities of waste accepted at licenced or permitted waste management facilities within the area. Each has a permitted operational capacity – the amount of waste that can be accepted in any calendar year. This is established through the planning permission or waste management licence. The level of inputs received at each site is not necessarily representative of the annual permitted capacity. Some waste management and treatment sites are classed as being "Exempt". This means they do not need to have a waste management licence. As such they are not required to report data relating to the amount of waste accepted and therefore data relating to inputs are based upon the maximum permitted under the exemption.

5.4 In 2017, the WDI showed that there were 54 facilities/sites accepting waste in North Lincolnshire, an increase from 52 in 2015 & 2016. Table 1 (below) shows the type and number of facilities in the area together with the amount of waste received, whilst Figure 1 shows their location.

WASTE MANAGEMENT FACILITIES – BY TYPE

Landfill - Disposal of waste into land. This can include inert waste, such as soils and rubble, as well as Household and Commercial wastes.

Metal Recycling Sites (MRS) - these include sites dealing with cars (Car Breakers, End of Life Vehicle Sites) and other Metal Recycling Sites (Scrap Yards etc).

On/In Land -

Transfer Facilities - These include the council's Household Waste Recycling Sites, and other private sites which bulk up waste prior to forwarding elsewhere for disposal or treatment.

Treatment Facilities - these sites include Composting, Physical-Chemical (facilities that treat waste by physical or chemical means in order to prepare for disposal or recovery e.g. Photographic chemicals processing, waste water treatment etc.), and Material Recycling Facilities (MRF), where recyclable wastes are separated and sorted prior to reprocessing.

Table 1: Operational Waste Management, Treatment & Disposal Facilities and Inputs (2014 – 2017)									
Site Category	Facility Type	2014		2015		2016		2017	
		No. of Facs	Tonnage	No. of Facs	Tonnage	No. of Facs	Tonnage	No. of Facs	Tonnage
Landfill	Hazardous Landfill	1	6,866.72	1	12,434.28	1	25,181.15	1	15,370.94
	Non Hazardous Landfill	4	597,982.46	5	662,749.97	5	763,557.28	4	620,748.01
	Non Hazardous (SNRHW) Landfill	1	2,649.30	1	1,360.28	0	-	-	-
	Restricted Landfill	2	110,661.18	3	119,754.50	1	32,843.00	1	10,182.00
MRS	Car Breaker	4	2,110.47	3	1,868.14	3	3,612.40	3	2,176.47
	Metal Recycling	3	12,130.59	3	14,237.95	4	354,331.3	3	20,344.96
	Vehicle Depollution Facility	1	603.22	1	4,281.28	2	4,865.06	2	4,875.00
On/In Land	Deposit of waste to land (recovery)	-	-	-	-	-	-	1	588,234.61
Transfer	Civic Amenity Site	8	22,010.33	8	21,643.77	8	23,487.57	8	24,380.87
	Hazardous Waste Transfer	3	57,970.52	3	54,982.97	3	62,120.66	3	59,723.19
	Non Hazardous Waste Transfer	5	212,072.19	5	155,136.02	6	216,850.27	6	290,339.52
Treatment	Anaerobic Digestion	1	981.95	2	1,246.18	2	5,218.92	4	61,232.24
	Biological Treatment	2	209,564.81	2	172,804.49	3	196,005.50	4	184,803.62
	Composting	1	71,346.23	1	73,458.28	1	54,382.74	1	66,757.47
	Materials Recycling Facility	0	0.00	0	0.00	0	0.00	0	0.00
	Inert Waste Transfer /Treatment	1	38,879.00	2	72,670.00	3	87,746.58	3	60,976.18
	Non Hazardous Waste Transfer /Treatment	1	3,524.96	2	6,241.87	1	21,470.49	1	33,665.94
	Physical Treatment	7	184,606.83	9	256,130.72	8	336,070.66	8	874,194.64
	Physical-Chemical Treatment	1	18,559.00	1	12,660.00	1	24,694.00	2	30,751.00
		46	**1,552,519.76**	**52**	**1,643,660.70**	**52**	**2,210,237.56**	**54**	**2,948,756.01**

Source: Environment Agency Waste Data Interrogator (2014 to 2017) – Active Sites List

Local Authority Collected Waste (LACW)

5.5 National Planning Policy for Waste refers to 'municipal' waste streams. In 2011, the definition of 'municipal' waste was revised by DEFRA in light of waste reporting and landfill diversion targets. It became Local Authority Collected Waste (LACW) – all waste collected by Local Authorities – and Local Authority Collected Municipal Waste which is household waste and business waste where collected by the Local Authority and which is similar in nature and composition to household waste.

5.6 LACW is made up of four components:

- Household waste consists primarily of waste collected directly from households;
- Household waste (with the exception of inert construction waste) which is accepted and collected at household waste recycling centres/civic amenity sites;
- Other household waste (smaller components) such as litter and street cleaning waste; and
- Non-household waste. The main components of municipal waste classified as non-household include commercial waste collected by local authorities (commonly termed "trade waste") and inert construction materials accepted at household waste recycling centres.

5.7 North Lincolnshire Council collects waste from households using;

- Brown Bin (Garden waste)
- Burgundy bin (Cardboard, plastic food/drink containers and cartons)
- Blue Box (Newspapers, Magazines, Junk mail, Directories and catalogues including yellow papers; All other paper; Shredded paper (in a carrier bag)
- Green Box (Glass; Food tins; Drinks cans; Aerosol cans (without lids); Aluminium foil; Sweet and biscuit tins; Household batteries
- Textile (Red) Bag (old clothes and other textiles)
- Green Bin (Residual Waste)

5.8 Small electrical items are also collected. Residents are required to place these in carrier bags and put them with their blue and green boxes.

5.9 Table 2 show that 96,430 tonnes of LACW arose in North Lincolnshire during the period 2016/17. Overall, there has been a decline in the amount LACW arisings over the last decade (around 9%); however, this fall has not been steady.

Table 2: Local Authority Collected Waste - North Lincolnshire (2006/07 to 2015/16)

	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Household Waste	91,694	93,627	87,074	87,136	87,499	81,663	81,660	80,069	84,041	85,092	87,522
Non-Household Waste	11,564	8,099	9,289	10,725	7,588	11,812	8,667	10,875	10,150	8,843	8,908
Total LACW Arisings	**103,258**	**101,726**	**96,363**	**97,861**	**95,087**	**93,475**	**90,327**	**90,944**	**94,191**	**93,935**	**96,430**

Source: DEFRA Waste Statistics/Waste Data Flow

Waste Generated Per Household/Per Capita

5.10 Table 3 shows the amount of waste generated by each household has also decreased by around 11% over this time period. This is despite an increase in the number of households in the area. Between 2006/07 and 2012/13, the amount of waste per household dropped from 1.35 tonnes to 1.15 tonnes. Since this point the amount has fluctuated and over the last three years has begun to increase.

Table 3: Waste Generated Per Household & Per Capita (2006/07 to 2016/17) (Tonnes)

	Total Household Waste	Number of Households	Waste Per Household	Population	Waste Per Capita
2006/07	91,694	67,826	1.35	161,200	0.57
2007/08	93,627	68,446	1.37	162,800	0.58
2008/09	87,074	69,254	1.26	164,500	0.53
2009/10	87,136	69,763	1.25	165,600	0.53

2010/11	87,499	70,292	1.24	166,500	0.53
2011/12	81,663	70,708	1.15	167,516	0.49
2012/13	81,660	71,269	1.15	168,372	0.48
2013/14	80,069	71,559	1.20	169,247	0.47
2014/15	84,041	71,975	1.17	169,767	0.50
2015/16	85,092	72,417	1.18	170,332	0.50
2016/17	87,522	72,879	1.20	170,905	0.51

Source: DEFRA Waste Statistics/WasteDataFlow (2006/07 to 2016/17); ONS Household Projections & Population Estimates.

5.11 Table 4 (below) shows how the LACW arising in North Lincolnshire has been managed over the last 10 years. Recycling and composting has increase by around 18% in over this period. Current rates (2016/17) stand at 47.7%. Any residual waste that cannot be recycled or re-used is disposed of at the Roxby Landfill site to the north east of Scunthorpe.

Table 4: Local Authority Collected Waste – North Lincolnshire - Fates

	Landfill	Incineration with EfW	Incineration without EfW	Recycled/ composted	Other	Total
2007/08	56,648	1,136	0	43,821	122	**101,726**
2008/09	49,593	845	0	45,817	108	**96,363**
2009/10	46,954	426	0	50,155	325	**97,862**
2010/11	46,643	135	0	48,309	0	**95,087**
2011/12	47,256	688	0	45,531	0	**93,475**
2012/13	48,174	978	0	39,690	0	**88,843**
2013/14	45,932	1,351	0	42,033	0	**89,316**
2014/15	46,371	1,268	0	47,834	-1,282	**94,191**
2015/16	47,118	831	0	45,986	0	**93,935**
2016/17	45,457	4,916	0	45.966	20	**96.359**

Source: DEFRA Waste Statistics/WasteDataFlow (2006/07 to 2016/17)

Commercial and Industrial Waste (C&I)

5.12 Commercial and Industrial (C&I) is large and often complex waste stream that is affected by a range of factors. It is produced from a number of different sources across the private and public sectors. For example, these can be small enterprises that employ a few people through major multinational corporations.

5.13 Commercial waste is classed as being that produced by wholesalers, catering establishments, shops, offices and various public sector activities like schools or colleges, whilst industrial waste arises from factories and industrial premises (see Table 5, below). It should be noted that C&I waste does not includes wastes from the construction, demolition and excavation sectors, or those produced from the agricultural, and mining/quarrying activities. Waste management and recycling business are also excluded from the definition of C&I waste to avoid double counting.

Table 5: Activities/Sectors Generating Commercial & Industrial Waste			
Industrial Sectors		**Commercial Sectors**	
1	Food, drink and tobacco businesses	**7**	Retail and wholesale
2	Textiles/wood/paper/publishing businesses	**8**	Hotels and catering
3	Power and utilities companies	**9**	Public administration and social work
4	Chemical/non-metallic minerals manufacturing businesses	**10**	Education
5	Metal manufacturing businesses	**11**	Transport and storage
6	Machinery & equipment (other manufacturing) businesses	**12**	Other services

5.14 Each of these sectors relate to Standard Industrial Classification (SIC) codes[1].

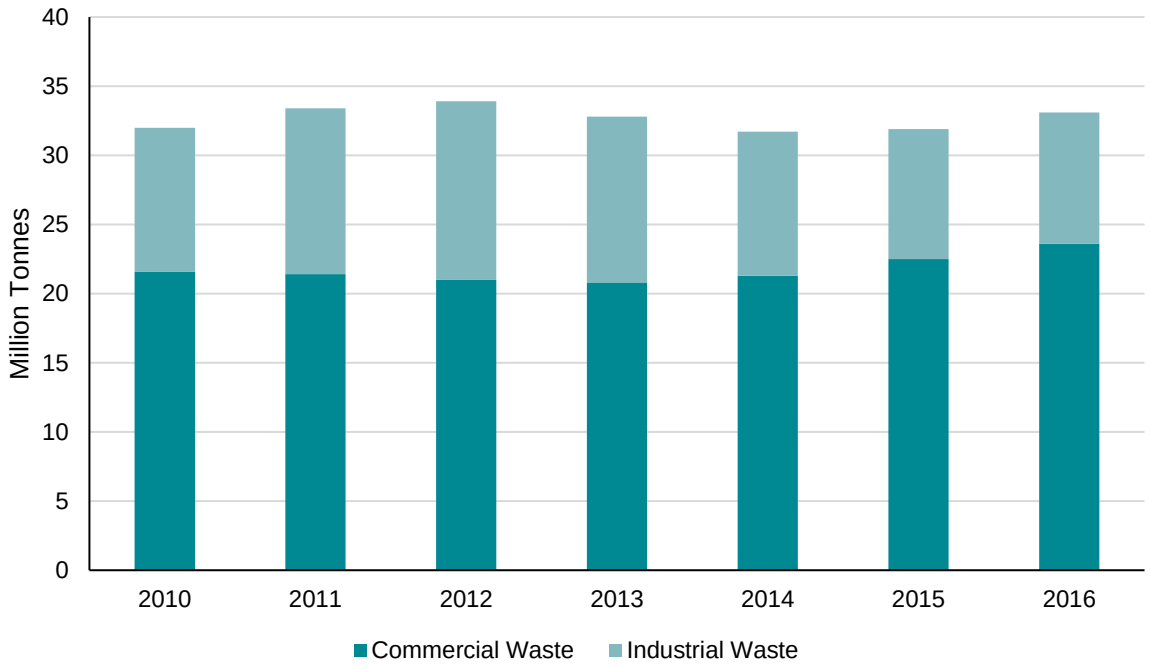
5.15 Despite being a key waste stream that must be considered by waste planning authorities in drawing up their Local Plans, specific data about the level of arisings and their composition is limited. A range of studies and surveys have been undertaken to gain an understanding of the level of C&I waste arisings, its composition and its management as well as to potentially identify future trends. To date there have been no specific studies or assessment of C&I waste arisings in North Lincolnshire. Given this lack of information, it is difficult to establish the levels of arising and predict future trends with any degree of accuracy. Any information about commercial and industrial waste arisings has tended to come from the national level.

5.16 The Waste Management Plan for England (2013) stated that 47.9 million tonnes of C&I waste was generated by business in 2009[2][3]. This consisted of 24.1 million tonnes from the industrial sector and 23.8 million tonnes from the commercial sector – roughly a 50:50 split between industrial and commercial arisings. The data used to underpin the Plan showed that there had been a decline with in the amount of C&I waste produced since a previous survey had been undertaken during 2002/2003. Industrial waste had seen a fall of 36%, whilst commercial waste fell by 21%. The 2009 survey also estimated that 52% of C&I waste was recycled or re-used, with 24% being sent to landfill. Small businesses (those with employing less than 50 people) were thought to be responsible for produced 35% of all C&I in 2009. Overall, it was estimated that C&I arisings nationally had decline by 29% between 2002/03 and 2009, despite the fact that the number of businesses grew up 10% over the period.

5.17 The Digest of Waste and Resource Statistics (October 2018)[4] showed that, in 2016, a total of 31.1 million tonnes was produced by businesses in England. Of this total, 9.1 million tonnes were from the industrial sector and 23.6 million tonnes from the commercial sector. This is an increase from the levels produced in 2014 & 2015. This data is not broken down to the regional, sub-regional or local levels.

[1] A Standard Industrial Classification (SIC) was first introduced into the UK in 1948 for use in classifying business establishments and other statistical units by the type of economic activity in which they are engaged. It provides a framework for the collection, tabulation, presentation and analysis of data, and its use promotes uniformity. The UK SIC system has been developed in association with the EU's classification system, NACE. The first four digits of each code are standardised across the EU, and subsequent digits are unique to each country. (Office of National Statistics)
[2] Waste Management Plan for England (2013), DEFRA
[3] Survey of Commercial and Industrial Waste Arisings 2010 – Revised Final Results (2009) – Statistical Release, DEFRA
[4] Digest of Waste and Resource Statistics (October 2018), DEFRA

Figure 1: Commerical & Industrial Waste Arisings (England) (2010 to 2016)



Source: Digest of Waste and Resource Statistics (October 2018), DEFRA

Methods for Estimating C&I Waste Arisings

5.18 There are a number of possible methods that can be used to estimate C&I waste arisings. These include:

- utilising the Environment Agency's Waste Data Interrogator (WDI);
- examining previous data used to support the former Regional Spatial Strategy;
- extrapolating the results of national and regional studies that have been undertaken; or
- using Defra's latest approach issued in 2014.

Environment Agency Waste Data Interrogator (WDI)

5.19 The WDI can be used to extract data on the levels of Household, Industrial and Commercial (HIC) waste arisings for North Lincolnshire. To provide an estimate of C&I waste arisings, the information set out about earlier in this document about LACW arisings, which includes household waste is subtracted from the total HIC arisings. This gives a notional level of C&I waste arisings. As can be seen in Table 6 (below) this method is crude and does not give a clear picture with which to estimate C&I waste arisings. Therefore, it should be treated as indicative only.

Table 6: Commercial & Industrial Waste Arisings in North Lincolnshire – Estimated Using Waste Data Interrogator			
	Household, Industrial & Commercial Waste Arisings	**Local Authority Collected Waste Arisings**	**Notional Commercial & Industrial Waste Arisings**
2007	594,458	101,726	492,732
2008	338,089	96,363	241,726
2009	404,200	97,861	306,339
2010	284,236	95,087	189,149
2011	433,468	93,475	339,993
2012	326,851	90,327	236,524
2013	248,600	90,944	157,656
2014	231,947	94,141	137,806
2015	238,551	93,935	144,616
2016	548,520	96,430	452,090
2017	902,621	96,430	806,191

Source: Waste Data Interrogator, Environment Agency (2007 to 2017) and DEFRA Waste Statistics/WasteDataFlow (2006/07 to 2016/17)

Former Regional Planning Evidence Base

5.20 At the regional (Yorkshire & Humber) level, the most recent data on C&I waste arisings and projections to be tested at independent examination was the study undertaken by Urban Mines on behalf of the former regional assembly entitled Projection of Commercial & Industrial Waste Arisings in Yorkshire & Humber to 2026[5]. This formed part of the evidence base for the former Regional Spatial Strategy (RSS) (revoked in 2013).

5.21 This study estimated that C&I waste arisings in the region would be 9,097,135 and 9,068,331 tonnes in 2015 and 2016 respectively. By 2026 (the end of the study period) arisings were projected to be 8,859,383 tonnes. It also provided estimates for each local authority area. In the case of North Lincolnshire, estimates for C&I waste arisings were **285,650 tonnes (2015**) and 283,186 tonnes (2016). By 2026, they were expected to be **280,967 tonnes**.

5.22 Since the revocation of the RSS, a number of other studies estimating C&I waste arisings have been produced at the national and regional levels. The former RSS projections were also produced prior to the economic downturn post 2008.

DEFRA Methodology (2009)

5.23 At the national level, a survey C&I waste was undertaken by DEFRA using data collected for 2009[6]. It can be used to extrapolate estimates for C&I waste arisings in North Lincolnshire.

5.24 The Commercial & Industry Waste Survey 2009 – Final Report (May 2011) sets out C&I waste estimates by industry sector and company size band. The survey covered 6,005 businesses and sought to estimate their waste arisings. It also used ONS data on business size and numbers for 2009. It was conducted using a mixture of face-to-face and telephone interviews, corporate date and Pollution Prevention Control (PPC) returns submitted to the Environment Agency. Of those locations surveyed, 7.77% were in Yorkshire & Humber. PPC returns data was added to the published totals but this information was not statistically derived and it should be noted that recognised combining data from multiple sources can produce distorted results.

5.25 The survey found that total C&I waste arisings for Yorkshire & Humber in 2009 were 6,944,000 tonnes. Table 7 sets out the level of arising by industrial and commercial sector.

[5] Projection of Commercial & Industrial Waste Arisings in Yorkshire & Humber to 2026, Urban Mines (2009)
[6] Commercial and Industrial Waste Survey 2009 - Final Report, (May 2011) (Jacobs, for Defra)

Table 7: Commercial & Industrial Waste Arisings By Sector – Yorkshire & Humber ('000s tonnes)		
Industrial Sectors		**Estimated Arisings**
1	Food, drink and tobacco businesses	690
2	Textiles/wood/paper/publishing businesses	583
3	Power and utilities companies	2,064
4	Chemical/non-metallic minerals manufacturing businesses	571
5	Metal manufacturing businesses	772
6	Machinery & equipment (other manufacturing) businesses	268
Commercial Sectors		
7	Retail and wholesale	314
8	Hotels and catering	237
9	Public administration and social work	265
10	Education	122
11	Transport and storage	211
12	Other services	347
	Total	**6,944**

Source: Table 23 - Commercial & Industry Waste Survey 2009 – Final Report (May 2011), Jacobs for Defra

5.26 Using the national (England) level data, the total estimated tonnage of waste arisings per industry sector is divided by the number of businesses per industry sector to produce an average quantity of waste produced per business type on a national level in 2009. This average figure is then multiplied by the number of businesses in each industry sector for the years 2009 to 2016, providing an estimate of the amount of waste produced by each industry sector. These can then be added together in order to derive an estimate of commercial and industrial waste arisings in North Lincolnshire.

5.27 Based on this methodology, it is estimated that C&I waste arisings in North Lincolnshire for 2016 were 126,891 tonnes.

Table 8: North Lincolnshire Commercial & Industry Waste Arisings (Estimated) (2009 to 2016)			
Year	**Industrial**	**Commercial**	**Total C&I Waste Arisings**
2009	83,701	73,220	**156,921**
2010	81,939	69,938	**151,877**
2011	78,415	68,835	**147,250**
2012	75,771	69,197	**144,968**
2013	77,534	69,403	**146,937**
2014	64,318	52,187	**116,505**
2015	63,473	45,772	**109,245**
2016	68,723	58,168	**126,891**

5.28 This methodology assumes that an average tonnage of waste is generated for each business in each sector. In reality, businesses of different sizes within the same sector would generate proportionally differing amounts of waste and the specific activities of each business would impact on the volume of waste arisings.

5.29 As the average tonnages are based on national level data, this approach assumes that the mix of the size of companies present in North Lincolnshire is the same as that seen at a national level. To derive an estimate for the arisings, per sector, an assumption has been made that the average tonnage of waste produced per business in the identified sectors has remained static between 2009 and 2016. These potential weaknesses are acknowledged.

DEFRA New Methodology (2014)

5.30 Jacobs were commissioned by Defra to develop a methodology for calculating C&I waste arisings. Their final report[7] set out a five-step approach for calculating arisings.

DEFRA FIVE STEP METHODOLOGY FOR CALCULATING C&I WASTE ARISINGS

1. **Calculate waste arisings sent to permitted facilities;**
2. **Calculate waste arisings received at incineration facilities;**
3. **Estimate waste arisings handled at exempt facilities;**
4. **Calculate waste arisings exported directly from the UK; and**
5. **Map waste to the sector that generated it and validate.**

5.31 This methodology has been designed to estimate C&I waste arisings at the national (England) level. This means that the origin of the waste was not considered as part of it. However, it can be adapted for use at the local level. A number of authorities have already done so. The following equation has been used to calculate the amount of C&I waste arisings in North Lincolnshire:

C&I Waste = (inputs to permitted facilities + inputs to energy from waste + exemptions + exports) – (household waste + CDE waste + mining, agricultural & wastewater wastes + transfer stations)

Step 1: Waste sent to permitted facilities

5.32 Step 1 involves identifying overall waste arisings sent to permitted sites in England using the Environment Agency's WDI (2017), where the origin is listed as being North Lincolnshire. This shows a headline figure of 1,132,025 tonnes of waste received at permitted sites originates in North Lincolnshire. Of this, 915,634 tonnes is received at facilities in North Lincolnshire, with 216,391 tonnes received elsewhere (see Table 9, below).

Table 9: Waste Received at Permitted Facilities in England with North Lincolnshire Origin (2017) (By EWC Chapter)

EWC Chapter & Description		Managed in North Lincolnshire	Managed Outside North Lincolnshire	Total
01	Wastes resulting from exploration, mining, quarrying, and physical and chemical treatment of minerals	481	134	**615**
02	Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing	27,446	5,150	**32,596**
05	Wastes from petroleum refining, natural gas purification and pyrolytic treatment of coal	0	2,824	**2,824**
06	Wastes from inorganic chemical processes	0	10,210	**10,210**
07	Wastes from organic chemical processes	759	555	**1,314**

[7] New Methodology to Estimate Waste Generation by the Commercial and Industrial Sector in England – Project Report: Final (EV0804), Jacobs for DEFRA (August 2014)

08	Wastes from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks	0	1,374	**1,374**
10	Wastes from thermal processes	515,806	2,589	**518,395**
11	Wastes from chemical surface treatment and coating of metals and other materials, non-ferrous hydro-metallurgy	0	152	**152**
12	Wastes from shaping and physical and mechanical surface treatment of metals and plastics	376	230	**606**
13	Oil wastes and wastes of liquid fuels (except edible oils, and those in chapters 05, 12 and 19)	33	1,072	**1,105**
14	Waste organic solvents, refrigerants and propellants (except 07 and 08)	0	891	**891**
15	Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified	412	24,503	**24,915**
16	Wastes not otherwise specified in the list	11,303	15,619	**26,922**
17	Construction and demolition wastes (including excavated soil from contaminated sites)	135,114	43,477	**178,591**
18	Wastes from human or animal health care and/or related research (except kitchen and restaurant wastes not arising from immediate health care)	0	0	**0**
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use	36,428	96,481	**132,909**
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions	187,476	11,130	**198,606**
Total		**915,634**	**216,391**	**1,132,025**

5.33 In order to begin the process of isolating the C&I waste fraction, the next stage is to deduct waste from a number of different streams from the headline figure set out above. These are:

- Mining Wastes (EWC Chapter 01)
- Agricultural Wastes (EWC Sub-Chapter 02 01)
- Construction, Demolition & Excavation Waste (EWC Chapter 17)
- Waste and Water Treatment Waste (EWC Chapter 19)
- Household Waste
- Hazardous Waste

5.34 The national methodology also discounted waste received at transfer facilities, as this will be recorded at its destination for treatment to avoid double counting. The same approach is applied to sites that operate as transfer facilities in North Lincolnshire.

Step 2: Inputs to Energy from Waste

5.35 There are no operational Energy from Waste (EFW) plants in North Lincolnshire.

Step 3: Exemptions

5.36 The national methodology identifies exempt activities that could make a notable contribution to the management of C&I waste, and therefore which ought to be captured in estimates generated. The types of activities and the number of registrations are shown in Appendix 1. Only those exemptions which were registered as managing non-agricultural alone were included.

Overall Estimated C&I Waste Arisings (2017)

5.37 The result of applying the adapted national methodology was an estimated 557,711 tonnes of C&I waste arising in North Lincolnshire in 2017.

Table 10: Estimated Commercial & Industrial Waste for North Lincolnshire (2017)

Management Routes	Estimated Tonnage
Inputs to Permitted Facilities	1,132,028
Inputs to Energy from Waste	0
Exemptions	0
Household Waste	-87,522
Construction, Demolition & Excavation Waste	-178,591
Mining, Agricultural & Wastewater Wastes	-152,380
Hazardous Wastes	-57,681
Inputs to Transfer Facilities	-98,143
Total	**557,711**

Construction, Demolition and Excavation Waste (CD&E)

5.38 CD&E waste consists of a range of waste materials from the construction and demolition industries, including excavation during construction activities. The majority of the CD&E waste tonnage consists of inert materials like soils, stones, concrete, bricks and tiles. It also includes some elements that are non-inert, for example, wood, metal, plastic, cardboard and residual household-like wastes.

5.39 The exact level of CD&E waste arising is difficult to measure for two principal reasons. First, much of this waste is re-processed/recycled and re-used on the same sites that they occur. This means it does not enter into the waste management system. Second, where waste is removed from a site for management, it is often dealt with at sites that are exempt from the Environment Agency's environmental permitting system. As such, they do not have a requirement to report annual throughput.

5.40 In order to gain insight into the level of CD&E waste produced in England, Government has undertaken various studies and surveys to understand the amount of CD&E waste that is being recycled/reused, or can potentially be used as secondary and recycled aggregate. The most recent study is dated 2005 (published in 2007). It provides information at the sub-regional level. It estimated that East Riding of Yorkshire, North Lincolnshire and North East Lincolnshire produced over 1.7 million tonnes of CD&E waste. It was estimated that 774,327 tonnes of recycled graded and ungraded aggregate was produced in the area. This represented around 45% of all CD&E waste arisings.

5.41 It is possible, using the Environment Agency's Waste Data Interrogator, to estimate the amount of CD&E waste arisings in North Lincolnshire. However, WDI only provides details of the waste deposited at those sites that hold a waste management permit. As such, it only covers a fraction of the CD&E waste that may be generated. Nonetheless, it provides useful data on the origin, type and fate of this waste, although not

all details are completely recorded. The definition of CD&E waste for the purpose of this document is from that used in the Construction, Demolition and Excavation Waste Arisings, Use & Disposal for England 2008 study. This was based on EWC codes[8]

5.42 Based on the WD1 2017 identified in Table 9 it is estimated that a total of 178,591 tonnes of CD&E waste arose in North Lincolnshire, of this 135,756 was managed locally with 43,477 being dealt with in other parts of the country. In relation waste received at management and treatment sites in North Lincolnshire, it is estimated that this totalled 292,154 tonnes. 135,756 tonnes were originated in North Lincolnshire, with the remainder – 156,398 tonnes being imported from other areas. Most of this was from elsewhere in the Yorkshire and Humber (93,030 tonnes) and East Midlands (39,066 tonnes) regions. The largest quantities of waste originated in North East Lincolnshire, Lincolnshire, London and unknown origins in Yorkshire and Humber.

Table 11: Construction, Demolition & Excavation Waste Received at Permitted Facilities in North Lincolnshire (Tonnes) (2008 to 2017)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total CD&E Waste Rec.	152,824	161,894	194,971	315,503	271,196	274,812	273,348	397,417	428,659	292,154
North Lincs Arising	115,712	92,595	116,414	147,591	139,440	107,467	94,493	105,052	146,694	135,756
Imports	37,112	62,299	78,557	167,611	134,757	167,345	178,854	292,365	281,965	156,398
% Imports	24%	43%	40%	53%	50%	62%	65%	74%	66%	54%

Source: Environment Agency, Waste Data Interrogator (2008 to 2017)

5.43 Table 12 (below) sets out the type of facilities that receive and manage CD&E in North Lincolnshire is managed, with most being dealt with at physical treatment facilities.

Table 12: Management of Construction, Demolition & Excavation Waste in North Lincolnshire (2012 to 2017) – By Facility Type

Facility Type	2012	2013	2014	2015	2016	2017
Biological Treatment	2,644.7	1,591.80	4,935.16	992.04	807.11	1,796.92
CA Site	914.26	1,037.99	2,455.18	2,417.83	2,308.28	2,396.22
Composting	-	-	-	-	-	1,920.54
Hazardous Waste Transfer	5,378.82	3,037.60	2,012.51	1,397.06	1,095.38	2,564.93
Hazardous Merchant Landfill	45,444.06	9,609.95	2,669.16	2,300.44	11,883.38	9,224.64
Inert Waste Transfer / Treatment	36,196	42,953	38,879	72,670	85,746.58	60,843.18
Metal Recycling	9,226.55	11,565.11	9,918.92	12,354.31	16,506.73	18,713.33
Non Hazardous Landfill	82,139.86	85,570.44	41,368.5	174,103.15	134,018.13	6,334.3
Non-Hazardous (SNRHW) Landfill	18.64	45.82	53	-	-	-
Non-Hazardous Waste Transfer	10,565.46	1,378.80	2,277	3,847.19	7,527.27	4,171.62
Non-Hazardous Waste Transfer / Treatment	7,892.79	-	-	6,197.87	21,183.49	33,636.09
Physical Treatment	57,279.02	110,977.91	154,640.12	108,423.43	147,213.66	150,203.2

[8] Construction, Demolition & Excavation Waste Arisings, Use and Disposal for England (2008) – Table A1.1

Reclamation	2,658	-	-	-	-	-
Restricted Landfill	13,838.26	7,040.46	14,125.28	12,363.16	-	-
Vehicle Depollution Facility	-	2.90	13.64	350.80	369.38	349
Total	**274,196.42**	**274,811.78**	**273,347.47**	**397,417.28**	**428,659.39**	**292,153.97**

Source: Environment Agency, Waste Data Interrogator (2008 to 2017)

Hazardous Waste

5.44 Waste is defined as being "Hazardous Waste" where it has characteristics that make harmful to human health or the environment, either immediately or over an extended period of time. It is highly regulated through the EU Waste Framework Directive and the Hazardous Waste Regulations (2005) (and amendments). The European waste catalogue includes a list of wastes and criteria used to assess if a waste is hazardous.

5.45 The main sources of information about hazardous waste arisings and its management are the Environment Agency's Waste Data Interrogator (WDI) and Hazardous Waste Data Interrogator (HWDI) databases. The latest editions were issued in October 2018 and cover the arisings and management for 2017. The HWDI 2017 is the basis for information in this report. It should be noted that querying the two databases results in slightly different quantities of hazardous waste arising, and slightly greater detail can be generated by queries of the HWDI.

5.46 In 2017, over 4.95 million tonnes of hazardous waste was produced in England, with the Yorkshire & Humber region producing the largest quantity – over 830,000 tonnes. Table 15 show the total deposits at facilities in North Lincolnshire were 61,422.01 tonnes in 2017. Table 13 below the hazardous waste arisings in North Lincolnshire were 57,681 tonnes in 2017. Most of North Lincolnshire hazardous waste arisings is not managed at facilities in the area and is exported elsewhere and this amounted to 76% of all hazardous waste arisings. The majority of deposits at facilities in the area are a result of imports from other regions.

Table 13: Hazardous Waste Arisings in North Lincolnshire (2007 to 2017)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Nth Lincs Arisings	17,977.5	21,287.9	43,431.5	40,733.9	37,985.9	70,659.8	42,177.2	34,022.8	54,655.9	57,061	57,681
Managed Locally	1,487.8	2,056.9	25,390.2	21,988.8	21,661.9	26,961.7	5,840.4	920	14,404	15,045.5	13,846.9
Exports	16,489.7	19,231	18,041.3	18,745.1	16,324.1	43,698.1	36,336.8	33,101.7	40,251.9	42,015.5	43,834.1

Source: Environment Agency Hazardous Waste Data Interrogator (2007 to 2017)

5.47 Table 14 (below) shows the hazardous waste arisings in North Lincolnshire by substance. The largest quantity was thermal process waste (inorganic).

Table 14: Hazardous Waste Arisings in North Lincolnshire (2015, 2016 & 2017) (By Substance)

	Hazardous Waste Substances Arising in North Lincolnshire	2015 Arisings (tonnes)	2016 Arisings (tonnes)	2017 Arisings (tonnes)
01	Mining and Minerals	0	0	0.03
02	Agricultural & Food Production	0	0	0.04
03	Wood and Paper Production	11.39	13.2	0
05	Petrol, Gas and Coal Refining/Treatment	1,661.85	1,868.1	6,625.71
06	Inorganic Chemical Processes	59.15	198.8	106.09
07	Organic Chemical Processes	257.63	407.2	293.07
08	MFSU Paints, Varnish, Adhesive and Inks	771.02	952.7	1,045.71

09	Photographic Industry	3.54	4.5	3.46
10	Thermal Process Waste (inorganic)	36,236.46	38,012.2	30,316.43
11	Metal Treatment and Coating Processes	230.08	112.9	121.16
12	Shaping/Treatment of Metals and Plastics	250.65	596.7	122.27
13	Oil and Oil/Water Mixtures	7,692.24	6,834.3	7,654.15
14	Solvents	809.65	649.9	931.95
15	Packaging, Cloths, Filter Materials	1,021.08	929.9	991.48
16	Not Otherwise Specified	1,943.04	1,810.2	4,765.61
17	C&D Waste and Asbestos	2,781.46	3,663.3	2,821.26
18	Healthcare	388.16	393.4	388.49
19	Waste/Water Treatment and Water Industry	21.68	52.4	829.14
20	Municipal and Similar Commercial Wastes	516.84	560.5	0
	Total	**54,655.9**	**57,060.2**	**57,016**

Source: Environment Agency Hazardous Waste Interrogator, 2015, 2016 & 2017

5.48 The majority of hazardous waste managed at facilities in North Lincolnshire is imported from other areas. The total amount of hazardous waste received at facilities in the area is set out in Table 16 (below) which show that in 2017 61,422.01 tonnes was deposited in North Lincolnshire facilities.

Table 15: Hazardous Waste Deposits in North Lincolnshire (2007 to 2017)

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
77,643.3	58,352	57,845.7	45,458.5	46,306.1	64,537.4	33,052	7,524.26	53,868.9	63,654.53	61,425.5

Source: Environment Agency Hazardous Waste Data Interrogator (2007 to 2017)

5.49 The Hazardous Waste Data Interrogator also provides details of how the hazardous waste received at facilities in North Lincolnshire is managed and/or treated. Table 16 (below) provides an overview of how this waste is managed/treated.

Table 16: Hazardous Waste Deposits in North Lincolnshire – Fates (2007 to 2017)

	Landfill	Incineration with Energy Recovery	Incineration without Energy Recovery	Recovery*	Transfer (D)	Transfer (R)	Treatment	Total
2007	55,311.18	19,240.63	0	1,583.91	11.07	164.11	1,337.42	**77,648.32**
2008	44,568.24	10,672.02	0	1,751.32	86.33	11.62	1,256.52	**58,346.05**
2009	32,800.58	23,229.51	0	676.52	22.39	41.91	1,074.84	**57,845.75**
2010	24,053.68	20,064.39	0	429.93	22.36	41.42	846.76	**45,458.54**
2011	23,599.38	20,429.84	0	1,897.49	6.26	24.45	348.7	**46,306.12**
2012	35,773.19	17,938.91	0	10,743.57	38.2	43.53	0	**64,537.4**
2013	8,138.53	18,484.4	0	6,336.8	23.6	68.7	0	**33,052.03**
2014	4,510.44	407.58	0	902.23	0.02	1,703.97	0	**7,524.94**
2015	12,043.48	27,476.8	0	14,330.3	0.34	17.94	0	**53,868.87**
2016	14,229.33	32,084.54	0	14,342.02	2.21	2,983.42	0	**63,641.52**
2017	7,619.03	27,513.9	0	12,713.11	2.64	13,573.33	0	**61.422.01**

*Prior to 2010, this category was known “Recycling/Re-use”.**Source**: Environment Agency Hazardous Waste Data Interrogator (2007 to 2017)

Agricultural Waste

5.50 The Agriculture Act 1947 defines agricultural premises as being those use for horticulture, fruit growing, seed growing, dairy farming, livestock breeding and keeping, grazing land, meadow land, osier land, market gardens and nursery grounds. Woodlands are also included within this definition, where their use is ancillary to the use of land for other agricultural purposes, as well as all arable farming.

5.51 Agricultural waste is any substance or object from premises used for agriculture or horticulture, that the owner/operator throws away, intends to throw away or is required to throw away. It is waste specifically generated by agricultural activities. Some examples of agricultural waste include empty pesticide containers; old silage wrap; out of date medicines and wormers; used tyres; or surplus milk. Since 2006, agricultural waste has been subject to the same controls that have applied to other sectors for many years. In May 2006, the uncontrolled burning or tipping of waste on farms became illegal.

National Information

5.52 Information on agricultural waste is limited, and some of the information that is available is dated. Accordingly, the arisings are considered to be best estimates.

5.53 Nationally, DEFRA has published estimates for agricultural waste generated for the purposes of reporting required by relevant EU legislation. However, these estimates for the combined amount of waste produced by the agriculture, forestry and fishing, and are not broken down by sector or geographic area (except England). Furthermore, they only cover non-natural agricultural waste.

Table 17: Waste Generation from Agriculture, Forestry & Fishing Sectors (England) (2010, 2012 & 2014)

	Tonnes		
	2010	**2012**	**2014**
Used Oils	21,571	22,067	20,591
Chemical Wastes	103,009	95,281	105,708
Health Care & Biological Wastes	1,021	1,015	1,025
Metallic Wastes (Mixed)	954	4,254	4,449
Paper & Cardboard Wastes	5,843	5,678	5,629
Rubber Wastes	21,798	10,696	11,316
Plastic Wastes	82,291	82,293	82,268
Discarded Equipment	9	9	10
Discarded Vehicles	31,071	38,798	26,742
Batteries & Accumulators' Wastes	3,110	3,176	3,363
Animal & Mixed Food Waste	14,348	14,169	14,109
Household & Similar Wastes	478	777	777
Mixed & Undifferentiated Wastes	2,986	8,947	11,711
Other Mineral Wastes	-	21,293	19,919
Mineral Waste from Waste Treatment & Stabilised Waste	20,919	-	-
Total Waste Generated	**309,408**	**308,3**	**307,617**

Source: UK Statistics on Waste (December 2016), DEFRA – Tables 5.5 & 5.7

Waste Data Interrogator

5.54 The EA's WDI (2017) can be used to identify agricultural waste received at permitted sites. The WDI uses to the EWC classifications to differentiate between waste types. Agricultural waste forms part of EWC Chapter 02 – Agricultural and Food Processing Waste. Within this chapter, there are a number of sub-chapters.

5.55 Agricultural waste falls within sub-chapter 02-01: Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing. The WDI 2017 shows that nationally (England-level) and regionally (Yorkshire & Humber) 1,148,555 tonnes and 144,447 tonnes of agricultural waste respectively were received at permitted facilities. At the local level, it shows 21,500.32 tonnes of agricultural waste were received at facilities in North Lincolnshire. Approximately 80%originated in North Lincolnshire, with remainder being imported from other areas including the East Midlands, North East and other parts of Yorkshire & Humber. The largest quantities were manures and effluents, and waste metal.

Table 18: Agricultural Waste Received At Facilities In North Lincolnshire – Based on EWC Sub-Chapter 02-01 (2016 & 2017)

EWC Code	Description	Tonnage (2016)	Tonnage (2017)
02-01-01	Sludges from washing and cleaning	234.6	25.5
02-01-03	Plant-tissue waste	762.6	1,170.41
02-01-06	Animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off-site	5,218.92	16,647.41
02-01-10	Waste metal	3,721.11	3,657
Total - Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing		**9,937.23**	**21,500.32**

Source: Environment Agency, Waste Data Interrogator (2016 & 2017)

Linking Waste Arising to Farm Holdings

5.56 A number of other waste planning authorities have sought to extrapolate available data on the number of farm holdings or area farmed and the amount of waste generated.

5.57 Data on the number of farm holdings as well as the amount of area farmed in England and Wales is set out in DEFRA's *Annual Agricultural Census by Region & Farm Type*. The key dataset is the Local Authority Breakdown for Key Crops Areas and Livestock Numbers on Agricultural Holdings. The latest version is dated 2014 and sets out data for 2013 on the number of farm holdings by region and local authority area.

5.58 The data from Annual Agricultural Census shows that there were 12,035 farm holdings and 1,091,407 hectares being farmed in the Yorkshire & Humber in 2013. The same data shows that North Lincolnshire had 496 farm holdings and 60,339 hectares being farmed, representing 0.48% and 0.66% of the total holdings and are being farmed in England.

Table 19: Agricultural Holdings & Area Farmed for England, Yorkshire & Humber and North Lincolnshire (2013)

	England	Yorkshire & Humber	North Lincolnshire	% of National
Number of holdings	102,836	12,035	496	0.48%
Farmed area (hectares)	9,086,480	1,091,407	60,339	0.66%

Source: DEFRA, Structure of the Agricultural Industry (2014)

5.59 The first approach assumes that the agricultural waste produced in North Lincolnshire is in proportion to the number of farm holdings and/or area being farmed. This would suggest that between 0.48% and 0.66% of

the country's agricultural (non-natural) waste is produced in the area. Extrapolating the information from Table 19 to the local level, shows that between 1,477 tonnes and 2,030 tonnes of non-natural agricultural waste is produced in North Lincolnshire.

5.60 The second approach involves scaling down the agricultural waste arisings data for the Yorkshire and Humber region. This data is set out in Appendix C of the Environment Agency's publication "*Towards Sustainable Agricultural Waste Management*" (2001) and provides estimates for 1998. It is noted that this data is dated, however it remains amongst the best available. Using this methodology, it is assumed that that the type of on-farm activities that create waste has not changed significantly since the data was published. This may mean that there is some inaccuracy. Based on the information set out in Table 20, North Lincolnshire contains 4.1% of the region's total farm holdings.

Table 20: Agricultural Waste Arisings in North Lincolnshire.

Waste Type	Tonnage (Yorkshire & Humber)	Tonnage (North Lincolnshire)
Plastic Packaging	2,495	103
Cardboard & Paper Packaging	770	32
Metal, Glass, Wood & Rubber Packaging	195	8
Other Non-Packaging Plastics	6,381	263
Agrochemicals	7,098	293
Animal Health Products	7,276	300
Machinery Waste (Oils, Batteries, Tyres, Redundant Machinery)	7,769	320
CD&E Waste (Asbestos Cement Bonding Roof Sheeting)	2,160	89
Organic By-Products Waste (Slurry, Waste Milk, Straw)	8,186,371	337,510
Animal By-Products	24,260	1,004
Tonnage	**8,244,775**	**339,222**

Source: Environment Agency (2001) Towards sustainable agricultural waste management, Appendix C; Defra (2013) June Census Local Authority breakdown for key crops areas and livestock numbers on agricultural holdings

Managing Agricultural Waste

5.61 In terms of management of agricultural waste, information is again limited. As mentioned previously in Table 18, the WDI 2017 recorded that over 21,500 tonnes of agricultural waste (EWC Sub-Chapter 02-01) being received at permitted facilities in North Lincolnshire. It showed that this waste was managed at three facilities. The waste metal was handled a vehicle depollution facility (J & S Metals Ltd), whilst the animal faeces, urine and manure were received for treatment at two on-farm anaerobic digestion plants (Rockscape Energy Ltd and Singleton Birch) and the plant-tissue waste was composted (Bioganix Ltd). The sludges from washing and cleaning were deposited a biological treatment facility (Scunthorpe STW).

5.62 A number of authorities have sought estimate to the potential treatment/management options for each type of agricultural waste, based on upon an estimate of current practice, and an assumption that current practice is the most appropriate when compared to the Waste Hierarchy. Table 21 set outs current and potential management routes base on this premise. It is likely that the virtually all agricultural waste will be dealt with on site with the remainder potentially falling to the Commercial and Industrial Waste category for management at third party sites.

Table 21: Agricultural Waste Arisings in North Lincolnshire	
Waste Management Route (Optimum Route – within Waste Hierarchy).	**Tonnage (Estimated)**
On Farm Management	
Composting on site/Land recovery/treatment on site/products used for agricultural purposes	**337,510**
Off Farm Management	
Recycling	726
Treatment Plant/Incineration	593
Animal By-Products Incineration	1,004
Landfill	0
Hazardous Landfill	89
Off Farm Management - Total	**2,412**
Total Arisings	**339,922**

Source: Environment Agency, Waste Data Interrogator (2016 & 2017)

5.63 Based on Table 21, it is suggested that the majority of agricultural waste is managed on site, with around 2,400 tonnes managed off site.

Agricultural Waste Exemptions

5.64 A factor to consider as part of examining agricultural waste arisings and management is the system of waste exemptions, including for agricultural waste. A waste exemption is a waste operation that is exempt from needing an environmental permit. Each exemption has specific limits and conditions that the holder must operate within. In 2010, the system was amended, that required farmers to re-register their exemptions covering a number of practices e.g land spreading and depositing dredgings clear from ditches along their banks. The requirement to re-register was introduced in October 2013.

5.65 There are 30 exemptions relating to agricultural activities. The amended system still includes nearly all existing exemption activities, all there may be some changes to the limits and conditions with the exemptions. As well as the new exemption regulation, consideration needs to be given to fact that more waste is likely to be recycled rather than landfilled. Most agricultural waste will still be managed on farms.

5.66 Contact will be made with the Environment Agency to obtain relevant information on waste exemptions.

Low Level (Non-Nuclear) Radioactive Waste

5.67 Almost all (98%) of the Low Level Radioactive (LLR) Waste arising in the UK is from the nuclear industry either from operation of nuclear power stations, nuclear fuel reprocessing facilities, and also from the decommissioning and clean-up of nuclear sites. North Lincolnshire does not have a nuclear industry presence. The remaining 2% is produced by non-nuclear industry users of radioactivity. These producers include hospitals, universities, research establishments and the oil and gas industries.

5.68 The EA regulate how users of radioactive substances dispose of their LLR waste. They do this by granting permits that place limits on disposal of solid waste to land and on discharges to water and air. In February 2016, the UK Government published an updated UK Strategy for the Management of Solid Low Level Waste from the Nuclear Industry. The strategy was prepared by the Nuclear Decommissioning Authority (NDA) and sets out the need to apply the waste hierarchy, make best use of existing LLR Waste management assets and the need for new fit-for-purpose waste management routes for LLR Waste.

5.69 The volumes of solid Low Level Radioactive Waste including VLLW - produced by the non-nuclear industries are extremely small compared with the total volume of municipal, construction and industrial wastes.

Government estimates that volumes are unlikely to exceed 0.1% of the annual quantities of all waste handled in England.

5.70 Where establishments use radioactive substances as part of their activities, they are required to have a Radioactive Source Permit issued by the Environment Agency. Details are available on the Agency's Public Registers website. A search of these records showed that there are four entities/establishments that use radioactive substances. This mean that is possible that they may generate some Low or Very Low Level Waste that will need to be disposed of offsite. Table 22, shows the four establishments and the number of authorisations they hold to use radioactive substances.

Table 22: Establishments with Radioactive Source Permits in North Lincolnshire

Entity	Site	Number of Authorisations
Egdon Resources Ltd	Wressle 1 Well Site, Lodge Farm, Clapp Gate, Scunthorpe, DN15 0DB	This data is not available
Longs Steel UK Limited	Scunthorpe Steelworks, PO Box 1, Brigg Road, Scunthorpe, DN16 1BP	This data is not available
Phillips 66 Limited	The Humber Refinery, Eastfield Road, South Killingholme, Grimsby, DN40 3DW	This data is not available
Total Lindsey Oil Refinery Limited	Lindsey Oil Refinery, Eastfield Road,, Immingham, DN40 3LW	This data is not available

Source: Environment Agency, Public Registers (accessed September 2017)

5.71 It is not possible to generate any meaningful estimates or calculations regarding the amount Low Level Waste produced in the area, due to a lack of data on the subject. Given that Government state that volumes nationally are only likely to be 0.1% of all waste generated, it can potentially be used that local volumes are also limited.

5.72 With regard to management and disposal the potential options include:

- Disposal of some liquid wastes as waste water;
- Controlled burial at a very limited number of permitted landfill sites;
- High temperature incineration at an even more limited number of specialised facilities; or in certain circumstances
- Long-term storage at the UK Low Level Radioactive Waste Repository in Cumbria.

5.73 Contact has been made with the Environment Agency regarding this waste type to ascertain whether there is any available information.

Wastewater / Sewerage Sludge

5.74 Wastewater is the water disposed of by domestic properties or following industrial activities. This includes sewerage, as well as waste from other activities. Planning practice guidance identifies that plan making may need to consider the sufficiency and capacity of wastewater infrastructure and the circumstances where wastewater from new development would not be expected to drain to a public sewer.

5.75 With North Lincolnshire, statutory responsibility for water supply, foul sewerage and waste water is divided between three companies – Anglian Water Services, Severn Trent and Yorkshire Water. Anglian Water provides water supply and sewerage services in the majority of the North Lincolnshire to the east of the River Trent (excluding Scunthorpe). In Scunthorpe and the area to the south of the town, they are solely responsible for water supply provision. Severn Trent Water provides sewerage services in Scunthorpe and areas to the south of the town as well as the Isle of Axholme, whilst Yorkshire Water is responsible for the provision of water supply to the north western parts of North Lincolnshire, which in practice is the Isle of Axholme.

5.76 There are 24 Sewage Treatment Works (STWs), also known as Waste Water Treatment Works (WWTWs) in North Lincolnshire – 11 operated by Anglian Water and 13 by Severn Trent Water. Anglian Water also operates a water treatment works at Elsham and an STW at North Kelsey, which is not in North Lincolnshire, but handles waste water from the Cadney & Howsham areas.

Table 23: Sewage Treatment Works/Waste Water Treatment Works in North Lincolnshire	
Anglian Water STWs	**Severn Trent Water STWs**
• Barnetby • Barton upon Humber • Brigg • Broughton • Dragonby • Hibaldstow • North Ferry • South Killingholme • Ulceby • Whitton • Winteringham	• Alkborough • Burton upon Stather • Crowle • Folly Drain (between Epworth & Sandtoft) • Trent Bank (between Burringham & East Butterwick) • West Butterwick • Yaddlethorpe (Scunthorpe) • Wroot

Source: Infrastructure Delivery Plan (2010), North Lincolnshire Council

5.77 These facilities undertake initial treatment of sewage, which in turn produces three outputs: decontaminated water that is discharged into watercourses; soild residues and semi-liquid sludges that require further treatment or disposal to usually to landfill or at other specialised facilities.

5.78 Information about the volumes of waste water and sewage sludge arisings is limited. The WDI 2017 shows that there is only one site permitted to treat waste water and sewage sludge in North Lincolnshire – the Scunthorpe Sewage Treatment Works, which is located to the south east of the Scunthorpe. This facility is operated by Severn Trent Water

5.79 The operations of water companies are planned on five-year cycles known as Assessment Management Periods (AMPs). For the next five year Asset Management Programme (AMP6) UK water companies will come under increased pressure to improve their relative efficiency whilst achieving improved wastewater effluent quality. This need is being driven by regulators, customers' expectations and increased competition within the water industry. In 2016, the water companies began to prepare for the seventh period (AMP7). This will include assessing the need to for new waste water infrastructure after 2020.

5.80 All water companies are required to prepare Water Resources Management Plans (WRMPs) that look ahead 25 years or more. Planning now covers the period 2015 - 2040. These plans conform to UK legislation and Environment Agency guidelines to ensure companies have sufficient water to supply the public and maintain adequate water in the environment. All three companies serving North Lincolnshire have prepared a WRMP.

5.81 The key issue for the North Lincolnshire Local Plan (2017 to 2036) is whether there will be a need to identify and allocate land to either accommodate expanded or additional WWTW facilities, as part of providing critical infrastructure in the correct locations and the most appropriate time. The general rule is for additional capacity to be located at, or adjacent to existing facilities.

5.82 The main providers (Anglian Water and Severn Trent Water) of waste water treatment facilities will be contacted in order to obtain details about sewage sludge arisings and broader capacity requirements. The will be involved in consultations on the Local Plan as it develops and the spatial strategy emerges.

6. WASTE MOVEMENTS (IMPORTS & EXPORTS)

6.1 As a waste planning authority, North Lincolnshire Council is required to plan for sufficient waste management capacity to deal with the waste arising in its area. However, it needs to be recognised that waste management is a highly commercialised industry. This means that it is based on various commercial decisions, which do not necessarily respect local authority boundaries or in some cases, national or international borders.

6.2 The nature of the industry means that waste travels across local authority boundaries to be managed, treated or disposed of. Among the factors that influence this, include the type and amount produced, availability of facilities and the cost of transport as well as commercial contracts between those creating the waste and those dealing with it. Economic conditions also have a bearing. For some types of waste, there may only be a few facilities in the country that deal with certain types of waste.

6.3 A large proportion of the waste managed at facilities in North Lincolnshire is imported from other parts of the country. Equally, a proportion of the waste generated in North Lincolnshire is exported to facilities in other areas. Therefore, having a good understanding of the waste movements to and from the area is important in identifying the level of waste that needs to be managed over lifetime of the Local Plan as well as the type and capacity of facilities needed. Analysing waste movements also allow us to identify any specific trends or patterns, and whether flows are temporary or permanent, long or short term. As part of this we will need to examine whether or not, capacity will continue to be available to deal with the waste exported from North Lincolnshire.

6.4 Information on waste movements to/from North Lincolnshire within England and Wales is available from the Environment Agency's WDI and HWDI databases.

6.5 The Localism Act 2011 introduced a Duty to Co-operate (DtC) obligation on public sector bodies including local planning authorities on issues that have cross boundary impacts. This duty is further highlighted in the NPPF (paragraph 27) which expects us "*to demonstrate evidence of having effectively cooperated to plan for issues with cross-boundary impacts*". It applies to development and use of certain infrastructure which involves two or more authorities and occurs on such a scale that it is considered to be strategic. NPPF paragraph 20 highlights those infrastructure developments that are considered to be strategic, including waste management.

6.6 There is no particular "rule of thumb" regarding the quantity of waste that is considered strategic. At regional (Yorkshire & Humber) level, a Memorandum of Understanding has been produced by the Yorkshire & Humber Waste Technical Advisory Body to assist each authority (including North Lincolnshire) to meet the DtC on cross boundary waste planning matters. However, this does not specific any thresholds for strategic waste movements. Emerging practice suggests that 1,000 tonnes should be used as a threshold for non-hazardous waste and 100 tonnes for hazardous waste. These thresholds will be used as part on any ongoing DtC activities.

6.7 Given the circumstances, outlined in paragraphs 6.1 and 6.2 above, it is likely that waste movements to/from North Lincolnshire will continue for all or some of the Local Plan period. As part of meeting the DtC, we will need to establish how much capacity in other areas will be available and for how long.

6.8 The WDI 2017 provides information on the waste deposited at permitted waste sites including the origin of waste arisings by Waste Planning Authority (WPA), however, it also contains waste deposits where the origin is only defined at regional level. This anomaly cannot be corrected from the available information sources and such material is excluded from this analysis, which therefore refers to the minimum quantities exported where this is known to originate locally.

Exports Originating in North Lincolnshire

6.9 The WDI 2017 shows in Table 24 that 216,392.99 tonnes of waste was received at facilities situated in other waste planning authority areas that originated in North Lincolnshire.The amount of hazardous waste exports recorded in the WDI 2017 is relatively small and does not give as true picture as the HWDI. Given this, the HWDI 2017 will be used to establish the level of hazardous waste exports (see below).

Table 24: Waste Arising in North Lincolnshire – Received at Facilities Elsewhere (2015, 2016 & 2017) – By Region

Regions	Tonnage (2015)	Tonnage (2016)	Tonnage (2017)
East Midlands	57,745.37	30,032.26	31,196.12
East of England	568.90	6,316.07	46.73

London	5.24	0.00	10.98
North East	12,163.94	28,157.96	47,994.51
North West	231.06	1,707.18	3,340.63
South East	20.96	2.61	3.16
South West	0.68	12.15	63.51
West Midlands	3,217.53	565.21	3,092.16
Yorkshire & Humber*	155,196.12	131,100.71	130,645.19
Total	**229,149.81**	**197,894.15**	**216,392.99**

* **Source**: Environment Agency, Waste Data Interrogator (2015, 2016 & 2017) * Excluding North Lincolnshire

6.10 The largest amount was received at facilities in the Yorkshire and Humber region (excluding North Lincolnshire), followed by the North East and the East Midlands. Table 25 shows the biggest flows (more than 10,000 tonnes) were to Middlesbrough, North East Lincolnshire, Leeds, Lincolnshire, Wakefield, Doncaster and East Riding of Yorkshire.

Table 25: Waste Arising in North Lincolnshire – Received at Facilities Elsewhere (2017) – By Waste Planning Authority (> 1,000 tonnes)

Waste Planning Authority	Region	Tonnage
Middlesbrough	North East	39,173.90
North East Lincolnshire	Yorkshire & Humber	30,212.46
Leeds	Yorkshire & Humber	29,504.12
Lincolnshire	East Midlands	21,930.65
Wakefield	Yorkshire & Humber	18,256.05
Doncaster	Yorkshire & Humber	15,595.89
East Riding of Yorkshire	Yorkshire & Humber	14,732.16
Rotherham	Yorkshire & Humber	9,259.61
North Tyneside	North East	8,364.35
Kingston upon Hull	Yorkshire & Humber	7,119.94
Nottingham City	East Midlands	6,580.04
Sheffield	Yorkshire & Humber	3,807.60
Walsall	West Midlands	2,887.94
Derbyshire	East Midlands	2,178.03
Knowsley	North West	1,773.33
North Yorkshire	Yorkshire & Humber	1,440.74
Liverpool	North West	1,114.80

Source: Environment Agency, Waste Data Interrogator (2017)

Imports

6.11 During 2017, around 69% (around 2 million tonnes) of the waste received at management and treatment facilities in North Lincolnshire was imported from elsewhere in the United Kingdom. The largest quantities originated from other areas of the Yorkshire & Humber region (excluding North Lincolnshire), the East Midlands and London. Table 26 shows the breakdown of waste origins by region, whilst Table 27 shows them by waste planning authority.

Table 26 Waste Imported to North Lincolnshire – Origins (By Region) (2015 to 2017)			
Regions	**Tonnage**		
	2015	**2016**	**2017**
East Midlands	300,557.17	391,151.37	441,861.06
East of England	9,874.27	9,745.95	11,697.21
London	317,376.62	147,464.52	10,907.21
North East	698.24	9,457.95	5,389.71
North West	24,659.70	28,460.37	67,608.24
Northern Ireland	708.12	1,300.39	1,477.14
Outside UK	0.00	8,085.20	19,778.76
Scotland	557.74	2,147.19	13,850.47
South East	404.56	3,319.82	16,175.16
South West	100.14	6,815.69	13,323.35
Wales	104.37	2,184.56	9,030.01
West Midlands	4,315.87	8,451.65	6,582.62
WPA Not Codeable	24.40	0.00	0.00
Yorkshire & Humber*	616,114.78	895,774.50	1,454,213.12
Total	**1,275,495.98**	**1,514,359.16**	**2,071,894.06**

*Excludes waste arisings from North Lincolnshire **Source**: Environment Agency - Waste Data Interrogator (2015 to 2017)

Table 27: Waste Imported to North Lincolnshire – Origins (By Waste Planning Authority) (2017) (> 1,000 tonnes)		
Waste Planning Authority	**Region**	**Tonnage**
Yorks & Humber (WPA Not Codeable)	Yorkshire & Humber	694,682.62
Lincolnshire	East Midlands	396,982.07
Doncaster	Yorkshire & Humber	381,276.37
North East Lincolnshire	Yorkshire & Humber	209,041.07
South Yorkshire (WPA Not Codeable)	Yorkshire & Humber	58,578.03
Manchester	North West	52,477.19
Leeds	Yorkshire & Humber	51,027.55
East Riding of Yorkshire	Yorkshire & Humber	22,807.96
Barnsley	Yorkshire & Humber	22,113.64
Outside UK	Outside UK	19,778.76
East Sussex	South East	14,538.93
Scotland (WPA Not Codeable)	Scotland	12,182.85
Nottinghamshire	East Midlands	11,917.89
Cornwall	South West	11,869.32
Leicestershire	East Midlands	11,688.61
Nottingham	East Midlands	10,105.33
London (WPA Not Codeable)	London	9,708.85

Merseyside (WPA Not Codeable)	North West	8,972.63
City & County of Swansea	Wales	6,893.82
Derbyshire	East Midlands	6,261.72
Kingston upon Hull	Yorkshire & Humber	5,451.58
Cambridgeshire	East of England	5,310.80
Norfolk	East of England	5,058.78
Northamptonshire	East Midlands	4,596.90
Rotherham	Yorkshire & Humber	3,095.08
Wakefield	Yorkshire & Humber	2,998.63
Cumbria	North West	2,621.12
Shropshire	West Midlands	2,484.34
Wolverhampton	West Midlands	1,805.57
St Helens	North West	1,597.20
Hartlepool	North East	1,563.18
Wales (WPA Not Codeable)	Wales	1,486.58
Northern Ireland	Northern Ireland	1,477.14
County Durham	North East	1,262.96
North Yorkshire	Yorkshire & Humber	1,200.21
Sheffield	Yorkshire & Humber	1,095.03
Barking & Dagenham	London	1,058.06

Source: Environment Agency - Waste Data Interrogator (2017)

6.12 The Yorkshire & Humber region (unknown origin) was the largest source of waste imported into North Lincolnshire. The next largest amounts of waste were imported from Lincolnshire, Doncaster, North East Lincolnshire, South Yorkshire, Manchester and Leeds. In previous years, a significant quantity of waste was imported by rail from the Greater Manchester area to the Roxby Landfill for disposal. This flow has now ceased, following the procurement of new contracts to manage this waste.

Hazardous Waste Movements

6.13 The majority of hazardous waste deposits for management/treatment at facilities in the area are a result of imports from other regions on the United Kingdom. In 2017, this amounted to 47,574.61 tonnes, which is slightly less than 2016, but still greater than those received in 2014 and 2015. Table 28 (below) provides an overview of hazardous waste imports to the area since 2007.

Table 28: Hazardous Waste Imports to North Lincolnshire (2007 to 2017)

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
76,155.46	56,295.1	32,455.48	23,469.7	24,644.2	37,575.7	5,840.4	6,603.2	39,464.8	48.595.99	47,574.61

Source: Hazardous Waste Data Interrogator (2007 to 2017), Environment Agency

6.14 Hazardous waste is, or has been, imported to North Lincolnshire from most parts of the UK, generally with the exception of Northern Ireland. Information for 2017 suggests that no hazardous waste was received from the London, South East, South West, Scotland and Wales. The largest quantities originated from the East Midlands (25,754.59 tonnes), Yorkshire & Humber (19,563.98 tonnes) (excluding North Lincolnshire) and the North East of England (2,029.4 tonnes). Table 30 shows that Derbyshire was largest single source, followed by Sheffield and Leeds.

Table 29: Hazardous Waste Imports to North Lincolnshire – Origins (By UK Region) (2015, 2016 & 2017)			
Region	**Tonnage**		
	2015	**2016**	**2017**
East Midlands	27,813.23	30,601.35	25,754.59
East of England	2.14	0.00	20.00
London	3.06	0.00	0.00
North East	0.30	1,594.80	2,029.4
North West	38.31	14.28	170.84
Northern Ireland	0.00	0.00	0.00
Scotland	2.32	0.00	0.00
South East	0.73	0.00	0.00
South West	1.33	0.30	0.00
Unknown	6.50	0.00	0.00
Wales	0.32	24.60	0.00
West Midlands	5.21	2.60	35.82
Yorkshire & Humber*	11,591.39	16,358.70	19,563.98
Total	**39,464.84**	**48,595.99**	**47,574.61**
*excludes North Lincolnshire			

Source: Hazardous Waste Data Interrogator (2007 to 2017), Environment Agency

Table 30: Hazardous Waste Imports to North Lincolnshire – Origins (By Waste Planning Authority) (2016 & 2017)			
Waste Planning Authority	**Region**	**Tonnage (2016)**	**Tonnage (2017)**
Bradford	Yorkshire & Humber	95.14	8.3
Bristol, City of	South West	0.30	-
Cheshire East	North West	-	7.2
Cumbria	North West	-	79.2
Derbyshire	East Midlands	30,502.92	25,485.7
Doncaster	Yorkshire & Humber	346.32	550.6
East Riding of Yorkshire	Yorkshire & Humber	402.08	233.2
Flintshire	Wales	22.40	-
Halton	North West	14.28	-
Hertfordshire	East of England	-	20
Kingston upon Hull, City of	Yorkshire & Humber	60.20	378.9
Leeds	Yorkshire & Humber	11,746.03	3,243.8
Leicestershire	East Midlands	-	0.8
Lincolnshire	East Midlands	98.42	62.6
Liverpool	North West	-	81.2

Middlesbrough	North East	28.36	-
Newport	Wales	2.20	-
North East Lincolnshire	Yorkshire & Humber	574.16	1,563.0
North Yorkshire	Yorkshire & Humber	1.36	148.1
Nottinghamshire	East Midlands	-	205.5
Rotherham	Yorkshire & Humber	15.36	55
Sheffield	Yorkshire & Humber	3,118.05	13,370.6
Staffordshire	West Midlands	2.60	1.5
Stockport	North West	-	3.2
Stockton-on-Tees	North East	1,565.80	2,029.4
Wakefield	Yorkshire & Humber	-	11.6
Wolverhampton	West Midlands	-	34.4
York, City of	Yorkshire & Humber	-	0.8
Total		**48,595.98**	**47,574.6**

Source: Hazardous Waste Data Interrogator (2007 to 2017), Environment Agency

6.15 Of the hazardous waste arising in North Lincolnshire, over 45,000 tonnes is exported to other areas. Table 31 below shows that the West Midlands (18,156.52 tonnes) received that largest amount of waste, followed by the Yorkshire & Humber, East Midlands, North West and North East regions. Table 32 show Warwickshire received the largest quantity followed by Northamptonshire, Kingston upon Hull, Walsall, Stockton on Tees Hampshire and Liverpool.

Table 31: Hazardous Waste Exports from North Lincolnshire – Destinations (By UK Region) (2015, 2016 & 2017)

Region	Tonnage		
	2015	**2016**	**2017**
East Midlands	2,310.27	6,744.96	7,084.74
East of England	225.69	278.75	1,017.56
London	0.01	0.02	74.37
North East	1,109.09	3,536.87	2,611.53
North West	2,529.46	2,727.18	2,970.85
Northern Ireland	0.00	0.00	0.00
Scotland	0.00	0.00	0.00
South East	106.38	214.24	1,858.31
South West	36.42	191.74	325.57
Unknown	0.00	0.00	0.00
Wales	0.00	0.00	0.00
West Midlands	23,245.69	20,695.78	18,156.52
Yorkshire & Humber*	10,688.85	7,625.96	9,734.64
Total	**40,251.86**	**44,031.50**	**45,851.09**
*excludes North Lincolnshire			

Source: Hazardous Waste Data Interrogator (2007 to 2017), Environment Agency

Table 32: Hazardous Waste Exports from North Lincolnshire – Destinations (By Waste Planning Authority) (2017)		
Authority	**Region**	**Tonnage**
Warwickshire	West Midlands	13,059.22
Northamptonshire	East Midlands	4,727.98
Kingston upon Hull, City of	Yorkshire & Humber	4,474.07
Walsall	West Midlands	4,031.31
Stockton on Tees	North East	2,332.43
Hampshire	South East	1,834.63
Liverpool	North West	1,263.21
Lincolnshire	East Midlands	1,015.43
North Yorkshire	Yorkshire & Humber	939.83
Norfolk	East of England	929.72
Sandwell	West Midlands	927.78
Cheshire West & Chester	North West	831.39
Barnsley	Yorkshire & Humber	610.88
Rotherham	Yorkshire & Humber	588.55
Kirklees	Yorkshire & Humber	583.57
Sheffield	Yorkshire & Humber	561.31
North East Lincolnshire	Yorkshire & Humber	518.34
Leeds	Yorkshire & Humber	506.39
Derbyshire	East Midlands	494.80
Leicestershire	East Midlands	456.51
Wakefield	Yorkshire & Humber	403.07
Doncaster	Yorkshire & Humber	393.15
Nottinghamshire	East Midlands	383.02
Bristol, City of	South West	318.57
Trafford	North West	242.10
North Tyneside	North East	177.06
Lancashire	North West	153.93
Salford	North West	134.26
Cheshire East	North West	103.54
East Riding of Yorkshire	Yorkshire & Humber	99.67
Stoke on Trent	West Midlands	97.13
Sefton	North West	96.01
Redcar & Cleveland	North East	82.39
Havering	London	73.11
Knowsley	North West	63.77
Cambridgeshire	East of England	56.42
Bradford	Yorkshire & Humber	42.10
Peterborough	East of England	24.06
Worcestershire	West Midlands	23.67
Stockport	North West	22.06
Wirral	North West	17.99
Sunderland	North East	17.79

West Berkshire	South East	17.60
St Helens	North West	15.56
Rochdale	North West	15.51
York	Yorkshire & Humber	13.18
Staffordshire	West Midlands	7.04
Derby, City of	East Midlands	7.00
South Gloucestershire	South West	7.00
Hertfordshire	East of England	5.74
Wolverhampton	West Midlands	5.56
Birmingham, City of	West Midlands	5.00
Oldham	North West	4.70
Kent	South East	4.30
Wigan	North West	2.66
Blackburn with Darwen	North West	2.32
Suffolk	East of England	1.34
Northumberland	North East	1.11
Bury	North West	1.00
Surrey	South East	1.00
Bexley	London	0.80
Bolton	North West	0.78
Milton Keynes	South East	0.78
Middlesbrough	North East	0.75
Calderdale	Yorkshire & Humber	0.53
Newham	London	0.46
Shropshire	West Midlands	0.20
Essex	East of England	0.19
Thurrock	East of England	0.10
Manchester	North West	0.05
Halton	North West	0.02
Total		**43,834.50**

Source: Hazardous Waste Data Interrogator (2007 to 2017), Environment Agency

6.16 Table 33 show the majority of hazardous waste exported from North Lincolnshire sent for recovery. Prior to 2010, this category was known “Recycling/Re-use”.

Table 33: Hazardous Waste Exports From North Lincolnshire – Fates (2007 to 2017)

	Landfill	Incineration with Energy Recovery	Incineration without Energy Recovery	Recovery	Transfer (D)	Transfer (R)	Treatment	Rejected	Other Fate	Total
2007	848.66	418.04	946.36	8,715.47	789.10	1,435.63	3,302.70	33.60	0.00	**16,489.56**
2008	994.46	243.17	1,826.27	10,847.66	739.98	1,307.58	3,179.42	92.46	0.00	**19,231.00**
2009	1,161.19	240.12	2,418.58	8,770.21	607.14	1,544.15	3,253.55	46.50	0.00	**18,041.44**
2010	95.57	97.25	2,635.51	9,534.82	1,160.85	1,637.01	3,566.82	17.30	0.00	**18,745.13**
2011	476.60	230.90	638.11	8,159.57	1,411.72	2,658.59	2,745.58	0.00	3.00	**16,324.07**
2012	6,955.58	123.31	644.43	27,633.05	1,543.66	3,430.74	3,364.26	1.05	2.00	**43,698.08**

2013	3,424.16	129.57	205.77	24,331.95	588.75	3,056.64	4,595.44	4.50	0.00	**36,336.78**
2014	688.63	3.26	1,500.72	22,556.91	910.31	3,126.32	4,316.70	5.40	0.00	**33,108.25**
2015	1,064.71	160.07	727.11	29,441.49	1,320.18	3,745.55	3,792.55	0.21	0.00	**40,251.87**
2016	1,406.84	8.48	673.13	26,046.82	1,228.66	3,676.74	8,945.60	29.22	0.00	**42,015.49**
2017	721.34	387.86	3,361.88	21,758.06	906.96	4,451.21	12,209.19	37.58	0.00	**43,834.08**

Source: Hazardous Waste Data Interrogator (2007 to 2017), Environment Agency

Agricultural Waste

6.17 Table 34 shows that during 2017, the WDI showed that 3,417.16 tonnes of agricultural waste was imported from other areas to be managed at facilities in North Lincolnshire, including East Midlands and North East regions as well as other parts of Yorkshire & Humber. The largest quantity was received from Lincolnshire at 2,883.06 tonnes. In relation to exports of agricultural waste, 872 tonnes was exported to Leeds and 2 tonnes to North East Lincolnshire.

Table 34: Agricultural Waste Imports (2016 & 2017)

Arising Waste Planning Authority	Tonnage Received (2016)	Tonnage Received (2017)
Cumbria	83.42	-
Doncaster	0.00	-
East Riding of Yorkshire	0.00	-
Hartlepool	28.50	28.72
Leeds	168.76	311.76
Lincolnshire	992.28	2,883.06
North East Lincolnshire	500.24	-
North Yorkshire	0.00	49.96
Nottingham	-	28.72
Nottinghamshire	27.38	-
Sheffield	56.80	28.06
Stockton on Tees	-	27.56
WPA Not Codeable (East Midlands)	752.34	-
WPA Not Codeable (South Yorkshire	0.00	28.46
WPA Not Codeable (Yorks & Humber)	722.32	3
York	51.18	27.86
Total Imported Agriculture Waste	**3,383.22**	**3,417.16**

Source: Waste Data Interrogator (2016 & 2017), Environment Agency

Waste Removed From Permitted Sites

6.18 Not all waste received at permitted sites in North Lincolnshire is dealt with within these sites. In many cases, the waste is treated or prepared for onward shipment to other facilities elsewhere in the country or beyond for management and/or disposal. The WDI can be used identify these movements.

6.19 Table 35 shows the WDI (2017) shows that 1,277,740 tonnes of waste was removed from facilities in the area for management, treatment or disposal elsewhere. 741,822 tonnes were moved from one site in North Lincolnshire to another, with the remainder - 535,918 tonnes exported to other authority areas or beyond.

Table 35 – Waste Removed from Facilities				
Fate	**Destination North Lincolnshire (Tonnes)**		**Destination Outside North Lincolnshire (Tonnes)**	
	2016	**2017**	**2016**	**2017**
Incineration	0	0	23,615.29	21,575.08
Landfill	135,998.7	179,490.54	71.22	5,798.9
Recovery	377,291.22	393,266.72	127,200.74	187,125.33
Transfer	33,986.81	113,339.32	80,552.52	173,408.68
Treatment	53,509.2	55,720.79	120,790.69	146,444.36
Unknown Fate	485.87	4.43	3,164.04	1,565.33
Totals	**601,271.8**	**741,821.8**	**355394.50**	**535917.68**

Source: Waste Data Interrogator (2016 & 2017), Environment Agency

6.20 Table 36 show waste removed from permitted sites in North Lincolnshire to other waste planning authorities. The most common destination was the East Midlands, followed by other parts of the Yorkshire & Humber area, destinations outside the UK, Scotland and the North West of England.

Table 36: Waste Removed from Permitted Sites in North Lincolnshire – Destinations (by Region & Waste Planning Authority)				
Destination Region	**Destination Waste Planning Authority**	**Tonnage (2015)**	**Tonnage (2016)**	**Tonnage (2017)**
East Midlands	Derby	2,184.75	2,067.70	-
	Derbyshire	1,130.86	2,434.69	362.39
	Leicester	-	28.6	20.9
	Leicestershire	-	-	50.6
	Lincolnshire	185,060.79	150,906.81	261,947.9
	Northamptonshire	-	-	10,840.46
	Nottingham	918.11	665.64	582.46
	Nottinghamshire	937.33	636.21	5,078.82
	WPA Not Codeable (East Midlands)	5,196.01	1,829.01	139.2
		195,427.85	**158,567.64**	**279,022.73**
East of England	Cambridgeshire	-	-	112.2
	Essex	-	-	17.6
	Hertfordshire	-	-	11
	Norfolk	-	-	12.1
	Peterborough	2,054.68	1,120.46	3.3
	WPA Not Codeable (Bedfordshire)	-	-	846
	WPA Not Codeable (East of England)	-	20.45	-
		2,054.68	**1,140.91**	**1,002.2**
London	Barking & Dagenham	74.31	149.68	14.78
	Harrow	-	4,778.28	-
	WPA Not Codeable (South London)	-	-	4.3
	WPA Not Codeable (London)	3,520.97	4,863.47	-
		3,595.28	**9,791.43**	**19.08**

North East	County Durham	-	-	217.85
	Darlington	0.6	126.62	0.6
	Hartlepool	1,021.64	3,462.76	4,872.4
	Middlesbrough	8,949.96	18,850.71	-
	Newcastle upon Tyne	-	-	254.4
	Northumberland	12,916.22	11,006.39	14,865.9
	WPA Not Codeable (North East)	-	49.03	-
		22,888.42	**33,495.51**	**20,211.15**
North West	Blackpool	-	-	33.74
	Cheshire East	58	-	61.02
	Cheshire West & Chester	-	-	53.9
	Cumbria	-	200.1	90.22
	Lancashire	-	109	596.76
	Manchester	114.68	27	249.82
	St. Helens	-	-	3,910.58
	Warrington	15.53	-	-
	WPA Not Codeable (Cheshire)	30.57	4,693.23	15,394.27
	WPA Not Codeable (Merseyside)	-	-	3.3
	WPA Not Codeable (North West)	-	20.45	-
		218.78	**5,049.78**	**20,396.61**
Northern Ireland	WPA Not Codeable (Northern Ireland)	-	1,021.45	15.4
		-	**1,021.45**	**15.4**
Not Codeable	WPA Not Codeable	263.32	-	-
		263.32	**-**	**-**
Outside UK	Not Codeable (Outside UK)	50,532.42	55,068.45	39,504.17
		50,532.42	**55,068.45**	**39,504.17**
Scotland	Aberdeenshire	-	-	46
	Dumfries & Galloway	-	27	-
	Fife	-	-	2.2
	North Lanarkshire	-	12.84	-
	Stirling	-	1,396.42	21,060.49
	WPA Not Codeable (Scotland)	-	3,242.45	11,229.36
		-	**4,678.71**	**32,338.05**
South East	Buckinghamshire	-	-	1.1
	Hampshire	-	-	1
	Kent	-	-	12.1
	Oxfordshire	-	-	1.1
	WPA Not Codeable (South East)	-	20.45	-
		-	**20.45**	**15.3**
South West	Bristol	-	-	50.6
	Devon	26.5	-	-
	Dorset	-	-	7.7

	Wiltshire	22	-	291.3
		48.5	**20.45**	**349.6**
Wales	Cardiff	**-**	290.7	-
	Swansea	**-**	-	1.1
	Wrexham	-	27.4	-
	WPA Not Codeable (Wales)	1,162.21	1,413.72	1,647.4
		1,162.21	**1,731.82**	**1,648.5**
West Midlands	Birmingham	**-**	29	92.56
	Coventry	-	49.26	15.18
	Herefordshire	-	-	122
	Shropshire	-	216.66	235.18
	Staffordshire	96.31	88.73	300.4
	Telford & Wrekin	-	-	98.72
	Warwickshire	-	-	55.38
	WPA Not Codeable (West Midlands)	15.3	47.45	153.9
		111.61	**431.10**	**1,073.32**
Yorkshire & Humber	Barnsley	1,074.2	1,144.08	17.2
	Bradford	-	28.55	-
	Doncaster	4,380.22	7,353.28	4,255.56
	East Riding of Yorkshire	15,225.83	6,490.83	715.15
	Kingston upon Hull	305.5	13,023.52	1,322.76
	Leeds	9,170.18	5,112.34	11,985.39
	North Yorkshire	186.92	10,973.16	28,688.36
	North East Lincolnshire	1,429.82	3,905.52	21,655.29
	Rotherham	271.44	5,165.56	2,292.62
	Sheffield	-	305.46	5,725.81
	Wakefield	-	-	113.1
	York	-	111.3	224.4
	WPA Not Codeable (South Yorkshire)	6,807.23	15,708.46	36,817.25
	WPA Not Codeable (Yorkshire & Humber)	23,067.53	24,055.73	25,874.74
		61,917.87	**93,377.79**	**139,687.4**
Total		**338,220.94**	**364,395.49**	**535,283.74**

7. NORTH LINCOLNSHIRE'S WASTE MANAGEMENT FACILITIES

7.1 North Lincolnshire has a range of facilities for managing and treating waste. These include landfill sites, scrapyards, composting plants and as well as smaller facilities such as household waste transfer/recycling centres. The majority of these facilities are privately owned and operated. All facilities are required to have a Waste Management License, issued by the Environment Agency and in most cases will have the benefit of planning permission.

7.2 In total, there are 55 waste management/treatment facilities in the area, with a total permitted capacity of over 21.1million tonnes per annum. Table 37(below) provides an overview of the facility types and annual permitted tonnages. This is based on the Active Sites listing from the Environment Agency's Waste Data Interrogator. The change in the number of facilities between 2016 and 2017 is due to additional anaerobic digestion, biological treatment and physico-chemical treatment facilities coming on stream. Also, a facility has been created to deposit waste to land, as part of a recovery operation, within the South Humber Bank. It is considered that this may part of preparing land for future development. It should be noted that number of facilities will fluctuate from year to year, as some sites/facilities may be temporary.

Table 37: Operational Waste Management, Treatment & Disposal Facilities – Permitted Capacity

Site Category	Facility Type	2015		2016		2017	
		Number of Facilities	Annual Permitted Tonnage	Number of Facilities	Annual Permitted Tonnage	Number of Facilities	Annual Permitted Tonnage
Landfill	Hazardous Landfill	1	500,000	1	500,000	1	500,000
	Non Hazardous Landfill	5	2,722,300	5	1,917,300	4	1,792,300
	Non Hazardous (SNRHW) Landfill	1	47,300	0	-	0	-
	Restricted Landfill	3	1,820,339	1	850,000	1	850,000
MRS	Car Breaker	3	9,999	3	9,999	3	9,999
	Metal Recycling	3	35,000	4	1,034,999	3	35,000
	Vehicle Depollution Facility	1	29,999	2	34,998	2	34,999
Transfer	Civic Amenity Site	8	90,000	8	90,000	8	90,000
	Hazardous Waste Transfer	3	670,610	3	670,610	3	670,610
	Non Hazardous Waste Transfer	5	1,249,999	6	1,324,998	6	1,324,998
On/In Land	Deposit of Waste to Land (Recovery)	-	-	-	-	1	815,999
Treatment	Anaerobic Digestion	2	65,100	2	65,100	4	814,600
	Biological Treatment	2	246,000	3	270,999	4	1,270,998
	Composting	1	74,999	1	74,999	1	74,999
	Materials Recycling Facility	0	0	0	0	0	0
	Inert Waste Transfer/Treatment	2	325,000	3	400,000	3	400,000
	Non Hazardous Waste Transfer/Treatment	2	149,998	1	74,999	1	74,999

	Physical Treatment	9	1,174,996	8	1,374,996	8	2,299,996
	Physical-Chemical Treatment	1	93,805	1	93,805	2	10,093,804
		52	**9,305,444**	**52**	**8,787,802**	**55**	**21,153,301**

Source: Environment Agency, Waste Data Interrogator (2015, 2016 & 2017) – Active Sites List.

Landfill Sites

7.3 There are nine permitted landfill sites in North Lincolnshire – six for non-hazardous waste, two which are restricted and one for hazardous waste. Of these six are listed as being active on the WDI 2017. The majority are located in and around the Scunthorpe area and make use of former ironstone extraction sites (the Ironstone Gullets). These sites are:

- **New Crosby Landfill** is located to the east of Scunthorpe, off Dawes Lane. This non-hazardous landfill site is operated by SUEZ UK Ltd. The site has been operational since 2005 and received planning permission in February 2009 to be extended. It was indicated that this would create around 1 million tonnes of capacity with an estimated 17-year lifespan (from 2012 to 2030). It has an annual permitted capacity of 375,000 tonnes. In 2015, it received 183,978.58 tonnes of waste. The majority of this (71%) was imported from the London area, which should reduce in future years. It has recently ceased operations.

- **Roxby Landfill** is located to the north east of Scunthorpe. Biffa Waste Management Ltd. operates this non-hazardous landfill site. This site has been operational for many years and is rail served. Prior to 2015, it received significant quantities of waste by rail from Greater Manchester. This flow has now ceased. It has a permitted annual capacity of 550,000 tonnes and in 2017 received 455,747 tonnes. The largest proportion originated in the Doncaster area. Planning permission for the site is expected to expire in the mid 2020's.

- **Winterton Landfill** is located to the north west of Winterton, near the village of West Halton and consists of two separate sites. Winterton North is permitted to receive non-hazardous waste, whilst Winterton South receives hazardous waste. Waste disposal on this site dates to the late 1970's. The site is owned and operated by FCC Environment Ltd.

  Winterton North has been partially restored and is currently mothballed. This is due to a reduction in the supply of domestic landfill resulting from contracts ending. Previously, the site took waste from other authorities with the Humber sub-region. It should be noted that EA data showed that 2,882 tonnes were received at the site during 2017. Methane gas is collected from the domestic landfill, whilst leachate is collected and treated at a plant in the north-west corner of the site or transported by road to another treatment site.

  Winterton South is one of six permitted hazardous landfill sites in the Yorkshire & Humber region. In 2016, it received 15,371 tonnes of waste. This originated from the East Midlands, North West, West Midlands and Yorkshire & Humber regions. The largest quantity was received from North East Lincolnshire (8,048.54 tonnes) followed by Leeds (3,239.34 tonnes), North Lincolnshire (1,688.7 tonnes) and Sheffield (560.14 tonnes). Planning permission was granted in 2016 to vary a number of existing conditions to allow the extension of the site's life up to March 2026, with restoration by 2027. This permission creates a hazardous waste void with a capacity to receive 600,000m^3 of material and completion of the existing hazardous waste cell (circa 51,000m^3 of capacity at January 2016).

- **Campwood Landfill** is located at Melton Ross within the existing quarry that forms part of Singleton Birch's operations adjacent to the Melton Ross lime making plant. The site can accept non-hazardous, high sulfate and inert industrial wastes[9]. The landfill waste is used to fill the quarry and assist in its restoration to agriculture. In 2017, the site received 161,249 tonnes of waste. The largest quantity originated in North East Lincolnshire. Planning permission was granted in June 2017 to extend the landfill in both a westerly and easterly direction, thus extending the site's lifespan by around 25 to 30 years (circa 2042 to 2047).

[9] Campwood Landfill – Singleton Birch Website

- **South Ferriby Landfill** is located adjacent to the CEMEX's cement works at South Ferriby. Information suggests that the site is not currently receiving waste materials. It has previously received cement kiln dust and inert factory waste from the adjacent works. The most recent planning permission was granted in 2006 and is time-limited to 15 years giving an end date of 2021, with restoration expected by 2022. In 2009, the site received around 3,445 tonnes of waste.

- **Crosby Warren Landfill** is located on the north eastern edge of Scunthorpe, and is within an area of former ironstone working. It is owned and operated by Longs Steel UK Ltd. The site receives restricted landfill material from the nearby steelworks. In 2017, the site was not operational.

- **Yarborough Quarry Landfill** is located on the eastern edge of Scunthorpe, adjacent to the steelworks, and is within an area of former ironstone working. It is owned and operated by British Steel Ltd. The site receives restricted landfill material from the nearby steelworks. In 2017, the site received 10,182 tonnes of waste.

- **Crosby North Landfill** is located on the eastern edge of Scunthorpe within the steelworks complex. It is owned and operated by British Steel Ltd. In 2017, the site received 870 tonnes of waste.

- **Conesby Quarry Landfill** is located to the north of Scunthorpe, adjacent to Normanby Enterprise Park and is within an area of former ironstone mining. It is owned by North Lincolnshire Council and received non-hazardous waste from nearby reclamation works. The site is not operational.

Table 38: North Lincolnshire Operational Landfill Sites (2017)

Permit	Site Name	Operator	Permit Type	Tonnage Received (2017)	Annual Permitted Tonnage
BW1785IH	Winterton South Landfill	Integrated Waste Management Ltd	L01 : Hazardous Merchant LF	15,371	500,000
BS9989IJ	Campwood Landfill	Singleton Birch Limited	L04 : Non Hazardous LF	161,249	500,000
BU9947IA	New Crosby Landfill	SUEZ Recycling and Recovery UK Ltd	L04 : Non Hazardous LF	-	375,000
BW2951IM	Roxby Landfill	Biffa Waste Services Ltd	L04 : Non Hazardous LF	455,747	550,000
CP3036AJ	Crosby North Landfill	British Steel Ltd	L04 : Non Hazardous LF	870	47,300
QP3539XL	Winterton North Landfill	Integrated Waste Management Ltd	L04 : Non Hazardous LF	2,882	1,000,000
FP3136AL	Yarborough Quarry	British Steel Ltd	L07 : Restricted LF	10,182	850,000
			Total	**646,301**	**5,089,939**

Source: Environment Agency, Waste Data Interrogator (2015, 2016 & 2017)

Waste Transfer Facilities

7.4 Waste transfer stations are facilities for the transfer and or bulking of small loads into larger loads for onward transfer for reprocessing/treatment or disposal at other facilities. These facilities may take mixed waste or could be a specialist facility taking only a single waste type such as clinical or hazardous waste. They also include Household Waste Recycling Sites. Table 39 shows that in 2017, there were 17 transfer sites accepting waste in North Lincolnshire.

7.5 Planning permission was granted in January 2016 for a new waste transfer station at 21 Midland Road in Scunthorpe. The facility commenced operations in September 2016 and processes up to 75,000 tonnes of LACW per annum. The waste will be delivered, checked for contamination, bulked up and transported to a waste processing facility where plastics and metals can be extracted for recycling. Residual waste will be

manufactured into refuse-derived fuel for use in energy production whilst garden waste will be sent for composting. This facility will divert around 90% of the council's residual waste from landfill.

Table 39: North Lincolnshire Operational Transfer Sites (2017)					
Permit	**Site Name**	**Operator**	**Permit Type**	**Tonnes Received**	**Annual Permitted Tonnage**
AB3607UQ (100656)	Whites Transfer Station	Whites Recyling Ltd	A11 : Household, Commercial & Industrial Waste T Stn	51,320	249,999
AP3595LY (43090)	Groveport Logistics Limited	Groveport Logistics Limited	A11 : Household, Commercial & Industrial Waste T Stn	95,674	400,000
CP3390CP (43584)	New Crosby Waste Management Facility	Suez Recycling And Recovery U K Ltd	A11 : Household, Commercial & Industrial Waste T Stn	5,394	25,000
DR3905LR (403120)	21 Midland Road	North Lincolnshire Council	S1506 : 75kte HCI Waste Transfer Station	63,140	75,000
DP3097FC (43128)	Cottage Beck Transfer Station	North Lincolnshire Council	A9 : Haz Waste Transfer Station	2,300	300,000
JP3695NH (70848)	Roxby Sidings Transfer Station	U K Waste Management Ltd	A11 : Household, Commercial & Industrial Waste T Stn	66,274	500,000
KB3734AC (70865)	Barton Civic Amenity Site	North Lincolnshire Borough Council	A13 : Household Waste Amenity Site	1,897	2,500
KB3734RU (70866)	Goxhill Civic Amenity Site	North Lincolnshire Borough Council	A13 : Household Waste Amenity Site	1,970	2,500
KB3735AN (70867)	Broughton Civic Amenity Site	North Lincolnshire Borough Council	A13 : Household Waste Amenity Site	1,805	2,500
KB3735RG (70868)	Barnetby Civic Amenity Site	North Lincolnshire Borough Council	A13 : Household Waste Amenity Site	1,406	2,500
KB3736AV (70869)	Kirton Lindsey Civic Amenity Site	North Lincolnshire Borough Council	A13 : Household Waste Amenity Site	1,767	2,500
KB3736RT (70864)	Winterton Civic Amenity Site	North Lincolnshire Borough Council	A13 : Household Waste Amenity Site	1,725	2,500
KB3737AA (43120)	Belton Civic Amenity Site	North Lincolnshire Borough Council	A13 : Household Waste Amenity Site	2,619	25,000
KB3737RF (43122)	Cottage Beck Civic Amenity	North Lincolnshire Borough Council	A13 : Household Waste Amenity Site	11,192	50,000
LP3990CY (43465)	Bell Waste Control	Ellgia Limited	A9 : Haz Waste Transfer Station	54.965	70,610
QP3590CA (43759)	Addlesee Timber & Haulage Ltd	Addlesee Timber & Haulage Ltd	S0801 : HCI Waste Transfer Station	5,539	75,000
WP3397FZ (43094)	Bell Waste Control	Ellgia Limited	A9 : Haz Waste Transfer Station	2,459	300,000
			Total	**374,444**	**1,835,610**

Source: Environment Agency, Waste Data Interrogator 2017

Treatment Facilities

7.6 Table 40 show the operational treatment sites in North Lincolnshire. These sites include Composting, Physical-Chemical (facilities that treat waste by physical or chemical means in order to prepare for disposal or recovery e.g. Photographic chemicals processing, waste water treatment etc.), and Material Recycling Facilities (MRF), where recyclable wastes are separated and sorted prior to reprocessing. In 2017, there were 22 treatment facilities accepting waste in North Lincolnshire with annual permitted tonnage of 14,279,896. In 2017 1,263,777 tonnes were received across the 22 sites within North Lincolnshire.

Table 40: North Lincolnshire Operational Treatment Sites (2017)					
Permit	**Site Name**	**Operator**	**Permit Type**	**Tonnes Received**	**Annual Permitted Tonnage**

AB3001LN (400286)	52b And 52c Colin Road	G P S Mobile Crushing Services Limited	A16 : Physical Treatment Facility	3,876	75,000
AB3004MY (400312)	Groveport	M R F Glass Recycling Limited	A16 : Physical Treatment Facility	43,521	399,999
BL5288IC	Scunthorpe Integrated Streel Works	Harsco Metals Group	Physical Treatment Installation	492,826	999,999
BL8805IZ	Melton Ross Lime Works	Singleton Birch Ltd	AD Installation	3,774	250,000
C3209KF/ (401936)	Site Opposite To 39a Hoylake Road	S P B Plant & Tool Hire Limited	SR2010 No12: Treatment of waste to produce soil <75,000 tpy	8,098	75,000
CB3202CZ (401883)	Northern Plasterboard Recycling Limited	Northern Plasterboard Recycling Limited	S0803 : HCI Waste TS + treatment	33,666	74,999
CB3309XS (402008)	Northwold Farm AD Plant	Singleton Birch Limited	S1210 : On-farm anaerobic digestion using farm wastes only	8,443	36,500
DB3401LB (402773)	Melton Ross Quarry	Sandstop Quarries Limited	S0811 : Inert & excavation Waste TS + treatment	13,125	75,000
DB3703MC (402966)	Normanby Road	Overhall Contractors Limited	S0811 : Inert & excavation Waste TS + treatment	16,927	75,000
DB3907XF (403142)	Brocklesby Estate	Digit Resource Management Ltd	S0819 : Sewage Sludge Treatment	873	24,999
FP3092NC (73210)	Bioganix Ltd	Bioganix Ltd	A22 : Composting Facility	66,758	74,999
FP3198VH (101272)	Elsham Airfield	Stoneledge (Southbank) Ltd	S0906: Inert and excavation WTS with treatment	30,925	250,000
GB3535RQ (104140)	Manton Quarry	Brianplant (Humberside) Ltd	SR2010 No12: Treatment of waste to produce soil <75,000 tpy	45,498	74,999
LP3434DN	North Moor Farm	Rockscape Energy Limited	S1210 : On-farm anaerobic digestion using farm wastes only	4,410	28,600
LP3537VV	Scunthorpe Aggregate Processing	East Coast Slag Products Limited	A16 : Physical Treatment Facility	198,991	300,000
QP3093VT (102147)	Down To Earth Recycling	Down To Earth Recycling Ltd	A23 : Biological Treatment Facility	41,118	96,000
QP3931PF	Winterton Effluent Treatment Plant	Integrate Waste Management Ltd	Other Biological Treatment Installation	23,604	999,999
RP3192EW (102225)	Kirton Quarry	Welton Aggregates Limited	A16 : Physical Treatment Facility	63,165	74,999
TP3731UE	Hanson Dewatering Facility	Tube City IMS UK Limited	A17 : Physico-Chemical Treatment Facility	25,752	93,805
UP3230LR	Humber Oil Refinery	Phillips 66 Ltd	Physico-Chemical Treatment Installation	4,999	9,999,999
YP3090CV (43719)	Pit Bottom	Ellgia Limited	A16 : Physical Treatment Facility	18,219	50,000
ZP3598EY (100422)	Scunthorpe Sewage Treatment Works	Severn Trent Water Ltd	A23 : Biological Treatment Facility	115,209	150,000
			Total	**1,263,777**	**14,279,896**

Source: Environment Agency, Waste Data Interrogator 2017

Metal Recycling Sites (MRS)

7.7 Table 41 shows the operational metal recycling sites in North Lincolnshire. These include sites that deal with cars such as Car Breakers or End of Life Vehicle Facilities as well as other Metal Recycling Sites that

include Scrap Yards. In 2017, there were 8 MRS facilities accepting waste in North Lincolnshire, most of which are located on industrial estates. Two sites have the capacity to process more than 20,000 tonnes of waste per year.

Table 41: North Lincolnshire Operational Metal Recycling Sites (2017)

Permit	Site Name	Operator	Permit Type	Tonnes Received	Annual Permitted Tonnage
AB3103XK (400380)	Selbys Yard	J & S Metals Ltd	S1214 : Metal recycling, vehicle storage, depollution	4,303	29,999
EB3701MT (403699)	M.J.S. Recovery	M.J.S. Recovery (Scunthorpe) Limited	S1517: Vehicle storage, depollution	572	5,000
EP3990CN (43631)	Delta Salvage Ltd	Delta Salvage Ltd	A19a : ELV Facility	250	2,499
MB3033DB (43105)	L A S Metals Recycling Facility	L A S Metals Limited	A20 : Metal Recycling Site (mixed MRS's)	20,120	25,000
WP3197FT (43103)	George Eva Webster Vehicle Dismantler	Eva, George Webster	A20 : Metal Recycling Site (mixed MRS's)	214	5,000
WP3297FF (43100)	Ac Autos Pit Bottom	Carrington, A. J.	A20 : Metal Recycling Site (mixed MRS's)	11	5,000
WP3797FY (43104)	R C Edley Salvage Co	Edley, R.C.	A19 : Metal Recycling Site (Vehicle Dismantler)	1,627	2,500
ZP3192NH (73242)	New Holland Ship Yard	Acetech Construction Ltd	A19 : Metal Recycling Site (Vehicle Dismantler)	300	5,000
			Total	**27,397**	**1,079,996**

Source: Environment Agency, Waste Data Interrogator 2017

Community Recycling Centres

7.8 In addition to the facilities described above, Table 42 shows that North Lincolnshire also has a network of 16 community recycling centres spread across the area. Most are located at or close to existing community facilities or at supermarkets. These allow local residents to deposit various items for recycling.

Table 42: North Lincolnshire Community Recycling Centres (2016)

Location	Site Name	Waste Accepted
Barton upon Humber	Tesco, Maltkin Road	Paper; Glass Bottles & Jars; Food Tins & Drink Cans; Household Plastic Packaging
Bottesford	Bottesford & Yaddlethorpe Civic Hall, Bramley Crescent	Paper; Glass Bottles & Jars; Food Tins & Drink Cans; Household Plastic Packaging
Brigg	Car Park, Old Courts Road	Paper; Glass Bottles & Jars; Food Tins & Drink Cans; Household Plastic Packaging; Books
	Tesco, Barnard Avenue	Paper; Glass Bottles & Jars; Food Tins & Drink Cans; Household Plastic Packaging
	Ancholme Leisure Centre, Scawby Brook	Paper; Glass Bottles & Jars; Food Tins & Drink Cans; Textiles; Household Plastic Packaging
Crowle	Potts Lane Car Park, Potts Lane	Paper; Glass Bottles & Jars; Food Tins & Drink Cans; Textiles; Household Plastic Packaging
Epworth	Epworth Leisure Centre, Burnham Road	Paper; Glass Bottles & Jars; Food Tins & Drink Cans; Textiles; Household Plastic Packaging

Messingham	Car Park to rear of Library, Wendover Road	Paper; Glass Bottles & Jars; Food Tins & Drink Cans; Textiles; Household Plastic Packaging
Owston Ferry	Coronation Village Hall, High Street	Paper; Glass Bottles & Jars; Food Tins & Drink Cans; Textiles; Household Plastic Packaging
Scunthorpe	Asda, Scotter Road	Paper; Glass Bottles & Jars; Food Tins & Drink Cans; Household Plastic Packaging
	Lincoln Gardens Community Centre, Gloucester Road	Paper; Glass Bottles & Jars; Food Tins & Drink Cans; Household Plastic Packaging; Books
	Morrison's, Lakeside	Paper; Glass Bottles & Jars; Food Tins & Drink Cans; Household Plastic Packaging
	Riddings Community Centre, Willoughby Road	Paper; Glass Bottles & Jars; Food Tins & Drink Cans; Textiles; Household Plastic Packaging
	Tesco Extra, Doncaster Road	Paper; Glass Bottles & Jars; Food Tins & Drink Cans; Household Plastic Packaging
	Tesco Express, Ashby High Street	Paper; Glass Bottles & Jars; Food Tins & Drink Cans; Household Plastic Packaging
	Wells Street	Food Tins & Drink Cans; Household Plastic Packaging

Source: North Lincolnshire Council 2017

8. FUTURE WASTE ARISINGS

8.1 In order to begin the process of forecasting future waste arisings for the main waste streams, it is essential to establish a baseline date and baseline figure. For the purposes of this assessment, the base date (where possible) is 2017 and the following baseline figures will be used:

- Local Authority Collected Waste – 96,430 tonnes (2016/17)
- Commercial & Industrial Waste – 557,711 tonnes (2017)
- Construction, Demolition & Excavation Waste – 135,756 tonnes (2017)
- Hazardous Waste – 57,681 tonnes (2017)
- Agricultural Waste – 2,412 tonnes (2016)
- Low Level (Non-nuclear) Radioactive Waste (LLRW) and Waste Water/Sewage Sludge – no baseline adopted due to limited information.

8.2 Waste arisings do not tend to be static, as such planning for an amount of waste arisings in one year does not necessarily provide the basis for forecasting future arisings over the lifetime of the North Lincolnshire Local Plan (2020 to 2038). In addition, it must be recognised that the quantities of waste that will need to managed during this time will change, and that different waste types will exhibit different growth trends.

8.3 Future waste arisings are likely to be affected by a range of national and local factors. These include:

- Impact of measures and legislative proposals deriving from the Circular Economy Package
- Leaving the European Union, and the potential economic, legal, political and policy impacts that it may as well as the potential for effects on waste movements to/from UK and mainland Europe.
- Local Demand Factors such as existing or planned housing or economic growth

Local Authority Collected Waste Arisings

8.5 Previously the term 'Municipal Waste' was used in waste policies and nationally reported data to refer to waste collected by local authorities. Local Authority Collected Waste (LACW) refers to all waste collected by the local authority. This is a slightly broader concept than LACMW as it would include both this and non-municipal fractions such as construction and demolition waste.

8.6 The 'waste from households' definition was introduced in May 2014 to reflect the revised EC definition of household waste adopted for the purposes of assessing compliance with the biodegradable municipal waste targets set in the Landfill Directive. It is defined as 'waste generated by households' and similar waste as 'waste in nature and composition comparable to household waste, excluding production of waste and waste from agriculture and forestry'.

National Planning Practice Guidance

8.7 The Planning Practice Guidance on Waste (paragraphs 29 to 30)[10] sets out guidance for Waste Planning Authorities (WPAs) to assist them in forecasting future municipal waste arisings. The guidance considers that Municipal Waste Management Strategies are a useful starting point as forecasting is central to their production. It also suggests that the sources of municipal waste arisings are examined to identify any particular trends or factors that may affect growth and inform future forecast. This could include assessing how much waste is generated from household collections, civic amenity sites or trade waste collections.

8.8 The guidance suggests that authorities should examine existing municipal waste arisings and develop a "*growth profile*" to set out an assumed rate of change in waste arisings. This growth profile should be based on two factors:

- household or population growth; and
- waste arisings per household or per capita.

8.9 Furthermore, it suggested this growth profile should be prepared through a staged process:

- calculate arisings per head by dividing annual arisings by population or household data to establish short- and long-term average annual growth rates per household; and
- factor in a range of different scenarios, e.g. constant rate of growth, progressively lowering growth rates due to waste minimisation initiatives.

8.7 This will allow the final forecast to be modelled with scenarios based on the long- and short-term rate of growth per household, together with household forecasts. However, it is notable that the growth rates refer to constant rate of growth or lower growth rates as opposed to any increase in the amount of LACW produced.

Other Factors

8.8 A number of variables will influence future levels of Local Authority Collected Waste (LACW) produced in North Lincolnshire. The state of the national and local economies will be a key consideration – generally when the economy performs well, the amount of waste produced will increase. Similarly, the growth in the number of households will have an influence - the more households there are in an area, it is likely that the waste levels will grow. In addition, the number of new dwellings the Local Plan will seek to deliver need to be taken into account.

8.10 As well as the variables set out above, the policy and regulatory environment will be a key consideration. Various initiatives designed to affect the amount of waste generated. Examples including encouraging the use of less packaging materials, waste prevention initiatives, markets for recycled materials, and growing recycling and composting.

[10] Planning Practice Guidance: Waste – paragraphs 029 Reference ID: 28-029-20141016 & 030 Reference ID: 28-030-20141016 (October 2014)

8.11 Nationally, there are two main targets for managing LACW, derived from European Waste Framework Directive, but are not formally cascaded down to local authorities. These are:

- Recycling and composting of household waste: 50% by 2020
- Recovery of municipal waste: 75% by 2020.

8.12 Over the last decade there has generally been a decrease in the amount of waste generated by each household (estimated 0.17 tonnes per household – 12.4% overall. Low point (2011/12 & 2012/13) was 1.15 tonnes. Now starting see a slow increase.

Growth Rates

8.13 Using the method for calculating a growth profile, outlined in the PPG, a short, medium and long-term annual growth rate of waste per household was derived using household waste per dwelling (see Table 3) and the household projections issued by Ministry of Housing, Communities & Local Government. The initial starting point is a baseline of 1.2 tonnes of waste per household.

8.14 Five growth scenarios have been developed for Local Authority Collected Waste (LACW). These are:

- Scenario 1: Growth based solely on the future housing growth. This scenario assumes that the amount of waste arising per household will remain constant over the lifetime of the Local Plan (1.2 tonnes per household per annum).

- Scenario 2: Growth based on household growth of 0.5% per annum. This is envisaged in the Municipal Waste Management Strategy. Again, this scenario assumes that the amount of waste arising per household will remain constant over the lifetime of the Local Plan (1.2 tonnes per household per annum).

- Scenario 3: (Short Term Growth) is based on average annual growth trend over the past 2 years in waste arisings per household (1.7%)

- Scenario 4: (Medium Term Growth) is based on the average annual growth trend over the past 5 years in waste arising per household (0.9%)

- Scenario 5: (Long Term Growth) is based on the average annual growth trend over the past 10 years in waste arising per household (-1.4%)

8.15 Table 43 shows the LACW arisings forecasts for each scenario between 2017 and 2038. All scenarios consider that the amount of non-household waste will remain broadly consistent – average 9,500 tonnes per annum (based on previous 10 years).

Table 43: LACW Arisings Forecast (2017-2038)

Year	**Scenario 1**	**Scenario 2**	**Scenario 3**	**Scenario 4**	**Scenario 5**
2017	97,022	97,022	97,022	97,022	97,022
2018	97636	97,392	99,055	98,419	96,326
2019	98249	97,832	101,202	99,835	25,697
2020	98,863	98,273	103,396	101,268	95,069
2021	99,477	98,717	105,638	102,720	94,441
2022	100,089	99,163	107,928	104,190	93,814
2023	100,600	99,611	110,157	1055,573	93,095
2024	101,111	100,062	112,434	106,973	92,380

2025	101,623	101,435	114,759	108,391	91,669
2026	102,134	101,894	117,134	109,826	90,962
2027	102,645	102,356,	119,559	111,280	90,258
2028	103,156	102,821	122,035	112,751	89,558
2029	103,667	103,287	124,564	114,241	88,862
2030	104,179	103,756	127,146	115,749	88,169
2031	104,690	104,227	239,783	117,275	87,480
2032	105,201	104,972	132,478	118,821	86,796
2033	105,712	105,449	135,224	120,385	86,115
2034	106,223	105,929	138,031	121,969	85,438
2035	106,735	106,411	250,897	123,573	84,765
2036	107,246	106,896	143,823	125,196	84,096
2037	107,757	107,383	146,811	126,839	83,431
2038	108,268	108,004	149,862	128,503	82,770

Commercial and Industrial Waste Arisings

8.12 Guidance on forecasting future commercial and industrial is included in the Government's on-line Planning Practice Guidance. It states that:

"*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.*"

8.13 In line with national policy, growth rates have been applied to the baseline figure of 557,711 tonnes in order to project future demand for C&I waste management over the plan period (2020 to 2038).

8.14 It is assumed that future commercial and industrial waste arisings will, in the main, be linked to the number and types of businesses and commercial enterprises in North Lincolnshire.

8.15 Analysis of C&I waste data obtained though the Environment Agency Waste Data Interrogator following the DEFRA New Methodology (2014) does not reveal any specific trends. C&I waste levels in 2017 were approximately the same as those in 2007 (2017: 557,711 and 2007: 558,814) with significant reduction to a low of 69,767 tonnes in 2013.

8.16 Table 44 show the C&I Waste Arising forcasting between 2017 and 2038. Despite there being no obvious trend, three growth scenarios have been developed for Commercial and Industrial (C&I) Waste. These are:

- Scenario 1: Representative 1% year on year growth
- Scenario 2: Representative -1% year on year reduction
- Scenario 3: Representative 2% year on year growth

Table 44: C&I Waste Arisings Forecast			
Year	**Scenario 1**	**Scenario 2**	**Scenario 3**
2017	557,710	557,712	557,712
2018	563,287	552,135	568,866
2019	568,920	546,614	580,244
2020	574,609	541,147	591,848
2021	580,355	535,736	603,685
2022	586,159	530,379	615,759
2023	592,020	525,075	628,074
2024	597,941	519,824	640,636
2025	603,920	514,626	653,449
2026	6109,959	509,480	666,518
2027	616,059	504,385	679,848
2028	622,219	499,341	693,445
2029	628,442	494,348	707,314
2030	634,726	489,404	721,460
2031	641,073	484,510	735,889
2032	647,484	479,665	750,607
2033	653,959	474,868	765,619
2034	660,498	470,120	780,931
2035	667,103	465,418	796,550
2036	673,774	460,762	812,481
2037	680,512	456,154	828,731
2038	687,317	451,593	845,305

Construction, Demolition and Excavation Waste Arisings

8.9 Construction waste is classed as "*waste materials*" resulting from the construction or demolition of buildings and/or civil engineering infrastructure, including hard construction and demolition waste and excavation waste, whether segregated or mixed".

8.10 Construction waste can be broken down further into the following categories:

- Excavation waste – naturally occurring soil, stone, rock and similar materials (whether clean or contaminated) which have been excavated as a result of site preparation activities;
- Demolition waste - timber, mixed unprocessed brick, concrete, tiles, sheeting including asbestos containing materials from barns and sheds etc;

- Mixed hard construction (new build) waste – a combination of packaging, pipes, cables, timber and mixed unprocessed/uncrushed materials (particularly concrete, masonry, bricks, tiles, etc.)

8.11 In attempting to forecast future CDE waste arisings, the Planning Practice Guidance (Reference ID: 28-033-20141016) states that:

"Waste planning authorities should start from the basis that net arisings of construction and demolition waste will remain constant over time as there is likely to be a reduced evidence base on which forward projections can be based for construction and demolition wastes. However, when forecasting construction and demolition waste arisings, the following may be relevant:

- *Annual existing returns from waste management facilities;*
- *Data from site waste management plans (where available);*
- *The fact that a sizeable proportion of construction and demolition waste arisings are managed or re-used on-site, or exempt sites, so it is critical that some provision is made for unseen capacity in this way;*
- *Significant planned regeneration or major infrastructure projects over the timescale of the Plan".*

Other Factors

8.12 Other factors that will have an influence on CDE waste arisings include:

- *Landfill Tax and its escalator* – introduced in 1996, this tax applies to the disposal of material at a landfill site that is covered by a permit under specific environmental legislation unless it is specifically exempt. It also applies to material disposal off at an unauthorised site. No exemptions are applied in this case. It seeks to encourage efforts to minimise the amount of waste produced and the use of non-landfill waste management options, which might include recycling, composting and recovery. It is charged by weight and there are 2 different rates – a standard rate and a lower rate. Inert or in active waste is subject to the lower rate. The standard rate is £88.95 per tonne, whilst the low rate is £2.80 per tonne[11].

- *Aggregates Levy* – introduced as a tax on the commercial exploitation of rock, sand and gravel that has either been dug from the ground, dredged from the sea in UK waters or imported. Its overall aim is to encourage recycling of aggregates and use of alternative materials such as CDE waste that would otherwise be landfilled. The levy is set at £2.00 per tonne of sand, gravel or rock. However, there are some reliefs and exemptions under certain circumstances.

Growth Rate

8.13 Table 45 shows the CDE waste arising forecast for all growth scenarios between 2017-2038. Four growth scenarios have been developed for Construction, Demolition and Excavation (CDE) waste. These are:

- Scenario 1: No change
- Scenario 2: (Short Term Growth) is based on the average growth trend over the past three years (3%)
- Scenario 3: (Medium Term Growth) is based on the average growth trend over the past five years (1%)
- Scenario 4: (Long Term Growth) is based on the average growth trend over the past ten years (2%)

Table 45: CDE Waste Arisings Forecast

Year	**Scenario 1**	**Scenario 2**	**Scenario 3**	**Scenario 4**
2017	135,756	135,756	135,756	135,756
2018	135,756	139,829	137,114	138,471
2019	135,756	144,024	138,485	141,241
2020	135,756	148,344	139,870	144,065
2021	135,756	152,795	141,268	146,947

[11] As at 1st April 2018

2022	135,756	157,378	142,681	149,886
2023	135,756	162,100	144,108	152,883
2024	135,756	166,963	145,549	155,941
2025	135,756	171,972	147,004	159,060
2026	135,756	177,131	148,474	162,241
2027	135,756	182,445	149,959	165,486
2028	135,756	187,918	151,459	168,796
2029	135,756	193,556	152,973	172,171
2030	135,756	199,362	154,503	175,615
2031	135,756	205,343	156,048	179,127
2032	135,756	211,503	157,609	182,710
2033	135,756	217,845	159,185	186,364
2034	135,756	224,384	160,776	190,091
2035	135,756	231,116	162,384	193,893
2036	135,756	238,049	164,008	197,771
2037	135,756	245,191	161,608	201,726
2038	135,756	252,546	163,224	205,761

Hazardous Waste Arisings

8.17 As highlighted previously, information on the level of hazardous arisings in North Lincolnshire, can be obtained from the Environment Agency's Hazardous Waste Data Interrogator (HWDI)[12]. The Planning Practice Guidance (paragraph 34) considers that this data is likely to be robust and that WPAs should plan from future hazardous waste arisings based on extrapolating time series data.

8.18 The Government's National Planning Statement on Hazardous Waste (2013) expects that the amount of hazardous waste is expected to increase due to:

- Continuing consumer demand means that hazardous waste will continue to arise as consumer durables containing hazardous materials are discarded.
- Increasing use of producer responsibility schemes, such as those provided for Waste Electrical and Electronic Equipment (WEEE) which require the separate collection of WEEE resulting in more hazardous items being removed from the mixed municipal waste stream, collected separately as hazardous waste.
- Changes to the list of hazardous properties in the revised Waste Framework Directive and changes to the European Waste List, lead to further increases in the amount of waste that must be managed as "hazardous".

[12] Planning Practice Guidance, Paragraph: 035 Reference ID: 28-035-20141016

- There are still uses in which components that become hazardous waste may be unavoidable for the foreseeable future. For example, the use of oil in internal combustion engines.

8.19 There has been an overall upward trend in the amount of hazardous waste produced in North Lincolnshire over the past 10 years, it has been characterised by several peaks and troughs including some sharp increases and decreases from one year to the next – with 2008 to 2009, and 2011, 2012 and 2013 being examples of this. Some of this likely to due to the circumstance highlighted above, as well as fluctuations in the national economy. However, levels have been steadier over the past three years (2015, 2016 & 2017) – averaging 56,466 tonnes per year.

8.20 It should be noted that there are no statutory targets for the management of hazardous waste.

8.21 Table 46 show the Hazardous waste arising forecasts for all scenarios between 2017 and 2038. Three growth scenarios have been developed for Hazardous Waste. These are:

- Scenario 1: (Short Term Growth) is based on the previous year growth trend (1%)
- Scenario 2: (Medium Term Growth) is based on the average growth trend over the past three years (3%)
- Scenario 3: (Long Term Growth) is based on the average growth trend over the past five years (7%)

Table 46: Hazardous Waste Arisings Forecast

Year	Scenario 1	Scenario 2	Scenario 3
2017	57,681	57,681	57,681
2018	58,258	58,835	61,719
2019	58,840	60,011	66,039
2020	59,429	61,212	70,612
2021	60,023	62,436	75,608
2022	60,623	63,685	80,901
2023	61,230	64,958	86,564
2024	61,842	66,257	92,623
2025	62,460	67,583	99,107
2026	63,085	68,934	106,044
2027	63,716	70,313	113,467
2028	64,353	71,719	121,410
2029	64,996	73,153	129,909
2030	65,646	74,617	139,002
2031	66,303	76,109	148,732
2032	66,969	77,631	159,144
2033	67,636	79,184	170,284
2034	68,312	80,767	182,204
2035	68,995	82,383	194,958

2036	69,685	84,030	208,605
2037	70,382	86,551	223,207
2038	71,086	89,147	238,832

Low Level Radioactive Waste Arisings

8.22 Information provided by the Environment Agency shows that four sites within North Lincolnshire use radioactive substances (see Table 22). However, given the limited number of sources and quantity and nature of material involved there does not appear to be a requirement to provide any specialised facilities for managing low-level wastes within the Council area.

8.23 It should be noted that the EA no longer reports the quantities and sources of these arisings and it may be prudent for the Council to consider a future, small-scale survey of potential local sources of these materials to check that the current situation has not changed. In light of this, contact has been made with the EA in order to solicit more information from them.

Wastewater / Sewerage Sludge

8.24 The quantity of arisings is largely immaterial in as much as the choice of management methods lies with the statutory local undertaker(s), in this case, Anglian Water Services, Severn Trent and Yorkshire Water.

8.25 Anglian Water Services and Severn Trent are the main providers of wastewater treatment facilities in the Plan area and will be contacted in order to obtain details about future capacity requirements needed to meet future demand as a result of housing growth and industrial activity. Consultation with these bodies will continue as the Local Plan develops and the spatial strategy emerges.

Agricultural Waste

8.26 As shown in Table 19, there are 496 farm holdings in North Lincolnshire which are estimated to generate around 339,000 tonnes of waste. However, over 99% of this material comprised organic by-products (slurry, waste milk, straw etc.) which are spread or buried on the farm, or re-used, buried or burned at source. Table 21 shows that, as a result, only an estimated 2,412 tonnes of agricultural waste requires off-farm management.

8.27 The level of future agricultural waste arisings in North Lincolnshire will be largely dependent upon the nature of the agricultural industry in the area over the lifetime of the Local Plan. That is very hard to predict, and in lieu of any other information, it is assumed that there will not be a significant change in agricultural practices within the Plan area over the Plan period. It is likely that natural waste will continue to be managed, treated and disposed of on farms – under exemptions or at on-farm facilities.

9. FUTURE WASTE MANAGEMENT CAPACITY REQUIREMENTS

Local Authority Collected Waste

9.1 Agreement was reached by the European Commission and representatives of the European Parliament in 2018 on the revisions to the Waste Framework Directive and the Landfill Directive, including the following targets:

- Preparation for re-use and recycling (including composting/anaerobic digestion) target of 55% of municipal waste by 2025.
- Preparation for re-use and recycling (including composting/anaerobic digestion) target of 60% of municipal waste by 2030.
- Preparation for re-use and recycling (including composting/anaerobic digestion) target of 65% of municipal waste by 2035.
- Gradual limitation on landfilling of municipal waste, to 10% by 2035.
- Requirement for separate collection of textiles and hazardous waste from households, by 2025.
- Requirement for separate collection of bio-waste for recycling by 2024.

9.2 At this point in time there is no suggestion that the UK will not continue to adopt the same or similar guidelines upon exiting the EU.

Recycling

9.3 The above targets have been included in the below table 47 which shows the projected recycling requirement in key years throughout the Plan period using Scenario 1 figures with table 43.

Table 47: LACW Recycling		
Key Years	**Recycling Requirement (50% by 2020/onwards)**	**Recycling Requirement (50% 2020 then increasing – 55%,60% / 65% / 65%) (tonnes)**
2020	49,432	49,432
2025	50,812	55,893
2030	52,090	62,378
2035	53,368	69,378
2038	54,134	70,374

Recovery

9.4 Recovery can be also taken to mean diversion from landfill, in this instance, recovery should be taken to mean the waste that is neither recycled nor disposed of to landfill. As such, if a total recovery target of 75% by 2020 is applied, the target for recovery would be 25%. Table 48 below shows the recovery requirement in North Lincolnshire in key years of the Plan period.

Table 48: LACW Recovery	
Recovery Key Years	**Recovery (25% ongoing) (tonnes)**
2020	24,716
2025	25,406
2030	26,045
2035	26,684
2038	27,067

Residual

9.5 Once the targets for recycling and recovery have been accounted for, any remaining LACW will need the be disposed of to landfill. Table 49 shows projected residual LACW across the Plan period.

Table 49: LACW Residual	
Key Years	**Residual LACW remaining after Recycling and Recovery (tonnes)**
2020	24,715
2025	20,324
2030	15,756
2035	10,673

2038	10,827

9.6 Table 50 provide a summary of the above tables for how LACW arisings will be processed over the plan period.

Table 50: Summary of LACW Arising will be processed over the plan period 2020-2038

Key Years	LACW arisings (tonnes)	Recycling Requirement (50% 2020 then increasing - 60% / 65% / 65%) (tonnes)	Recovery (25% ongoing) (tonnes)	Residual LACW remaining after Recycling and Recovery (tonnes)
2020	98,863	49,432	24,716	24,715
2025	101,623	55,893	25,406	20,324
2030	104,179	62,378	26,045	15,756
2035	106,735	69,378	26,684	10,673
2038	108,268	70,374	27,067	10,827

9.6 The hope is that those figures can be met within North Lincolnshire. However, unless there is a general reduction in the amount of waste being sent to landfill within the Council area, there is anticipated to be a shortfall in the capacity required to meet the projected tonnages being received.

9.7 As described in paragraph 7.3 and shown in Table 51, below several of the currently operational landfill sites within North Lincolnshire are due to cease operations within the coming years.

Table 51: Operational Landfill Sites

Site Name	Permit Type	Operational End date	Annual Permitted Tonnage	Tonnage received 2017
New Crosby	Non-Hazardous LF	2030	375,000	183,978
Roxby	Non-Hazardous LF	Mid 2020s	550,000	455,747
Campwood	Non-Hazardous LF	2042	500,000	161,249
Total			*1,425,000*	*800,974*

9.8 Roxby Landfill is due to cease operations at some point in the mid-2020s and New Crosby is due to close in 2030. The closure of those sites by the late 2020s will result in 925,000 tonnes of permitted LACW landfill capacity being lost.

9.9 Once those sites close, Campwood Landfill site will be the only currently existing fully operational landfill site in North Lincolnshire. Currently, the annual permitted tonnage at Campwood is 500,000 tonnes, and as of 2017, 161,249 tonnes were received. The waste received was mainly from North East Lincolnshire during this period.

9.10 Based on the 2017 figures, with regard to LACW there would be a deficit in capacity of 146,301 tonnes per annum in total landfill capacity once operations have ceased and the annual tonnage received at the other sites in Table 38 has been discounted. It should be noted that the 2017 figure for landfill included waste from other local authorities across the country.

9.11 Using 2017 figures, Campwood would therefore not be able to accommodate all of the additional amounts of waste that are currently being sent to the sites in Table 38 above. Therefore, it is clear that North Lincolnshire will not be able accommodate the amount of landfill waste that it currently does if the amount of waste being directed to landfill is not reduced over the plan period.

9.12 However, as shown in Table 2, there has been a decline in the total amount of LACW arisings with North Lincolnshire over the last decade of around 9%. Per household that translates to around a 1.4% decline over the same period. Scenario 5 within Table 43 shows that if this trend was to continue that LACW arisings would drop from 95,069 tonnes to around 82,770 tonnes per year by 2038.

9.13 If the above EC targets are met, Campwood could potentially have the capacity to take all of the projected waste sent to landfill in North Lincolnshire. As shown above in Table 50, when considering EC targets, the projections show that by 2038, the maximum amount of waste being sent to landfill from within North Lincolnshire could be around 10,827 tonnes.

9.14 Such a situation could potentially leave plenty of capacity within North Lincolnshire for LACW landfill streams. It is also clear that even if there was no reduction in the amounts of LACW being produced within the Council area, that North Lincolnshire could meet its own capacity needs for the whole plan period.

9.15 However, LACW continues to be imported in substantial amounts to North Lincolnshire landfill sites from other WPAs. If EC targets are met in future, it may be possible to continue to accommodate LACW streams from those WPAs, but only if they also experience similar reductions in the amounts of waste going to landfill in the future. Yet, it is clear that there will be a shortfall of LACW landfill capacity within North Lincolnshire in the coming years if 2017 volumes of LACW continue to be received.

9.16 This situation will need to be kept under close review and discussions will need to take place with the other WPAs who currently export LACW to landfill sites in North Lincolnshire.

Commercial and Industrial Waste

9.17 As mentioned earlier in this report, there are no specific targets for the management of C&I waste.

9.18 Table 52 shows the total predicted C&I waste arisings in North Lincolnshire in key years throughout the plan period when the assumptions in Scenario 1 of Table 44 are applied.

Table 52: Commercial and Industrial Waste Arisings

	2017	2020	2025	2030	2035	2038
Commercial (46%)	256,547	264,320	277,803	291,974	306,867	316,166
Industrial (54%)	301163	310,289	326,117	342,752	360,236	371,151
Total C&I	**557,710**	**574,609**	**603,920**	**634,726**	**667,103**	**687,317**

9.19 It should be noted that the total C&I figure quoted for 2017 does not include household waste, therefore there is not considered to be any double counting between the two waste streams in the future projection assumptions.

Recycling

9.20 DEFRA have estimated that the municipal component of the 47.9 million tonnes C&I waste arising produced in England in 2009 as around 24.7 million tonnes[13]. That equates to around 52% of the C&I waste stream being akin to LACW. DEFRA assumed that C&I recycling is to increase by around 10% by 2020, reflecting factors such as landfill tax[14]. However, as the 2014 DEFRA report states, a lack of regular data means there is uncertainty in projecting C&I recycling rates. Therefore, in line with the assumptions made for LACW waste, it is considered appropriate to apply a recycling target for C&I waste arisings of 50% from 2020 onwards with future targets for recycling continuing to increase throughout the Plan period in the same way. The assumed future targets and figures are shown below in Table 53 for key years in the Plan period.

[13] DEFRA – Commercial and Industrial Waste Generation and Management Survey' (2009)
[14] DEFRA – Forecasting 2020 Waste Arisings and Treatment Capacity (2014)

Table 53: Commercial and Industrial Waste Recycling			
	C&I Arisings	**Recycling Requirement *(50% by 2020 onwards)***	**Recycling Requirement *(50% 2020 then 55%,60%/65%/65%)***
2020	574,609	287,305	287,305
2025	603,920	301,960	301,960
2030	634,726	317,363	380,836
2035	667,103	333,552	433,617
2038	687,317	343,659	446,756

Recovery

9.21 The Commercial and Industrial Waste Survey 2009 Final Report (2011) stated that around 7% of C&I waste in England was recovered in 2009 (5% land recovery and 2% energy recovery), in the Yorkshire and Humber region the figure was around 4.5%. It is considered reasonable to assume that at least 7% of C&I in North Lincolnshire is being recovered. However, as with recycling, those figures are anticipated to increase through the Plan period.

9.22 By way of comparison, a target of 25% was employed for projecting recovery rates for LACW waste. As explained, there is an overlap between the C&I waste and LACW waste which tend to have a positive correlation. Therefore, the application of similar projected rates of growth is considered realistic and reasonable. As a result, for the C&I waste akin to LACW waste, the 25% target has been applied. For the remainder of the C&I waste, a 7% target has been employed in line with the national average.

9.23 As with recycling of C&I waste, and for the same reasons, future targets for recovery have also been modelled to increase at key stages in the Plan period. Table 54 shows the waste recovery figures for the key years over the plan period,

Table 54: Commercial and Industrial Waste Recovery			
Key Years	**C&I Arisings**	**Recovery (25% for 52% of the waste; 7% for 48% of the waste ongoing)**	**Recovery (25% for 52% of the waste; 7% for 48% of the waste increasing over plan period 7%, 10% / 12% / 14%)**
2020	574,609	94,006	94,006
2025	603,920	98,801	98801
2030	634,726	103,841	112,981
2035	667,103	109,138	125,149
2038	687,317	112,445	135,539

9.24 As the recovery of C&I waste is often dealt with alongside LACW, Table 55 below shows the two streams added together.

Table 55: Combined LACW & C&I			
Key Years	**LACW Recovery (25% ongoing) (tonnes)**	**Recovery (25% for 52% of the waste; 7% for 48% of the waste increasing over plan period 7%,10% / 12% / 14%)**	**Total Recovery allowance**
2020	24,716	94,006	118,722
2025	25,406	98,801	124,207
2030	26,045	112,981	139,026
2035	26,684	125,149	151,833
2038	27,067	135,539	162,606

Residual

9.25 Once recycled and recovered waste have been accounted for, any remaining C&I waste will also need to be managed, most likely by landfill. The table below shows the estimated total C&I and LACW residual waste that could require disposal in this way.

9.26 This has been calculated in a similar way to LACW residual waste as demonstrated earlier in this report.

Table 56: Residual C&I and LACW Waste Projections			
	Residual C&I remaining after Recycling and Recovery	**Residual LACW remaining after Recycling and Recovery (tonnes)**	**Total Projected Residual (tonnes)**
2020	193,298	24,715	218,013
2025	203,159	20,324	223,483
2030	140,909	15,756	156,665
2035	108,337	10,673	119,010
2038	105,022	10,827	115,849

Summary

9.27 In 2017, as shown in Table 9, it is estimated that around 94% of all C&I waste with a North Lincolnshire origin is received at facilities within North Lincolnshire.

9.28 The same facilities as those used to calculate the estimated C&I arisings in Table 10a have been used to calculate future C&I capacity. Table 57 below shows the estimated capacities of all C&I facilities in North Lincolnshire in 2017 with estimates of capacity once total projected C&I volumes are discounted in key years throughout the plan period.

9.29 There are obvious limitations here in that there is no breakdown of the specific waste treatment capacities. However, it is clear that there is large unused capacity across C&I waste streams in general. Logically, any C&I waste produced within North Lincolnshire that is currently being management outside the Council area because there is no appropriate facility will continue to be processed outside North Lincolnshire going forward. That being the case, it will be important to remain in close discussion with those Local Authority areas to which North Lincolnshire exports C&I waste so as to ensure that any issues relating to the future management of those exports within those Council areas can be addressed as early as possible.

Construction, Demolition and Excavation Waste

9.30 As with some other previously discussed waste streams, there are no adopted targets for CD&E waste. However, the European Waste Framework Directive (2008) does set a target of at least 70% recovery of non-hazardous C&D waste by 2020.

9.31 Table 11 shows that North Lincolnshire remains a net importer of CD&E waste from other authorities. In 2017 the net amount received by North Lincolnshire was 156,398 tonnes. On average, since 2008, 55% of the CD&E waste received at permitted facilities in North Lincolnshire has been imported from other WPAs.

9.32 Figures from 2017 in Table 12 show that around 90% of the CD&E waste handled within North Lincolnshire is handled at Waste Transfer/Treatment, Metal Recycling or Physical Treatment facilities. Tables 38 and 39 show the annual permitted tonnage at those types of facilities within North Lincolnshire. The estimated remaining capacity at those types of sites in 2017 is shown in Table 57

9.33 Figures for the other facilities that handle the remaining 20% are difficult to isolate.

9.34 Table 45 includes future projections for CD&E waste in North Lincolnshire. Scenario 3 has been used to inform the CD&E capacity gap calculations. Table 58 shows the remaining capacity within the key years of the plan for CD&E waste.

Table 58: Remaining Capacity for CD&E Waste						
	Inert Waste Transfer / treatment (not C&I) (tonnes)	Non-Hazardous Waste Transfer (tonnes)	Non-Hazardous Waste Transfer / Treatment	Metal Recycling (tonnes)	Physical Treatment (tonnes)	Total
2017	**30,870**	**2,117**	**17,066**	**9,494**	**76,209**	**135,756**
2017 Annual Permitted Tonnage	400,000	74,999		35,000	2,299,996	2,809,995
2017 Remaining Capacity	369,130	55,816		25,506	2,223,787	2,674,239
2020	**32,759**	**2,246**	**18,110**	**10,076**	**80,873**	**144,065**
2020 Annual Permitted Tonnage	400,000	74,999		35,000	2,299,996	2,809,995
2020 Remaining Capacity	367,241	54,642		24,924	2,219,123	2,665,930
2025	**36169**	**2480**	**19996**	**11124**	**89291**	**159060**
2025 Annual Permitted Tonnage	400,000	74,999		35,000	2,299,996	2,809,995
2025 Remaining Capacity	363,831	52,523		23,876	2,210,705	2,650,935
2030	**39,934**	**2,738**	**22,077**	**12,282**	**98,584**	**175,615**
2030 Annual Permitted Tonnage	400,000	74,999		35,000	2,299,996	2,809,995
2030 Remaining Capacity	360,066	50,184		22,718	1,822,857	2,255,825
2035	**44,090**	**3,023**	**24,374**	**13,560**	**108,845**	**193,893**
2035 Annual Permitted Tonnage	400,000	74,999		35,000	2,299,996	2,409,995
2035 Remaining Capacity	355,910	47,602		21,440	2,191,151	2,260,193
2038	**46,789**	**3,208**	**25,866**	**14,390**	**115,507**	**205,761**
2038 Annual Permitted Tonnage	400,000	74,999		35,000	2,299,996	2,809,995
2038 Remaining Capacity	353,211	45,925		20,610	2,184,489	2,604,235

9.35 North Lincolnshire could reasonably expect to see a decline in the amount of waste imported into the area from other WPAs due to the desire of Government for WPAs to seek to achieve net self-sufficiency. Similarly, North Lincolnshire will also have to aspire towards net self-sufficiency. As mentioned earlier in this study, around 43,477 tonnes of CD&E waste arising in North Lincolnshire is currently exported to be managed elsewhere in the Country. It may be the case that some of this waste will have to be redirected to be dealt with internally, if so, it is likely that there will be capacity within the Plan area to accommodate that extra waste depending on the specific type of CD&E waste in question.

9.36 Ongoing work will need to be required with those authorities that share an import/export relationship with North Lincolnshire in order to closely monitor CD&E waste coming into and moving out of the Plan area.

9.37 Landfill and Recycled / Recovered to be included here – note that any hazardous CD&E waste likely to be managed at specialist facilities covered in the Hazardous section.

Hazardous Waste

9.38 Hazardous wastes tend to be components of other waste streams and can arise from many different sources. As such, it can be difficult to isolate hazardous waste streams for the purposes of calculating future arisings.

9.39 However, as mentioned previously in this report, analysis shows that around 77% of the hazardous waste arisings reported in 2017 in North Lincolnshire were exported for management outside of the Council area. Over the 5 previous years, that averaged out to around 81%.

9.40 It must be assumed that this trend will continue until or unless new facilities become available within the Council area. Table 59 below shows projected total hazardous waste arisings (using scenario 1 within Table 46), with a breakdown of how much could be expected to be managed internally and exported in key years throughout the Plan period if recent trends continue.

Table 59: Projected total hazardous arising in key years of the plan

Key Years	2020	2025	2030	2035	2038
North Lincs Arisings (tonnes)	59,429	62,460	65,646	68,995	71,086
Managed Locally	11,292	11,867	12,473	13,109	13,506
Exports (at 81%)	48,137	50,593	53,173	55,886	57,560

9.41 However, whilst a substantial amount of hazardous waste arising in North Lincolnshire was exported for management elsewhere, an almost equivalent amount of hazardous waste was imported into the Council area in the same time period. In 2017 for example, 47,575 tonnes of hazardous waste were imported into North Lincolnshire with the average amount of hazardous waste imported into the area in 2015, 2016 and 2017 being 45,212 tonnes. Table 60 below shows the balance of imports and exports in and out of the Council area over that three-year period.

Table 60: Actual Hazardous Waste Import and Exports

	2015	2016	2017
Exports	40,252	42,015	43,834
Imports	39,465	48,596	47,575

9.42 It should be noted that, as per Tables 16 and 31, no substantial amounts of hazardous waste are being dealt with in facilities or in ways which are not available within North Lincolnshire. Whilst there are obvious

contractual issues regarding the treatment of hazardous waste within and outside of North Lincolnshire, this serves to demonstrate that the facilities exist within the Council area which could theoretically facilitate net self-sufficiency. Furthermore, Table 30 show that the vast majority of the hazardous waste imported to North Lincolnshire comes from Derbyshire and Sheffield. In terms of exports, Table 32 shows only Warwickshire received more than 10,000 tonnes of hazardous waste from North Lincolnshire in 2017 at 13,059 tonnes. The next highest importer from North Lincolnshire was Northamptonshire at 4,727 tonnes. It is hoped that any issues with management of North Lincolnshire's imported and exported hazardous waste will come to light through continued monitoring and cooperation with those few Waste Planning Authorities that engage in the transfer of what could be considered significant amounts of hazardous waste with North Lincolnshire.

9.43 However, self-sufficiency will not be possible for all hazardous waste streams across the Plan period. Winterton South Landfill is due to cease operations in March 2026; it is not currently known whether applications to extend operations further will be submitted or granted. In 2017 around 7,619 tonnes of the hazardous waste arising in North Lincolnshire was received at Winterton South with around 15,371 tonnes being received at the site in total. By 2026 when Winterton South is due to close, these figures could rise to be around 11,9878,333 tonnes per annum respectively.

Table 61: Winterton South

Site Name	Permit Type	Operational End date	Annual Permitted Tonnage	Total Tonnage received 2017	Projected North Lincolnshire Arisings 2026	Projected Total Tonnage received 2026
Winterton South	Hazardous Waste	March 2026	500,000	15,371	11,987	16,811

9.44 Whilst these are relatively small amounts of waste, this is an obvious problem as North Lincolnshire and all of the other WPAs who currently export material to Winterton South will need to find alternative ways of managing those streams of hazardous waste once operations cease on site. However, there are 5 other permitted hazardous landfill sites within the Yorkshire & Humber region, so there is the potential for that waste to be managed elsewhere within the wider region.

9.45 That being the case, at this point in time, there are no seemingly insurmountable issues regarding capacity for management of hazardous waste over the Plan period. Despite that, the Council will endeavour to continue to undertake discussions with other WPAs and waste operators in the region in order to better understand the long-term status of hazardous waste management and any future capacity gaps or issues.

Agricultural Waste

9.46 As mentioned earlier in this report, there is limited data available on agricultural waste. The total waste arising from agriculture that will need to be dealt with off-farm is likely to be insufficient to justify the identification of land for strategic waste management facilities dedicated to this sector. Recyclable wastes can be managed at the same sites as C&I waste. As such it is not anticipated that additional capacity will be required.

9.47 Capacity for specialised treatment is already in place locally as explained in paragraph 5.2 and it is not anticipated that additional capacity will be required.

10. CONCLUSIONS

10.1 The principal conclusions from the capacity assessment are summarised as follows:

Local Authority Collected Waste

10.2 North Lincolnshire has historically worked with the Yorkshire and Humber Authorities – in particular, East Riding, NE Lincs and Kingston Upon Hull to effectively manage the regional LACW. However, there will be pressure on the current waste export/import streams into the Council area towards the end of the Plan

period. It is anticipated that current waste streams will not be able to be accommodated after 2026, and as a result, the available and future capacity at sites within North Lincolnshire and neighbouring authorities will need to be monitored closely. However, there is capacity within the existing facilities to accommodate the projected LACW arisings within North Lincolnshire.

Commercial and Industrial Waste

10.3 There is a notable amount of uncertainty in in C&I waste estimates and forecasts, meaning that assessing future capacity is difficult. If the assumed projections are applied, the assessment suggests that, depending on levels of recycling and composting, there should be sufficient capacity within North Lincolnshire to accommodate C&I waste streams.

Construction, Demolition and Excavation Waste

10.4 As with C&I waste, there is a good deal of ambiguity surrounding CD&E estimates. DEFRA recognise as much and have claimed that accurately quantifying C&D waste is challenging and that absolute tonnage figures are subject to a relatively high level of uncertainty[15]. However, it is likely that there will be capacity within the Plan area to accommodate future CD&E waste depending on the specific type of CD&E waste in question.

Hazardous Waste

10.5 Only 57,681tonnes of hazardous waste were generated in North Lincolnshire in 2017 – a small fraction of the national total. Based on the small quantities of hazardous waste arising in North Lincolnshire, it is not anticipated that there will be a need to identify strategic locations for the management of hazardous waste, particularly given the nature of consent for such development which, above 30,000 tonnes would be considered a nationally significant infrastructure project.

Agricultural Waste

10.6 The relatively small amounts of agricultural waste arisings that have to be handled off-farm should continue to be appropriately managed by the private sector, as such the Local Plan will not need to identify any strategic locations for its management.

[15] DEFRA – Statistics on Waste Notice (2016)

REFERENCES

Department for Communities & Local Government (2012), National Planning Policy Framework (March 2012)

Department for Communities & Local Government (2014), National Planning Policy for Waste (October 2014)

Department for Communities & Local Government (2014), Planning Practice Guidance – Waste (October 2014 onwards) (On-line only), DCLG

Department for Energy & Climate Change (2011), National Policy Statement for Renewable Energy Infrastructure (EN-3) (July 2011)

Department for Energy & Climate Change (2011), Overarching National Policy Statement for Energy (EN-1) (July 2011)

Department for Environment, Food & Rural Affairs (2012), National Policy Statement for Waste Water - A Framework Document for Planning Decisions on Nationally Significant Waste Water Infrastructure (March 2012)

Department for Environment, Food & Rural Affairs (2013), National Policy Statement for Hazardous Waste – A Framework Document for Planning Decisions on Nationally Significant Hazardous Waste Infrastructure (July 2013)

Department for Environment, Food & Rural Affairs (2013), Waste Management Plan for England (December 2013)

Environment Agency (2006 to 2017), Waste Data Interrogator

Environment Agency (2006 to 2017), Hazardous Waste Data Interrogator

European Commission (1991), Landfill Directive (1991/31/EC)

European Commission (2008), Waste Framework Directive (2008/98/EC)

North Lincolnshire Council (2003), North Lincolnshire Local Plan – Saved Policies (May 2003)

North Lincolnshire Council (2011), North Lincolnshire Local Development Framework - Core Strategy DPD (June 2011)

North Lincolnshire Council (2012), Municipal Waste Management Strategy 2012 to 2030 (May 2012)

North Lincolnshire Council (2016), North Lincolnshire Local Development Framework – Housing & Employment Land Allocations DPD (March 2016)

North Lincolnshire Council (2016), North Lincolnshire Local Development Framework – Lincolnshire Lakes Area Action Plan (May 2016)

UK Parliament (2011), Localism Act 2011, TSO

UK Parliament (2011), Waste (England & Wales) Regulations 2011

UK Parliament (2012), Waste (England & Wales) (Amendment) Regulations 2012

GLOSSARY OF TERMS

Agricultural Waste - waste generated by the agriculture sector, mainly from farm complexes. Most of this waste is natural and can be managed on-farm; non-natural wastes (e.g. plastic wrapping) is generally managed through the private sector.

Anaerobic Digestion - a process to manage organic matter including green waste and food waste broken down by bacteria in the absence of air, producing a gas (biogas) and nutrient rich solid or liquid (digestate). The biogas can be used to generate energy either in a furnace, gas engine, turbine or to power vehicles, and digestate can be applied to land as a fertiliser.

Commercial & Industrial Waste (C&I) - waste generated by shops, offices, factories and other businesses and industry.

Composting - a biological process which takes place in the presence of oxygen in which organic wastes, such as garden and kitchen waste, are converted into a stable, granular material. This can be applied to land to improve soil structure and enrich nutrient content.

Construction, Demolition & Excavation Waste (CDE) - controlled waste arising from the construction, repair, maintenance and demolition of buildings and structures.

Controlled Waste - waste subject to controls emanating from the EU Waste Framework Directive.

Department for Environment, Food & Rural Affairs (DEFRA) – central government department with responsibility for the environment. Sets out the national approach to waste management.

Duty to Co-operate (DtC) - The duty to cooperate is a legal test that requires co-operation between local planning authorities and other public bodies to maximise the effectiveness of policies for strategic matters in Local Plans. It is separate from but related to the Local Plan test of soundness. It was introduced by the Localism Act 2011.

East Midlands – one of nine regions of England for planning and other purposes. Consists of Derby City, Derbyshire, Leicester City, Leicestershire, Lincolnshire, Nottingham City, Nottinghamshire & Northamptonshire

East of England - one of nine regions of England for planning and other purposes. Consists of Bedford, Cambridgeshire, Central Bedfordshire, Essex, Hertfordshire, Luton, Norfolk, Southend on Sea, Suffolk & Thurrock.

End of Life Vehicle - motor vehicles that fall into the category of 'waste' as defined by the EU Waste Directive.

Environment Agency (EA) – The body responsible for the regulation of waste management activities through issuing permits to control activities that handle or produce waste. It also provides up-to-date information on waste management matters and deals with other matters such as water issues including flood protection advice.

Environmental Permit – formerly known as a Waste Management Licence. The regime is governed by the Environmental Permitting (England & Wales) Regulations 2010. It requires operators of facilities that could harm the environment or human to obtain a permit for some facilities. This includes some waste management facilities.

European Waste Catalogue (EWC) – also known as the List of Waste (LoW). It is a classification code used to identify different types of 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.

Incineration with Energy Recovery – Management of waste by incineration with the use of facilities to capture heat given off for the purposes of producing energy. Plants are known “Energy from Waste” facilities.

Incineration without Energy Recovery - Management of waste by incineration without use of facilities to capture heat given off for the purposes of energy recovery

Landfill - restoration of land (for example, a former quarry) using waste

Landfill Directive - a Directive on waste management from the European Commission which aims to prevent, or reduce as far as possible, the negative effects on both the environment and human health caused by landfilling of wastes.

Local Authority Collected Waste (LACW) - includes waste produced by householders both collected from their homes (collected household waste), and deposited at Household Waste Recycling Centres (HWRCs) (total household waste), plus commercial waste collected by district councils, street sweepings, litter and fly tipped materials.

Local Development Framework (LDF) – introduced under the Planning & Compulsory Purchase Act 2004, it consists of a suite of documents that make up the development plan for a Local Planning Authority area. North Lincolnshire's Local Development Framework consists of the Core Strategy DPD (June 2011), Housing & Employment Land Allocations DPD (March 2016) and Lincolnshire Lakes Area Action (May 2016). It forms the current development plan for North Lincolnshire alongside the saved policies of the North Lincolnshire Local Plan (May 2003). Will be replaced by the North Lincolnshire Local Plan (2017 to 2036)

Localism Act 2011 – introduced into law in November 2012, this Act of Parliament sought devolve decision making powers from central government control to individuals and communities. It introduction the Duty to Co-operate between planning authorities and other statutory bodies on strategic, cross boundary issues, including waste management. It also established neighbourhood planning as a tool for communities to shape how their areas grow and develop.

London - one of nine regions of England for planning and other purposes. Consists of 32 boroughs that make up the Greater London area – Barking & Dagenham, Barnet, Bexley, Brent, Bromley, Camden, City of London, City of Westminster, Croydon, Ealing, Enfield, Greenwich, Hackney, Hammersmith & Fulham, Haringey, Harrow, Havering, Hillingdon, Hounslow, Islington, Kensington & Chelsea, Kingston upon Thames, Lambeth, Lewisham, Merton, Redbridge, Richmond upon Thames, Sutton, Tower Hamlets, Waltham Forest, & Wandsworth.

Low Level (Non-Nuclear) Radioactive Waste (LLRW) - radioactive waste having a radioactive content not exceeding four GBq/te of alpha or 12 GBq/te of beta/gamma activity.

Metal Recycling Sites (MRS) – sites that are permitted to manage scrap and waste metals.

Municipal Waste Management Strategy (MWMS) – a strategy to guide the management, treatment and disposal of Local Authority Collected Waste (LACW). North Lincolnshire's MWMS was adopted in 2012.

National Planning Policy for Waste (NPPW) – it is the key national planning policy document that sets out the Government's planning principles for waste. This includes delivering the waste hierarchy, addressing waste as a resource, and viewing disposal as the last option, but one which must be adequately catered for. The NPPW alongside the Waste Management Plan for England (2013) form the National Waste Management Plan.

National Planning Policy Framework (NPPF) – originally published in March 2012, it was amended and re-published in July 2018. It sets out the Government's policy on a wide range of planning issues and provides the overarching context of local planning policy. It establishes a presumption in favour of sustainable development. However, it does not include policies for sustainable waste management; however it is an important consideration for waste planning as it sets out the national policy framework for all other aspects of planning and sustainable development.

National Policy Statement (NPS) – produced by Government and the primary consideration in decision-making on Nationally Significant Infrastructure Projects (NSIPs). They set out the policies against which decisions on NSIPs should be made. 12 NPSs are either designated or proposed covering energy (6), transport (3), and water, waste water & waste (3).

Nationally Significant Infrastructure Projects (NSIPs) - are major infrastructure developments in England and Wales that bypass normal local planning requirements. These include proposals for power plants, large renewable energy projects, new airports and airport extensions, major road projects etc. Created in 2008, since April 2012 these projects have been managed by the Planning Inspectorate.

National Waste Management Plan – consists of the NPPW and the Waste Management Plan for England (2013)

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.

North East - one of nine regions of England for planning and other purposes. Consists of County Durham, Darlington, Gateshead, Hartlepool, Middlesbrough, North Tyneside, Northumberland, Redcar & Cleveland, South Tyneside, Stockton-on-Tees & Sunderland.

North Lincolnshire Local Plan (2017 to 2036) – the emerging Local Plan for the area. Will replace the existing planning policy framework for area and will set out the long term development strategy including minerals and waste development.

North West - one of nine regions of England for planning and other purposes. Consists of Blackburn with Darwen, Blackpool, Bolton, Bury, Cheshire East, Cheshire West & Chester, Cumbria, Halton, Knowsley, Lancashire, Liverpool, Manchester, Oldham, Rochdale, Sefton, St Helens, Stockport, Tameside, Trafford, Warrington, Wigan & Wirral

Nuclear Decommissioning Authority (NDA) – non-departmental public body created via the Energy Act 2004 that oversees the safe and efficient clean up of the UK's nuclear legacy.

Planning Practice Guidance (PPG) – often referred to as National Planning Practice Guidance (NPPG), it is a web-based resource which brings together planning guidance on various topics into one place. It was launched in March 2014 and coincided with the cancelling of the majority of Government Circulars which had previously given guidance on many aspects of planning.

Proximity Principle - waste should generally be disposed of as near as possible to its place of production. In line with Article 16 of the European Waste Framework Directive.

Recovery – subjecting waste to processes that recover value including recycling, composting or thermal treatment to recover energy.

Recycling - the reprocessing of materials extracted from the waste stream either into the same product or a different one.

Regional Spatial Strategy (RSS) – introduced in 2004, Regional Spatial Strategies provided regional planning frameworks for eight regions of England outside London. They were revoked by the Government in July 2010.

Residual Waste - waste remaining after materials for re-use, recycling and composting/organic waste treatment e.g. anaerobic digestion have been removed.

South East - one of nine regions of England for planning and other purposes. Consists of Bracknell Forest, Brighton & Hove, Buckinghamshire, East Sussex, Hampshire, Isle of Wight, Kent, Medway, Milton Keynes, Oxfordshire, Portsmouth, Reading, Slough, Southampton, Surrey, West Berkshire, West Sussex, Windsor & Maidenhead & Wokingham.

South West - one of nine regions of England for planning and other purposes. Consists of Bath & North East Somerset, Bournemouth, Bristol, Cornwall, Devon, Dorset, Gloucestershire, Isles of Scilly, North Somerset, Plymouth, Poole, Somerset, South Gloucestershire, Swindon, Torbay & Wiltshire.

Standard Industrial Classification (SIC) - first introduced into the UK in 1948 for use in classifying business establishments and other statistical units by the type of economic activity in which they are engaged. It provides a framework for the collection, tabulation, presentation and analysis of data, and its use promotes uniformity. The UK SIC system has been developed in association with the EU's classification system, NACE. The first four digits of each code are standardised across the EU, and subsequent digits are unique to each country.

Transfer/Transfer Station – facility for receiving and "bulking up" waste before its onward journey for treatment, recycling or disposal elsewhere.

Treatment - physical, chemical, biological or thermal waste management processes which change the characteristics of waste.

Waste (England & Wales) Regulations 2011 (as amended) – transposes the legislative framework set out in revised EU Waste Framework Direction 2008 into English law.

Waste Collection Authority (WCA) – local authority who is responsible for collecting municipal waste. There 376 WCAs in England and Wales. North Lincolnshire Council is the WCA for its areas.

Waste Data Interrogator (WDI)/Hazardous Waste Data Interrogator (HWDI) - data tools prepared by the EA based on information provided by waste operators. It allows for assessments of strategic waste and general waste flow.

Waste Dataflow – on-line tool for reporting Local Authority Collected Waste (LACW) to central government. Can be used to examine LACW arisings.

Waste Disposal Authority (WDA) – established under Environment Act 1990 to facilitate the management and disposal of Local Authority Collected Waste. Responsible for developing Municipal Waste Management Strategies. These can groups of councils or individual councils. North Lincolnshire Council is the WDA for its area.

Waste Exemption - certain waste operations are exempt from the need to hold an environmental permit (formerly a waste management licence) for many years. These operations are not unregulated, but are subject to a lighter touch regulation requiring those who carry them out to comply with certain rules and not cause harm to the environment. This system is managed by the Environment Agency.

Waste Framework Directive (WFD) - Directive 2008/98/EC sets out the legislative framework for the collection, transport, recovery and disposal of waste in the European Union. It includes a common definition of waste and establishes the Waste Hierarchy. It is transposed into law by the Waste (England & Wales) Regulations 2011 (as amended).

Waste Hierarchy – this is a theoretical framework which acts as a guide to waste management options. This is set out in the revised European Waste Framework Directive, and reflected in NPPW. It sets out that prevention should be followed by preparing for re-use; recycling; other recovery and finally disposal as a last resort

Waste Management Plan for England – produce by DEFRA in 2013, it sets out an analysis of waste management in England and seeks to bring waste management policies into a single national planning. It forms part of fulfilling the requirements of Article 28 of the revised Waste Framework Directive.

Waste Planning Authority (WPA) - the local authority responsible for waste development planning and control. They are unitary authorities, including National Park Authorities, and county councils in non-unitary areas. North Lincolnshire Council is the waste planning authority for its area.

Waste Water/Sewage Sludge - water disposed of by domestic properties or following industrial activities. This includes sewerage, as well as waste from other activities. Sewage sludge is the by-product of waste water treatment.

West Midlands - one of nine regions of England for planning and other purposes. Consists of Birmingham, Coventry, Dudley, Herefordshire, Sandwell, Shropshire, Solihull, Staffordshire, Stoke-on-Trent, Telford & Wrekin, Walsall, Warwickshire, Wolverhampton & Worcestershire.

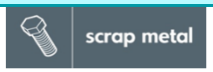
WPA Not Codeable – term used in the EA Waste Data Interrogator where is not possible to identify the origin of waste received at permitted facilities.

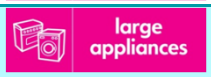
Yorkshire & Humber - one of nine regions of England for planning and other purposes. Consists of Barnsley, Bradford, Calderdale, Doncaster, East Riding of Yorkshire, Kingston upon Hull, Kirklees, Leeds, North East Lincolnshire, North Lincolnshire, North Yorkshire, Rotherham, Sheffield & York.

APPENDIX 1: DESTINATIONS OF WASTE COLLECTED BY NORTH LINCOLNSHIRE COUNCIL VIA BIN COLLECTIONS & HOUSEHOLD WASTE RECYCLING CENTRES

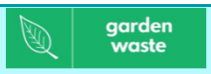
Waste Type	Method of Collection	Reprocessor

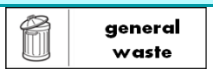
	Household Recycling Centres	• Items are sold in three British Heart Foundation shops:
		  • Market Hill, Scunthorpe, DN15 6RA;
		  • Cole Street, Scunthorpe, DN15 6RA;
		  • The Colonnades, Doncaster, DN1 3EG.

	Burgundy bin Household Recycling Centres	• LEE & MANN MILLS, Changsu Economic Development Zone, Jiangsu China.
	Sack and bin collections	• Shredall (East Midlands) Ltd, Joy House, Park Road, Bestwood Business Park, Park Road, Bestwood Village, Notts, NG6 8TW.
	Blue box Bring sites Household Recycling Centres	• Palm Recycling, Saddlebow Industrial Estate, Popular Ave, Kings Lynn, PE34 3AL.
	Burgundy bin Bring sites Household Recycling Centres	• JAYPLAS J & A Young, 15 Saxon Way, East Corby, Northamptonshire, NN18 9EX • Ecoplastics, Hemswell Business Park, Hemswell, Lincolnshire, DN21 5TU.
	Household Recycling Centres	• Van Werven Ltd, Verlengrde Looweg 7, 8096 RR Oldebroek, Netherlands (Cliffe Common, Selby, YO8 6G)
	Green box Bring sites Household Recycling Centres	• NOVELIS Warrington, Thelwall Lane, Warrington, Cheshire, WA4 1NN.
	Green box Bring sites Household Recycling Centres	• NOVELIS Warrington, Thelwall Lane, Warrington, Cheshire, WA4 1NN.
	Household Recycling Centres	• Crosby Employment Agency, 1-3 Laneham Street, Scunthorpe, North Lincolnshire, DN15 6LJ
	Household Recycling Centres	• LAS Metals, 44 Midland Road, Scunthorpe, North Lincolnshire, DN16 1DQ.
	Green box Bring sites Household Recycling Centres	• Sahaviriya Steel House, Redcar, TS10 5QW
	Textiles sack collected with the green and blue box Household Recycling Centres	• Bag it up, Unit 1, Calder St, West Vale, Greetland, Halifax, HX4 8AQ.
	Household Recycling Centres	• Sonoco, Alcove's Mill, Holywell Green, Nr Halifax, W Yorkshire, HX4 9PY.
	Household Recycling Centres	• Living Fuels, Freedom Farm, Cowles Drove, Thetford, Norfolk, IP26 4JQ.
	Household Recycling Centres	• Mid UK, Ermine St, Barkston Hearth, Ancaster, NG32 3PY.
	Household Recycling Centres	• Recyclemart Ltd, Unit 3, Rannock House, Geddington Road, Corby, Northamptonshire, NN18 8ET.
	Household Recycling Centres	• Vision Aid, 12 The Bell Centre, Newton Road, Crawley, West Sussex, RH10 9FZ.

	Green box Household Recycling Centres	• G & P Batteries Ltd, Crescent Works Industrial Park, Willenhall Road, Wednesbury, West Midlands, WS10 8JR.
	Household Recycling Centres	• Sims Group Ltd, Macklin Ave, Cowpen Lane Industrial Estate, Billingham TS23 4BY.
	Household Recycling Centres	• Mercury Recycling Ltd, Unit 17 Commerce Way, Trafford Park, Manchester M17 1HW.
	Household Recycling Centres	• EMR, Sirius House, Delta Crescent, Westbrook, Warrington, WA5 7NS and EMR Alexandra Dock, Liverpool, L20 1BX.
	Household Recycling Centres	• Mercury Recycling Ltd, Unit 17 Commerce Way, Trafford Park, Manchester, M17 1HW.
	Household Recycling Centres	• Britaniacrest Recycling Ltd, 24-26 Reigate Road, Hookwood, Horley, Surrey, RH06 0HJ
	Kerbside Collections Household Recycling Centres	• EMR Alexandra Dock, Liverpool, L20 1BX.
	Council buildings and schools	• Sims Group UK Ltd, South Road, Ellesmere Port, Cheshire, CH65 4LB • Electrical Waste Recycling Group, School Lane, Kirkheaton, Huddersfield, HD5 0JS.
	Household Recycling Centres	• Electric Waste Recycling Group Ltd, School Lane, Kirkheaton, HD5 0JS.
	Green box Bring sites Household Recycling Centres	• Berrymans, South Kirkby Plant, 49 Lidgate Crescent, Langthwaite Grange Ind, South Kirkby, West Yorkshire WF9 3NR
	Household Recycling Centres	• Mid UK, Ermine St, Barkston Hearth, Ancaster, NG32 3PY.

	Household Recycling Centres	• Items are sold in three British Heart Foundation shops:
		  • Market Hill, Scunthorpe DN15 6RA;
		  • Cole Street, Scunthorpe DN15 6RA:
		  • The Colonnades, Doncaster, DN1 3EG.

	Household Recycling Centres	• Nimtech, c/o Crown Paints, Hollins, Darwen, Lancashire, BB3 0BG.
	Brown bin Household Recycling Centres	• Brier Hills Recycling, Brier Hills Farm, Hatfield, Doncaster, DN7 6HA.
	Household Recycling Centres	• Bells Waste Control, Winterton Road, Scunthorpe, DN15 0DH • Sita UK Ltd, New Crosby Landfill, Off Dawes Lane, Scunthorpe, DN15 6UD.
	Household Recycling Centres	• Down to Earth, Old Cement Works, Gainsthorpe Road East, Kirton Lindsey, North Lincolnshire, DN21 4JH.
	Road Sweeper	• T Shea Limited, Knowsthorpe Road, Leeds, LS9 0N • EMR, Laisterdyke Road, Bradford • Bradford Waste Traders, Bowling Back Lane, Bradford BD4 8SJX.
	Household Recycling Centres	• Bells Waste Control, Winterton Road, Scunthorpe, DN15 0DH • Sita UK Ltd New Crosby Landfill, Off Dawes Lane, Scunthorpe, DN15 6UD.
	Household Recycling Centres	• Plevins, Cheshire Street, Mossley, Ashton Under Lyne, Lancashire OL5 9NG • Down to Earth, Gainsthorpe Road, Kirton Lindsey DN21 4JH.
	Household Recycling Centres	• LAS Metals, 44 Midland Road, Scunthorpe, North Lincolnshire, DN16 1DQ.
	Household Recycling Centres	• EnviroTyre, 47 London Rd, Boston, Lincolnshire, PE20 1JE.

	Household Recycling Centres	• Eco-Oil Ltd, Kingsnorth Treatment Plant, Jetty Rd, Kingsnorth, Kent, ME3 9ND.
	Household Recycling Centres	• Viridor Erin Landfill, Markham Lane, Chesterfield, S44 5HS • WRG, Coleby Road, Winterton
	Orange sack collections	• Veolia Tyseley, James Rd, Tyseley, Birmingham, West Midlands, B11 2BA • FCC Welbeck Landfill Site, Boundary Lane, Normanton, Wakefield, WF6 2JA.
	Household Recycling Centres	• Mariner Gas Services (Calor), 20 Kendale Road, Scunthorpe, North Lincolnshire, DN16 1DT • Synergy Asset Services Ltd, Merton Farm, Merton Lane South, Canterbury, Kent, CT4 7BA • Flogas Britain Ltd, 8 Beck View Rd, Beverley, HU17 0JT.
	Household Recycling Centres	• Chemtech Waste Management Ltd, Alchemy House, Coppice Side Industrial Park, Brownhills, Walsall, West Midlands, WS8 7EU.
	Green/grey bin Household Recycling Centres	• Biffa Waste Services Ltd, Roxby Landfill Site, Winterton Road, Roxby, North Lincolnshire, DN15 0BD
	Kerbside burgundy bin	• Impetus Waste Management, Davy Bank, Wallsend, NE28 6UY, & • Impetus Waste Management, North Tees Access Road, Port Clarence, Middlesbrough, TS2 1TT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