Norfolk County Council

Norfolk Minerals and Waste Local Plan

Waste Management Capacity Assessment

Containing 2019 and 2020 data

2022

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Contents

Abbreviations

AD	Anaerobic Digestion
ACM	Asbestos Containing Material
DCLG	Department of Communities and Local Government
Defra	Department of Environment, Food and Rural Affairs
ELV	End of Life Vehicles
GVA	Gross Value Added
HIC	Household, Industrial and Commercial
HWI	Hazardous Waste Interrogator
HWRC	household waste recycling centre
IBA	incinerator bottom ash
LAWC	Local Authority Collected Waste
LPA	Local Planning Authority
MRF	Materials Recycling Facility
MRS	Metal recycling site
NM&WLP	Norfolk Minerals and Waste Local Plan
NPPF	National Planning Policy Framework
NPPG	National Planning Practice Guidance
NPPW	National Planning Policy for Waste
ONS	Office for National Statistics
RDF	Refuse Derived Fuel
SRF	Solid Recovered Fuel
WDI	Waste Data Interrogator
WEEE	Waste Electrical and Electronic Equipment
WFD	Waste Framework Directive
WPA	Waste Planning Authority
WTAB	Waste Technical Advisory Body

1. Introduction

This report is in four parts:

- Assessment of existing waste management capacity in Norfolk
- Assessment of waste movements to and from Norfolk
- Forecast of future waste arisings in Norfolk
- Conclusion

The first part of the report assesses existing waste management capacity at facilities in Norfolk, using information from the Environment Agency Waste Data Interrogator. Assessment of existing waste management capacity is the first step towards ensuring that sufficient planned provision for the management of waste in the emerging Norfolk Minerals and Waste Local Plan (NM&WLP). This is in accordance with national policy to ensure that any future plan is able to take into account a robust analysis of the current provision of facilities.

The second part of the report assesses the movement of waste to and from Norfolk, including whether there are any significant waste streams moving to specific facilities, using information contained within the Waste Data Interrogator.

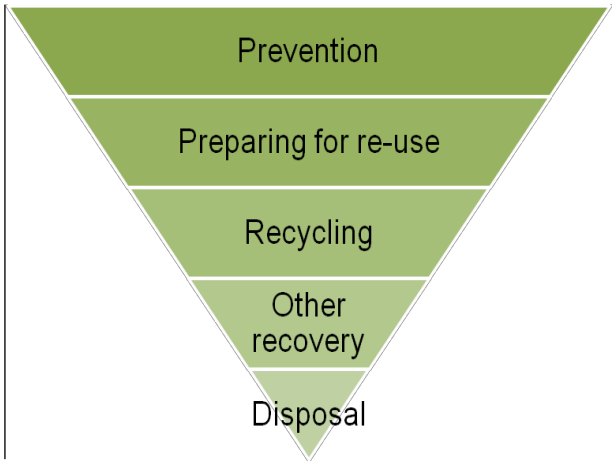
The third part of the report forecasts the quantities of waste likely to require management over the Plan period up to 2038. Forecasting will use the methods set out in national guidance as being appropriate and will make use of various datasets on population and household growth forecasts. Forecasting for some waste streams makes use of economic growth forecasting. Data compiled from the East of England Forecasting Model will be used to establish economic growth forecasts for specific business sectors. Any gap in capacity identified would form the basis for planned provision within the emerging NM&WLP.

Legislation

The overriding legislation relating to the management of waste in England is the Waste Framework Directive. Key principles of the WFD are the waste hierarchy, the proximity principle and the principle of the self-sufficiency.

The Waste hierarchy

The following diagram of the waste hierarchy is contained in appendix A of the National Planning Policy for Waste and in the Waste Management Plan for England.



The full definition of each level of the waste hierarchy is set out in Article 3 of the revised Waste Framework Directive (2008/98/EC); and see also the Waste Management Plan for England.

The principles of proximity and self-sufficiency

The proximity principle means that the disposal of waste should take place at the nearest appropriate facility, and the recovery of mixed municipal waste collected from private households should take place at the nearest appropriate facility.

Article 16 of the WFD requires that each Member State work towards self-sufficiency in the management of waste at EU and national level.

However, it is recognised that there may be certain waste streams for which the complexity of the waste management process, and/or the volumes of waste in each area are so low that it would be unviable for a full range of waste management facilities to exist in every area.

The principles of proximity and self-sufficiency shall not mean that each Member State has to possess the full range of final recovery facilities within that Member State." Article 16 of the Waste Framework Directive.

The Planning Practice Guidance (paragraph reference ID: 28-007-20141016) sets out how the self-sufficiency and proximity principles apply to individual Waste Planning Authorities. It says that although it should be the aim for each waste planning authority to manage all of its own waste, "there is no expectation that each local planning authority should deal solely with its own waste to meet the requirements of the self-sufficiency and proximity principles. Nor does the proximity principle require using the absolute closest facility to the exclusion of all other considerations. There are clearly some wastes which are produced in small quantities for which it would be uneconomic to have a facility in each local authority."

1.1. National Policy and guidance

The National Planning Policy for Waste published in October 2014 (MHCLG) contains the detailed policies for the management of waste in England. Other documents which provide policy and guidance on aspects of waste management are the National Planning Policy Framework (MHCLG, 2021), National Planning Policy Guidance (MHCLG, 2014-2022), the Waste Management Plan for England (2021), the Resources and Waste Strategy for England (Defra, 2018), the National Policy Statements on Waste Water (Defra, 2012), and Hazardous Waste (Defra, 2013), and the Waste (England & Wales) Regulations 2011 (amended 2012).

National Planning Policy for Waste (NPPW) requires that WPAs should prepare Local Plans which identify sufficient opportunities to meet the identified needs of their area for the management of waste streams. National policy requires that Waste Planning Authorities (WPAs), in preparing their Local Plans, should: "*Ensure that the planned provision of new capacity and its spatial distribution is based on robust analysis of best available data and information, and an appraisal of options. Spurious precision should be avoided;"*

The NPPW reflects the requirements and principles of the WFD. The NPPW states that WPAs should: "*plan for the disposal of waste and the recovery of mixed municipal waste in line with the proximity principle, recognising that new facilities will need to serve catchment areas large enough to secure the economic viability of the plant*."

It is important to note in the quote above that the proximity principle in relation to waste management applies to only certain waste streams and waste management facilities which are the recovery of waste from private households, and the disposal of any form of waste. It is also recognised that it may not be viable to require a full range of facilities in every area.

The NPPW states that WPAs should: "*identify the tonnages and percentages of municipal, and commercial and industrial, waste requiring different types of management in their area over the period of the plan "*

National Planning Practice Guidance states that:

"Waste planning authorities should anticipate and forecast the amount of waste that should be managed at the end of the plan period. They should also forecast waste arising at specific points within the plan period, so as to enable proper consideration of when certain facilities might be needed. However, the right balance needs to be made between obtaining the best

evidence to inform what will be necessary to meet waste needs, while avoiding unnecessary and spurious precision." Paragraph: 028 Reference ID: 28-028-20141016

1.2. Waste Data Sources

Norfolk County Council waste management data

Norfolk County Council in its capacity as the Waste Disposal Authority (WDA) maintains detailed records of the amounts of Local Authority Collected Waste that is collected by the Waste Collection Authorities (District, Borough and City Councils) and by the WDA. This data is submitted to Defra and is available through the "Waste Data Flow" application. It is acknowledged in national policy and guidance that the Waste Data Flow information on LACW represents the most accurate information available on the quantities of waste managed.

Environment Agency waste management data

The Environment Agency maintains two databases of information obtained from returns made by sites with Environmental Permits; the Waste Data Interrogator (WDI), and the Hazardous Waste Interrogator (HWI). The WDI and HWI both report on hazardous waste, however they do it using different survey methods. The WDI records the quantities and types of waste that a permitted site deals within terms of the waste received, waste removed, and waste processed using treatment or recovery processes. The HWI records quantities of waste using information from consignment notes which are generated when waste changes hands. This means that the HWI is recognised as having issues regarding the under-reporting of waste quantities where waste is transferred to different sites for treatment/disposal if they are in the same ownership. For 2013 to 2018 the WDI did not include waste received at incinerators, but this data is included in the WDI for 2019 and 2020. Table 1 compares the quantities of hazardous waste recorded as arising in Norfolk as reported in the WDI and the HWI.

Table 1: comparison of hazardous waste arisings in Norfolk reported in WDI and HWI

Year	Hazardous waste in WDI ('000 tonnes)	Hazardous waste in HWI ('000 tonnes)	Comments
2013	83,894	70,486	In addition to WDI data, 3,602t of hazardous waste from Norfolk is recorded as received at incinerators.
2014	82,644	67,066	In addition to WDI data, 4,495t of hazardous waste from Norfolk is recorded as received at incinerators.
2015	78,568	65,781	In addition to WDI data, 3,803t of hazardous waste from Norfolk is recorded as received at incinerators.
2016	76,496	65,212	In addition to WDI data, 3,550t of hazardous waste from Norfolk is recorded as received at incinerators.
2017	47,412	69,720	In addition to WDI data, 3,166t of hazardous waste from Norfolk is recorded as received at incinerators.
2018	52,524	71,460	In addition to WDI data, 3,907t of hazardous waste from Norfolk is recorded as received at incinerators. 12,180t of waste has been subtracted from the original total of 64,704t in the WDI as this is a recognised error in returns for permit 70496.
2019	88,486	85,271	WDI includes waste to incinerators in 2019.
2020	79,605	73,157	WDI includes waste to incinerators in 2020. 64,000t of waste has been subtracted from the original total of 143,605t in the WDI as this is a recognised error in returns for permit 71536.

In planning for waste capacity, it is prudent to ensure that sufficient provision is made for the amount of waste which is likely to need to be managed. Therefore, the higher quantity contained in the WDI for hazardous waste is more appropriate to use than the data in the HWI; as this has known under-reporting issues. Therefore, for all sections of this report that use Environment Agency data, the data from the WDI is used and not the HWI.

2. Existing Waste Management Capacity

Assessment of existing waste management capacity is the first step towards ensuring that sufficient planned provision for the management of waste in the review of the Norfolk Minerals and Waste Local Plan. This is in accordance with national policy to ensure that any future plan is able to take into account a robust analysis of the current provision of facilities.

2.1 Methodology

Analysis of the waste management capacity for the existing facilities within Norfolk has been carried out, using the Environment Agency's waste data interrogator. Details of the permitted sites on the Waste Data Interrogator are set out in Appendix 1.

Appendix 1 contains the following details for each site: site name, site address, site operator, site type, whether the site is temporary or permanent and if temporary the end date of the permission.

In order to assess the existing capacity for each site, the following details have been collated for each site:

- Site Operator
- Summary of proposed development from application
- Permitted waste processes
- Whether the site is active
- Whether permission is temporary or permanent and if temporary the end date of the permission.
- Environment Agency Environmental Permit number
- Amount of waste received according to the Environment Agency WDI 2017-2020.

The maximum total annual waste inputs for each site have been collated by each waste management process type (shown in Table 2).

2.2 Assessment of existing waste management capacity

Waste management facilities which hold an Environmental Permit from the Environment Agency are required to submit annual returns to the Environment Agency, which include total waste received. This information is available on the Waste Data Interrogator and has been used to assess the maximum quantities of waste received at each facility type in Norfolk during 2017-2020.

Having analysed the WDI waste received for each site it has become clear that there can be considerable variance in the amount of waste that is received at each site from one year to the next. Waste management operates in a commercial marketplace and securing a contract to deal with waste from a particular company or organisation will have a significant effect on the amount of waste managed at a particular site.

For many sites, it would appear from the data that the most significant limiting factor in the amount of waste received in a particular year is its availability, and that in years where greater amounts of waste are available the level of waste received at some sites also increases.

To take this into account in analysing the existing capacity, the maximum waste received quantity for each site has been collated to reach a maximum waste input figure for each waste facility type based on four years' data (2017-2020). However, it should be noted that there is no definitive evidence that these maximums are absolute. It is considered likely that for some sites if there was an increase in waste available above these maximums it could be appropriately managed.

It should be noted that the years of the highest total waste input to Norfolk sites overall do not necessarily correlate with the highest waste inputs for all facility types. It should also be recognised that in 2020 the Covid-19 pandemic restrictions will have affected the production of waste and the operation of waste management facilities. For example, Norfolk County Council's Household Waste Recycling Centres (referred to as Civic Amenity sites in the WDI)

were closed for part of 2020, resulting in a reduction in the quantity of waste received compared to previous years.

Table 2 uses the category and facility types from the WDI. To calculate ongoing annual waste management capacity, the table does not include waste received at facilities within the categories of: landfill, mobile plant, on/in land or storage

The remaining void capacity will be used for landfill sites because their existing capacity is finite therefore the annual quantity of waste received will not necessarily continue during the whole Plan period.

Storage facilities have not been included because they are not performing any waste management operation in terms of treatment or transfer.

Mobile plant have not been included because it is not certain where they have been used. The mobile plant could be registered to an address in Norfolk but operated elsewhere. Therefore, it should be noted that mobile plant would provide additional waste management capacity. Common waste management operations that mobile plant are used for include land spreading of agricultural and food processing wastes, or physical treatment (such as crushing and screening) of inert waste to be recycled into aggregates. In addition, an operator in Norfolk has mobile plant for landspreading deinking sludges from paper and cardboard production and processing. The landspreading operations in particular would not require planning permission to take place.

The site category of on/in land consists of the facility types of lagoon and deposit of waste to land (recovery). The lagoons recorded in the WDI for Norfolk are used as an interim stage before the liquid waste is spread to land. Therefore it is not considered appropriate to include this capacity.

The sites that are for the deposit of waste to land are generally mineral workings that are being restored by the deposit of inert waste to raise the ground level back to the agreed restoration profile. These sites will only need to receive waste for a finite time period whilst they are being restored and therefore the remaining void capacity (where it is known) will be used instead for these mineral restoration sites because the annual quantity of waste received will not necessarily continue during the whole Plan period.

The figures produced by the analysis of the total waste capacity of Norfolk waste management facilities reported within the WDI, for the period 2017-2020 indicates that they have a capacity to deal with at least 3.534 million tonnes of waste per annum. This figure includes on-farm anaerobic digestion facilities, car breakers and vehicle depollution facilities that have been permitted by the district local planning authorities.

Also included within this total is waste received at the Palm Paper reprocessing facility at King's Lynn which received a maximum of 0.54 million tonnes of paper and cardboard per annum. Data from Palm Paper was only reported within the WDI in 2019 and 2020, but data from previous years was provided to Norfolk County Council by the Environment Agency.

Also included within this total is wastewater treatment sludge received at the three Anglian Water sludge treatment facilities at King's Lynn, Thetford and Whitlingham. These three facilities received a maximum of 0.961 million tonnes of waste per annum. They are categorised in Table 2 as different facility types by the Environment Agency; the Thetford facility is categorised as physical treatment, the King's Lynn facility is categorised as physical/chemical treatment and the Whitlingham facility is categorised as biological treatment.

In addition to this figure is the EPR Thetford Power Station which received a maximum of 0.493 million tonnes of waste per annum. Data from the Thetford Power Station was only reported within the WDI in 2019 and 2020, but data from previous years is reported separately in the Environment Agency's 'waste returns for incinerators'.

Table 2: Waste quantities received at Norfolk facilities 2017-2020

Site Category	Facility Type	2020 tonnage received in Norfolk	2019 tonnage received in Norfolk	2018 tonnage received in Norfolk	2017 tonnage received in Norfolk	Highest throughput over 4 years
Incineration	Animal By-Products Incinerator *(EPR Thetford Power Station)*	396,839	493,116	460,857	476,335	493,116
MRS	Car Breaker	2,156*	5,931	7,338	8,363	8,363
MRS	Metal Recycling	157,556	146,411	156,071	117,446	157,556
MRS	Vehicle depollution facility	7,592	9,048	16,299**	13,099	16,299
Processing	Paper and Pulp Reprocessing	448,277	540,107	490,470	449,522	540,107
Transfer	Civic Amenity Site	42,150	48,316	47,575	61,753	61,753
Transfer	Clinical Waste Transfer / Treatment	3,552	2,461	2,362	2,056	3,552
Transfer	Haz Waste Transfer / Treatment	225,218	245,740	216,202	218,273	245,740
Transfer	Non-Haz Waste Transfer / Treatment	517,365	546,063	583,981	615,748	615,748
Treatment	Anaerobic Digestion	18,060	17,803	16,403	10,788	18,060
Treatment	Biological Treatment	155,112	151,870	152,663	135,984	155,112
Treatment	Chemical Treatment	4,020	6,142	7,261	4,036	7,261
Treatment	Composting	108,479	111,489	105,877	104,509	111,489
Transfer/Treatment	Inert Waste Transfer / Treatment	45,159	54,160	62,386	48,153	62,386
Treatment	Material Recycling Facility	179,154	129,154	105,981	100,040	179,154
Treatment	Non Haz Waste Transfer / Treatment	81,096	89,555	86,612	83,130	89,555
Treatment	Physical Treatment	625,733	878,435	951,353	800,096	951,353
Treatment	Physical-Chemical Treatment	244,917	302,192	256,591	282,154	302,192
Treatment	WEEE treatment facility	5,931	0	7,280	7,881	7,881
Total	N/A	**3,266,210**	**3,777,993**	**3,717,263**	**3,539,365**	**4,026,677**
Total excluding ABPR incinerator	N/A	**2,869,371**	**3,284,406**	**3,256,885**	**3,063,030**	**3,533,561**

*64,000 tonnes has been deleted from EA WDI car breaker data in 2020 due to known data error

** 12180 tonnes has been deleted from EA WDI vehicle depollution data in 2018 due to known data error

2.3 Landfill and quarry restoration capacity

There are two non-hazardous landfill sites (Blackborough End and Feltwell) in Norfolk, but both sites were inactive in 2019 and only Blackborough End landfill site received waste in 2020 (over 75,000 tonnes). As at the end of 2020, Blackborough End landfill site had a permitted void capacity (remaining landfill space) of 3.767 million m^3 in total, however, 2.34 million m^3 of this voidspace is expected to be used for inert waste only, leaving 1.422 million m^3 voidspace for non-hazardous waste. The remaining voidspace in Feltwell landfill site at the end of 2020 was 1.204 million m^3. Therefore, the total landfill voidspace for non-hazardous waste disposal is 2.626 million m^3.

Inert landfills and restoration of mineral workings using inert waste, provide locations for the deposit of wastes such as soils; only a small proportion of which can be recycled as a marketable product. Inert waste used in quarry restoration may be a recovery operation if it aids restoration of the site. There is an estimated void capacity at inert landfill sites and for quarry restoration of at least 2.523 million m^3 in Norfolk at the end of 2020 plus the 2.34 million m^3 in Blackborough End landfill site, together totalling 4,863 million m3 as detailed below.

Mineral extraction site	**Remaining void capacity at end 2020 ('000 cubic metres)**
Carbrooke	35
Snettisham	30
Crimplesham	735
Punch Farm	240
Blackborough End	2,340
East Winch	742
Spixworth	206
Wymondham	120
Mangreen	415
Morningthorpe	unknown
Bittering	unknown
Total	**4,863**

2.4 Additional permitted capacity

The Environment Agency's WDI covering the period of 2020 is the most recent data currently available in 2022. The WDI for 2021 is expected to be published in autumn 2022. Since 2020 several planning permissions have been granted and implemented (in the period up to end of 2021) which increase either quarry restoration capacity or waste throughput capacity. In addition, there are a number of sites which received planning permission prior to or during 2020 but were not operational during 2020 and therefore their capacity was not included within the 2020 WDI. These are summarised in Table 3 below.

Table 3: Additional permitted waste management capacity

Facility Type	**Waste Type**	**Throughput per annum (tonnes)**
Transfer/Treatment	Non-hazardous and/or inert CD&E	163,000
Transfer / treatment	CD&E waste only	42,000
Inert recycling	Inert CD&E	88,000
HWRC	LACW	15,000
Total	**All waste types**	**308,000**

The additional throughput increases the maximum waste management capacity for Norfolk by more than 300,000 tonnes per annum. Further planning permissions increasing waste management capacity have also been granted but not yet implemented and are therefore not currently included in the additional waste management capacity.

Additional inert waste capacity for quarry restoration at Mayton Wood was granted in June 2021 and creates 900,000m^3 of additional void space.

2.5 Summary of existing waste management capacity in Norfolk

The maximum existing waste management capacity of operational sites in Norfolk is calculated to be 3.534 million tonnes per annum in 2020. This is based on the maximum recorded throughputs at sites between 2017 and 2020, however these may not represent absolute maximums, with many sites having higher maximum volumes set out in their Environmental Permits. This waste management capacity includes composting facilities, metal recycling, inert waste recycling, sewage sludge treatment, waste transfer and waste treatment facilities and is summarised in Table 4.

New planning permissions were granted during 2020 and 2021 for facilities with a total throughput of over 0.3 million tonnes of waste management capacity per annum.

Therefore, Norfolk has known existing capacity to deal with at least 3.834 million tonnes of waste per annum.

The amount of waste managed by individual sites fluctuates from year to year. It is considered that this may be in response to the availability of waste on the market and the ability of operators to secure contracts to manage waste from producers. The ability for existing waste management facilities to deal with differing amounts, dependent on the availability of waste is clear from the total amounts of waste dealt with, during the period analysed. Therefore, there is the potential for some existing facilities to receive greater quantities of waste.

Permitted void space within two non-hazardous landfill sites at Feltwell and Blackborough End of 3.767 million m3 at the end of 2020; 1.422 million m3 for non-hazardous waste and 2.34 million m3 for inert waste.

Permitted void space at mineral extraction sites which will be restored using imported inert material was 2.523 million m^3 at the end of 2020, with a further 0.9 million m3 permitted in 2021 and a further 2.34 million m^3 available at Blackborough End landfill site.

The power station at Thetford also consumed over 493,000 tonnes of used chicken litter and forestry waste. Due to the very specific nature of the waste received at this facility it has not been included in the total available waste management capacity and has also not been included in the waste arisings calculations elsewhere in this report.

Table 4: Summary of existing waste management capacity in Norfolk

Waste management facility type (Using Environment Agency Waste Data Interrogator site categories and facility types)	**Highest throughput over 4 years from 2017-2020 ('000 tonnes)**
Metal Recycling sites (including car breaker, metal recycling and vehicle depollution facilities)	182
Household waste recycling centre	62
Inert waste transfer / treatment	62
Non-hazardous waste transfer / treatment	705
Hazardous waste transfer / treatment	246
Clinical waste transfer / treatment	4
Composting and anaerobic digestion	130
Treatment (includes biological treatment, chemical treatment, material recycling facility, physical treatment, physical-chemical treatment, WEEE treatment facility)	642
Anglian Water Ltd sewage sludge treatment (at Thetford, King's Lynn and Whitlingham Water Recycling Centres)	961
Paper and pulp reprocessing	540
Total existing capacity from EA WDI data	**3,534**

Additional capacity granted planning permission in 2020 and 2021 = **300,000 tpa**
Permitted inert void space (landfill and quarry restoration) at 30/12/2020 = **4.875 million m^3**
Permitted non-hazardous landfill void space at 30/12/2020 = **1.422 million m^3**

3. Waste movements to and from Norfolk

This chapter provides information on the movements of waste to facilities within Norfolk, and also movements of waste arising in Norfolk to facilities located in other Waste Planning Authority areas using waste recorded as being received in the Environment Agency's Waste Data Interrogator.

Table 4: shows the quantities of waste received at waste management facilities in Norfolk which complete annual returns to the Environment Agency (in accordance with the Environmental Permitting regime). Some waste sites operate under an exemption from permitting and these do not need to complete an annual return to the Environment Agency. The increases in HIC waste recorded as received in Norfolk in 2019 and 2020 are mainly due to the inclusion of waste received at the Palm Paper processing facility and the Thetford Power Station within the WDI for the first time.

The Environment Agency has three broad categories for waste reported using the Waste Data Interrogator (WDI); Household, Industrial, Commercial (HIC), Inert, and Hazardous Waste.

Table 5: Inputs to waste management facilities in Norfolk 2015 to 2020 (Source: EA WDI)

EA Waste Category	WDI 2015 (tonnes)	WDI 2016 (tonnes)	WDI 2017 (tonnes)	WDI 2018 (tonnes)	WDI 2019 (tonnes)	WDI 2020 (tonnes)
HIC	2,313,562	2,303,371	2,162,012	2,351,790	3,628,633	2,858,120
Inert /C&D	1,077,538	1,296,904	1,109,931	981,819	1,093,855	1,104,986
Hazardous	85,722	64,845	36,030	37,540*	62,414	54,527
Total	3,476,822	3,665,120	3,307,973	3,371,149	4,784,903	4,017,633

*WDI total of 50,430 tonnes minus 12,890 tonnes incorrect entry for permit 70496
**WDI total of 118,527 tonnes minus 64,000 tonnes incorrect entry for permit 71536

As the WDI records waste movements, this means that there is an element of double-counting inherent within the system. Waste may be received at a facility in Norfolk where it is subject to sorting; the sorted waste may then be sent to another facility (which may or may not be in Norfolk) where more specialised treatment processes are carried out. Therefore, the same waste may be input and output through a number of sites prior to the residue being ultimately recovered or disposed of. Also, waste which is treated to become a product instead of a waste (for example, compost or aggregate), would not be recorded on the WDI when leaving the site.

3.1 Household, Industrial and Commercial (HIC) waste movements from Norfolk

The total amount of HIC waste received at Norfolk facilities in 2019 was 3,628,633 tonnes. Of this total, 2,541,531 tonnes of waste were recorded as arising in Norfolk.

The total amount of HIC waste arising in Norfolk, but received at facilities in other WPAs in 2019 was 708,771 tonnes.

The total amount of HIC waste received at Norfolk facilities in 2020 was 2,858,120. Of this total, 1,916,899 tonnes of waste were recorded as arising in Norfolk.

The total amount of HIC waste arising in Norfolk, but received at facilities in other WPAs in 2020 was 968,233. Of this total, 444,315 tonnes was received at a mobile plant which may or may not have been located in Norfolk.

In the 2020 WDI the location of mobile plant was reported differently to previous years. In 2020 mobile plant were reported with an unknown location because the address that they are registered to is not necessarily the location where they are used. In previous years the mobile plant location was recorded as the same as the registered business address. In 2019 289,125 tonnes of HIC waste arising in Norfolk was reported as being received at a mobile plant registered to a business address in Norfolk.

Table 6 and Table 7 show the movements of waste arising in Norfolk to waste management facilities located in other waste planning authority areas in 2019 and 2020.

The most significant movements of waste are to Suffolk, Cambridgeshire, Kent and North Lincolnshire.

In Cambridgeshire, in 2020 11,600 tonnes of HIC waste was received at Milton landfill site whilst, 11,139 tonnes of landfill leachate were sent for treatment at Buckden Effluent Treatment Plant. In 2020, 36,065 tonnes of Norfolk's HIC waste was received at a waste transfer station located in Wisbech through a contract with Norfolk County Council for the management of Norfolk's residual Local Authority Collected waste.

Suffolk has an Energy from Waste facility at Great Blakenham, and there is an agreement between Norfolk and Suffolk County Councils for a proportion of Norfolk's LACW to be dealt with at this plant. In 2020, 49,897 tonnes of waste from Norfolk went to the Suffolk's Energy from Waste facility, whilst 58,739 tonnes of waste was received at the EfW facility in 2019. Mason's landfill in Suffolk received just over 40,193 tonnes of Norfolk's HIC waste in 2020 and 32,396 tonnes in 2019.

In Kent, Norfolk sent 32,136 tonnes of paper and cardboard to two paper mills for recovery in 2020 and 16,040 tonnes in 2019. In 2019 Norfolk also sent 35,324 tonnes of municipal waste to Kent for incineration at Allington, and 8,411 tonnes in 2020.

In North Lincolnshire, the majority of the HIC waste received in 2019 was for a mobile plant which would be used for landspreading. This could be a mobile plant registered in North Lincolnshire, but used elsewhere, potentially within Norfolk. In 2020, when mobile plant data was recorded differently in the WDI and not associated with the location the business is registered to, only 5,051 tonnes of HIC waste from Norfolk was recorded as received at facilities in North Lincolnshire.

Table 6: Households, Industrial and Commercial waste movements from Norfolk to other Waste Planning Authorities (over 1,000 tonnes per annum) in 2019

Destination WPA	Destination region	Total tonnes waste	Main waste types
Norfolk	East of England	2,541,531	Liquid wastes, soil remediation sludge, chemicals, human and animal health care waste, municipal wastes, plastics, metals, paper and cardboard,
Suffolk	East of England	159,750	Liquid waste, municipal wastes, packaging, absorbents, wiping cloths, municipal wastes, agriculture and food processing wastes, ELV, gases and chemicals, paint, adhesive, sealant and ink manufacturing waste, inorganic waste,
North Lincolnshire	Yorks & Humber	155,426	Agriculture and food processing wastes, water treatment wastes, sorting residues of aerobic treatment wastes.
Cambridgeshire	East of England	107,502	Water treatment sludges, sorting residues off-specification compost, mixed municipal wastes, agriculture and food processing wastes, electrical and electronic equipment, packaging, wood, human and animal health care waste, ELV
Kent	South East	51,570	Soil remediation sludge, liquid wastes, organic wastes, chemicals, natal care, sorting residues from mechanical treatment, municipal wastes, plastics,

Destination WPA	Destination region	Total tonnes waste	Main waste types
Cheshire (UA)	Northwest	27,131	Oil and fat, pulp from paper and cardboard, plastic and mixed municipal waste, ELV, packaging, metals
Peterborough	East of England	21,347	Urban waste sludge, municipal wastes, metals, natal care, sorting residues from mechanical treatment and water treatment, packaging, landfill leachate, chemicals
Northamptonshire	East Midlands	20,572	Sludges from water treatment, sorting residue from compost and pulp, food preparation and products, plastics, paper and cardboard, metals, chemicals, municipal wastes, textile, ELV
Nottingham	East Midlands	18,910	Bottom ash, slag and boiler dust from co-incineration, food, ELV, chemicals, plastics, metals
Essex	East of England	14,843	Water treatment wastes, municipal wastes, packaging, chemical deposits and residues, rubber
Leicester City	East Midlands	11,739	Sludges from on-site effluent treatment
Lancashire	Northwest	11,303	Organic, pulp from paper and cardboard, packaging, plastic, plastic, ELV, electronic and electrical equipment
Hertfordshire	East of England	11,274	Agriculture and food processing wastes, thermal processes waste, municipal wastes, chemical surface treatment and metal coating wastes, packaging, batteries and accumulators, electrical and electronic equipment, ELV, Sorting residues
Redcar and Cleveland	Northeast	11,131	Wood, liquid waste chemicals
Medway	South East	10,937	Biodegradable waste, mixed municipal waste, brake pads, human health care, mechanical treatment of waste, plastics
County Durham	Northeast	10,654	De-inking sludges from paper recycling
Lincolnshire	East Midlands	9,031	Machines and equipment components, plastic, metals, rubber, urban wastewater sludges, municipal waste, agriculture and food preparation and productions, sludges from washing, cleaning, ELV, wood, packaging, rubber.
Doncaster	Yorks and Humber	5,451	Waste and water treatment waste, ELV, ferrous metal
Liverpool	North West	4,754	Mainly food preparation, minimal plastic and ferrous metal
Rotherham	Yorks and Humber	4,614	Wood, ferrous metal, mixed metal and sorting residues from mechanical and aerobic treatment
Thurrock	East of England	4,362	Mainly wood, minimal waste water treatment sludges
Northumberland	North East	3,163	All paper and cardboard

Destination WPA	Destination region	Total tonnes waste	Main waste types
Leicestershire	East Midlands	2,822	Household and similar, WEEE, plastic, glass, mixed metals, infectious health, chemicals, organic waste
Bedford & Central Bedfordshire	East of England	2,693	2,424t food preparation and products waste, other waste includes plastic, chemicals, WEEE, paper and cardboard, textile, infectious health waste, spent solvents, inorganic and organic wastes.
Leeds	Yorks & Humber	2,531	Household and similar, food preparation, plastic, textile, mixed metals, non-ferrous metal, chemicals, spent solvents, paper and cardboard, mixed packaging and organic wastes
Nottingham City	East Midlands	2,266	ELV and ferrous metal waste
North East Lincolnshire	Yorks & Humber	2,235	Mainly Household and similar waste, minimal waste water treatment sludges
Warwickshire	West Midlands	2,234	Food preparation, wood, WEEE, textile
Solihull	West Midlands	2,160	All wood waste
Sheffield	Yorks and Humber	2,148	Chemicals, mixed metals, textile, plastic, WEEE, organic and inorganic waste, spent solvents and sorting residues from mechanical treatment
Sandwell	West Midlands	1,646	Chemicals, household and similar, WEEE, ferrous, non-ferrous and mixed metals, sorting residues from mechanical treatment, inorganic and organic waste
East Riding of Yorkshire	Yorks & Humber	1,347	Food preparation and products, wood, household and similar
Havering	London	1,247	Household and similar, plastic, non-ferrous and sorting residues from waste water treatment
Buckinghamshire	South East	1,164	Food preparation and products, rubber and sorting residues from mechanical treatment
Milton Keynes	South East	1,154	Waste water treatment sludges, cesspit contents, chemicals and sorting residues from mechanical treatment
Derbyshire	East Midlands	1,020	Combustion wastes, sorting residues from mechanical treatment, plastic, textiles, chemicals, acid, alkalies or salts, spent solvents, paper and cardboard and non-ferrous metals

Source: EA Waste Data interrogator 2019

Table 7: Households, Industrial and Commercial waste movements from Norfolk to other Waste Planning Authorities (over 1,000 tonnes per annum) in 2020

Destination WPA	Destination Region	Total tonnes waste	Comments
Norfolk	East of England	1,916,899	Large proportion of slurry and manure, wastewater treatment sludges, food preparation waste, paper and carboard. Other wastes include green waste, household waste etc.
Mobile Plant (no location)	N/A	444,315	232,250t of food preparation and products,115,445t of waste water treatment sludge; industrial effluent sludge, ferrous metal, slurry and manure, non-ferrous metal, pre-mixed non-hazardous, off-specification compost
Suffolk	East of England	150,037	Large proportion of household and similar waste, sorting residues from mechanical treatment and waste water treatment sludge. Others include slurry and manure, industrial effluent sludges, paper and carboard, ELV, metals, glass, rubber, green wastes, plastic, solvents and woods.
Cambridgeshire	East of England	77,251	Large proportion of household and similar wastes as well as industrial effluent sludges, plastics, food preparation wastes, green wastes, sorting residues from mechanical and aerobic treatment, glass, paper and carboard.
Kent	South East	40,562	Majority from paper and carboard, other waste includes household and similar wastes, chemical deposits, metals
Cheshire East	North West	34,140	34,139t from industrial effluent sludges, minimal waste of food preparation
Northamptonshire	East Midlands	21,589	Significant amount from food preparation and water waste treatment sludges. Other waste include plastics, aerobic treatment sorting residues, paper and cardboard, plastics, slurry and manure
Peterborough	East of England	21,409	Significant amount from industrial effluent sludges, waste water treatment sludge and mechanical treatment sorting residues. Other wastes include non-ferrous metal, industrial effluent sludges, chemical deposits, ferrous metal, WEEE, Textile
Nottinghamshire	East Midlands	19,444	17,084t from combustion wastes, fewer rubber, ferrous metal, wood, plastic and chemical deposits.
Hertfordshire	East of England	16,465	Majority from waste water treatment sludge and ferrous metals. Other wastes include food preparation, WEEE, ELV, Chemicals, C&D, Textiles
Medway	South East	15,813	8168t from plastic. Other wastes include mechanical treatment sorting residues, household wastes and WEEE
County Durham	North East	12,752	12,492t from industrial effluent sludges, minimal food preparation waste

Destination WPA	Destination Region	Total tonnes waste	Comments
Redcar and Cleveland	North East	12,199	12,019t from wood wastes, minimal chemical deposits
Essex	East of England	10,493	Food preparation wastes, waste water treatment sludges, mechanical treatment sorting residues, septic tank sludge, rubber, WEEE, garden and parks wastes
Northumberland	North East	10,805	10,497t of paper and cardboard, minimal food preparation waste
Slough	South East	7,703	Household and similar wastes
Lancashire	North West	7,191	Plastic, industrial effluent sludges, paper and cardboard, WEEE, textiles, chemicals
Lincolnshire	East Midlands	6,290	Sorting residue from paper and cardboard, plastic, waste water treatment sludge, WEEE, Ferrous metals, food preparation, wood, plastics, non-ferrous metals, industrial effluent sludges, septic tank sludge,
Barnsley	Yorks and Humber	5,616	5,563t from paper and carboard, minimal WEEE and non-ferrous and ferrous metal
North Lincolnshire	Yorks and Humber	5,051	5022t from food preparation wastes, minimal glass waste
Birmingham City	West Midlands	4,377	2,938t from paper and carboard, 1,375t from ferrous metal. Other waste includes chemical deposits, non-ferrous metal, textile and WEEE
Rotherham	Yorks and Humber	3,815	Sorting residues from mechanical treatment and aerobic treatment, woods, ferrous metals, wood and textile
Leeds	Yorks and Humber	3,357	Sorting residues from mechanical treatment, chemical deposits, paper and cardboard, mixed metals, household, food preparation, ferrous metal, plastic, textile, rubber, packaging and WEEE
Solihull	West Midlands	2,839	Wood wastes
Liverpool	North West	2,679	Food preparation and products
Gloucestershire	South West	1,887	1,076t chemical deposits. Other waste include waste water treatment sludges, household and similar waste, mixed metal wastes and industrial effluent sludges
East Riding of Yorkshire	Yorks and Humber	1,853	Majority food preparation and products, minimal rubber wastes
Darlington	North East	1,846	Mixed, ferrous and non-ferrous metal
Warwickshire	West Midlands	1,801	Combustion waste, chemical, WEEE, food preparation and wood
Salford	North West	1,721	1,622t sorting residues from mechanical treatment. Others include plastic, chemical deposits, WEEE
North Yorkshire	Yorks and Humber	1,713	1,294t industrial effluent sludges. Other household and similar wastes, food preparation, woods and plastics.
Thurrock	East of England	1,700	1621t wood, minimal effluent sludges and WEEE

Destination WPA	Destination Region	Total tonnes waste	Comments
Leicestershire	East Midlands	1,571	753t chemical deposits, 583t household and similar wastes, minimal paper and cardboard, chemicals, organic wastes, plastics, mixed metals
Nottingham City	East Midlands	1,370	510t ELV, 450t ferrous metals, minimal mixed metals and WEEE
Sheffield	Yorks and Humber	1,260	Non-ferrous metals, sorting residues from mechanical treatment, ferrous metals, food preparation and products, ELV, WEEE, Textiles, chemicals, organic waste
Bedford	East of England	1,191	461t food production and product waste, 453t plastic, 130t paper and cardboard, minimal WEEE, combustion waste, chemicals, industrial effluent sludge, rubber, mixed metals and organic waste
North East Lincolnshire	Yorks and Humber	1,188	715t waste water treatment sludges, 142t industrial effluent sludges, 330t household and similar wastes
Derbyshire	East Midlands	1,165	Large proportion of chemicals, other wastes include plastic, household and similar, paper and cardboard, textile, non-ferrous, mixed metals
Buckinghamshire	South East	1,155	859t waste of food preparation and products, 296t rubber
Lewisham	London	1,131	Ferrous metals
Wiltshire	South West	1,033	780t glass; food preparation and products and household and similar waste

Source: EA Waste Data Interrogator 2020

3.2 Household, Commercial and Industrial (HIC) waste movements to Norfolk

Norfolk's waste management facilities receive waste from other Waste Planning Authorities, as well as waste produced within Norfolk, as shown in Table 8. The greatest tonnage received is from Suffolk - this is predominately sewage sludge (over 164,000 tonnes in 2020 and 323,000 tonnes in 2019) which is treated at three Anglian Water treatment plants at Whitlingham, Thetford, and King's Lynn and agriculture and food processing waste which is treated at the power station in Thetford (over 118,000 tonnes in 2020 and 38,930 tonnes in 2019). Sewage sludge also forms the majority of waste from Cambridgeshire which is managed at the three sludge treatment facilities in Norfolk (over 44,000 tonnes in 2020 and 84,000 tonnes in 2019). The sludge treatment facilities also received just over 27,000 tonnes of sludge from Lincolnshire in 2019 and 20,000 tonnes in 2020.

There is an ash treatment facility in Norfolk which received Incinerator Bottom Ash (IBA) and flyash from the Thetford Power Station, which is treatment prior to being used in the manufacture of construction materials, which replaces primary mineral.

The vast majority of the paper and cardboard listed in the tables below was received by Palm Paper at King's Lynn for reprocessing.

Table 8: Household, Industrial and Commercial waste movements to Norfolk from Waste Planning Authorities (over 1,000 tonnes per annum) in 2019

Origin WPA	Origin Region	Tonnes Received	Main waste type
Norfolk	East of England	2,541,531	Mixed
Suffolk	East of England	426,457	Sewage sludge, municipal wastes, ELV
London	London	217,742	Paper and cardboard, municipal waste, sewage sludge
Cambridgeshire	East of England	138,317	Sewage sludge, municipal wastes,
WPA not codeable (East of England)	East of England	67,068	Metals, WEEE, ELV, municipal wastes
Lincolnshire	East Midlands	31,901	Sewage sludge, municipal waste
Outside UK	Outside UK	23,880	Paper and cardboard
Essex	East of England	21,419	Sewage sludge
WPA not codeable (Yorks and Humber)	Yorks and Humber	18,589	Paper and cardboard
Newcastle Upon Tyne	North East	17,642	Paper and cardboard
Northamptonshire	East Midlands	15,595	Sewage sludge, municipal waste, paper and carboard
Leicester City	East Midlands	10,966	Paper and cardboard
Walsall	West Midlands	10,698	Paper and cardboard, metals, WEEE
Oxfordshire	South East	10,336	Paper and cardboard, metals
Devon	South West	8,903	Paper and cardboard
North Yorkshire	Yorks and Humber	8,658	Paper and cardboard
Hertfordshire	East of England	8,110	Paper and cardboard, metal, sewage sludge
Barking and Dagenham	London	6,144	Paper and cardboard
Birmingham City	West Midlands	5,951	Paper and cardboard
WPA not codeable (Wales)	Wales	5,863	Paper and cardboard
Kent	South East	4,884	Metals, municipal waste, food preparation waste
Bath and North East Somerset	South West	4,064	Paper and cardboard
Luton	East of England	3,599	Paper and cardboard
Bristol City	South West	3,502	Paper and cardboard
Leeds	Yorks and Humber	2,804	Paper and cardboard
West Sussex	South East	2,481	Mixed metals
Swansea	Wales	2,325	Paper and cardboard
Gloucestershire	South West	1,735	Paper and cardboard
Dudley	West Midlands	1,699	Paper and cardboard
Manchester	North West	1,386	Paper and cardboard
Reading	South East	1,190	Paper and cardboard
Central Bedfordshire	East of England	1,058	Wastewater treatment sludges
WPA not codeable (Bedfordshire)	East of England	1,054	Water treatment sludges, metals, food waste

Source: EA Waste Data Interrogator 2019

Table 9: Household, Industrial and Commercial waste movements to Norfolk from Waste Planning Authorities (over 1,000 tonnes per annum) in 2020

Origin WPA	Origin Region	Tonnes Received	Main waste type
Norfolk	East of England	1,916,899	517,777t is household and similar waste, 343,272t is wastewater treatment sludges, 265869t is slurry and manure, 264,091t is food preparation and products waste. Other wastes include green waste, paper and cardboard, combustion wastes, chemicals, cesspit contents, ELV, metals, textiles, woods, C&D, health care and oils
Suffolk	East of England	338,618	170,591t is wastewater treatment sludges, 118,602t is agriculture and food processing waste, chemicals, paper and cardboard, household and similar, cesspit contents, combustion wastes, industrial effluent sludges, ferrous metals and green wastes.
London (WPA not codeable)	London	139,056	133,328t is paper and cardboard
Outside UK	N/A	105,277	100,878t is paper and cardboard
Cambridgeshire	East of England	82,423	43,033t is wastewater treatment sludge. Mixed metals, food preparation, industrial effluent sludges, paper and cardboard, household, ferrous metals, cesspit contents, green waste, plastic, sorting residue from mechanical treatment
East of England (WPA not codeable)	East of England	40,253	21,887t is ferrous metal and scrap, 9,714t is mixed metal. Other waste includes household and similar, non-ferrous metal, rubber, ELV, textile, health care, garden and parks waste (mineral)
Yorks & Humber (WPA not codeable)	Yorks & Humber	36,453	all paper and cardboard
Lincolnshire	East Midlands	26,773	Wastewater treatment sludges, paper and cardboard, industrial effluent sludges, ferrous metal, non-ferrous metal, ELV, food preparation waste,
Essex	East of England	17,587	Wastewater treatment sludges, industrial effluent sludges, paper and cardboard, food preparation, chemicals, non-ferrous metal, cesspit contents, ferrous metal, slurry and manure, WEEE
City of Derby	East Midlands	15,903	Household and similar wastes
Hampshire	South East	13,796	13,730t is paper and carboard waste, minimal plastic, chemical, non-ferrous and ferrous metals, WEEE
Northamptonshire	East Midlands	10,754	10,050t is household and similar waste, minimal non-ferrous and ferrous metals, industrial effluent sludges, WEEE and chemicals
Gloucestershire	South West	8,650	8,648 tonnes is paper and cardboard
Newcastle Upon Tyne	North East	7,080	all paper and cardboard

Origin WPA	Origin Region	Tonnes Received	Main waste type
Hertfordshire	East of England	6,960	6,631t is paper and cardboard. Minimal mixed, ferrous and non-ferrous metals, wastewater treatment sludges, cesspit contents, WEEE
Dudley	West Midlands	6,923	all paper and cardboard
Devon	South West	6,644	6,633 tonnes is paper and cardboard
Oxfordshire	South East	6,524	6,205t is paper and cardboard, minimal C&D, household, food preparation, slurry and manure, plastic and WEEE
Swansea	Wales	5,859	all paper and cardboard
Liverpool	North West	5,149	5,147t is paper to cardboard. Minimal non-ferrous metal
Leicester City	East Midlands	4,482	4,479t is paper to cardboard. Minimal WEEE and non-ferrous and ferrous metals
Staffordshire	West Midlands	4,232	4,217t is ferrous metal. Minimal paper and cardboard and WEEE
Bristol City	South West	4,212	all paper and cardboard
Powys	Wales	3,944	all paper and cardboard
Telford and Wrekin	West Midlands	3,506	all paper and cardboard
Somerset	South West	3,294	all paper and cardboard
Reading	South East	3,183	all paper and cardboard
Bath and North East Somerset	South West	2,805	All paper and cardboard
Swindon	South West	2,678	All paper and cardboard
Birmingham City	West Midlands	2,251	2,209t is paper and cardboard, minimal WEEE, mixed metals, non-ferrous and ferrous metals
Scotland (WPA not codeable)	Scotland	2,219	2,218t is paper and cardboard, minimal glass and household waste
Walsall	West Midlands	2,027	all paper and cardboard
Stoke-on-Trent City	West Midlands	1,902	all paper and cardboard
Medway	South East	1,702	All plastic
Bury	North West	1,680	all to Blackborough End landfill
Kent	South East	1,593	630t ferrous metal, 334t food preparation waste, 377t non-ferrous metal minimal chemical, household, WEEE
Gwynedd	Wales	1,437	all paper and cardboard
Luton	East of England	1,339	848t is paper and cardboard, 480t is ferrous metal and scrap, minimal WEEE and chemicals
Buckinghamshire	South East	1,012	904t is ferrous metal and scrap, minimal non-ferrous metal, WEEE, wood and household waste

Source: EA Waste Data Interrogator 2020

3.3 Hazardous waste movements

National guidance and policy states that WPAs should recognise that certain specialist waste streams do not produce sufficient volumes in each Waste Planning Authority area to make facilities viable in every planning area. This is the case with many waste streams which are broadly categorised as hazardous waste. Hazardous waste is generated at far lower volumes than HIC waste, and due to its nature waste management facilities treating this waste are more specialist and need to draw waste from a far larger area in order to be economically viable.

The total amount of hazardous waste received at Norfolk facilities in 2019 was 62,414 tonnes. Of this total, 43,012 tonnes of waste were recorded as arising in Norfolk.

The total amount of hazardous waste arising in Norfolk, but received at facilities in other WPAs in 2019 was 41,753 tonnes.

The total amount of hazardous waste received at Norfolk facilities in 2020 was 54,527. Of this total, 41,854 tonnes of waste were recorded as arising in Norfolk. These figures have been amended from the WDI to remove 64,000 tonnes recorded as received by permit 71356 (DLH Autorecyclers) as this is recognised to be an error and the site probably only received 64 tonnes.

The total amount of hazardous waste arising in Norfolk but received at facilities in other WPAs in 2020 was 37,752 tonnes.

3.4 Hazardous waste movements to Norfolk

Norfolk has some hazardous waste treatment facilities for specialist waste streams which receive waste at a national level, whilst some specialist waste streams produced in Norfolk are exported to facilities in other Waste Planning Authority areas.

There is a facility for recycling fluorescent tubes and Waste Electrical and Electronic Equipment in Thetford. These are specialised waste streams and the facility receives electrical goods and fridges/freezers from across the country. Many of the other hazardous waste management facilities in Norfolk carry out interim bulking, transfer or treatment operations before the waste streams are sent on to another facility for further processing.

Table 10: Hazardous waste received by Norfolk facilities from all Waste Planning Authorities (over 100 tonnes per annum) in 2019

Origin Waste Planning Authority	Origin Region	Tonnage received	Main waste types
Norfolk	East of England	43,012	Construction and demolition wastes, packaging, organic/inorganic wastes, batteries, electrical and electronic equipment, ELV, municipal wastes, Oil wastes and liquid fuels, aqueous liquid, paint, adhesive, sealant and ink manufacturing waste, gases in pressure containers and discarded chemicals, mine and quarry wastes, photographic industry wastes, health care wastes, furniture, paper and cardboard manufacturing wastes
Suffolk	East of England	9,357	Construction and demolition wastes, packaging, inorganic chemicals, glass, plastic, wood, batteries, electrical and electronic equipment, ELV, municipal wastes, paints, adhesive, sealant and inks, oils, mine and quarry wastes, health care wastes, photographic industry wastes, chemicals,

Origin Waste Planning Authority	Origin Region	Tonnage received	Main waste types
WPA not codeable (East of England)	East of England	2,427	Asbestos, ELV, batteries, human and animal health care, chemicals, packaging, fluorescent tubes
Essex	East of England	1,623	Municipal waste, asbestos, minerals, textile, chemicals, ELV, liquid wastes, batteries, medicines, chlorofluorocarbons, HCFC, HFC, electronic and electrical equipment, oils, water separators
Cambridgeshire	East of England	1,191	Packaging, batteries, electrical/electronic waste, municipal, paint, adhesive, sealant, ink, gases, construction and demolition wastes, photographic industry wastes, human and health care wastes, ELV, municipal wastes, oil wastes, liquid wastes,
Hampshire	South East	889	Florescent tubes, asbestos, oily water, interceptor sludges, liquid waste, laboratory chemicals, chlorofluorocarbons, HCFC, HFC
Cumbria	North West	716	Liquid wastes, oil, fuel
Leicester City	East Midlands	235	Electrical and electronic equipment
WPA not codeable (London)	London	212	Asbestos, inorganic liquid wastes, industrial sludges, oil/water separators, grit chamber waste
North East Lincolnshire	East Midlands	205	Liquid wastes, asbestos, chemicals, packing, machines and components, textiles, metals, oils
Kent	South East	167	Asbestos, grit chamber waste, oil/water separators, interceptor sludges, liquid wastes, ELV, chlorofluorocarbons, fluorescent tubes, electrical and electronic equipment
Northamptonshire	East Midlands	151	Textiles, chemical residue, packaging, oils, ELV, electronic and electrical equipment
Staffordshire	West Midlands	139	Fluorescent tubes, mercury, grit chamber waste, oil/water separators, equipment containing chlorofluorocarbons,
East Sussex	South East	135	Asbestos, grit chamber waste, oil/water separators, interceptor sludges, chemicals
Luton	East of England	130	Fluorescent tubes and other mercury-containing waste, electrical and electronic equipment, oily water from oil/water separators
Kirklees	Yorks and Humber	121	Water treatment sorting residues, fluorescent tubes, mercury containing waste
WPA not codeable (East Midlands)	East Midlands	118	Infectious health care waste, chemicals, ELV
Devon	South West	101	Fluorescent tubes and other mercury-containing waste

Source: EA Waste Data Interrogator 2019

Table 11: Hazardous waste received by Norfolk facilities from all Waste Planning Authorities (over 100 tonnes per annum) in 2020

Origin WPA	Origin Region	Tonnes Received	Main waste type
Norfolk	East of England	41,854*	A high proportion is metals and ELV. Remaining waste consists of textiles, chemicals, asbestos, clinical, contaminated soils, sludges,
Suffolk	East of England	4,535	Clinical, chemicals, textiles, asbestos, contaminated soils, vehicles
Not codeable (East of England)	East of England	2,398	Vehicles, WEEE, chemicals, clinical,
Essex	East of England	2,248	Chemicals, textiles, industrial effluent sludges, WEEE, asbestos, vehicles,
Cambridgeshire	East of England	657	Textile, chemical wastes, WEEE, asbestos, vehicles
Hampshire	South East	257	WEEE, chemical deposits, asbestos
Leicester City	East Midlands	183	WEEE
West Sussex	South East	165	Oils wastes and wastes of liquid fuels, asbestos and WEEE
East Sussex	South East	148	Chemical deposits and residues, WEEE and minimal asbestos
Lincolnshire	East Midlands	145	Chemical deposits, WEEE, minimal asbestos
Kirklees	Yorks & Humber	141	WEEE
Bedford	East of England	129	Chemical deposits, WEEE, minimal asbestos
Northamptonshire	East Midlands	111	WEEE, chemical deposits, minimal asbestos
Luton	East of England	105	Mainly WEEE; minimal asbestos

Source: EA Waste Data Interrogator 2020

*The WDI includes an additional 64,000 tonnes of End-of-Life vehicles received in Norfolk at DLH Autorecyclers. This figure is incorrect and has therefore been excluded from the table.

3.5 Hazardous waste movements from Norfolk

A significant part of the residual hazardous waste in Norfolk is ultimately received at the hazardous waste physical-chemical treatment facility at King's Cliffe in Northamptonshire. The next largest quantity of hazardous waste is sent to an incinerator at Ellesmere Port in Cheshire.

Table 12: Hazardous waste received by facilities in any WPA arising from Norfolk (over 100 tonnes per annum) in 2019

Destination WPA	Destination Region	Tonnes Received	Main waste types
Norfolk	East of England	43,021	Oil/water separator contents, oil wastes and waste of liquid fuels, batteries, end-of-life vehicles, WEEE, discarded equipment containing CFCs, drilling muds and other drilling wastes
Northamptonshire	East Midlands	10,089	Filter cakes, oil filters, fuels, electronic/electrical equipment, chlorofluorocarbons, HCFC, HFC, construction and demolition wastes, ELV, metals, plastics, combustion wastes, soils and dredging soils, industrial waste sludges, asbestos
Cheshire	North West	3,630	ELV, packaging, textile, liquid wastes, gases, chemicals, oils, construction, demolition, organic, inorganic, paints, fuels, propellants wastes, minerals
Peterborough	East of England	2,143	ELV, asbestos, batteries, municipal wastes
Derbyshire	East Midlands	1,818	Packaging, inorganic wastes, organic wastes, residues of mechanical treatment, electronic and electrical equipment, liquid wastes, photographic industry wastes, ELV
Lincolnshire	East Midlands	1,742	Asbestos, oils, fuels, batteries, fluorescent tubes, chlorofluorocarbons, textiles, minerals
Leeds	Yorks and Humber	1,520	Asbestos, washing liquids, tank bottom and on-site effluent treatment sludges, fuels, oils, packaging, liquid wastes, paints, ELV
Suffolk	East of England	1,398	Batteries, municipal wastes, washing liquid wastes, electrical/electronic wastes, oils, ELV, paints, solvents, treatments of metals and plastics, chemicals
Leicestershire	East Midlands	707	Asbestos, gases in pressure containers, ELV, batteries, electronic and electrical equipment, fluorescent tubes, paints, solvents, oils, chemicals, clinical wastes, chlorofluorocarbons, HCFC, HFC, municipal, waste
Kingston Upton Hull City	Yorks and Humber	667	Tank bottom sludges, fuels, oils, minerals, asbestos
Walsall	West Midlands	664	Construction and demolition wastes, textiles, organic, ELV, municipal, liquid, paint, adhesives, sealants, chemicals, plastics, organic, refrigerant and propellent wastes, asbestos
Hertfordshire	East of England	624	ELV, packaging, batteries, municipal wastes, agriculture and food wastes, paints, inorganic, organic wastes, fuels, oils, metal coating wastes

Destination WPA	Destination Region	Tonnes Received	Main waste types
Cambridgeshire	East of England	623	Chlorofluorocarbons, batteries, municipal wastes, ELV, clinical wastes, chemicals, photographic industry wastes, electronic/electrical wastes
Nottinghamshire	East Midlands	576	Packaging, batteries, electronic/electrical equipment, ELV, fluorescent tubes, liquid wastes, paints, fuels, oils, minerals
Stockton-on-tees	North East	570	Oils, liquid wastes, ELV, textiles, effluent treatment sludges, chemicals, asbestos
Telford and Wrekin	West Midlands	493	Equipment containing chlorofluorocarbons
Hampshire	South East	407	Textile, oils, packaging, sludges, organic and inorganic chemicals, municipal wastes, metals, ELV, asbestos
Bedford	East of England	403	Packaging, municipal wastes, paints, chemicals, metals, fuels, oils, batteries, electrical/electronic equipment, inorganic wastes, organic wastes, ELV, liquid wastes, asbestos, clinical wastes
North Tyneside	North East	300	Chemical deposits/residues, ELV
Kent	South East	299	Chemicals, ELV, minerals, packaging, wood, textiles, paint, adhesives, sealant and ink, municipal wastes, oils, construction
North East Lincolnshire	Yorks and Humber	241	Batteries, ELV, gases in pressure containers, chemicals, chlorofluorocarbons, HCFC, HFC
Salford	North West	205	Sludges, packaging, chemicals, electrical and electronic equipment, textiles, paints, gases, dental care wastes, ELV, oils, fuels, tank storage wastes
Sheffield	Yorks and Humber	189	ELV, organic wastes, inorganic wastes, liquid wastes, adhesive and sealants, gases, pesticides, oils, packaging, construction and demolition wastes, batteries, chemicals, asbestos
Knowsley	North West	188	Inorganic, liquids, chemicals, packaging, ELV, paints, oils, dental care, gases and municipal wastes
Medway	South East	155	Textiles, minerals, oils, packaging, batteries, ELV, fluorescent tubes, fuels, paint, adhesive, sealant and ink, chemicals, clinical wastes
Kirklees	Yorks and Humber	155	Asbestos, electrical and electronic equipment, municipal waste
North Yorkshire	Yorks and Humber	153	Chemicals, packaging, paints, electronic and electrical equipment
Bristol City	South West	133	Packaging, organic and inorganic wastes, textiles, sewage sludges, oils, dental care, medicines
Essex	East of England	117	Asbestos, oils, electrical/electronic equipment, batteries, chlorofluorocarbons, HCFC, HFC,
Dudley	West Midlands	108	Inorganic wastes, components from discarded equipment

Destination WPA	Destination Region	Tonnes Received	Main waste types
Sandwell	West Midlands	108	Packaging, liquid wastes, textiles, chemicals, municipal wastes, asbestos, fuel, packaging, clinical wastes, refrigerant and propellant wastes
Lancashire	North West	107	Electrical and electronic equipment, packaging, washing liquids, organic solvents
Havering	London	105	Construction, asbestos, packaging, textile, oils, interceptor sludges, liquid wastes, minerals
Stoke-on-Tent	West Midlands	100	Clinical wastes, medicines, minerals, packaging, inorganic wastes, textiles, industrial effluent sludges, chemicals, oils, liquid wastes

Source: EA Waste Data Interrogator 2019

Table 13: Hazardous waste received by facilities in any WPA arising from Norfolk (over 100 tonnes per annum) in 2020

Destination WPA	Destination Region	Tonnes Received	Main waste types
Norfolk	East of England	41,584*	Mixed metals, ELV, oils, chemical deposits, acid, alkalies or salts, WEEE, inorganic waste minimal asbestos and textile
Northamptonshire	East Midlands	7,608	4,520t combustion wastes; other waste includes oils, contaminated soils, WEEE, chemicals, asbestos, waste and water treatment wastes
Cheshire West and Chester	North West	5,431	4,616t chemical deposits; other waste includes industrial effluent sludges, solvents, oils, chemicals, acid, alkalies or salts, C&D and textile
Suffolk	East of England	4,784	3,187t C&D waste, other waste includes oils, chemicals, WEEE, ELV, asbestos, solvents, packaging containing residues of or contaminated by dangerous substances
Cambridgeshire	East of England	3,697	2,674t contaminated soils; other waste includes asbestos, health care wastes, WEEE, C&D, oils, textile
Leeds	Yorks and Humber	1,691	1,052t chemical deposits; other waste includes industrial effluent sludges, chemicals, textile, asbestos, WEEE, oils, packaging containing residues of or contaminated by dangerous substances
Peterborough	East of England	1,683	1054t WEEE, other waste includes Asbestos, textile, chemicals, acid, alkalies or salts, solvents
Lincolnshire	East Midlands	1,676	1,137t WEEE; other waste includes oils, chemicals, solvents, asbestos,
Lancashire	North West	1,154	736t spent solvents, other waste includes chemicals, industrial effluent sludges, textile,

Destination WPA	Destination Region	Tonnes Received	Main waste types
Kent	South East	908	439t WEEE, 280t chemical deposits, 178t oils, minimal wood, textile, contaminated soils, health care wastes and asbestos
Cheshire East	North West	878	804t chemical deposits, minimal solvents, textile, WEEE
Sandwell	West Midlands	725	Acid, alkalies or salts, textile, chemicals, oils, sorting residues, WEEE, textile
Derbyshire	East Midlands	722	Sorting residues from mechanical treatment, minerals from mine and quarry, spent solvents, chemicals, acid, alkalies or salts, textile, asbestos, oils, industrial effluent sludges
Nottinghamshire	East Midlands	593	462t used oils, small amounts of WEEE, spent solvents, chemicals,
Unknown (mobile plant)	Unknown (mobile plant)	580	WEEE and asbestos
Leicestershire	East Midlands	565	458t WEEE, other waste includes health care, chemicals, asbestos, C&D, textile, acid, alkalies or salts, packaging containing residues of or contaminated by dangerous substances
Kingston Upon Hill City	Yorks and Humber	530	393t oils, other waste includes chemical, asbestos and sorting residues of mechanical treatment
Telford and Wrekin	West Midlands	366	WEEE
Bedford	East of England	348	Textile, WEEE, oils, spent solvents, acid, alkalies or salts, chemicals, asbestos,
Hertfordshire	East of England	321	201t chemical deposits; other waste includes acid, alkalies or salts, oils, absorbents, filter materials, wiping cloths, protective clothing contaminated by dangerous substances
North East Lincolnshire	Yorks and Humber	317	WEEE, minimal spent solvents and chemicals
Walsall	West Midlands	296	Sorting residues, chemicals, textile, oils, acid, alkalies or salts, asbestos,
Worcestershire	West Midlands	276	Oils, chemicals, spent solvents, asbestos, ELV, packaging containing residues of or contaminated by dangerous substances, inorganic wastes containing dangerous substances, discarded organic chemicals consisting of or containing dangerous substances
Bristol City	South West	260	packaging containing residues of or contaminated by dangerous substances, chemicals, textile, spent solvents, infectious health care wastes
Salford	North West	251	Chemicals, industrial effluent sludges, acid, alkalies or salts, combustion wastes, textile, inorganic wastes containing dangerous substances

Destination WPA	Destination Region	Tonnes Received	Main waste types
Stockton-on-Tees	North East	200	Chemicals, textile, industrial effluent sludges, contaminated soils, oils, WEEE
Sheffield	Yorks and Humber	183	packaging containing residues of or contaminated by dangerous substances, textile, chemicals, oils, WEEE, infectious health care, packaging, organic and inorganic wastes containing dangerous substances
Essex	East of England	151	Chemicals, asbestos, WEEE
Staffordshire	West Midlands	144	Spent solvents, chemicals, WEEE, oils, acid, akalies or salts, packaging, inorganic and organic wastes containing dangerous substances
Hampshire	South East	143	Chemicals, asbestos, WEEE, organic wastes containing dangerous substances, minimal oils, textile, combustion wastes,
North Yorkshire	Yorks and Humber	134	Chemicals, packaging containing residues of or contaminated by dangerous substances, minimal WEEE
Warwickshire	West Midlands	115	Mainly chemicals; minimal acid, alkalies or salts, WEEE, oils, textile, organic wastes containing dangerous substances

Source: EA Waste Data Interrogator 2020

*The WDI includes an additional 64,000 tonnes of End-of-Life vehicles received in Norfolk at DLH Autorecyclers. This figure is incorrect and has therefore been excluded from the table.

3.6 Inert Waste movements

The inert waste category within the Waste Data Interrogator includes Construction, Demolition and Excavation waste, as well as a proportion of waste from LACW which is inert and separated as part of the recycling process. Within the WDI this category also includes glass and metals. Due to the relative weight to value of most inert wastes, management tends to take place close to where the waste arises. Mineral workings often require a certain amount of inert waste to aid restoration, and the largest amounts of inert waste are received at mineral operations. It is common for these operations to incorporate inert waste recycling as part of their business, with suitable waste recycled into secondary aggregate, with recovery through quarry restoration often being the fate for inert waste such as soils, although a proportion would be screened and potentially blended to create a topsoil product.

The total amount of inert/C&D waste received at Norfolk facilities in 2019 was 1,093,855 tonnes. Of this total, 923,317 tonnes of waste were recorded as arising in Norfolk.

The total amount of inert/C&D waste arising in Norfolk, but received at facilities in other WPAs in 2019 was 103,047 tonnes.

The total amount of inert/C&D waste received at Norfolk facilities in 2020 was 1,104,986 tonnes. Of this total, 899,601 tonnes of waste were recorded as arising in Norfolk.

The total amount of inert/C&D waste arising in Norfolk, but received at facilities in other WPAs in 2020 was 197,288.

3.7 Inert waste movements to Norfolk

Table 14: Inert waste received by facilities within Norfolk in 2019 (over 1,000t per annum)

Origin WPA	Origin Region	Tonnes	Main waste types
Norfolk	East of England	923,317	Construction materials (around 552,775 tonnes of soil and stones)
East of England	East of England	69,595	Bricks, concrete, metals, soils and stone
Suffolk	East of England	66,278	Soil and stones, construction materials, metal, plastic, glass, sludges from dredging
Cambridgeshire	East of England	21,659	Metals, concrete, bricks, soil and stones, sand and clay, mixed C&D waste, gypsum construction material
Lincolnshire	East Midlands	8,741	Metals, soil and stones, concrete, sand and clays
Newham	London	2,977	Metals

Source: EA Waste Data Interrogator 2019

Table 15: Inert waste received by facilities within Norfolk in 2020 (over 1,000t per annum)

Origin WPA	Origin Region	Tonnes	Main waste types
Norfolk	East of England	899,601	Mainly minerals from C&D wastes as well as wood, mixed metals, glass and plastic
East of England	East of England	75,777	Mainly minerals from C&D wastes as well as mixed metals
Suffolk	East of England	62,960	Mainly minerals from C&D wastes as well as metals, woods and plastic
Cambridgeshire	East of England	40,743	Mainly ferrous metal waste as well as minerals from C&D, woods, non-ferrous metal
Lincolnshire	East Midlands	8,192	Minerals from C&D, ferrous metal, non-ferrous metal

Origin WPA	Origin Region	Tonnes	Main waste types
Newham	London	5,510	Mainly ferrous metal waste as well as non-ferrous metal
Bexley	London	3,923	Mainly ferrous metal waste, fewer non-ferrous metal
Essex	East of England	1,152	C&D waste including ferrous and non-ferrous metal and minerals

Source EA: Waste Data Interrogator 2020

3.8 Inert waste movements from Norfolk

Glass forms a part of the inert waste stream, and as a higher value item travels further for reprocessing; glass bottles may be suitable for crushing and reprocessing into glass containers. Flat glass is unsuitable for such reprocessing but is recovered by crushing and grinding to form a sand substitute used in asphalt and abrasives manufacture.

Table 16: Inert waste received by facilities in any WPA arising from Norfolk in 2019 (over 1,000 tonnes per annum)

Destination WPA	Destination Region	Tonnes	Main waste types
Norfolk	East of England	923,317	Metals, bituminous mixtures, bricks, cables, concrete, soil. Glass, dredging spoil, gypsum-based construction materials, plastic, soil and stones, sand
Suffolk	East of England	55,753	Concrete, bricks, tiles, ceramics, soil and stones, concrete, wood
Thurrock	East of England	18,069	Glass, wood
Cambridge	East of England	12,719	Soil and stones, mixed C&D water, bituminous material, concrete, bricks, tiles, ceramics, wood, glass
Wakefield	Yorks & Humber	10,618	glass
Barking and Dagenham	London	1,349	metals

Source: EA Waste Data Interrogator 2019

Table 17: Inert waste received by facilities in any WPA arising from Norfolk in 2020 (over 1,000 tonnes per annum)

Destination WPA	Destination Region	Tonnes	Main waste types
Norfolk	East of England	899,601	597,114t naturally occurring mineral from C&D, garden & parks, mines & quarries, 249,289t is C&D; ferrous metal and scrap, glass, plastic, wood, non-ferrous mineral
Suffolk	East of England	119,416	98,154t naturally occurring mineral from C&D and garden & parks; C&D waste, ferrous metal, wood, mixed metals
Cambridge	East of England	24,519	13,168t naturally occurring mineral from C&D and garden & parks; 11,191t C&D waste; mixed metals and wood
Thurrock	East of England	12,684	10,840t glass, 1,843t wood
Wakefield	Yorks & Humber	4,017	glass
Barking & Dagenham	London	1,244	metals

Source: EA Waste Data Interrogator 2020

3.9 London Waste

Apart from paper and cardboard received at Palm Paper for reprocessing, Norfolk has not received significant quantities of waste from London, in comparison with those WPAs located closer to London or WPAs located where better transport links makes the movement of waste more efficient. The WDI data for 2012-2017 shows a significant fall in the volumes of London's waste which is being received at facilities within Norfolk. The 2019 data includes inputs to Palm Paper at King's Lynn that is not recorded in the WDI in previous years, therefore the table below also shows the quantity of HIC waste excluding the Palm Paper facility to enable a comparison. The increases in inert waste from London received in Norfolk in 2019 and 2020 are metals received by Gold Star Metal Traders at King's Lynn docks for export. Most of the increase in HIC waste received from London in Norfolk in 2020 (at facilities other than Palm Paper) was metals received at Glazewing Dereham (5,263 tonnes).

Table 18: Waste from London received at waste management facilities in Norfolk

Waste Type	2012	2013	2014	2015	2016	2017	2018	2019	2020
HIC waste (tonnes)	16,805	8,720	625	920	1,680	98	123	217,742 (1,650 excluding Palm Paper)	141,656 (8,328 excluding Palm Paper)
Inert waste (tonnes)	5	160	15	15	0	0	0	3,555 (mainly metals for export)	10,514 (metals for export)
Hazardous waste (tonnes	260	160	175	370	68	108	130	428	174
Total Waste (tonnes)	17,070	9,040	815	1,320	1,748	206	253	221,725	152,344

Source: EA Waste Data Interrogator (totals are rounded and may not sum)

The reduction in HIC waste received in Norfolk from London between 2012 and 2018 is due to a very significant reduction in the quantities of separated LACW (paper and cardboard) received. In 2012, such waste was received from a greater number of London Boroughs than in 2016, dropping substantially again in 2017 and 2018; this may be as the result of a change in contractor, the opening of an alternative site outside Norfolk, or a change in market viability. In 2016, over 90% of the waste from London received in Norfolk was paper and cardboard. Over half the total waste was received at a few specialist facilities which manage specific parts of the hazardous waste stream (waste electricals and fluorescent tubes).

The quantities of waste imported into Norfolk from London are small when compared to the quantities of waste from London imported into the other WPA areas in the East of England, as shown in the table below. The higher figures in 2019 and 2020 are due to waste paper and cardboard received at Palm Paper for reprocessing being included in the WDI for the first time.

Table 19: Waste from London received at facilities in the East of England

WPA	2013	2014	2015	2016	2017	2018	2019	2020
Bedfordshire authorities	305,382	472,657	241,929	232,405	310,196	238,483	185,270	80,977
Cambs & Peterborough	65,486	114,504	336,792	679,346	758,318	386,821	384,593	222,139
Essex & Southend-on-Sea	1,644,501	1,820,556	1,311,074	1,436,742	1,183,829	804,940	684,662	452,390
Hertfordshire	747,755	703,455	973,704	821,218	676,867	649,185	737,140	1,209,135

WPA	2013	2014	2015	2016	2017	2018	2019	2020
Norfolk	9,045	815	1,302	1,748	206	253	221,725 [1,650*]	152,344 [19,016*]
Suffolk	24,324	10,296	1,559	4,463	5,722	12,585	12,315	10,471
Thurrock	2,163,622	1,941,733	2,018,316	2,099,484	2,701,190	2,265,140	4,415,401	3,118,151
Total	**4,960,116**	**5,064,017**	**4,884,675**	**5,275,406**	**5,636,328**	**4,337,407**	**6,641,106**	**5,245,608**

Source: Environment Agency Waste Data Interrogator

*this is the quantity of waste from London received at Norfolk facilities excluding Palm Paper

If waste from London continues to be received in Norfolk this will be as part of commercial contracts with waste management companies. As the quantities of London's waste received in Norfolk are no more significant than for the majority of other WPAs from which Norfolk receives waste no special action is required to plan specifically for London's waste within the Minerals and Waste Local Plan.

3.10 Conclusions on waste movements to and from Norfolk

The East of England WTAB has agreed that for the purposes of the Duty to Cooperate, thresholds on the amount of waste transferred between WPA areas should apply. The thresholds are: 5,000 tonnes per annum of non-hazardous waste (HIC), 100 tonnes per annum of hazardous waste and 10,000 tonnes per annum of inert waste (CD&E). Therefore, Norfolk County Council has contacted all the identified WPAs which receive amounts of waste above these thresholds, so that we can engage with them in accordance with the duty.

The waste management industry operates across borders, both administrative within the UK, and international borders. Waste that arises in Norfolk is transported to many facilities outside the county boundary. There is also a significant flow of waste into facilities in Norfolk which has arisen in other WPA areas. For many waste management processes there are thresholds below which facilities are not economically viable, and the waste management industry is market driven, so commercial facilities are unlikely to be developed if it is not considered that sufficient waste could be processed. The type of facilities likely to be developed to take advantage of waste from an area greater than that covered by one WPA would be those to treat specialised waste streams, particularly hazardous wastes, or waste streams which require costly infrastructure to process them.

Waste streams often pass through several waste management facilities, where sorting, separation, bulking up and treatment takes place for wastes that have not been segregated at source. Therefore, the efficient recycling of waste often relies on a network of smaller waste management facilities which can separate and bulk up particular waste streams prior to delivery to larger waste treatment facilities.

The general movement of waste between Norfolk and other WPA areas is based on the locations of the nearest appropriate facility for particular waste streams (which may be outside the WPA area boundary); or is driven by commercial priorities (as evidenced by Norfolk having non-hazardous landfill capacity which is not currently being used, whilst waste from Norfolk is received at operational landfill sites in Suffolk, Cambridgeshire and Peterborough). It is considered that such cross-boundary movements between WPA areas generally cancel each other out. Therefore, all WPAs should plan for net-self-sufficiency in waste management facilities.

Hazardous waste is generated at far lower volumes than HIC waste, and due to its nature, facilities treating this waste are more specialised and need to draw waste from a far larger area to be viable.

Overall, the movement of waste into and out of Norfolk is the result of the interaction of commercial priorities in a contract driven industry and the need for many waste facilities to have a suitably sized area from which to draw material in order for them to be viable.

4. Forecast of future waste arisings in Norfolk

This chapter forecasts the waste quantities likely to arise within Norfolk for the plan period to 2038. These forecasts are made using a variety of data sources, including the East of England Forecasting Model, Norfolk's Local Planning Authorities' local housing needs and housing trajectories and the Environment Agency Waste Data Interrogator. National Policy states that in forecasting for future waste arisings, spurious precision should be avoided; this is due to the forecasts being based on projections at a large scale. The forecasts will be used to inform the Minerals and Waste Local Plan by assessing likely future waste capacity requirements, based on the forecast waste arisings compared to existing capacity and movements of waste.

4.1 Methodology

Local Authority Collected Waste (previously known as 'municipal waste') is a significant part of the waste stream. To forecast future arisings national guidance suggests that a growth profile should be the starting point. The growth profile should be based on household or population growth and waste arisings per household or per capita.

National guidance provides additional detail on how the growth profile for LACW should be prepared.

- 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.

The Office of National Statistics (ONS) compiles regular population and household growth projections, and these provide a robust basis for such forecasts. Local Authority Collected Waste arisings per household can therefore be calculated and forecast based on future household growth. National Planning Policy is that "to determine the minimum number of homes needed, strategic policies should be informed by a local housing need assessment, conducted using the standard method in national planning guidance – unless exceptional circumstances justify an alternative approach which also reflects current and future demographic trends and market signals." The planned housing growth in Norfolk's Local Planning Authorities' Local Plans will therefore be used for forecast future LACW arisings.

Creating forecasts for waste streams other than LACW is less precise. This is because, as local authorities are responsible for collection and management of LACW, the data on the total amounts of LACW managed are more robust.

A growth profile for **commercial and industrial waste** can be created to forecast future arisings. National planning guidance states that:

- forecasts for commercial and industrial waste arisings should be based on a growth projection;
- Waste Planning Authorities should set out clear assumptions on which any growth projection is based, and should consider different assumptions if necessary; and
- A certain level of growth in arisings should be assumed unless there is clear evidence to demonstrate otherwise.

Forecasting for future **construction and demolition waste** arisings is less certain due to the incomplete information for this waste stream. National guidance states that Waste Planning Authorities should assume a constant level of arisings as a starting point.

National guidance states that the Environment Agency WDI information for **hazardous waste** is considered to be robust and that growth projections for this waste stream should be made by projecting forward trends from time-series data. Facilities dealing with hazardous waste are almost invariably going to be operating under the Environmental Permitting regulations rather than an exemption due to the nature of the waste.

4.2 Total waste quantities managed

The total amounts of waste currently received by waste management facilities is recorded in the Environment Agency's Waste Data Interrogator for those sites which operate under the Environmental Permitting regulations. This is covered in more detail within the chapters on existing waste management capacity and movements of waste.

The WDI does not classify wastes in the same way as planning policy. Therefore, the total quantities of wastes within the WDI will be composed of LACW, C&I, CD&E, hazardous, and waste such as sewage sludge and agricultural waste received at facilities operating under the Environmental Permitting regime. The waste classification codes used in the WDI are such that some waste planning categories would be split between them; for example LACW would contain a proportion of waste classified as Household, Industrial and Commercial (HIC); a proportion that would be inert, and a proportion would be hazardous. Therefore, it is not possible to directly relate quantities in the EA Waste Data Interrogator to the quantities in each category in planning terms. Due to the way the permitting return operates, by recording the movement of waste, the potential exists for waste to be double-counted as it moves through multiple transfer and treatment facilities prior to the residue being either sent to a recovery or disposal location. Therefore, the quantity of waste recorded as managed at waste management facilities is not the same as the quantity of waste arising.

4.3 Local Authority Collected Waste arisings

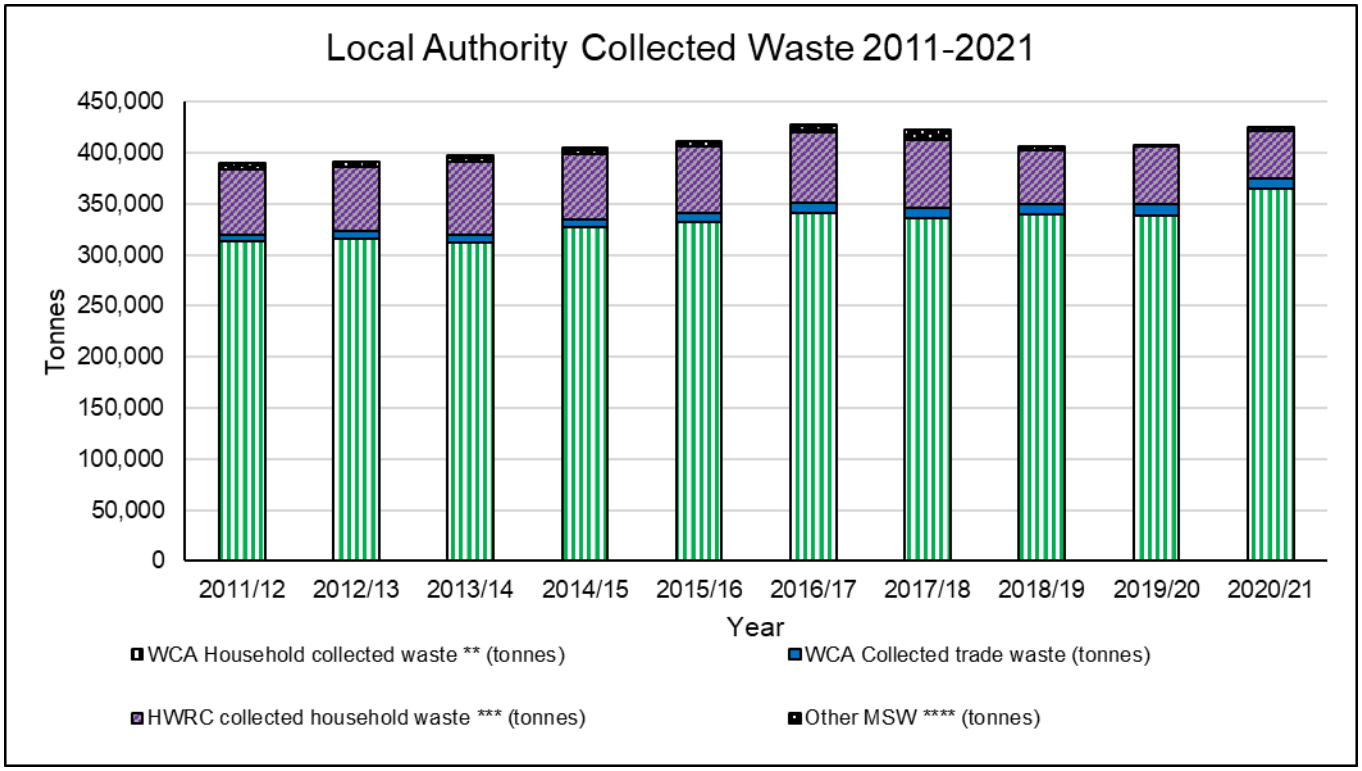
Waste from Households in Norfolk is collected by the district, borough and city councils in their capacity as Waste Collection Authorities (WCAs). Some WCAs also collect a proportion of trade waste which is similar in composition to the waste obtained from households. Household Waste Recycling Centres also receive a proportion of waste produced by households. Norfolk County Council is the Waste Disposal Authority and is responsible for the treatment, recovery and/or disposal of LACW. LACW has the most robust system for the recording of quantities of waste that is collected and treated and/or sent for recovery or disposal. There is a national system for recording quantities of LACW called WasteDataFlow, which is funded by Defra. Therefore, the data on LACW quantities and destinations is considered to be the most accurate of all the waste streams. The following table and graph below shows the total LACW received for the period 2011/12-2020/2021.

Table 2*0*: Local Authority Collected Waste arisings summary 2007/08 to 2020/21

Year	WCA Household collected waste ** (tonnes)	WCA Household collected waste ** (%)	WCA Collected trade waste (tonnes)	WCA Collected trade waste (%)	HWRC collected household waste *** (tonnes)	HWRC collected household waste *** (%)	Other MSW **** (tonnes)	Total MSW arisings (tonnes)
2011/12	313,544	81%	5,425	1%	64,832	17%	5,579	389,380
2012/13	315,462	81%	7,574	2%	63,158	16%	4,896	391,090
2013/14	312,503	79%	6,749	2%	71,780	18%	5,935	396,967
2014/15	327,139	81%	7,359	2%	64,817	16%	5,403	404,718
2015/16	331,556	81%	8,801	2%	65,394	16%	5,645	411,396
2016/17	341,082	80%	10,126	2%	69,400	16%	6,439	427,048
2017/18	335,340	79%	10,860	2%	66,370	18%	10,102	422,672
2018/19	339,187	84%	10,730	3%	52,810	13%	3,215	405,942
2019/20	338,549	83%	10,833	3%	56,295	14%	2,403	408,080
2020/21	365,192	86%	9,544	2%	46,629	11%	3,360	424,725

Source: NCC Waste Disposal Authority

** household waste, kerbside recycling, fridges, flytipping and beach cleansing waste
*** excluding rubble ****rubble and abandoned vehicles



Source: NCC Waste Disposal Authority

** household waste, kerbside recycling, fridges, flytipping and beach cleansing waste

*** excluding rubble ****rubble and abandoned vehicles

4.4 LACW growth projections to 2038

Data for LACW is recognised as being the most robust for any waste stream. National planning policy guidance states that a growth forecast should be developed using household formation and population growth forecasts as a basis.

Actual LACW arisings are known for all the years up to and including 2020/21. Due to the Covid-19 pandemic and national lockdowns in 2020/21 this will have affected the LACW arisings and therefore the base year of 2019/20 will be used to calculate the LACW forecasts.

The forecasts of housing growth used are from the following sources as these are the most up-to-date currently available:

- Greater Norwich Local Plan Submission (2021) (covers the period 2018 to 2038)
  Policy 1 The Sustainable Growth Strategy: "to meet the need for around 40,550 new homes, provision is made for a minimum of 49,492 new homes".
- Breckland Council's adopted Local Plan (2019) (covers the period 2012 to 2036)
  Policy HOU 01 Development requirements (minimum): "The Local Plan will provide for no less than 15,298 new homes between 2011 and 2036, an average of 612 dwellings per annum."
- Great Yarmouth Borough Council's adopted Local Plan Part 2 (2021) (covers the period from 2013 to 2030)
  Policy UCS3 Adjustment to Core Strategy Housing Target: updates the Core Strategy Policy CS3 to state that the Plan will make provision for at least 5,303 new homes over the plan period. This equates to 363 dwellings per year. However, the Local Plan Part 2 seeks to provide 7,020 dwellings over the remainder of the plan period.
- North Norfolk's Proposed Submission Local Plan (Jan 2022) (covers the period 2016 to 2036)
  Policy HOU1 Delivery Sufficient Homes: Minimum housing requirement of 9,600 new homes between 2016 and 2036, equating to an annual average rate of around 480

dwellings per year, or 2,400 every five years. The Plan sets this as the minimum but includes policies and specific development site proposals that together allow for the delivery of at least 12,000 new homes.

- King's Lynn and West Norfolk's Pre-Submission Local Plan Review (August 2021) (covers the period 2016 to 2036)
  Policy LP01 Spatial Strategy: The Local Housing Need for King's Lynn and West Norfolk is 539 new dwellings annually, over the 20 year period this results in a need for 10,780 dwellings to be planned for. Paragraph 4.1.11 sets out the potential projected supply of housing in plan period as 16,100.

The planned delivery of homes per annum contained in the policies in the Local Plans listed above (which is higher than the Local Housing Need calculated using the standard methodology) has been used to forecast future LACW arisings with one additional tonne of LACW per annum assumed to be produced for each additional home built in that year resulting in a cumulative increase over the plan period to 2038. For simplicity the total amount of homes planned for in each Local Plan, over the period of that Local Plan has been divided by the years covered by the Local Plan to calculate the additional number of homes that will be delivered in each year of the plan. Where Local Plans do not cover the period up to 2038, it has been assumed that the average homes delivered per annum will continue until 2038 for the purposes of forecasting future LACW arisings.

The LACW growth scenario takes a precautionary approach and assumes that the amount of waste generated per household will remain the same for the whole Plan period; in order to ensure enough future capacity to meet predicted arisings. While there are several initiatives and aspirations which could lead to a reduction in the amount of waste produced by households, there is currently insufficient evidence of any reduction per household on which to base a robust future scenario. The average quantity of LACW arising per dwelling over the 10-year period from 2010/11 to 2019/20 was 0.995 tonnes per annum. 2020/21 figures have not been included in this calculation due to the potential impact of the Covid-19 pandemic on LACW waste arisings. There were slight increases in the average quantity arising per household from 2015 which is likely to be a result of changes in the recycling regime which allowed the inclusion of glass within kerbside recycling collections. Therefore, for the purpose of forecasting future LACW arisings, one tonne of LACW per household has been used.

Table 21: Tonnage of LACW arising per dwelling

Year	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
LACW per dwelling (tonnes)	1.00	0.99	0.97	0.97	0.98	0.99	1.00	1.03	1.1	0.96	0.96	0.98

Source: Norfolk County Council Waste Disposal Authority

Analysis of previous LACW waste quantities seems to indicate a potential correlation between the quantities of waste and economic activity. Waste quantities decreased slightly during the recession following the 'Credit Crunch' of 2009 (see Table 16); this may well have been as the result of households deferring spending for non-essential items and reducing overall household budgets. It is likely that up to the end of 2038 Norfolk is likely to see at least one economic cycle, and therefore assuming a given level of growth overall should smooth any variations in economic activity.

It is considered that a growth scenario using the housing growth planned for in Norfolk's Local Planning Authorities' Local Plans is the most appropriate to use to forecast future waste arisings for Norfolk. This growth scenario equates to an increase in the tonnage of LACW of

an average of 1.28% each year of the Plan period. If waste reduction initiatives prove successful over the Plan period they will reduce this rate of increase. The table below shows the forecast quantities of LACW in Norfolk over the Plan period using this growth scenario.

Table 23: LACW in Norfolk growth forecast to 2038

Year	LACW arisings in Norfolk ('000 tonnes)
2019/20	408
2020/21	413
2021/22	418
2022/23	424
2023/24	429
2024/25	434
2025/26	439
2026/27	444
2027/28	450
2028/29	455
2029/30	460
2030/31	465
2031/32	471
2032/33	476
2033/34	481
2034/35	486
2035/36	491
2036/37	497
2037/38	502

4.5 Commercial and Industrial Waste (non-hazardous)

Commercial and Industrial waste is a significant waste stream which is of an equivalent size to LACW. However, due to the nature of the waste management industry which deals with this waste stream data is less robust. C&I waste is produced largely by private sector businesses and the companies which collect and manage the waste are also in the private sector. While many of these are national companies and have robust internal systems for quantifying the amounts of waste that they deal with; this information is not published in a way which easily enables its use by waste planning authorities. Many of the companies operating in this sector must complete returns to the Environment Agency as part of the requirements of their Environmental Permits. Due to the way the permitting return operates, by recording the movement of waste, the potential exists for waste to be double-counted as it moves through multiple transfer and treatment facilities prior to the residue being either sent to a recovery or disposal location. Therefore, the quantity of waste recorded as managed at waste management facilities is not the same as the quantity of C&I waste arising. The government recognises that it is extremely difficult to estimate C&I waste generation due to the lack of the robustness in the data, leading to an increased level of uncertainty.

National planning guidance states that:

- forecasts for commercial and industrial waste arisings should be based on a growth projection;
- Waste Planning Authorities should set out clear assumptions on which any growth projection is based, and should consider different assumptions if necessary; and
- A certain level of growth in arisings should be assumed unless there is clear evidence to demonstrate otherwise.

National estimates by Defra for C&I waste arisings for England (UK Statistics on waste, Defra, 2020 data) available at: UK statistics on waste - GOV.UK (www.gov.uk) indicate a rise of 5.2 million tonnes of C&I waste between 2010 (32mt) and 2019 (37.2mt). This equates to an average increase of 1.8% per annum. However, it is noted in the UK Statistics on waste report that the reason for a relatively large increase in estimated C&I waste arisings in England for 2017 (36.1 million tonnes) from 33.1 million tonnes in 2016 was partly accounted for by some treatment categories where the Environment Agency have made improvements to capture additional installations from 2017 that were omitted for previous years; therefore, figures for 2017 onwards are not directly comparable with earlier years. C&I waste arisings were estimated to have decreased to around 33.8 million tonnes in England in 2020 which coincides with the Covid-19 pandemic and national lockdowns.

Estimates of C&I waste arisings were calculated for the review of the East of England Regional Spatial Strategy in 2010; these estimates were based on research carried out on behalf of Defra which included surveys (C&I waste survey 2009, Jacobs, May 2011). The last Defra survey which examined C&I waste quantities was 2009.

An estimate of C&I waste arisings in Norfolk has been calculated by using the quantity of Household, Industrial and Commercial waste recorded as originating in Norfolk in 2016 in the Environment Agency's Waste Data Interrogator and subtracting the quantity of LACW waste arising in 2016. The forecasts for C&I waste arisings will be based upon economic growth forecasts. Therefore, the base year of 2016 is being used to forecast C&I waste arisings over the Plan period because the East of England Forecasting Model uses 2016 as the base year for its economic growth forecasts.

Calculation of C&I waste arisings in 2016:

- HIC waste originating in Norfolk in 2016 = 1,905,148t [source: EA WDI]
- LACW arising in Norfolk in 2016/17 = 427,048t [source: NCC Waste Disposal Authority]
- 1,905,148t (HIC waste) – 427,048t (LACW) = **1,478,100t of C&I waste arisings**

In order to calculate the C&I arisings above, we firstly had to calculate the total HIC waste arising in Norfolk because the WDI for 2016 did not include the Palm Paper reprocessing facility or incinerators. The calculation was as follows:

Calculation of HIC waste originating in Norfolk in 2016:

The total HIC arising of **1,905,148** tonnes in Norfolk in 2016, used in the above calculation, was based on the following data:

- Total HIC recorded as arising in Norfolk within the WDI = 1,898,548 tonnes
- Plus an estimated 180,000 tonnes received at the Palm Paper reprocessing facility (this figure was requested from the Environment Agency but was not available prior to 2017)
- Plus the 27,100 tonnes of waste arising in Norfolk received at incinerators in 2016.
- Minus 200,500 tonnes received at lagoons in 2016 as they are an interim stage prior to landspreading. (Lagoons have also been excluded form the calculations of existing capacity).

No data for mobile plant was recorded in the WDI for 2016. As the majority of waste treated using mobile plant tends to be spread to land and therefore takes place in unrecorded locations and not at a fixed facility, this has been included in the total HIC arisings associated

with mobile plant. Mobile plant have also been excluded from the calculations of existing capacity.

The quantity of waste received at Thetford Power Station was potentially 375,000 tonnes, but this has not been included in the total HIC arisings due to its specific waste stream input and has also been excluded from the calculations of existing capacity.

A forecast of future C&I waste arisings can be developed by using forecasts of economic growth. Economic growth forecasts typically use Gross Value Added as a proxy, which is the output value added by a business to the value of its inputs. However, just because a business sector has a high GVA growth does not necessarily mean that it has high C&I waste growth. Technological change may add substantial value without increasing waste. As economic forecasts generally have a high level of uncertainty, waste forecasts derived from them are also uncertain.

The East of England Forecasting Model (EEFM) produces forecasts for Norfolk by business sector and for all sectors. The current model forecasts economic growth to 2045. The Defra Survey, for estimating C&I waste, selected business sectors seen as being representative of those generating C&I waste. By using selected business sector GVAs as a proxy for this survey a growth forecast can be established.

Table 24: Table of business sectors used for calculating C&I waste forecast

Business Sector in Defra Survey	Gross Value Added Business Sector from EEFM	Annualised % change 2016-38
Chemicals / non-metallic minerals manufacture	GVA5: Manufacturing - chemicals only GVA6: Manufacturing - pharmaceuticals	1.24 1.47
Education	GVA28: Education	0.44
Food, drink & tobacco	GVA3: Manufacturing - food manufacturing	2.21
Hotels & catering	GVA17: Accommodation & food services	2.87
Metal manufacturing	GVA7: Manufacturing - metals manufacturing	1.28
Machinery & equipment (other manufacture)	GVA4: Manufacturing - general manufacturing	0.21
Other services	GVA23: Professional services GVA31: Other services	1.67 0.56
Power & utilities	GVA10: Utilities	0.46
Public administration & social work	GVA27: Public administration	1.7
Retail & wholesale	GVA13: Wholesale GVA14: Retail	1.49 3.09
Textiles / wood / paper / publishing	GVA18: Publishing & broadcasting	-0.07
Transport & storage	GVA15: Land transport GVA16: Water & air transport	0.72 2.21

Source: East of England Forecasting Model 2019

The average annualised percentage increase for the selected business sectors that approximate to those used in the Defra survey is **1.35%** for the Plan period.

Average annualised growth for all business sectors included in the EEFM is 1.65% for the Plan period. However, the variance between sectors can be high. Waste and remediation as a business sector is included in the EEFM, this is the business sector that will deal with all waste from the economy. Therefore, forecast change in this sector could be an indicator of the potential changes in waste generation. This sector has a forecast of 2.12% annualised growth over the Plan period but is a small part of the overall economy.

Therefore, looking at all these potential scenarios, it would be appropriate to model growth forecasts for C&I waste on the growth for the business sectors which represent those sectors included in the previous Defra Survey of C&I waste. This growth is 1.35% per annum over the Plan period. The GVA forecasts in the East of England Forecasting Model use 2016 as the base year for the forecast. Therefore, the forecasts for C&I waste generation have also used 2016 as the base year. The estimate of C&I waste arisings in 2016 is 1,478,100 tonnes. It should be noted that the EEFM was developed before the covid-19 pandemic and therefore does not include any covid-19 specific assumptions or impacts.

It is considered that the effects on C&I waste generation of potential improvements in production efficiency and product packaging, together with changes in the regulatory environment are uncertain. Therefore, in planning flexibly for the Plan period to ensure adequate capacity, it has been assumed that no improvements to efficiency take place.

The following table shows the C&I waste growth forecast to 2038 based on an increase of 1.35% per annum over the Plan period.

Table 25: C&I waste growth in Norfolk forecast to 2038

Year	C&I waste arisings (tonnes)
2019/20	1,539
2020/21	1,560
2021/22	1,581
2022/23	1,602
2023/24	1,624
2024/25	1,645
2025/26	1,668
2026/27	1,690
2027/28	1,713
2028/29	1,736
2029/30	1,760
2030/31	1,783
2031/32	1,807
2032/33	1,838
2033/34	1,857
2034/35	1,882
2035/36	1,907
2036/37	1,933
2037/38	1,959

4.6 Construction, Demolition and Excavation Waste

Data for this waste stream is highly variable in terms of accuracy and robustness. National surveys were carried out in an attempt to quantify the amount of CD&E waste; however, the last of these was carried out in 2005. These surveys acknowledged in their findings that due to errors and omissions they only represented a broad estimate.

The WPAs in the East of England work jointly as a Waste Technical Advisory Body to look at waste issues covering more than one planning area. In 2012 they carried out a survey of waste management facilities operating under exemptions from the Environmental Permitting regulations. One of the findings of this study was that record keeping for operators dealing with CD&E waste often did not record total tonnages of waste. Those operators who used mobile equipment on development sites often only recorded days of operation and for those who did transport waste off site this was often as lorries or skip quantities instead of an exact tonnage. This is because as sites exempt from environmental permitting, there was no requirement for them to make a return of waste movements to the Environment Agency. Therefore, it has not been possible to include the CD&E waste treated at exempt sites, either in terms of the quantity of waste arisings or the treatment capacity at exempt sites.

The three main waste categories in the Environment Agency WDI are inert, HIC and hazardous wastes. Whilst the WDI includes a specific waste category for CD&E waste, this category includes some hazardous waste (such as asbestos and contaminated soils). Therefore, for the purpose of forecasting waste arisings for the Minerals and Waste Local Plan, the quantity of waste falling within the inert waste category in the WDI has been used as a proxy for CD&E waste arisings. Any CD&E waste that is not inert will already be counted under the category of C&I waste arisings in this report. This is because C&I waste arisings have been calculated by subtracting LACW arisings from the HIC arisings, leaving all other waste that is not hazardous or inert as being counted within the C&I category.

National guidance states that Waste Planning Authorities should assume a constant level of CD&E arisings as a starting point for forecasting. It is considered that basing the forecast on the amounts reported as arising in Norfolk in the WDI is an appropriate method for calculating future requirements for inert waste arisings.

Table 26: Inert / C&D waste arising in Norfolk in the Environment Agency WDI

Year	Inert/C&D waste ('000 tonnes)	Comments
2013	736	Total includes over 20,000t of wood, plastic and metal
2014	769	Total includes 13,500t of wood, plastic and metal
2015	901	Total includes over 15,000t of wood, plastic and metal
2016	1,071	Total includes over 20,000t of wood, plastic and metal
2017	1,081	Total includes nearly 23,000t of metal and wood
2018	1,004	Total includes over 20,000t of metal and wood
2019	1,026	Total includes over 40,000t of metal and wood
2020	1,097	Total includes over 70,000t of metal and wood

Based on the quantities of inert waste that have been recorded as arising in Norfolk in the WDI from 2013 to 2020, it is considered appropriate to plan for a constant level of 1,100,000 tonnes of inert waste arisings for each year during the Plan period.

Any CD&E waste that is not inert or hazardous and has instead been counted within the C&I waste category has been forecast to increase by 1.35% per annum throughout the Plan period as discussed in the preceding section on forecasting C&I waste. Hazardous waste is dealt with separately in the following paragraphs.

4.7 Hazardous waste

Hazardous waste makes up a relatively small proportion of the total waste and the hazardous waste stream is composed of many different fractions. Due to the nature of hazardous waste, and the relatively small volumes produced in any one location, treatment and disposal facilities are often highly specialised and need a significant geographical area from which to receive waste in order to be economically viable. Virtually all the companies operating in this sector have to complete returns to the Environment Agency as part of the requirements of their Environmental Permits. This data, whilst useful, is known to suffer from errors or omissions. Due to the way the permitting return operates, by recording the movement of waste, the potential exists for waste to be double-counted as it moves through multiple transfer facilities prior to being either sent to a suitable treatment or disposal location. Therefore, the quantity of waste recorded as managed at waste management facilities is not the same as the quantity of hazardous waste arising.

The greatest quantities of hazardous waste arising in Norfolk recorded in the WDI for 2019 and 2020 were:

- Oil containing drilling muds and wastes
- Wastes from the manufacture, formulation, supply and use of organic plant protection products, wood preserving agents and other biocides
- Fly-ash from co-incineration
- Oil/water separator contents
- End-of life vehicles
- Lead batteries
- Aqueous liquid containing dangerous substances
- Packaging containing residues or contaminated by dangerous substances
- Contaminated absorbents, filter materials, wiping cloths and protective clothing
- Contaminated metal wastes
- Contaminated concrete/bricks/tiles ceramics
- Contaminated soil and stones
- Asbestos containing materials
- Wastes from the mechanical treatment of waste
- Oil from separation
- Sludges from physico/chemical treatment
- Discarded electrical and electronic equipment
- Discarded equipment containing CFCs

4.8 Hazardous Waste forecasting

National guidance states that data returns for hazardous waste should be considered robust, and that Waste Planning Authorities should plan for future needs by using time-series data to extrapolate a growth forecast. However, as seen in Table 27, there were two significant errors in the data in the WDI for Norfolk regarding End-of-Life Vehicle facilities.

It is considered that basing the forecast on the amounts reported as arising in Norfolk in the Waste Data Interrogator is an appropriate method for calculating future requirements for this specialist waste stream. The quantity of hazardous waste recorded as arising in Norfolk, but received any facility located within the UK, has been used to forecast the amount of hazardous waste arising to plan for during the Plan period to 2038.

Table 27 compares the quantity of hazardous waste reported as arising in Norfolk in the Environment Agency's Waste Data Interrogator with the quantities reported in the Hazardous Waste Interrogator. The average quantity of hazardous waste recorded in the HWI for the eight years of data in Table 27 is 71,032t per annum. The average quantity of hazardous waste recorded in the WDI for the eight years of data in Table 27 is 73,703t per annum.

As the quantities in the WDI are higher than the quantities in the HWI for all years except 2017 and 2018, they will be used as the basis for future forecasting. It should be noted that the

WDI only included waste received at incinerators in 2019 and 2020. However, before 2019 the quantity of hazardous waste from Norfolk received at incinerators has been reported separately in the Environment Agency's 'waste returns for incinerators' and this was between 3,166 - 4,495t per annum. When the quantity at incinerators is added to the WDI totals, then the average hazardous waste recorded in the WDI for the eight years in Table 27 is 76,519t per annum. However, the highest total recorded in the previous eight years (including data from incinerators) is 88,486 tonnes in 2019. This is of a similar scale to the 87,495 tonnes recorded in 2013 and 87,139 tonnes recorded in 2014. Therefore, it is considered appropriate to plan for the highest quantity recorded instead of the average quantity recorded. Therefore, the Minerals and Waste Local Plan forecast is that hazardous waste production will remain stable at 90,000 tonnes per annum during the Plan period to 2038.

Table 27: Hazardous waste arising in Norfolk in the Environment Agency WDI and HWI

Year	Hazardous waste in WDI ('000 tonnes)	Hazardous waste in HWI ('000 tonnes)	Comments
2013	83,894	70,486	In addition to the WDI data, 3,602t of hazardous waste from Norfolk is recorded as received at incinerators.
2014	82,644	67,066	In addition to the WDI data, 4,495t of hazardous waste from Norfolk is recorded as received at incinerators.
2015	78,568	65,781	In addition to the WDI data, 3,803t of hazardous waste from Norfolk is recorded as received at incinerators.
2016	76,496	65,212	In addition to the WDI data, 3,550t of hazardous waste from Norfolk is recorded as received at incinerators.
2017	47,412	69,720	In addition to the WDI data, 3,166t of hazardous waste from Norfolk is recorded as received at incinerators.
2018	52,524	71,460	In addition to the WDI data, 3,907t of hazardous waste from Norfolk is recorded as received at incinerators. 12,180t of waste has been subtracted from the original total of 64,704t in the WDI as this is a recognised error in returns for ELV from David Yarham (permit 70496).
2019	88,486	85,271	WDI includes waste to incinerators in 2019.
2020	79,605	73,157	WDI includes waste to incinerators in 2020. 64,000t of waste has been subtracted from the original total of 143,605t in the WDI as this is a recognised error in returns from for ELV DLH Autorecyclers (permit 71536).

4.9 Radioactive waste

No radioactive waste is recorded as having been received or removed from waste management facilities in Norfolk, as the volumes produced by any one site are sufficiently low as to be exempt from reporting. Government published a 'Strategy for the management of solid low level radioactive waste from the non-nuclear industry in the United Kingdom' (2012) this contains guidance on the management of low level and very low level radioactive waste.

Very Low Level radioactive Waste (VLLW) is classified as non-nuclear waste if it is produced from educational and medical institutions. There are 12 organisations or institutions which have been granted a radioactive substances permit in Norfolk [Source: Radioactive substances permits (data.gov.uk)], this allows them to have a radioactive source, the use of such sources may give rise to the creation of VLLW, such as gowns and dressings which have

been exposed to the radioactive source. This waste is normally produced in very small volumes by such establishments and does not require specialist facilities at a Waste Planning Authority level. Low volume VLLW can be managed at non-hazardous landfills and incinerators without special provisions. Low volume VLLW will be included within the general Household, Industrial and Commercial waste volumes and will be dealt with as such (2019-Waste-Report-Final.pdf (nda.gov.uk)).

4.10 Agricultural waste

Agriculture produces significant amounts of waste if manures and slurries are included. Much of the animal waste produced on agricultural holdings is dealt with on such holdings either through traditional muck-spreading or following on-farm anaerobic digestion by spreading of digestate to land, in both cases as an agricultural land improver. As the inputs and outputs of such operations are often entirely contained within the farm unit, the waste does not often appear within the Waste Data Interrogator. Some waste from food production may leave the farm unit but is not managed at a facility classified as a waste management site. On-farm anaerobic digestion plants are likely to either import or grow material to be blended with animal wastes to create a suitable feedstock. Agricultural operations also produce waste plastics, waste oils, chemicals and metals which are dealt with by waste management facilities. It is considered that this situation is likely to continue and does not require special provisions within the Plan. Agricultural waste that is managed off-site and reported within the Waste Data Interrogator will be included within the general Household, Industrial and Commercial waste volumes and will be dealt with as such.

4.11 Total Forecast waste arisings in Norfolk from 2019/20 to 2037/38

The forecast waste arisings for LACW, C&I waste, inert waste and hazardous waste are all included in the table below:

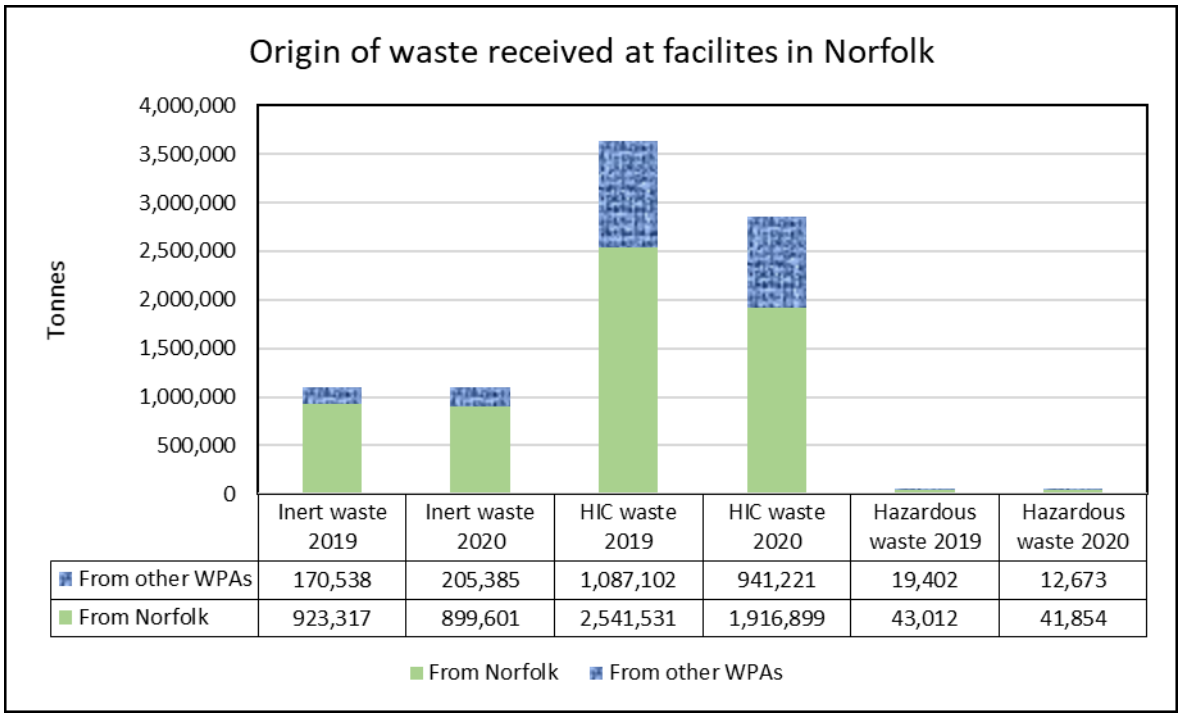
Table 28: Forecast waste arisings in Norfolk from 2019/20 to 2037/38

Year	Local Authority Collected Waste ('000 tonnes)	Commercial and industrial waste ('000 tonnes)	Inert waste ('000 tonnes)	Hazardous waste ('000 tonnes)	Total Forecast waste arisings ('000 tonnes)
2019/20	408	1,539	1,100	90	3,137
2020/21	413	1,560	1,100	90	3,163
2021/22	418	1,581	1,100	90	3,189
2022/23	424	1,602	1,100	90	3,216
2023/24	429	1,624	1,100	90	3,243
2024/25	434	1,645	1,100	90	3,269
2025/26	439	1,668	1,100	90	3,297
2026/27	444	1,690	1,100	90	3,324
2027/28	450	1,713	1,100	90	3,353
2028/29	455	1,736	1,100	90	3,381
2029/30	460	1,760	1,100	90	3,410
2030/31	465	1,783	1,100	90	3,438
2031/32	471	1,807	1,100	90	3,468
2032/33	476	1,838	1,100	90	3,504
2033/34	481	1,857	1,100	90	3,528
2034/35	486	1,882	1,100	90	3,558
2035/36	491	1,907	1,100	90	3,588
2036/37	497	1,933	1,100	90	3,620
2037/38	502	1,959	1,100	90	3,651

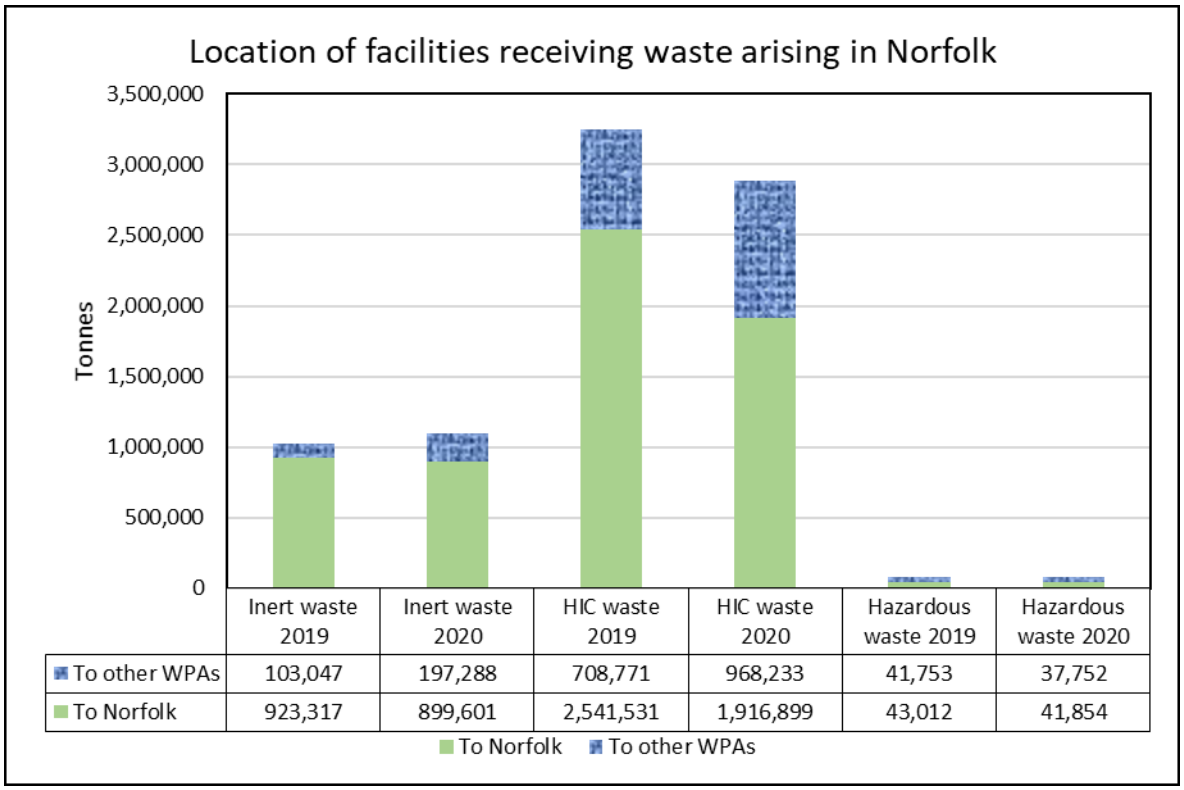
5. Conclusion

5.1 Existing waste movements

The following graphs show two aspects of waste movements. The first graph shows the quantities of waste received at facilities in Norfolk and whether the waste originated within Norfolk or in other WPA areas. The second graph shows how much waste arising in Norfolk was received by facilities located in Norfolk, and how much was received at facilities located in other WPA areas. The majority of Norfolk's waste is managed within Norfolk, whilst there are movements of waste both into and out of Norfolk. The difference in the volumes of HIC waste between 2019 and 2020 is mainly because the location of mobile plant was recorded differently on the WDI between the two years.



	Inert waste 2019	Inert waste 2020	HIC waste 2019	HIC waste 2020	Hazardous waste 2019	Hazardous waste 2020
From other WPAs	170,538	205,385	1,087,102	941,221	19,402	12,673
From Norfolk	923,317	899,601	2,541,531	1,916,899	43,012	41,854



	Inert waste 2019	Inert waste 2020	HIC waste 2019	HIC waste 2020	Hazardous waste 2019	Hazardous waste 2020
To other WPAs	103,047	197,288	708,771	968,233	41,753	37,752
To Norfolk	923,317	899,601	2,541,531	1,916,899	43,012	41,854

5.2 Forecast waste arisings

The growth forecast for Local Authority Collected Waste (LACW) equates to a growth of 1.28% per annum over the Plan Period, from 408,000 tonnes in 2019/20 up to 502,000 tonnes in 2037/38.

Estimates for the growth of Commercial and Industrial (C&I) waste is based on the Gross Value Added (GVA) economic forecasts derived from the East of England Forecasting Model. The selected business sectors used are consistent with those used in the historic Defra surveys of C&I waste. The annualised growth percentage is approximately 1.35% for Norfolk. Therefore C&I waste arisings are forecast to increase from 1.539 million tonnes in 2019/20 to 1.959 million tonnes in 2037/38.

Arisings of inert waste are assumed to remain constant over the Plan period at 1,100,000 tonnes per annum.

Based on time-series data from the WDI and HWI covering the period from 2013 to 2020, Norfolk's hazardous waste arisings are forecast to remain stable at 90,000 tonnes per annum during the Plan period.

LACW, C&I waste, inert waste and hazardous waste quantities are forecast to reach approximately 3.651 million tonnes per annum by the end of the Plan period (see Table 28).

5.3 Existing waste management capacity

The assessment of existing waste management capacity concluded that a capacity of approximately 3.534 million tonnes per annum exists in Norfolk at the current time, based on historical throughputs of waste managed and recorded in the Environment Agency's Waste Data Interrogator. The potential exists that, while this figure is calculated based on the maximum amount that facilities have managed, this may not represent the absolute maximum as some sites may have additional headroom to deal with even more waste if it were available to them.

In addition to the 3.534 million tonnes per annum capacity at existing facilities, Norfolk also has a number of mineral extraction sites using imported inert material and it is considered that these sites will meet the capacity requirements for the inert waste arisings that are unsuitable for recycling, over the Plan period. At the end of 2020 there was 4.863 million m^3 of permitted inert landfill and quarry restoration void space in Norfolk and 1.422 million m^3 of permitted void capacity in two non-hazardous landfill sites. In addition, over 0.3 million tonnes per annum of additional waste management capacity was permitted in 2020 and 2021. Therefore, it is considered that sufficient capacity currently exists to meet the growth forecast.

In addition to waste managed at sites with Environmental Permits which are recorded within the WDI, significant amounts of inert waste are recycled and reused as secondary aggregate as a substitute for primary materials on construction sites which are not recorded on the WDI because the material does not leave the site to go to a waste management facility.

Agricultural waste is often dealt with on a farming unit, although there are some facilities which use agricultural waste as a feedstock. The largest of these facilities is the Thetford Power Station which consumes between 4-500,000 tonnes of chicken litter and forestry waste per annum.

In line with the Waste Framework Directive, national policy is clear that waste for disposal should go to the nearest appropriate facility, and the recovery of mixed municipal waste collected from private households should take place at the nearest appropriate facility. There is greater flexibility over where the recovery and recycling of other types of waste can take place.

The Planning Practice Guidance (paragraph reference ID: 28-007-20141016) sets out how the self-sufficiency and proximity principles apply to individual Waste Planning Authorities. It says that although it should be the aim for each waste planning authority to manage all of its own waste, "there is no expectation that each local planning authority should deal solely with its own waste to meet the requirements of the self-sufficiency and proximity principles. Nor does

the proximity principle require using the absolute closest facility to the exclusion of all other considerations. There are clearly some wastes which are produced in small quantities for which it would be uneconomic to have a facility in each local authority."

Operational thresholds may mean that not every Waste Planning Authority requires the full range of waste management facilities, and the nearest appropriate facility may be outside an administrative boundary. Therefore, there is the potential that the nearest appropriate facilities for the disposal of Norfolk's residual waste and for the recovery of LACW may be located outside Norfolk.

The National Planning Policy for Waste states that sites or areas for new or enhanced waste management facilities should "give priority to the re-use of previously development land, sites identified for employment uses and redundant agricultural and forestry buildings and their curtilages".

Changes in the regulatory and economic environment can have significant effects on the types of waste management operations which operators bring forward; therefore, flexibility in this regard will allow a degree of future proofing for the Plan. A waste operator will often only consider what might be an appropriate location for a waste management facility as part of the negotiations for a waste contract; rather than finding a location and then seeking to gain a contract for managing waste at that site.

The waste management industry operates in the same way as other contract driven industries, and it is part of the normal business cycle that some businesses will cease operation over the Plan period to be replaced by others; or businesses will move to gain competitive advantage and/or harness greater efficiencies. It is considered that the best way of planning for such eventualities is to provide a degree of flexibility, both in potential locations and potential waste management technologies so as to not stifle competition and innovation.

6. Glossary

Agricultural waste: Waste that is specifically generated by agricultural activities. This includes manure and other wastes from farms, poultry houses and slaughter houses; harvest waste and pesticides.

Anaerobic Digestion: Anaerobic digestion is the biological treatment of biodegradable organic waste in the absence of oxygen, utilising microbial activity to break down the waste in a controlled environment. Anaerobic digestion results in the generation of:
● Biogas, which is rich in methane and can be used to generate heat and/or electricity;
● Fibre, (or digestate) which is nutrient rich and can potentially be used as a soil conditioner; and
● Liquor, which can potentially be used as a liquid fertiliser.

Chemical Treatment: A method of treating waste that uses chemicals to treat waste to neutralise or reduce its harmfulness, prior to further treatment, recovery or disposal. These methods are often used to treat Hazardous Wastes (see separate definition) but chemical treatments are also applied in waste water treatment.

Composting: A method of biological treatment that involves breaking down organic waste into a soil-like substance, using various micro-organisms in the presence of oxygen. Can be done in “open windrows” or “in-vessel”. The end-product is compost which has various horticultural and agricultural uses. As there are potential risks to health from “bio-aerosols” and in some cases, animal by-products, composting is normally only allowed on sites that are an appropriate distance away from away from “sensitive receptors” such as housing and community facilities.

Commercial and industrial waste (C&I): Waste from shops, industrial and business premises.

Construction, Demolition and Excavation waste (CD&E): CD&E waste can be in the form of certain types of: Construction wastes (e.g. surplus supplies of materials specifically required for a single project as well as waste originating from site preparation), Demolition wastes (e.g. used material resulting from demolition activities); or Excavation wastes (e.g. usually consisting of soils and stones which cannot be used beneficially, such as from tunnelling operations, the soil component may not be inert).

Energy from Waste (EfW): Utilising the embodied energy of waste materials to generate electricity and heat through direct combustion or indirect combustion of biogas.

Energy recovery: The generation of heat and power from the thermal treatment of waste, the production of fuels from other forms of treatment and the combustion of landfill gas and gas from anaerobic digestion to create electricity.

Gross Value Added (GVA): the value generated by any business or organisation that produces goods or services. The calculation for GVA is: value of goods and services produced, minus the costs of production in terms of raw materials and other direct costs. It does not take into account the effects of taxation or subsidies. This can be measured across a geographical area, industry or sector, and can used as a measure of productivity and growth.

Hazardous waste: Defined in Article 2 (2) of the Waste Framework Directive as “...waste which displays one or more of the hazardous properties listed in Annex III.” In other words, waste whose properties are likely to cause risks to health, the environment or water quality. Annex III of the Directive provides a (non-definitive) list of properties that render waste “hazardous,” and the Environment Agency has produced guidance on the types of waste that are likely to be hazardous.

Household, Industrial and Commercial waste (HIC): Household, industrial and commercial wastes, the deposition, recovery and disposal of which are subject to the permitting system established through the Environmental Protection Act (1990). There are exemptions from the requirement for a permit (e.g. individuals depositing personal garden waste), and these are detailed in the Controlled Waste Regulations (1992).

Household waste Household waste includes all mixed waste that is collected from households; all materials taken to local bring banks or collected at the doorstep or kerbside for recycling and composting; all waste (apart from rubble) that is taken to the County Council operated Recycling Centres; litter and street sweepings.

Household waste recycling centres: Provided by Waste Disposal Authorities as places where the public can deliver their household waste for recycling or disposal. These sites usually incorporate skips, collection areas for waste refrigeration and metal appliances, and recycling banks. Some sites have containers for materials such as waste batteries, paint, oil and wood. These facilities do not generally accept trade waste.

Incinerator: The combustion of waste, either with or without energy recovery. Municipal energy from waste plants tend to be referred to as “incinerators” although they normally recover some energy, and the most recently developed plants (such as the facility at Great Blakenham in Suffolk, which is used by Norfolk County Council) are efficient enough to qualify as a waste “recovery” operation.

Inert waste: Waste that does not undergo any significant physical, biological or chemical changes likely to cause risks to health or to the environment or to affect water quality – the legal definition of “inert waste” can be found in Article 2 of the Landfill Directive. This type of waste can be disposed of at any permitted Landfill site. Certain types of inert waste such as clean waste soils may also be disposed of onto land for the legitimate purpose of restoration, land remediation or landscaping.

Knacker’s Yard: A facility for the disposal of dead animals, or the slaughter of old or injured animals (esp. horses) which are not suitable for human consumption, and whose remains are generally either incinerated or rendered depending on the facility.

Landfill: The term landfill relates to waste disposal mainly below ground level whereas landraise, also generically referred to as landfill, refers to waste disposal mainly above pre-existing ground levels. Modern landfill practice requires a significant degree of engineering in order to contain the waste, control emissions and minimise potential environmental effects. The primary by-products of landfilling, where biodegradable materials are disposed of, are landfill gas and leachate (a liquor resulting from water passing through the waste mass) and much landfill engineering is geared towards dealing with these substances. As such, landfill sites require containment lining systems and abstraction systems for both landfill gas and leachate.

Materials Recycling Facility (MRF): A facility for sorting, separating and packing or baling recyclable materials into individual materials prior to reprocessors who wash and prepare the materials for manufacturing into new recycled products. MRFs can also be referred to as materials recovery or reclamation facilities.

Mechanical Biological Treatment Facility (MBT): A facility containing a hybrid treatment process that uses both mechanical and biological techniques to sort and separate mixed waste. There is often an initial mechanical sorting and separation stage to recover materials suitable for recycling, followed by processing and/ or treatment of the residue, to prepare it for a final treatment stage, when any remaining residual waste is used to recover energy and/ or prepared for disposal. In this combination the final stage involves some form of biological treatment.

Recovery: Includes recycling and composting operations as well as anaerobic digestion, thermal treatment operations which produce energy from waste (including fuel, heat and power) and some backfilling operations.

Recycling: Defined in Article 3 (17) of the Waste Framework Directive as “...any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.”

Refuse Derived Fuel (RDF): consists of the residual waste that complies with the specifications in a written contract between the producer of the RDF and a permitted end-user

for the thermal treatment of the waste in an energy from waste facility or a facility undertaking co-incineration such as cement and lime kilns. The written contract must include the end-user's technical specifications relating as a minimum to the calorific value, the moisture content, the form and quantity of the RDF.

Residual waste: The elements of the waste streams that remain following recovery, recycling or composting operations.

Transfer facility: A facility where waste materials are transferred from small vehicles to large trucks to be bulked up for efficient transport to treatment or disposal sites over a large distance.

Transfer/treatment: A facility where a degree of sorting and segregation of waste materials takes place from mixed loads of waste, such as skips, prior to waste being bulked up for efficient transport to further treatment or disposal sites over a large distance. A site may also carry out the recycling of construction waste such as rubble into secondary aggregate.

Waste arisings: The amount of waste generated in any given locality over a given period of time.

Waste Collection Authority: A local authority with a statutory responsibility to provide a waste collection service to each household in its area, and on request, to local businesses; in Norfolk the relevant district, borough or city council is the WCA.

Waste Disposal Authority: A local authority that is legally responsible for the safe disposal of municipal waste collected by the WCAs and the provision of Household Waste Recycling Centres; in Norfolk the County Council is the WDA.

Waste Planning Authority: An organisation with statutory planning powers relating to waste management development, in most areas the County or Unitary Council

Appendix 1 - Waste management facilities in Norfolk in 2020

*Sites with N/A in the “WDI Facility Category” and “WDI Facility Type” could not be found in the EA public register for waste operations with an environmental permit.

Address	Postcode	Eastings	Northings	Operator	Temporary/ Permanent permission	End date	NCC Site Type	WDI Facility Category	WDI Facility Type
Lodge House, Shelfhanger Road, Heywood, Diss	IP22 4EE	610478	282218	R & C Bettinson	Permanent (CLU)	N/A	Recycling	N/A	N/A
Whitlingham Water Treatment Centre, Kirby Bedon Road, Trowse	NR14 8TZ	627890	307580	Anglian Water Services Ltd	Permanent	N/A	Treatment	Treatment	Physical Treatment
Whitlingham Water Treatment Centre, Kirby Bedon Road, Trowse	NR14 8TZ	627890	307580	Alpheus Environmental Ltd	Permanent	N/A	Transfer/Treat	Treatment	Biological Treatment
The Runway, Woodforde Farm, Weston Longville	NR9 5LG	609200	315170	TMA Bark Supplies	Permanent	N/A	Composting	Treatment	Composting
Estuary Farm Recycling Facility, Edward Benefer Way, King's Lynn	PE30 2HY	562110	322960	Greenworld Sales Ltd	Temporary	08/2030	Composting	Treatment	Composting
Marsham composting facility, Wood Farm, Buxton Road, Marsham	NR10 5QQ	618500	323150	Norse Environmental Waste Services Ltd [not operational]	Permanent	N/A	Composting	Treatment	Composting
Crossways Waste Management Facility, Thurlton	NR14 6NZ	641632	297073	M Gaze & Co Ltd	Permanent	N/A	Composting	Treatment	Composting
Old Hethel Airfield, Stanfield Road, Bracon Ash, Wymondham	NR18 9RL	614440	305190	Greencomp	Permanent	N/A	Composting	Treatment	Composting

Address	Postcode	Eastings	Northings	Operator	Temporary/ Permanent permission	End date	NCC Site Type	WDI Facility Category	WDI Facility Type
Pump Lane, Caister on Sea, Great Yarmouth	NR30 5BE	651803	310919	Norfolk County Council	Permanent	N/A	HWRC	Transfer	Non-Haz Waste Transfer
East Winch Landfill, East Winch Road, Mill Drove, Middleton	PE32 1SW	567703	314482	Middleton Aggregates Ltd	Temporary	01/2033	Inert Landfill	Landfill	Inert Landfill
Former Ketteringham Quarry, Hethersett Road, Ketteringham	NR14 8JA	617210	302510	Middleton Aggregates Ltd	Temporary	05/2029	Inert recycling	Treatment	Physical Treatment
2 Tollbar Cottages, Norwich Road, Westwick, North Walsham	NR10 5BG	627879	327804	Dave's Skips	Permanent (CLU)	N/A	Transfer/Treat	N/A	N/A
Lodge Farm, Stubbs Green Lane, Loddon	NR14 6EA	635696	297779	Agri-Cycle Norfolk	Permanent	N/A	Transfer	N/A	N/A
Crimplesham Quarry, Main Road, Crimplesham	PE33 9EB	566600	303500	Frimstone Ltd	Temporary	12/2022	Quarry restoration	On/In Land	Deposit of waste to land (recovery)
Snettisham Quarry, Norton Hill, Snettisham, King's Lynn	PE31 7LZ	568405	334976	Frimstone Ltd	Temporary	09/2028	Inert recycling	Treatment	Physical Treatment
Crimplesham Quarry, Main Road, Crimplesham	PE33 9EB	566365	303751	Frimstone Ltd	Temporary	12/2022	Inert recycling	Treatment	Physical Treatment
Caistor Recycling Centre, Pump Lane, Caister on Sea, Great Yarmouth	NR30 5TE	651800	310940	Carters of Caister	Permanent	N/A	Inert recycling	N/A	N/A

Address	Postcode	Eastings	Northings	Operator	Temporary/ Permanent permission	End date	NCC Site Type	WDI Facility Category	WDI Facility Type
Caistor Recycling Centre, Pump Lane, Caister on Sea, Great Yarmouth	NR30 5TE	651800	310940	Norse Environmental Waste Services Ltd	Permanent	N/A	HWRC	Transfer	CA Site
Whitlingham Sewage Treatment Works, Kirby Bedon Road, Trowse	NR14 7DU	627759	307528	Anglian Water Plc	Permanent	N/A	Composting	N/A	N/A
Stow Bedon, Lodge Farm, Thetford Road, Breckles, Attleborough	NR17 1ES	594651	295233	R Childerhouse	Permanent	N/A	Inert recycling	Treatment	Inert Waste Transfer / Treatment
Aylsham Industrial Estate, Banningham Road, Aylsham	NR11 6SS	620095	327719	Aylsham Plant Hire Ltd	Permanent	N/A (CLU)	Inert recycling	Treatment	Physical Treatment
Welcome Pit, Butt Lane, Burgh Castle, Great Yarmouth	NR31 9PY	648102	304233	Folkes Plant & Aggregates Ltd	Permanent	N/A	Inert recycling	Mobile Plant	Mobile Plant - Treatment
Road Haulage Depot, Welbeck Road, Bergh Apton	NR15 1AU	630873	299909	T Farrow Construction	Permanent	N/A	Inert recycling	N/A	N/A
Cherry Lane, Browston Green	NR31 9DN	649400	301700	E E Green & Son	Permanent	N/A (CLU)	Inert recycling	Treatment	Physical Treatment
Station Road, Tivetshall St Margaret, Norwich	NR15 2BA	618244	286920	FCC Environment (UK) Ltd [not operational]	Permanent	N/A	Transfer/Treat	Transfer	Waste Transfer
Ducks Hole Farm, Hunworth Road, Holt	NR25 6SR	607243	337047	Breedon Group	Temporary	07/2030	Inert recycling	Treatment	Physical Treatment

Address	Postcode	Eastings	Northings	Operator	Temporary/ Permanent permission	End date	NCC Site Type	WDI Facility Category	WDI Facility Type
Mayton Wood Quarry, Little Hautbois, Coltishall	NR12 7JX	624543	320800	Frimstone Ltd	Temporary	12/2035	Inert recycling	Transfer	Physical Treatment
Innisfree Trading Estate, Lynn Road, Bawsey, King's Lynn	PE32 1EX	567051	320138	P Bacon Recycling Ltd	Permanent	N/A	Scrap metal recycling	Transfer	Non-Haz Waste Transfer
South Quay, Great Yarmouth	NR30 3LD	652531	306688	European Metal Recycling Ltd	Permanent	N/A	Scrap metal recycling	MRS	Metal Recycling
G & A Car Spares, Great Yarmouth	NR30 3LD	652597	306735	G & A Car Spares Limited	District LPA permission	N/A	Scrap metal recycling	MRS	Vehicle depollution facility
Double Banks Farm, Abbey Road, Carleton Rode	NR16 1NH	609158	293513	None [not operational]	Permanent	N/A	Composting (in-vessel)	N/A	N/A
Blackborough End Landfill, East Winch Road	PE32 1SW	567500	315000	FCC Environment (UK) Ltd	Temporary	12/2026	Non-Haz landfill	Landfill	Non Hazardous Landfill
Feltwell Quarry, The Oakery, Lodge Road, Feltwell	IP26 4DR	574236	292106	FCC Environment (UK) Ltd	Temporary	02/2042	Non-Haz landfill	Landfill	Non-hazardous landfill
Site No.3, Shipdham Airfield Industrial Estate, Shipdham	IP25 7SD	599431	306906	FCC Environment (UK) Ltd	Permanent	N/A	Transfer	Transfer	Non-Haz Waste Transfer
1-4 South Denes Road, Great Yarmouth	NR30 3QF	653050	304410	Enviroco Ltd	Permanent	N/A	Transfer	Storage	Temporary Storage installation

Address	Postcode	Eastings	Northings	Operator	Temporary/ Permanent permission	End date	NCC Site Type	WDI Facility Category	WDI Facility Type
Thetford Power Station, Mundford Road, Two Mile Bottom, Thetford	IP24 1LX	585290	286740	Fibrophos Ltd	Permanent	N/A	Transfer	Treatment	Physical Treatment
Thetford Power Station, Mundford Road, Two Mile Bottom, Thetford	IP24 1LX	585290	286740	Fibrophos Ltd	Permanent	N/A	Transfer	Incineration	Animal By-Products Incinerator
Rossfield, Reepham Road, Horsford, Norwich	NR10 3AL	618312	315129	AKS Skip Hire Services Limited	Permanent	N/A	Transfer/Treat	Treatment	Non Haz Waste Transfer / Treatment
Bittering Quarry, Reed Lane, Bittering, East Dereham	NR19 2QS	593300	316800	McLeod Aggregates Ltd	Temporary	12/2031	Inert recycling	Treatment	Physical Treatment
Station Road, Ketteringham	NR9 3AZ	617390	303884	M W White Ltd	Permanent	N/A	Transfer/Treat	Transfer	Non-Haz Waste Transfer
Swanton Road, Norwich	NR2 4LH	621524	309995	FCC Environment (UK) Ltd	Permanent	N/A	HWRC/ Transfer	N/A	N/A
Harfrey's Road, Harfrey's Industrial Estate, Great Yarmouth	NR31 0LS	651857	305610	East Coast Waste Recycling	Permanent	N/A	Transfer/Treat	Transfer	Haz Waste Transfer
Land Off Harfreys Road, Harfreys Industrial Estate, Great Yarmouth,	NR31 0LS	651900	305650	East Coast Waste Limited	Permanent	N/A	Transfer/Treat	Treatment	Non Haz Waste Transfer / Treatment
4 Folgate Road, Lyngate Industrial Estate, North Walsham	NR28 0AJ	628100	331200	Drurys Environmental Services Ltd	Permanent	N/A	Transfer/Treat	Transfer	Non-Haz Waste Transfer

Address	Postcode	Eastings	Northings	Operator	Temporary/ Permanent permission	End date	NCC Site Type	WDI Facility Category	WDI Facility Type
Rackheath Industrial Estate, Unit 5, Wendover Road, Rackheath, Norwich	NR13 6LH	628010	314020	PSH Environmental Ltd	Permanent	N/A	Transfer/Treat	Transfer	Non-Haz Waste Transfer
Low Road farm, Low Road West, North Tuddenham, Dereham	NR20 3AB	604749	313791	North Tuddenham Parish Council	Permanent	N/A	Transfer	N/A	N/A
Frans Green Industrial Estate, Sandy Lane, East Tuddenham, Dereham	NR20 3JG	609451	314037	Pips Skips	Permanent	N/A	Transfer/Treat	Treatment	Haz Waste Transfer / Treatment
Eurocentre, North River Road, Great Yarmouth	NR30 1TE	652120	309170	East Coast Waste Ltd	Permanent	N/A	Transfer/treat	Treatment	Physical Treatment
Eurocentre, North River Road, Great Yarmouth	NR30 1TE	652130	309150	East Coast Waste Ltd	Permanent	N/A	Transfer/Treat	Transfer	Non-Haz Waste Transfer
Yew Tree Farm, Tivetshall Road, Pulham Market	IP21 4XN	618633	286801	AR Kent & Son	Permanent	N/A	Transfer/Treat	Treatment	Non Haz Waste Transfer / Treatment
Glazewing House, Station Road, West Dereham	PE33 9RR	565455	299393	Glazewing Ltd	Permanent	N/A	Transfer/Treat	Transfer	Non-Haz Waste Transfer
3-5 Howlett Way, Thetford	IP24 3RW	585487	281830	Viridor Ltd	Permanent	N/A	Transfer/Treat	Transfer	Non-Haz Waste Transfer
Thetford Transfer Station, Burrell Way, Thetford	IP24 3RW	585487	281830	FCC Environment (UK) Ltd	Permanent	N/A	Transfer/Treat	Transfer	Haz Waste Transfer

Address	Postcode	Eastings	Northings	Operator	Temporary/ Permanent permission	End date	NCC Site Type	WDI Facility Category	WDI Facility Type
Thetford Recycling Centre, 19 & 19a Burrell Way, Thetford	IP24 3RW	585498	281685	FCC Environment (UK) Ltd	Permanent	N/A	Transfer/Treat	Transfer	Non-Haz Waste Transfer
Costessey MRF Transfer Station, Longwater Busines Park, Costessey,	NR5 0TL	615840	311320	FCC Environment (UK) Ltd	Permanent	N/A	Transfer/Treat	Transfer	Haz Waste Transfer
Unit 2, Frans Green Industrial Estate, Sandy Lane, East Tuddenham	NR20 3JG	609316	314020	Norman Wenn Skip Hire	Permanent	N/A	Transfer/Treat	Treatment	Non Haz Waste Transfer / Treatment
King's Lynn Resource Management Centre, Hardwick Narrows Industrial Estate, Hamlin Way, King's Lynn	PE30 4NG	562420	317940	Norse Environmental Waste Services Ltd	Permanent	N/A	Transfer/Treat	Transfer	Non-Haz Waste Transfer
Willow House, Dereham Road, Whissonsett, Dereham	NR20 5TQ	592455	322700	A E Daniels & Son	Permanent	N/A	Transfer/Treat	N/A	N/A
Land off Marriott Way, Melton Constable Industrial Estate, Briston	NR24 2BT	604642	332819	Morrissey Builders Ltd	Permanent	N/A	Inert recycling	N/A	N/A
Larkshall MIll, Thetford Road, East Wretham	IP24 1QY	591900	289100	Viridor Ltd	Permanent	N/A	Transfer/Treat	Transfer	Non-Haz Waste Transfer
Freedom Farm, Cowles Drove, Hockwold, Thetford	IP26 4JQ	571768	287274	Freedom Recycling Ltd	Permanent	N/A	Transfer/Treat	Treatment	Material Recycling Facility

Address	Postcode	Eastings	Northings	Operator	Temporary/ Permanent permission	End date	NCC Site Type	WDI Facility Category	WDI Facility Type
Crossways Waste Management Facility, Thurlton	NR14 6NZ	641510	297000	M Gaze & Co Ltd	Permanent	N/A	Treatment	Treatment	Physical Treatment facility
Shrubbs Farm, Edgefield Road, Melton Constable,	NR24 2AT	611317	332273	ORM North Norfolk	Permanent	N/A	Composting	Treatment	Composting
Beeston Regis Quarry, Briton's Lane, Beeston Regis, Sheringham	NR26 8TP	616855	341480	Carter Concrete Ltd	Temporary	02/2042	Inert recycling	N/A	N/A
Beeston Regis, Remembrance Gardens, Britons Lane, Beeston Regis	NR26 8TP	616659	341482	Abbey Pets	Permanent	N/A	Incinerator	N/A	N/A
Bidwells Farm, Blooms Turn, Trunch, Norfolk	NR28 0PQ	628280	334308	Trunch Parish Council	Permanent	N/A	Composting	N/A	N/A
The Grange, West Rudham, KING'S LYNN	PE31 8SY	582156	325952	Peaceful Pets	Permanent	N/A	Incinerator	Transfer	Clinical Waste Transfer
Norfolk Pet Crematorium, Shortthorn Road, Felthorpe, Norwich	NR10 4DE	618278	318868	Norfolk Pet Crematorium Ltd	Permanent	N/A	Incinerator & Transfer Station	Transfer	Haz Waste Transfer
Blackwater Pit, Helhoughton Road, Hempton	NR21 7DY	590510	328500	Gamble Plant (Norfolk) Ltd	Permanent	N/A	Inert recycling	Treatment	Non Haz Waste Transfer / Treatment

Address	Postcode	Eastings	Northings	Operator	Temporary/ Permanent permission	End date	NCC Site Type	WDI Facility Category	WDI Facility Type
Longwater Industrial Estate, Dereham Road, Costessey, NORWICH	NR5 0JS	615697	311310	Longwater Gravel Ltd	Permanent	N/A	Inert recycling	Treatment	Physical Treatment
East Bilney Quarry, Rawhall Lane, Beetley	NR20 4HH	595008	318751	Middleton Aggregates Ltd	Temporary	12/2029	Inert recycling	Treatment	Physical Treatment
Red Roof Farm, Ludham Road, Potter Heigham	NR29 5NB	640805	318728	Playford, Mr G	Permanent	N/A	Incinerator	N/A	N/A
Pott Row, Grove Lodge, Innisfree Trading Estate, Lynn Road, Bawsey, King's Lynn	PE32 1EX	567051	320138	P Bacon	Permanent	N/A	Animal by-products transfer	Transfer	Non-Haz Waste Transfer
Pump Lane, Caister on Sea, Great Yarmouth	NR30 5TE	651792	310903	Norfolk County Council	Permanent	N/A	Transfer/Treat	Transfer	Non Haz Waste Transfer
Attleborough WEEE Recycling Facility, Maurice Gaymer Road, Gaymers Ind Est, Attleborough	NR17 2QZ	604754	294555	Biffa Waste Services Ltd	Permanent	N/A	Transfer/Treat	Treatment	Physical-Chemical Treatment
Harfrey's Road, Harfrey's Industrial Estate, Great Yarmouth	NR31 0LN	651890	305823	E E Green & Son	Permanent	N/A	Inert recycling	Transfer/ Treatment	Inert waste Transfer/ Treatment
Bessemer Way, Harfrey's Road Industrial Estate, Great Yarmouth	NR31 0LX	651840	306180	Augean North Sea Services	Permanent	N/A	Transfer	Treatment	Chemical Treatment
Hall Drive, Longwater Lane, Costessey	NR5 0TH	616923	310554	Frank Carrara (Jays Total Waste Management Ltd)	Permanent (CLU)	N/A	Transfer/Treat	Transfer	Non Haz Waste Transfer

Address	Postcode	Eastings	Northings	Operator	Temporary/ Permanent permission	End date	NCC Site Type	WDI Facility Category	WDI Facility Type
Longwater Estate, Dereham Road, Costessey, Norwich	NR5 0TL	615840	311320	Veolia ES (UK) Ltd	Permanent	N/A	Transfer	MRS	Metal recycling
Longwater Estate, Costessey, Norwich	NR5 0TL	615902	310802	NEWS Ltd	Permanent	N/A	Transfer/Treat	Transfer/ Treatment	Materials Recycling Facility
Compound 1, Swanton Road, Norwich	NR2 4LH	621524	309995	Norse Environmental Waste Services Ltd	Permanent	N/A	Transfer/Treat	Transfer	Non-Haz Waste Transfer
Atlas Works, Norwich Road, Lenwade	NR9 5AW	612055	317417	European Metal Recycling Ltd	Permanent	N/A	Scrap metal recycling	MRS	Metal Recycling
Vanguard Road, Gapton Hall Ind. Est., Bradwell, Great Yarmouth	NR31 0NT	651080	305911	G & A Car Spares Limited	Permanent	N/A	Scrap metal recycling	MRS	Metal Recycling
Walnut Tree Farm, Silver Street, Besthorpe	NR17 2LF	607231	296338	Baldwin Skip Hire Ltd	Permanent	N/A	Transfer/Treat	Transfer	Non-Haz Waste Transfer
WT Waste, Harfreys Road, Harfreys Industrial estate, Great Yarmouth	NR31 0LS	651900	305700	W T Waste	Permanent	N/A	Transfer/Treat	Transfer	Non-Haz Waste Transfer
Cats Premises, Ashwellthorpe Industrial Estate, Ashwellthorpe	NR16 1ER	615911	297820	AC Environmental Services Ltd	Permanent	N/A	Transfer/Treat	Transfer	Haz Waste Transfer
Cecil House, Mullicourt Road, Outwell	PE14 8PX	553259	303695	Doubleday, Mr D B	Permanent	N/A	Transfer/Treat	Transfer	Non Haz Waste Transfer
Wissington Sugar Factory, College Road, Stoke Ferry, King's Lynn	PE33 9QG	566383	297355	British Sugar PLC	Temporary	04/2025	Soil recycling	N/A	N/A

Address	Postcode	Eastings	Northings	Operator	Temporary/ Permanent permission	End date	NCC Site Type	WDI Facility Category	WDI Facility Type
17 Cornish Way, North Walsham, Norfolk	NR28 0AW	627779	331316	DLH Auto Recyclers	Permanent	N/A	Scrap metal recycling	MRS	Metal Recycling
JP Skips, 6 Gibbet Farm, Hale Road, Bradenham	IP25 7QX	590777	308338	J P Skip Hire	Permanent	N/A	Transfer/Treat	Treatment	Non Haz Waste Transfer / Treatment
Norwich Airport, Liberator Road, Norwich Airport, Norwich	NR6 6ER	622555	313539	KLM UK engineering	Permanent	N/A	Scrap metal recycling	MRS	Car Breaker
Spixworth Quarry, Grange Farm, Buxton Road, Spixworth, Norwich	NR10 3PR	623282	314757	Tarmac Trading Ltd	Temporary	10/2024	Quarry restoration	Landfill	Inert landfill
Aldeby Landfill, Oaklands Gravel Pit, Common Road, Aldeby	NR34 0BL	646300	292400	FCC Environment (UK) Ltd	Temporary	07/2021	Landfill	Landfill	Non-Hazardous landfill
A Kidd and Son, 37a Hempstead Road, Holt	NR25 6DL	608420	338465	Gordon And Alfred Kidd	District LPA permission	N/A	Scrap metal recycling	MRS	Car Breaker
Auto Salvage/amos Ltd, Land/premises At Lynn Road, Wereham	PE33 9BD	567744	301996	Gold Star Metal Traders Ltd	District LPA permission	N/A	Scrap metal recycling	MRS	Car Breaker
DLH Auto recyclers, Grub St, Happisburgh Common, Norwich	NR12 0RH	637450	329230	David Lawrence Horsnell	District LPA permission	N/A	Scrap metal recycling	MRS	Car Breaker

Address	Postcode	Eastings	Northings	Operator	Temporary/ Permanent permission	End date	NCC Site Type	WDI Facility Category	WDI Facility Type
MC Motor Spares,175 Northumberland Street, Norwich	NR2 3TE	621589	309600	Mr Noel Miles & Mr Paul Miles	District LPA permission	N/A	Scrap metal recycling	MRS	Car Breaker
Oak Street Car Spares, Rear Of 125 Oak Street, Norwich	NR3 3BP	622566	309429	J G Bailey And S J Bailey	District LPA permission	N/A	Scrap metal recycling	MRS	Car Breaker
Silverdale, Bawsey, King's Lynn	PE32 1EY	567173	320076	Peter Bacon	Permanent	N/A	Scrap metal recycling	MRS	Car Breaker/Metal Recycling
Phillip Warmer Car Spares, Alder House, Stone Road, Mattishall, Dereham,	NR20 3PG	602524	312023	Phillip Warmer	District LPA permission	N/A	Scrap metal recycling	MRS	Car Breaker
SB Recyclers, Wellys Yard, North Walsham Road, Swanton Abbott,	NR10 5DS	626642	325353	Stephen Bush	District LPA permission	N/A	Scrap metal recycling	MRS	Car Breaker
West Carr Road, Attleborough	NR17 1AN	603234	294935	Anglian Demolition And Asbestos Limited	Permanent	N/A	Scrap metal recycling	MRS	Metal Recycling
Station Lane, Hethersett, Norwich	NR9 3AX	616930	304436	D A Culling Scrap Metals Ltd	District LPA permission	N/A	Scrap metal recycling	MRS	Metal Recycling
Bentinck Dock, King's Lynn	PE30 2HA	561930	321199	D Miller	District LPA permission	N/A	Scrap metal recycling	MRS	Metal Recycling
Kings Lynn Export Terminal, Bentinck Dock, Cross Bank Rd, King's Lynn,	PE30 2EU	561901	321288	Gold Star Metal Traders Ltd	District LPA permission	N/A	Scrap metal recycling	MRS	Metal Recycling

Address	Postcode	Eastings	Northings	Operator	Temporary/ Permanent permission	End date	NCC Site Type	WDI Facility Category	WDI Facility Type
Halfmoon Way, Waterworks Road, Norwich	NR2 4EB	621544	309649	European Metal Recycling Limited	District LPA permission	N/A	Scrap metal recycling	MRS	Metal Recycling
Lenwade Recycling Facility, Atlas Works, Norwich Road, Lenwade,	NR9 5SN	611916	317743	European Metal Recycling Limited	Permanent	N/A	Scrap metal recycling	MRS	Metal Recycling
Longham Hall, Longham, Dereham,	NR19 2RJ	593122	316354	Raymond McLeod (Farms) Ltd	unknown	unknown	Scrap metal recycling	MRS	Metal Recycling
Mellor Metals, Attleborough Road, Great Ellingham	NR17 1LG	602500	297100	Mellor Metals Ltd	District LPA permission	N/A	Scrap metal recycling	MRS	Metal Recycling
Travellers Rest, South Creake, Fakenham	NR21 9JB	587870	334254	C & S Seaman	District LPA permission	N/A	Scrap metal recycling	MRS	Metal Recycling
Marshgate, Spa Common, North Walsham	NR28 9LG	629716	330669	CF Cushion	District LPA permission	N/A	Scrap metal recycling	MRS	Metal Recycling
David Yarham (salvage), Crofton Works, Harveys Lane, Seething Airfield, Norwich	NR15 1EN	630714	295938	David Yarham	District LPA permission	N/A	Scrap metal recycling	MRS	Vehicle depollution facility
Howe Pitts Breakers, Norwich Road, Brooke, Norwich	NR15 1HJ	628088	300620	Mr G Hindle, Mr D Mason & Mr D Wright	District LPA permission	N/A	Scrap metal recycling	MRS	Vehicle depollution facility
Unit 6, Enterprise House, Lynn Road, Swaffham	PE37 7PT	581246	309279	Mr A P Brown And Mr M Smith	District LPA permission	N/A	Scrap metal recycling	MRS	Vehicle depollution facility

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Thomson's Scrap Metals, Sandy Lane, East Tuddenham, Dereham	NR20 3JH	608811	312689	Ian Thomas	District LPA permission	N/A	Scrap metal recycling	MRS	Vehicle depollution facility
Unit 16 B, Roudham Park Industrial Estate, Harling Road, Roudham	NR16 2QN	597570	287869	Mr S Cox And Mr J Cox	District LPA permission	N/A	Scrap metal recycling	MRS	Vehicle depollution facility
Unit B, West Carr Industrial E, Attleborough, NR17 1AN	NR17 1AN	602778	294958	C and C Car Parts Norfolk Limited	District LPA permission	N/A	Scrap metal recycling	MRS	Vehicle depollution facility
Units To Rear Of Sunset Lodge, Lynn Road, St Germans, Kings Lynn	PE34 3AT	559850	314788	Daniel Day	District LPA permission	N/A	Scrap metal recycling	MRS	Vehicle depollution facility
Carbrooke Quarry, Summer Lane, Carbrooke, Thetford	IP25 6TJ	594900	301200	Frimstone Limited	Temporary	02/2025	Inert recycling	Treatment	Physical Treatment
Carbrooke Quarry, Summer Lane, Carbrooke, Thetford	IP25 6TJ	595156	301260	Frimstone Limited	Temporary	08/2027	Quarry restoration	On/In Land	Deposit of waste to land (recovery)
Faulkner House Farm, West Drove North, Walton Highway, Wisbech	PE14 7DP	549843	313778	Peter Bunning	unknown	Unknown	unknown	On/In Land	Deposit of waste to land (recovery)

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Bittering Quarry, Bittering, Dereham	NR19 2QS	593300	316800	Raymond McLeod (Farms) Ltd	Temporary	12/2032	Quarry restoration	On/In Land	Deposit of waste to land (recovery)
Morningthorpe Quarry, Morningthorpe, Long Stratton, Norwich	NR15 2LJ	621690	294419	Paul Richardson Recycling Limited	Temporary	18/03/2023	Quarry restoration	On/In Land	Deposit of waste to land (recovery)
Snettisham Quarry, Norton Hill, Kings Lynn	PE31 7LZ	568405	334976	Frimstone Limited	Temporary	04/09/2028	Quarry restoration	On/In Land	Deposit of waste to land (recovery)
Saddlebow Paper Mill, Poplar Avenue, Kings Lynn	PE34 3AL	561200	317800	Palm Paper Limited	Permanent District LPA permission	N/A	Processing	Processing	Paper and Pulp Reprocessing
Ashill Recycling Centre, Swaffham Road, Ashill	IP25 7BT	587324	304206	Norse Environmental Waste Services Ltd	Permanent	N/A	HWRC	Transfer	CA Site
Bergh Apton Recycling Centre, Welbeck Road, Bergh Apton	NR15 1AU	630873	299909	Norse Environmental Waste Services Ltd	Permanent	N/A	HWRC	Transfer	CA Site
Dereham Recycling Centre, Trafalgar Business Park, Rash's Green, Dereham	NR19 1JG	599570	312100	Norse Environmental Waste Services Ltd	Permanent	N/A	HWRC	Transfer	CA Site
Docking Recycling Centre, Fakenham Road, Docking	PE31 8PX	578578	335888	Norse Environmental Waste Services Ltd	Permanent	N/A	HWRC	Transfer	CA Site

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Heacham Recycling Centre, Chalk Road, Heacham, King's Lynn	PE31 7JE	568730	336813	Norse Environmental Waste Services Ltd	Permanent	N/A	HWRC	Transfer	CA Site
Hempton Recycling Centre, Helhaughton Road, Hempton, Fakenham	NR21 7DY	590473	328428	Norse Environmental Waste Services Limited	Permanent	N/A	HWRC	Transfer	CA Site
Ketteringham Recycling Centre, Station Yard, Station Lane, Ketteringham	NR9 3AZ	617130	303944	Norse Environmental Waste Services Ltd	Permanent	N/A	HWRC	Transfer	CA Site
King's Lynn Recycling Centre, Willows Business Park, Saddlebow, King's Lynn	PE34 3RD	560990	317100	Norse Environmental Waste Services Ltd	Permanent	N/A	HWRC	Transfer	CA Site
Mayton Wood HWRC, Aylsham Road, Little Hautbois, Coltishall	NR12 7JX	624543	320800	Norse Environmental Waste Services Limited	Permanent	N/A	HWRC	Transfer	CA Site
Morningthorpe Recycling Centre, Mill Lane, Morningthorpe	NR15 2ST	622051	294253	Norse Environmental Waste Services Ltd	Permanent	N/A	HWRC	Transfer	CA Site
Sheringham Recycling Centre, A148 Nr Pretty Corner, Beeston Regis, Sheringham	NR26 8TW	615643	341072	Norse Environmental Waste Services Ltd	Permanent	N/A	HWRC	Transfer	CA Site

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Snetterton Recycling Centre, Harling Road, Snetterton	NR16 2JU	601232	289905	Norse Environmental Waste Services Ltd	Permanent	N/A	HWRC	Transfer	CA Site
Strumpshaw Recycling Centre, Stone Road, Strumpshaw	NR13 4HR	635046	307005	Norse Environmental Waste Services Ltd	Permanent	N/A	HWRC	Transfer	CA Site
Thetford Recycling Centre, 15-17 Telford Way, Thetford	IP24 1HU	586463	284091	Norse Environmental Waste Services Ltd	Permanent	N/A	HWRC	Transfer	CA Site
Wells Recycling Centre, Warham Road, Wells-Next-The Sea	NR23 1NE	592690	342700	Norse Environmental Waste Services Ltd	Permanent	N/A	HWRC	Transfer	CA Site
Wereham Recycling Centre, Crimplesham Road, Off A134, Crimplesham,	PE33 9EB	566471	303558	Norse Environmental Waste Services Limited	Permanent	N/A	HWRC	Transfer	CA Site
Worstead Recycling Centre, Old Yarmouth Road, Worstead, North Walsham	NR28 9LX	629515	328012	Norse Environmental Waste Services Limited	Permanent	N/A	HWRC	Transfer	CA Site
Wymondham Recycling Centre, Strayground Lane, Wymondham	NR18 9NA	610788	300639	Norse Environmental Waste Services Limited	Permanent	N/A	HWRC	Transfer	CA Site
Thetford Service Centre, 1 Howlet Way, Thetford	IP24 1HZ	586661	284848	Rentokil Initial UK Limited	unknown	N/A	Transfer	Transfer	Clinical Waste Transfer

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Unit Vi, Vinces Road Industrial Estate, Vinces Road, Diss,	IP22 4HQ	612754	279975	Personnel Hygiene Services Ltd	Permanent	N/A	Transfer	Transfer	Clinical Waste Transfer
Great Yarmouth Oil Reclamation Facility, Yarmouth Business Park, Thamesfield Way, Great Yarmouth	NR31 0DN	652050	306300	C & L Waste Oil Collection Limited	Permanent	N/A	Transfer	Transfer	Haz Waste Transfer
Boundary Pit, Sandy Hills Lane, North Walsham,	NR28 9NA	629137	328218	Carl Bird Limited	Permanent	N/A	Transfer/treat	Transfer	Non-Haz Waste Transfer
Camp Farm Litter Store, Bridgham Road, Camp Farm, Bridgham	NR16 2RX	597274	286992	E P R Thetford Limited	Permanent	N/A	Transfer	Transfer	Non-Haz Waste Transfer
G Haller Skip Hire, Rosh Pinna, Lynn Road, Sculthorpe, Fakenham	NR21 9NE	590416	330519	Mrs C Haller, Mr C Haller, Mr S Haller & Mrs S Woods	Permanent	N/A	Transfer	Transfer	Non-Haz Waste Transfer
Great Yarmouth Decommissioning Facility, South Beach Parade, Great Yarmouth,	NR30 3QD	653310	304340	KDC Contractors Ltd	unknown	N/A	Scrap metal recycling	MRS	Vehicle depollution facility
M & M Services, Marsh Road, Walpole St Andrew, Wisbech	PE14 7JN	548829	317470	Michael Patrick and Maureen Patrick	Permanent	N/A	Transfer	Transfer	Non-Haz Waste Transfer
Seething Lagoons, Upgate Road, Seething, Norwich	NR15 1EL	632038	296234	Whites Recycling Ltd.	Decision pending	N/A	Lagoon	Transfer	Non-Haz Waste Transfer

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Lagoons 1 - 4, Threxton, Thetford,	IP25 6LT	588968	299450	Bowes Farms Ltd	Unknown	N/A	lagoon	On/In Land	Lagoon
Lagoon 5, Saham Thoney, Thetford,	IP25 7AB	589541	301213	Bowes Farms Ltd	unknown	N/A	lagoon	On/In Land	Lagoon
Unit 6, Dunkirk Industrial Estate, Aylsham	NR11 6SU	620228	327757	Norse Environmental Waste Services Ltd	Permanent	N/A	Transfer/treat	Transfer	Non-Haz Waste Transfer
Corbiere Renewables Ltd Raynham A D Plant, Hempton,	NR21 7DY	590372	328955	Corbiere Renewables Limited	District LPA permission	N/A	Anaerobic digestion	Treatment	Anaerobic Digestion
Coston Hall Farm, Barnham Broom, Norwich	NR9 4DT	606552	306283	Avocet Renewables Limited	District LPA permission	N/A	Anaerobic digestion	Treatment	Anaerobic Digestion
Grange Farm Anaerobic Digester, Grange Farm, Chalk Lane, Snetterton	NR16 2LA	600038	291803	Grange Farm Renewable Energy Limited	District LPA permission	N/A	Anaerobic digestion	Treatment	Anaerobic Digestion
Greenshoots Energy A D Plant, Garboldisham Road, Kenninghall	NR16 2DU	603175	284982	Greenshoots Energy Limited	District LPA permission	N/A	Anaerobic digestion	Treatment	Anaerobic Digestion
Methwold Farm, Brandon Road, Methwold, Thetford	IP26 4RJ	573220	292940	Warren Energy Limted	Permanent	N/A	Anaerobic digestion	Treatment	Biological Treatment

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Transfer Station, Harfrey's Road, Townlands, Great Yarmouth	NR31 8JL	651843	305513	E E Green & Son Ltd	Permanent	N/A	Transfer/ treat	Treatment	Inert Waste Transfer / Treatment
Costessey Resource Recovery Park, Dereham Road, Longwater Ind. Estate, Norwich	NR5 0TL	615902	310802	Norse Environmental Waste Services Ltd	Permanent	N/A	Transfer/Treat	Treatment	Material Recycling Facility
Salhouse Road, Rackheath, Norwich	NR13 6LD	627898	311985	Gamble Plant (Norfolk) Limited	District CLU (storage only) under investigation	N/A	storage	Treatment	Material Recycling Facility
Hillsend Farm, Wroo Road, Attleborough	NR17 1AR	602553	293888	J Evans	Permanent	N/A	Transfer/Treat	Treatment	Non Haz Waste Transfer / Treatment
Ash Tree Farm, Acle New Road, Great Yarmouth	NR30 1TD	650448	309244	Pattisons (Anglia) Ltd	unknown	unknown	Inert recycling	Treatment	Physical Treatment
Baileys of Norfolk Ltd, 50 Brick Kiln Road, Hevingham, Norwich	NR10 5NL	618890	320744	Bailey's Of Norfolk Limited	District LPA permission	N/A	Soil recycling	Treatment	Physical Treatment
Costessey Quarry, Breedon Southern Limited	NR5 0TL	614996	311093	Breedon Southern Limited	Temporary	06/2022	Inert recycling	Treatment	Physical Treatment
Coxford Abbey Quarry, Docking Road, Syderstone, King's Lynn	PE31 8TP	583020	330881	Longwater (Gravel) Company Ltd	Temporary	05/2027	Inert recycling	Treatment	Physical Treatment

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East Beckham Quarry Recycling Facility, Holt Road, Sheringham	NR26 8TN	615462	308660	Gresham Gravel Limited	Temporary	12/2031	Inert recycling	Treatment	Physical Treatment
East Winch Quarry, Land Off East Winch Road, East Winch, Kings Lynn	PE32 1LZ	568575	318055	Middleton Aggregates Ltd	Temporary	12/2025	Inert recycling	Treatment	Physical Treatment
Hall Lane Recycling Facility, Hall Lane, Greens Rd Ind Est, Dereham	NR20 3GG	599901	312603	Norfolk Recycling Limited	Permanent	N/A	Transfer/ treat	Treatment	Physical Treatment
Heron Farm Recycling Facility, Heron Farm, Besthorpe, Attleborough	NR17 2LN	608305	295143	Newall Plant Ltd	District LPA permission [storage only]	N/A	storage	Treatment	Physical Treatment
Kirby Cane Quarry, 3 Leet Hill Cottages, Yarmouth Rd, Bungay	NR35 2HJ	638051	293024	L P Pallet Quarry Limited	Temporary (refused, under appeal)	N/A	Inert recycling	Treatment	Physical Treatment
Mill Drove, Blackborough End, King,s Lynn	PE32 1SW	567703	314482	William George Sand & Gravel Limited	Temporary	12/2024	Inert recycling	Treatment	Physical Treatment
Ludham Recycling Centre, Land Off A149, Fritton, Ludham,	NR29 5PT	640038	319870	Norfolk Recycling Limited	District LPA permission [storage only]	N/A	storage	Treatment	Physical Treatment
Land South of B1110, North Tuddenham, Dereham	NR20 3DE	604883	313752	Martyn J Green Limited	Permanent	N/A	Transfer/ treat	Treatment	Physical Treatment
Rossfield, Reepham Road, Horsford, Norwich,	NR10 3AL	618278	315101	Green Planet Environmental Recycling Ltd	Permanent	N/A	Transfer/ treat	Treatment	Physical Treatment

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Roudham Recycling Facility, Roudham Road, East Harling, Attleborough	NR16 2QN	597738	287558	Rory J Holbrook Limited	District LPA permission	N/A	storage	Treatment	Physical Treatment
Six Acres Recycling Facility, Stone Road, Hockering, Norwich	NR20 3PZ	608103	315120	Norfolk Recycling Limited	Permanent	N/A	Inert recycling	Treatment	Physical Treatment
Thetford Water Recycling Centre (Sludge Treatment Centre), A11 Bypass Westbound, Thetford,	IP24 1DS	585469	283612	Anglian Water Services Limited	Permanent	N/A	Sewage sludge treatment	Treatment	Physical Treatment
Freedom Farm, Cowles Drove, Hockwold, Thetford	IP26 4JQ	571768	287274	Living Fuels Limited	Permanent	N/A	treatment	Treatment	Physical-Chemical Treatment
King's Lynn Sludge Treatment Centre, Clockcase Lane, Clenchwarton, King's Lynn,	PE34 4BZ	560315	322024	Anglian Water Services Ltd	Permanent	N/A	Sewage sludge treatment	Treatment	Physical-Chemical Treatment
Thetford WEEE Treatment Facility, 52-54 Brunel Way, Thetford,	IP24 1HF	586135	284158	Wiser Recycling Limited	District LPA permission	N/A	Transfer/ treat	Treatment	WEEE treatment facility