

# **Norfolk Minerals and Waste Development Framework**

Tenth Annual Monitoring Report  
Waste Data 2013-14

May 2015



**Norfolk** County Council

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# 1. Introduction

Section 35 of the Planning and Compulsory Purchase Act 2004 (amended by the Localism Act 2011) requires every local planning authority to produce a monitoring report. The MR should contain information on the implementation of the Minerals and Waste Development Scheme (MWDS), the extent to which the policies set out in Local Development Documents are being achieved. The Monitoring Report for 2013-14 has been published in three parts, as follows:

1. Waste Data (this part of the Monitoring Report)
2. Minerals data is reported in the Local Aggregate and Silica Sand Assessment
3.
  - Review of the Norfolk Minerals and Waste Development Scheme
  - Policy performance and implementation
  - Monitoring and enforcement

Sections 13-16 of the Planning and Compulsory Purchase Act 2004 (amended by the Localism Act 2011) establishes a duty for waste planning authorities to keep planning issues under review. This Waste Data Monitoring Report presents information on the annual production and management of wastes at facilities in Norfolk. This information is then used to assess the delivery of the relevant local plan policies, particularly the waste management targets, waste management capacity requirements, and the estimated waste arising these policies are based on.

## 2.0 Core Output Indicators: Waste

### 2.1 Waste Categories

The List of Wastes Regulations 2005 defines the way waste types are categorised. These terms are outlined in the table below and have been used throughout this document. However when reporting on new capacities as a result of approved planning permissions, the terminology used in the application is retained and therefore varies between the previous and current categories.

New Waste Categories	New Definitions
Inert	Non-hazardous waste as defined by The List of Wastes Regulations 2005 (excluding construction and demolition waste) which will not decompose. Includes: subsoil, concrete, hard-core, brickwork, stone, glass, concrete, tiles, ceramics.
Construction and Demolition	Non-hazardous construction and demolition waste as defined by the List of Wastes Regulations 2005. Including: bricks, concrete, wood, metal, soil, glass, tiles, ceramics, plastic.
Non-Hazardous	All non-hazardous waste as defined by The List of Wastes Regulations 2005 not included in other sections. Therefore this category excludes inert and construction/ demolition waste. This category includes, for example: municipal (household), commercial and industrial wastes, and scrap metal.
Hazardous	All hazardous waste (except hazardous clinical waste) as defined by The List of Wastes Regulations 2005. For example: asbestos, acids, oils, petroleum products, paint, mercury, solvents, undepolluted end-of-life vehicles.
Clinical	Hazardous and non-hazardous human and animal healthcare wastes as defined by the List of Wastes Regulations 2005.

Annual surveys of waste inputs have been carried out since 1995. The last survey was carried out for the period April 2013 to March 2014. Since 1994, data has been obtained on the quantity of waste recovered, quantity of waste disposed of (within and outside the County) and the remaining airspace capacity of landfill sites. This monitoring report also lists the quantity of waste imported into the County, the quantity of energy recovered from landfill sites and new capacity permitted in 2013/14.

Waste operators with an environmental permit from the Environment Agency are required by law to submit, to the Environment Agency, information relating to the throughput of waste at their site; this information has been requested from the Environment Agency to fill in the gaps left by operators not responding to Norfolk County Council's own survey. This information is not in the precise format that would be ideal for our purposes and so some assumptions based on past survey returns have been necessary; the overall volume of waste is correct but the precise origins or destinations of the waste have had to be estimated in some cases where they have been reported as 'not codeable' or 'east of England'. For sites where no up to date data is available estimates of volumes based on previous responses, and local site knowledge, have been made.

## 2.2 Landfill

### Non-hazardous landfill sites

Non-hazardous waste comprises waste which decomposes and can include materials as diverse as household waste, paper, vegetable matter and food processing waste. Non-hazardous landfill sites also take a quantity of inert waste for restoration and engineering purposes. In the reporting year 102,171 tonnes of inert waste was taken by 4 non-hazardous landfill sites listed below.

Aldeby	FCC Environment (UK) Ltd
Attlebridge	Biffa Waste Services Ltd
Blackborough End	FCC Environment (UK) Ltd
Edgefield	Norfolk Environmental Waste Services Ltd

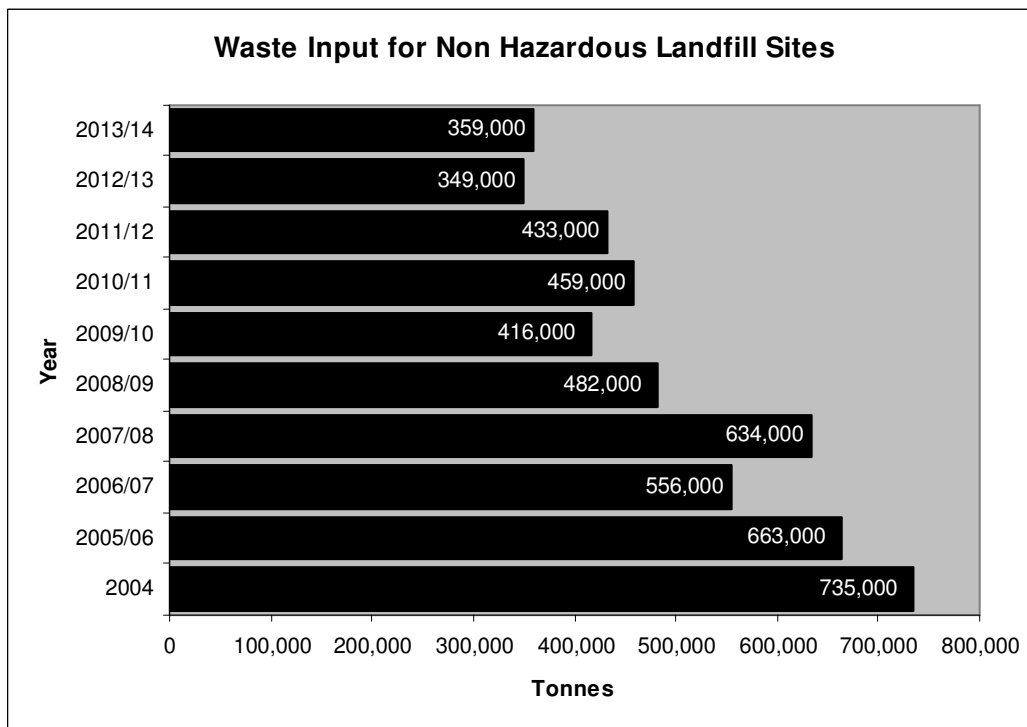
The landfill site at Attlebridge only received inert waste for restoration purposes in 2013/14. The permitted landfill site at Feltwell, operated by FCC Environment (UK) Ltd is currently inactive. Therefore only three landfill sites in Norfolk received non-hazardous waste in 2013/14. Edgefield landfill site ceased taking waste for disposal at the end of the 2013/14 financial year and is now undergoing final restoration.

Waste input in 2013/14 into non-hazardous landfill sites was 359,000 tonnes. This is a 3% increase on the quantity landfilled in 2012/13, and 149,000 tonnes below the 10 year average of 508,000 tonnes. The average input over the last three years has been 380,000 tonnes.

At 31/03/14 the volume of permitted void capacity (remaining landfill space) was estimated to be 5.62 million cubic metres. Whilst a larger void capacity has planning permission, it is unlikely to be operational capacity due to the need to engineer sites to meet the requirements of the Landfill Directive and subsequent re-permitting requirements by the Environment Agency leading to revised site contours. Therefore the void capacities at the sites affected by re-permitting requirements have been recalculated by the operators. These re-permitting requirements have led to a reassessment in remaining void capacity by one operator this year, which has the effect of significantly reducing the non-hazardous landfill void capacity from 7.68 million cubic metres on 31/03/2013 down to 5.62 million cubic metres on 31/03/2014. This is a reduction of over 25% of Norfolk's landfill void capacity in one year.

- Planning Application C/2/2009/2011 contains the most recent publicly available information on the remaining landfill space in Blackborough End landfill site. This planning application, dated May 2009, states (in a report provided by GP Planning Ltd, on behalf of the operator) that "remaining void for the site is currently calculated at 6.5 million cubic metres."
- Planning application C/7/2012/7008 contains the most recent publicly available information on the remaining landfill space at Aldeby. It states that the total available void as of 26/03/2012 was 622,120 cubic metres.

- There are no recent planning applications providing capacity information for Feltwell.
- Some information about remaining capacity for individual sites is gathered as part of the County Council’s annual survey. Some landfill sites choose not to provide this information. The information contained in any survey responses provided to the County Council is considered to be confidential and commercial information. If capacity information is not provided, then the remaining capacity is calculated, using the quantity of waste received at the site.



To calculate how long the remaining non-hazardous landfill voidspace will last, conversion factors have been applied for the density of inert waste (1 tonne occupies 0.67 cubic metres) and non-hazardous waste (1 tonne occupies 1 cubic metre).

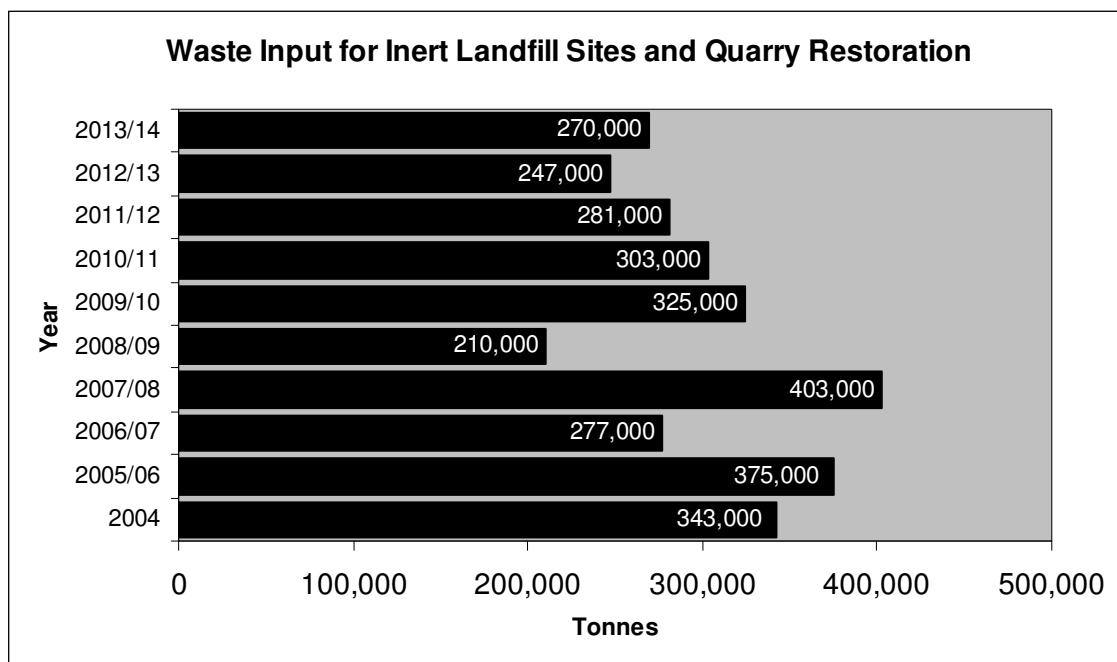
The length of time that the remaining non-hazardous landfill voidspace will last has been calculated using the forecast waste arisings for Municipal, Commercial and Industrial and imported London waste in the Norfolk “Core Strategy and Minerals and Waste Development Management Policies DPD”. Table A.2 of the Core Strategy forecasts the annual quantity of non-hazardous waste disposal to landfill until 2026/27. This table has been updated in Appendix A of this AMR, taking into account the non-hazardous landfill void capacity as at 31/03/2014. **With the current void capacity and the forecast non-hazardous waste disposal quantities to landfill, the existing landfill capacity is calculated to last until 2028/29.**

## Inert landfill sites and quarry restoration using inert waste

Waste input in 2013/14 into inert landfill sites and for quarry restoration was over 270,000 tonnes. This compares with 247,000 tonnes in 2012/13 and 281,000 tonnes in 2011/12. The 270,000 tonnes deposited in 2013/14 consisted of 226,000 tonnes used in quarry restoration and 44,000 tonnes deposited in inert landfill sites. At 31.03.14 the volume of permitted air-space was estimated to be 1,807,263 cubic metres.

After applying a conversion factor for the density of inert waste (1 tonne occupies 0.67 cubic metres), and assuming that waste inputs remain the same as the average for the last three years, it is calculated that inert landfill and quarry restoration sites will last 10.2 years, until mid 2024.

However, evidence for the Minerals and Waste Core Strategy uses a Government survey forecast of a 40% increase in construction and demolition waste over the plan period (to 2026). Assuming the 40% increase occurs as an incremental year on year increase of 2.5% per annum in inert waste requiring inert landfill/quarry restoration, it is calculated that existing **inert landfill and quarry restoration sites will last 6 years, until 2019**. Inert waste is also used for engineering works, including the capping of non-inert landfill sites and the restoration of mineral workings. It is important to note that the actual quantity of construction and demolition waste arising in the future will be subject to economic conditions.





## 2.3 Imported Waste to landfill

Waste imported to Norfolk's landfill sites and for quarry restoration, from outside the county, in 2013/14 was as follows:

Inert landfill sites and quarry restoration		Non-hazardous landfill sites	
Within region, outside county	Outside region	Within region, outside county	Outside region
12,886 tonnes	254 tonnes	18,905 tonnes	210 tonnes

The quantity of waste imported from outside the county and deposited at inert landfill sites and quarry restoration sites is equivalent to less than 5% of the total deposited at these sites. For non-hazardous landfill sites the equivalent is less than 6%.

The majority of the waste imported to Norfolk's non-hazardous landfill sites originated in Suffolk and was received to the non-hazardous landfill site that is closest to the Suffolk border.

## Renewable energy generation

The current installed capacity for energy generation at Norfolk's landfill sites in 2013/14 was the equivalent of 12.81 megawatt hours (MWh), reducing to 11.94 MWh from January 2014. The engines were downsized at Costessey and Mayton Wood due to the reducing amount of methane gas being produced by these closed sites, because there is no longer sufficient gas being produced to support the larger engines. The actual megawatt hours of electricity generated depends on the quantity and concentration of methane being produced within the landfill site and is only known for those sites managed by Norfolk County Council.

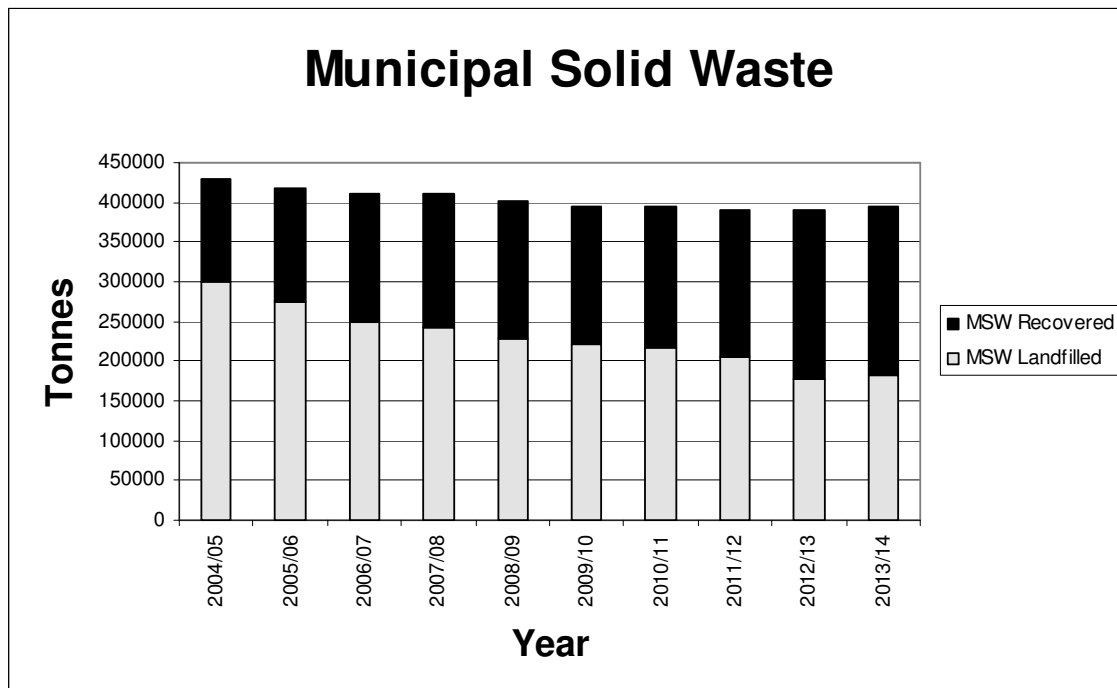
SITE	Current maximum capacity MWh	Actual MWh generated in 2013/14
Beetley	0.36	1314
Blackborough End	3.6	Unknown
Costessey	1.1	3942
Mayton Wood	1.20 (reduced to 0.33 in 2014)	4380
Snetterton	0.14	600
Edgefield	1.15	Unknown
Attlebridge	1.2	Unknown
Feltwell	2.06	Unknown
Aldeby	2.0	Unknown
<b>TOTAL</b>	<b>12.81</b> (until to Jan 2014) <b>11.94</b> from Jan 2014 onwards	

## 2.4 Local Authority Collected Municipal Waste

Below is a table outlining the quantity of local authority collected municipal waste arising in Norfolk and how it was managed in 2013/14. The proportion of local authority collected municipal waste sent to landfill came to 45.8%; which is comparable to the 45.5% landfilled in 2012/13. Local authority collected municipal waste in Norfolk over the reporting year totalled 396,740 tonnes, a slight increase compared with the previous year but remains just below the 400,000 tonne mark where it has been for the last 5 years.

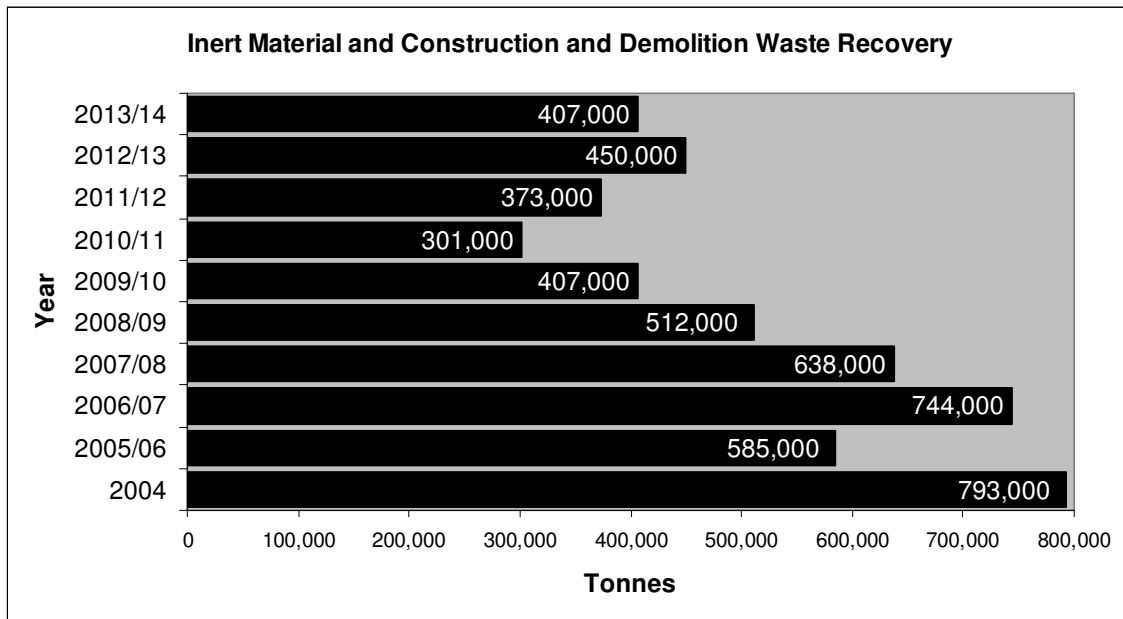
Approximately 1,254 tonnes of road sweepings were collected during the reporting year but, due to a change in classification, the management of this waste was unable to be categorised; this waste has been excluded from the table below.

Management type	Quantity managed	
	Tonnes	Percentage
Recycled	96,176	24.3
Composted	71,406	18.1
Reuse	1,094	0.3
Refuse Derived Fuel	14,565	3.6
Incinerated with energy recovery	30,965	7.8
Landfilled	181,253	45.8
Incinerated without energy recovery	27	<0.1
<b>TOTAL</b>	<b>395,486</b>	<b>100</b>



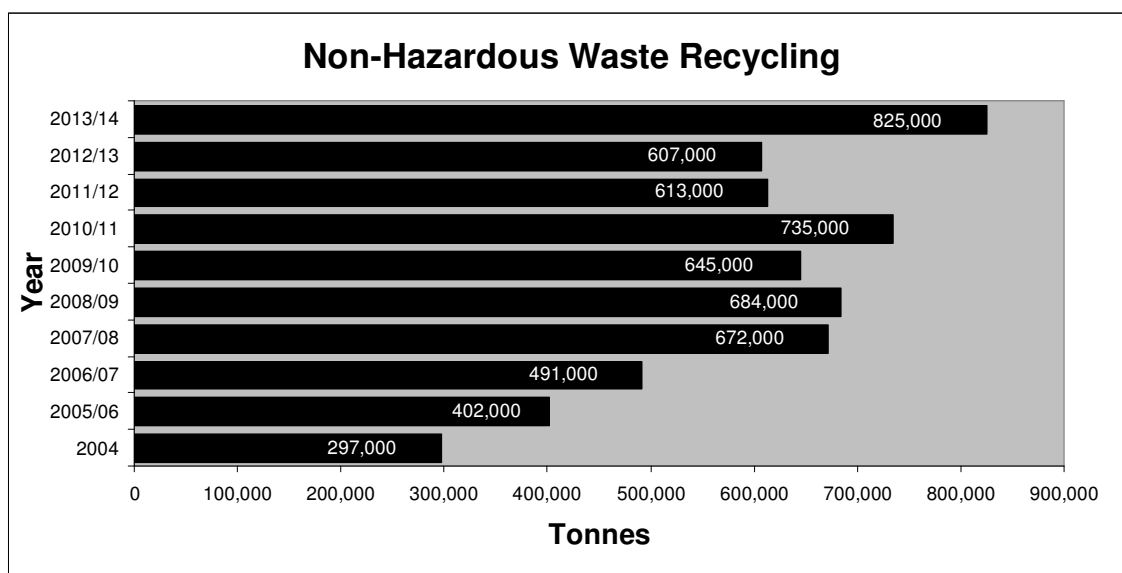
## 2.5 Waste Recovery

It is estimated that in 2013/14 over 407,000 tonnes of the inert and construction & demolition waste, received at transfer stations and recycling centres, was recovered. This includes waste recovered at quarries as well as waste management facilities. The figures from the quarry sites are only included in the last seven years' statistics.



The quantity of non-hazardous waste recycled/composted in 2013/14 was over 825,000 tonnes. This compares with over 607,000 tonnes in 2012/13 and 613,000 tonnes in 2011/12.

This strong increase in recycling/composting has been brought about by one large facility reporting their figures (approximately 100,000 tpa) where they have not done so before and a general increase in recycling and composting figures at existing sites.



The origins of waste received at Norfolk's transfer stations, treatment and recovery facilities in 2013/14 were as follows:

	Waste type (quantity in tonnes)					
	Inert	C&D	Non-hazardous	Hazardous	Clinical	Total
<b>Received from within Norfolk</b>	136,265	195,110	1,310,395	71,828	530	<b>1,714,128</b>
<b>Received from outside Norfolk, but within the region</b>	20,151	15,348	374,398	15,260	0	<b>425,157</b>
<b>Received from outside the region</b>	3,932	289	32,343	8,973	0	<b>45,537</b>
<b>TOTAL WASTE RECEIVED</b>	<b>160,348</b>	<b>210,747</b>	<b>171,136</b>	<b>96,061</b>	<b>530</b>	<b>2,184,822</b>

After being sorted and/or treated at Norfolk's transfer stations, treatment and recovery facilities, the destination of waste outputs from these sites in 2013/14 was as follows:

Waste management method	Waste type (quantity in tonnes)					
	Inert	C&D	Non-hazardous	Hazardous	Clinical	Total
Disposal to landfill within Norfolk	437	36,691	141,914	0	4	179,046
Exported for disposal to landfill within the region	0	725	35,829	1,893	135	38,582
Disposal to landfill outside the region	0	0	11,299	846	0	12,145
<b>TOTAL WASTE TO LANDFILL</b>	<b>437</b>	<b>37,416</b>	<b>189,042</b>	<b>2,739</b>	<b>139</b>	<b>229,773</b>
Incineration/power station within Norfolk *	0	0	432,513	0	382	432,895
Exported for incineration within the region	0	6,400	6,197	42	5	12,644
Incineration outside the region	0	0	77,356	85	0	77,441
<b>TOTAL WASTE TO INCINERATION</b>	<b>0</b>	<b>6,400</b>	<b>516,066</b>	<b>127</b>	<b>387</b>	<b>522,980</b>
Recycled or composted in Norfolk	158,570	137,751	516,882	58,382	0	871,585
Exported for recycling or composting within the region	16,997	5,159	78,053	6,090	0	106,299
Recycling or composting outside the region	13,430	14,491	230,120	6,879	0	264,920
<b>TOTAL RECYCLED OR COMPOSTED</b>	<b>188,997</b>	<b>157,401</b>	<b>825,055</b>	<b>71,351</b>	<b>0</b>	<b>1,242,804</b>

\*The majority of waste recorded in the 'incineration/power station in Norfolk' row of the above table, was received at the EPR renewable energy plant at Thetford which burns poultry litter.

In 2013/14 imported waste represented 21.5% of the total waste received at transfer stations and recovery facilities in Norfolk. There has been a decrease of 63,926 tonnes in the quantity of waste imported to Norfolk facilities in 2013/14 compared to 2012/13. This decrease is primarily in non-hazardous waste from outside the East of England (66,000 tonnes) while imports of other waste streams have fluctuated only slightly. In the same period the quantity of waste exported for disposal outside of Norfolk decreased by 33,000 tonnes.

The following table shows the quantity of waste handled in Norfolk by each type of waste management facility. The table does not include any End-of-Life Vehicle de-pollution sites because the majority of these sites have planning permission granted by the relevant district council instead of the County Council.

Waste may be handled at more than one facility. For example, green waste received at a household waste recycling centre will also be composted at one of the compost facilities.

<b>Facility Type</b>	<b>Compost</b>	<b>HWRC</b>	<b>Incineration/ Power station</b>	<b>Transfer / Treatment of inert waste</b>	<b>Metal Recycling</b>	<b>Transfer / treatment of waste</b>
<b>No. of sites</b>	10	20	6	25	9	60
<b>Input from outside Norfolk but within region (tonnes)</b>	20,136	0	71,643	8,589	71,162	253,626
<b>Input from outside region (tonnes)</b>	6,689	0	0	610	0	38,237
<b>Input from within Norfolk (tonnes)</b>	183,157	65,890	362,910	130,190	84,603	887,377
<b>Recycled or compost (tonnes)</b>	172,997	50,325	454	144,967	108,043	758,739
<b>Sent to landfill within Norfolk (tonnes)</b>	777	15,565	483	405	2,604	159,211
<b>Sent to landfill outside Norfolk (tonnes)</b>	0	0	413	0	318	48,752
<b>Incineration / Power Station within Norfolk * (tonnes)</b>	0	0	432,895	0	0	0
<b>Incineration outside Norfolk (tonnes)</b>	0	0	0	0	35,213	54,872

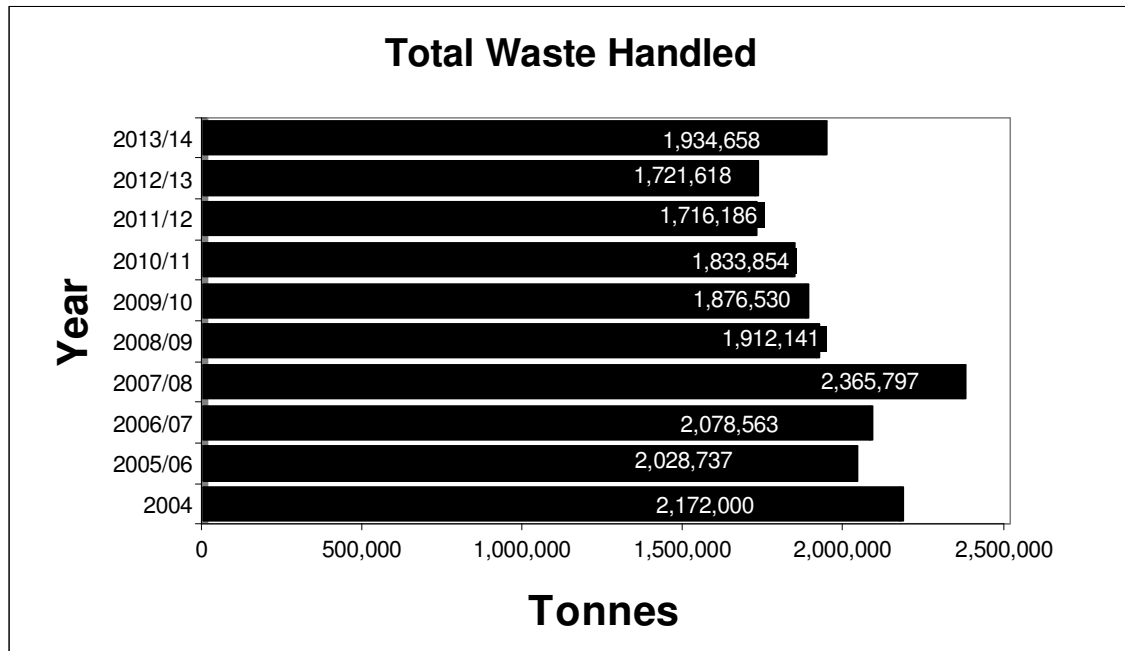
It should be noted that the inputs are unlikely to match the outputs for all facility types. For example, at composting facilities a portion of the weight of waste input is lost through the composting process; other facilities may have recycled previously stockpiled waste.

\*The majority of waste recorded in the incineration/power station row of the above table, was received at the EPR renewable energy plant at Thetford which burns poultry litter. The exact origin of this material is difficult to ascertain as material from within the region and within Norfolk may be mixed before its origin can be accurately identified.

## 2.6 Waste Handled in Norfolk

The total waste handled in 2013/14 was 1,934,658 tonnes. To reduce double counting waste that may be handled at more than one facility, this figure is calculated from the total amount of waste landfilled in Norfolk plus the total amount of waste recycled or segregated for recycling at transfer stations and recycling facilities in Norfolk. The increase in the total waste handled by waste management facilities in Norfolk, of over 213,000 tonnes from 2012/13 to 2013/14, is due to the significant increase in the quantity of waste recycled/composted, as discussed in section 2.5 above.

In addition to the total waste recorded in the graph below, the EPR Thetford renewable energy plant has been operational for over 10 years and burns between 360,000 - 450,000 tonnes of poultry litter per annum.



## 2.7 New Capacity in Norfolk

The table below demonstrates the increased waste management capacity as approved in the period between 1 April 2013 and 31 March 2014. These sites were:

Location	Applicant	Type of facility	Anticipated throughput (tonnes per annum)	Type of waste (waste class)
Heckingham	Mr Herring	Composting	30	Non-hazardous (green and woody garden waste only)
Bressingham	Mr Aves / Green Oil Technology Ltd	Anaerobic digestion	3,000	Manure, litter and straw bedding (plus 900t of maize silage)
Haddiscoe	M Gaze & Co Ltd	Waste transfer / treatment Composting Oil recovery Waste water treatment	Additional capacity of 100,000 tpa (to bring total permitted site capacity to 175,000 tpa)	As existing – commercial and industrial and hazardous wastes
West Caister	NEWS Ltd	Transfer	Additional 1000tpa storage	Street sweepings
Norwich	NORSE Group	Transfer (storage only)	Not known – two 40yd containers	Scrap metal, street sweepings
Norwich	Keyline Builders Merchants Ltd	Transfer (storage only)	Not known – 4 skips	Paint, WEEE (waste electrical and electronic equipment), building maintenance contract waste
Norwich	KLM UK Engineering Ltd	Metal recycling	2,000	End-of-life vehicle aircraft components (mainly aluminium), fuel and hydraulic oil
Dereham	Monk Plant Hire	Transfer / treatment	Increase in existing capacity (2,500) to 15,000	Non-hazardous commercial & industrial, construction, demolition and excavation waste
Hockering	Monk Plant Hire	Transfer / treatment	25,000	Non-hazardous commercial & industrial, construction, demolition and excavation waste
Bridgham	Pelorus	Transfer (storage only)	42,000	Chicken litter (storage prior to use as a fuel by EPR Thetford)
West Winch	Skippy Skip Hire	Transfer / treatment	7,500	Non-hazardous household, commercial & industrial, construction, demolition



Location	Applicant	Type of facility	Anticipated throughput (tonnes per annum)	Type of waste (waste class)
				and excavation waste.
Hempton	Gamble Plant (Norfolk) Ltd	Transfer / treatment	No additional throughput (25,000 tpa as existing)	Addition of non-hazardous waste
Worstead	Carl Bird Limited	Transfer / treatment	Additional 15,000 tpa	Additional waste types of non-hazardous biodegradable (non-putrescible) including municipal waste.

The Materials Recycling Facility (MRF) operated by NEWS Ltd, at Costessey, received planning permission for an extension to the existing building in October 2013. This extension did not increase the range of permitted waste types or the permitted capacity, which is already permitted for 200,000 tonnes per annum. However, the actual throughput of the site is expected to increase from 80,000 tpa to 125,000 tpa. This increased throughput is expected due to an increase in the range of wastes that can be recycled by householders in Norfolk from October 2014. Therefore the MRF is expecting an increase in the amount of green waste, glass and plastic received from local authority collected municipal waste.

In addition to the above facilities, the following additional sewage treatment capacity received planning permission in 2013/14:

Location	Applicant	Type of facility	Anticipated throughput (litres per annum)	Type of waste (waste class)
Ormseby St Margaret with Scratby	Anglian Water	Sewage pumping station	20,301,300	Sewage (to replace existing septic tanks)
Leziate	Anglian Water	Package sewage treatment works	157,680,000	Sewage (replacing existing septic tanks)

## 2.8 Assessment of progress against Policy CS4

The Minerals and Waste Core Strategy Policy CS4 states that between 2010 and the end of 2026 “there is a need to provide about 163,000 tonnes of new recycling, composting and source-segregated anaerobic digestion capacity, about 703,000 tonnes of recovery (residual waste) infrastructure and about 2,060,000 tonnes of new inert landfill/quarry restoration voidspace.”

These figures were calculated on the basis of the existing capacity in the financial year 2008/9. This included 684,000 tonnes of non-hazardous waste recycling and composted, plus the composting facility for 20,000 tpa at Bracon Ash permitted in 2008. In the six years from 2008/9 to 2013/14 the average quantity of non-hazardous waste recycled at Norfolk facilities was 684,000 tonnes, although this has fluctuated. It should be noted that this is likely to double count material that is treated at more than one facility (for example green waste segregated at a transfer station and then composted at a separate facility).

The recycling/composting and recovery (residual waste treatment) capacities required are based on forecast municipal and commercial and industrial waste arisings (detailed in Appendix A of the Core Strategy). Facilities to treat sewage or natural agricultural waste (such as manure and silage) were not included in the calculations for need in policy CS4.

Additional non-hazardous landfill capacity was calculated to not be needed in the plan period. The existing capacity is now calculated to last until 2028/29.

Additional recycling/recovery capacity for C&D waste was not calculated to be needed in the plan period, therefore additional permitted facilities for this waste type are not detailed below.

Since 2009/10 the following additional waste management capacity has been permitted by Norfolk County Council:

### Recycling/composting facilities

Year	Recycling capacity permitted (tonnes)	Composting capacity permitted (tonnes)
2009/10	<b>3,500</b> = 50% of throughput at transfer station in Frans Green	<b>45,000</b> (Marsham)
2010/11	<b>3,000</b> = 50% of new HWRC throughput at Dereham	0
2011/12	<b>13,500</b> = 50% of throughput of transfer station at Sculthorpe = wood recycling, Mattishall = 50% of additional HWRC capacity at Thetford	<b>40,000</b> (TMA Bark supplies, Hockering)  However, the Environmental Report accompanying a planning application for this site in August 2014 states: “ <b>it is becoming very unlikely that trading conditions will justify the development of the In-Vessel Composting</b> ”. The site currently

Year	Recycling capacity permitted (tonnes)	Composting capacity permitted (tonnes)
		receives 34,000 tpa green waste and has an environmental permit for up to 75,000 tpa.
2012/13	<b>12,500</b> = plastic & card, Shropham = end-of-life vehicles, North Walsham	<b>12,500</b> (expected green waste input to Anglian Water, Kirby Bedon facility)
2013/14	<b>Total 82,000 consisting of:</b> <b>7,500</b> = 50% additional capacity for transfer/treatment Carl Bird Ltd, North Walsham <b>3,750</b> = 50% transfer/treatment Skippy Skip Hire, West Winch <b>12,500</b> = 50% transfer/treatment Monk Plant Hire Hockering <b>6,250</b> = 50% transfer/treatment Monk Plant Hire Dereham <b>2,000</b> = aircraft components, KLM, Norwich <b>50,000</b> = 50% additional capacity at M Gaze and Co Ltd, Thurlton	<b>0</b>
<b>TOTAL</b>	<b>114,500</b>	<b>97,500 (likely only 57,500 tonnes of this will become operational)</b>

Where a facility is a transfer station, it has been assumed that a minimum of 50% of the throughput will be recycled/composted, however it is recognised that this figure may be higher. Transfer stations are likely to be taking a percentage of construction and demolition waste as well as the household, commercial and industrial waste that policy CS4 plans for.

In addition, planning permission was granted for a Material Recycling Facility at Attlebridge landfill site in 2011/12, with a throughput of 25,000tpa. At the current time this permission is not expected to be implemented and therefore it has not been included in the above table.

In addition, planning permission was granted in 2011/12 for an anaerobic digestion facility with an annual throughput of 360,000 tonnes at British Sugar's Wissington site. This facility is permitted to treat pressed sugar beet and vinasses from the production process. This facility has not been included in the additional capacity because the waste treated was previously used as animal feed and did not enter the waste stream. Therefore, it is considered that this capacity is in addition to the requirements in Policy CS4.

There is the potential for part of the additional capacity permitted at M Gaze and Co Ltd in 2013/14 to be for composting, but the additional capacity is for the site as a whole which comprises of waste transfer/treatment, composting, oil recovery and waste water treatment operations.

As stated in the table above, the additional composting capacity permitted at TMA Bark Supplies in 2011/12 is now considered to be unlikely to become operational. Therefore there is calculated to be an additional 57,500 tpa composting capacity and 114,500 tpa recycling capacity for household, commercial and industrial waste in the period 2009/10-2013/14. **Therefore, the additional recycling/composting capacity requirements over the plan period have now been met.**

#### **Recovery (residual waste treatment) infrastructure**

No additional recovery (residual waste treatment) infrastructure was permitted in 2009/10 or 2010/11.

A biomass CHP plant fuelled by waste wood with an annual throughput of 20,000 tonnes was permitted in 2011/12. No additional recovery (residual waste treatment) infrastructure has been permitted in 2012/13 or 2013/14. **Therefore there remains a need for 683,000 tpa additional recovery (residual waste treatment) infrastructure capacity over the plan period in accordance with policy CS4. There is the potential for some of this capacity to be provided by recycling/composting facilities instead of recovery (residual waste treatment) facilities if necessary. Some of this forecast capacity need is for pre-treatment prior to disposal only and the existing transfer stations would be providing part of this service.**

Existing **inert landfill and quarry restoration** capacity is recorded in section 2.2 as 1,807,263 cubic metres on 31/3/2014. This capacity is calculated to last until between 2019 and 2024. Therefore there is still insufficient capacity for the plan period (until the end of 2026).

## 2.9 Conclusions for waste management

A summary of the main waste data to be drawn from the 2013/14 Survey of Waste Facilities is as follows:

- The total amount of Local Authority Collected Municipal Waste increased slightly in the year 2013-14 compared to 2012-13;
- Waste input into non-hazardous landfill sites in 2013/14 was 359,000 tonnes, an increase of approximately 3% on the 2012/13 figure and about 21,000 tonnes below the 3 year average of 380,000 tonnes;
- Norfolk's non-hazardous landfill capacity is calculated to last until 2028/29 based on the forecasts of waste arisings in the Minerals and Waste Core Strategy;
- The landbank for inert landfill and quarry restoration sites stands at 10.2 years, assuming waste inputs remain the same as the average for the last three years, or 6 years assuming waste inputs increase by 2.5% per annum;
- The quantity of inert waste recovered in 2013/14 was 407,000 tonnes; well below the 10 year average of 521,000 tonnes;
- The quantity of non-hazardous waste recycled/composted in 2013/14 (825,000 tonnes) was higher than the quantity recycled in 2012/13, and was approximately 227,900 tonnes higher than the 10 year average of 597,100 tonnes; and
- The overall quantity of waste handled in Norfolk in 2013/14 was 213,000 tonnes more than 2012/13, but 29,350 tonnes less than the 10 year average of approximately 1,964,000 tonnes.
- The Norfolk Waste Site Specific Allocations Plan was adopted on 28 October 2013. The plan covers the period until the end of 2026 and allocates specific sites that are considered suitable in principle and available for development as waste management facilities. The allocated sites would provide for enough waste management capacity to meet the needs within Norfolk for the plan period.

Waste is produced as the result of human activity. As economic activity increases, along with a consequent increase in house building, population and household formation it is to be expected that amounts of waste generated would increase. The figures of total waste handled in Norfolk would seem to reflect this with amounts increasing to a high point in 2007/2008 before falling during subsequent years before an increase in the last reporting year. This will need to be monitored over subsequent years to see if a trend develops or if the previous decreases since 2007/08 are re-established. Waste planning should be trend based as any individual year can contain anomalies due to the methods of data collection and the impacts of individual events which may generate large amounts of waste. The Waste and Minerals Core Strategy will be reviewed in 2016 and this will provide an appropriate point for reassessing waste trends.

## APPENDIX A

### Non-hazardous landfill capacity assessment

Table A1

Year	MSW & C&I and imported London waste to landfill (Table A.2 of the Core Strategy)	Remaining non-hazardous landfill capacity (starting at 5,001,800m <sup>3</sup> )
2014/15	493,772	4,508,028
2015/16	462,487	4,045,541
2016/17	440,038	3,605,503
2017/18	417,589	3,187,914
2018/19	393,468	2,794,446
2019/20	372,012	2,422,434
2020/21	349,131	2,073,303
2021/22	327,852	1,745,451
2022/23	305,278	1,440,173
2023/24	282,708	1,157,465
2024/25	260,142	897,323
2025/26	237,518	659,805
2026/27	215,023	444,782
2027/28	Estimate 215,000	229,782
2028/29	Estimate 215,000	14,782
2029/30	Estimate 215,000	-200,218
<b>TOTAL</b>	<b>5,202,018</b>	

Non-hazardous landfill capacity at 31/03/2012 was 5,620,000m<sup>3</sup>. 11% of non-hazardous voidspace is assumed to be taken up by inert waste, leaving 5,001,800 m<sup>3</sup> voidspace for non-hazardous waste.

The adopted Norfolk Minerals and Waste Core Strategy only contains forecast waste arisings and the associated need for landfill capacity covering the period up to 2026/27. Therefore, an assumption that a maximum of 215,000 tonnes per annum would continue to be disposed of to landfill in the years after 2026/27 has been used for the purposes of calculating how long the existing landfill capacity will last.

It should be noted Planning Permission was granted on 9 November 2011 for an extension to Attlebridge landfill site with 1,000,000 tonnes capacity. This planning permission was not implemented and it expired on 9 November 2014.

## Inert landfill and quarry restoration capacity assessment

Table A2

Year	Inert waste (tonnes)	Inert waste (m3)	Remaining inert landfill and quarry restoration capacity (starting at 1,807,263 m <sup>3</sup> )
2014	381,000	255,000	1,552,263
2015	389,000	261,000	1,291,263
2016	398,000	267,000	1,024,263
2017	407,000	273,000	751,263
2018	415,000	278,000	473,263
2019	424,000	284,000	189,263
2020	433,000	290,000	-100,737

The forecast inert waste arisings detailed in the table above are the same as those used to assess the need for additional inert landfill/quarry restoration capacity in the Norfolk Minerals and Waste Core Strategy.

It should be noted that non-hazardous landfill sites also received a proportion of inert waste (historically approximately 11% of the waste they receive). Therefore, there is the potential for an additional 618,200m<sup>3</sup> to be available for inert waste disposal in Norfolk's existing non-hazardous landfill sites, which would provide between two and three years' additional capacity.