

Waste Needs Assessment

October 2010

1. Introduction

- 1.1 As part of the evidence base for the production of the Waste Core Strategy & Development Control Policies document a Waste Needs Assessment was produced dated June 2006. This was updated in June 2008 for the submission of the Core Strategy and was used as the basis for the figures published in the adopted Core Strategy. Since the updating of the needs assessment in 2008 the position on the waste capacity of the City and County has increased with the grant of new permissions. This document seeks to provide a more up to date assessment of the waste management capacity in the City and County and, therefore, an update on the shortfalls published in the Core Strategy. To be clear, this document does not seek to make any amendments to the waste arisings data or the assumptions used to produce it.

2. New Capacity

2.1 The minimum shortfalls in waste management capacity are available to view in the adopted Waste Core Strategy in Tables 4.1 – 4.6 and their associated text. However, since the production of these figures in the June 2008 Waste Needs Assessment a number of planning permissions have been granted which have reduced the requirement for new sites. These are set out in the tables below organised by waste stream and management type. The first table (Table 2.1) lists those new sites which have been granted permission and are currently operational, i.e. the permission has been implemented, and the second table (Table 2.2) those which have been granted permission but have not begun any operations. Table 2.3 collates the data from Tables 2.1 and 2.2. Many of these permissions have been published in the Annual Monitoring Reports (AMR), along with an updated position in the shortfall in capacity. However, some permissions have been granted post 31st March 2010 and have not been included in the latest AMR.

Table 2.1: New operational waste management capacity by waste stream and management

Waste Stream and Management Type	Site Name/Location	Operational Capacity (tonnes per annum)
Municipal and Commercial & Industrial Waste Recycling	Gwendolen Road, Leicester	25,000
	Hatfield Barns, Saxby	500
	Hilltop Farm, Melton Mowbray	5,000
	Knight’s Close, Thurmaston	1,000
	The Scotlands, Coalville	250
	Wharf Way, Glen Parva*	67,500
	Whitefield Road, Leicester	30,000
	Wolds Farm, Ragdale	10,000
	Total	139,250
Municipal Waste	Beech Tree Farm, Sproxton	4,000

Composting	Manor Farm, Aston Flamville	20,000
	Total	24,000
Construction & Demolition Waste Recycling	Arkwright Hill Farm, Cosby	15,000
	Huncote Quarry	5,000
	Orston Lane, Bottesford	19,000*
	Wharf Way, Glen Parva*	7,500
	Total	46,500
Inert Waste Landfilling	Croft Farm, Husbands Bosworth	3,500 (for two years)
	Huncote Quarry	50,591
	Market Harborough Cricket Club	5,250 (total)
	Northfield House Farm, Cotesbach	27,000 (total)
	Slip Inn Quarry	56,000 (for 8 years)
	Tivey's Farm, Shackerstone	750 (total)
	Total	143,091

* a 5,000tpa increase from that published in 08/09 AMR to better reflect permitted capacity of the site.

Table 2.2: New permitted waste management capacity by waste stream and management

Waste Stream and Management Type	Site Name/Location	Permitted Capacity (tonnes per annum)
Municipal and Commercial & Industrial Waste Recycling	Coventry Road, Narborough	75,000
	Gilmorton Lodge Farm, Gilmorton	1,000
	Humberstone Road, Leicester	500
	Logix Park, Hinckley	1,500

	Maizefield, Hinckley	2,500
	Manor Farm, Aston Flamville	2,500
	Sunningdale Road, Leicester	360,000
	Wanlip Sand & Gravel, Syston	500
	Total	443,500
Municipal Waste Recovery	Shawell Quarry	50,000
	Total	50,000
Commercial & Industrial Waste Recovery	Green's Lodge Farm, Huncote	25,500
	Total	25,500
Construction & Demolition Waste Recycling	Groby Quarry	50,000
	Strawberry Fields, Enderby	125,000
	Total	175,000
Inert Waste Landfilling	Fosse Way Quarry	55,000 (for three years)
	Mallory Park	57,000 (total)
	Total	112,000

Table 2.3: Total new waste management capacity by waste stream and management

Waste Stream and Management Type	New Operational and Permitted Capacity	Total Capacity (tonnes per annum)
Municipal and Commercial & Industrial Waste Recycling	(139,250 + 443,500) – (19,000+67,500)*	496,250
Municipal Waste Composting	24,000	24,000
Municipal Waste Recovery	50,000	50,000
Commercial & Industrial Waste Recovery	25,500	25,500
Construction & Demolition Waste Recycling	(46,500 + 175,000) – 7,500**	214,000
Inert Waste Landfilling	112,000 + 143,091	255,091

* Need to remove 19,000tpa from the C&I/MSW recycling capacity to account for the closure of Skeffington Mill. Also 67,500tpa has been removed because the site at Wharf Way, Glen Parva only has a temporary permission up to December 2010.

** 7,500tpa has been removed because the site at Wharf Way, Glen Parva only has a temporary permission up to December 2010.

Shortfalls for New Waste Management Capacity

2.2 The identified capacity shortfalls in waste management facilities are sourced from Chapter 4 of the adopted Waste Core Strategy. There are three key dates at which waste requirements and thus facilities are required: 2009/10, 2014/15 and 2019/20.

Recycling

2.3 In the adopted Waste Core Strategy the indicative requirement for new facilities for the recycling of municipal and commercial and industrial (C&I) wastes was in the order of 127,000tpa (127,107). Table 2.1 above shows that, at the time this document was written, the recycling shortfall up to 2019/20 has been met from those facilities newly permitted and operational. However, the permission at Wharf Way only has permission to operate until December 2010 and the capacity it adds to the County's and City's recycling needs has been removed from Table 2.3.

2.4 Table 2.3 shows that permission has been granted for a significant level of, principally, C&I recycling capacity. By providing recycling facilities above and beyond the minimum shortfalls shown to be required it is possible to remove this from the non-inert landfill requirement. Table 2.4 below and

its preceding paragraph explain how this affects the landfill shortfall. For the composting of municipal waste a shortfall of 21,615tpa and 14,858 was identified at 2009/10 and 2014/15, respectively. The provision of 24,000tpa has assisted in reaching the 2009/10 target and gone part way to meeting the 2014/15 target. So, a shortfall of 12,473tpa does technically exist. However, it may be possible to attain the municipal recycling and composting targets through greater recycling facilities.

- 2.5 The new recycling capacity for construction and demolition (C&D) waste is in the order of 214,000tpa. This reduces the shortfall for new facilities to 378,800tpa by 2009/10. However, it was not appreciated in the 2008 Waste Needs Assessment that the site at Ulverscroft Road, Leicester was only granted temporary permission in 2006 for a 5-year period. Hence, past 2011 the 75,000tpa attributed to this site cannot be relied upon as existing capacity. Therefore, for 2014/15 and 2019/20 the capacity has been reduced accordingly.

Table 2.4: Indicative scale and number of facilities required for the recycling of construction & demolition waste.

Year	Gross Requirement (tonnes)	Capacity (tonnes)	Shortfall/ Surplus (tonnes)	Number of additional facilities needed
2009/10	1,165,650	806,800	-378,800	8 of 50,000
2014/15	1,225,500	1,206,800 ¹	-18,700	1 of 50,000
2019/20	1,225,500	1,256,800 ²	(31,300)	0

¹ Assumes 400,000 tonnes of capacity added in response to the 2014/15 requirement and 75,000 is lost.

² Assumes 50,000 tonnes of capacity added in response to the 2019/20.

Recovery

- 2.6 In terms of the recovery of municipal waste the sole facility currently available for this is the operation within Shawell Quarry (although an element of recycling is achieved). However, this is a time limited permission providing an intermediary provision for the County Council until such time (currently assumed to be 2015) as a larger facility to deal with the entire recovery requirement as well as some residual waste, i.e. that left following recycling and composting, is provided. Thus, there is still a requirement to provide recovery for municipal waste of around 120,000tpa. After 2015 the facility would be available for use as a merchant facility and hence process C&I waste. Recovery of C&I waste is provided for by the anaerobic digester at Huncote, although, no targets exist for management of this waste stream in this manner it assists in reducing the amount of waste which would otherwise go to landfill. Thus, this 25,500tpa capacity can be removed from the non-inert landfill requirement.

Landfilling

- 2.7 Since the publication of the most recent Waste Needs Assessment in June 2008 a number of permissions have been granted for the extension in duration and implementation of inert landfills in the County. For non-inert landfill the provision of sites remains the same (i.e. no new sites have been permitted and none have closed). The assumptions for the inputs of both inert and non-inert waste to landfill sites can be viewed in Appendix 1. Although the Core Strategy indicates a shortfall in the requirement for landfill, it can be considered a maximum figure for disposal and if recycling, composting and/or recovery operations are permitted above the minimum targets set this can be removed from the landfill requirement.
- 2.8 Assuming there will be 700,000tpa of landfill, 25,500tpa of C&I recovery and 372,643tpa (499,750 – 127,107) of extra recycling capacity results in a current capacity of 1,094,643tpa. Therefore, the shortfall for non-inert landfill at 2009/10 drops markedly from the figure produced in the Core Strategy and there is a very small surplus (7,643tpa). In 2014/15 the capacity is predicted to decrease because the New Albion landfill site currently has permission until 31st December 2014. So, the shortfall for 2014/15 is in the order of 130,000tpa. Adding this surplus through to the 2019/20 requirement results in a shortfall potentially requiring one non-inert landfill. Though, this could be attained by other means, such as increased recycling. However, for the foreseeable future landfill will still make up an integral part of the County and City's waste management, i.e. not all waste can be recovered and recycled. There may also be a need to use landfill to restore former sites of mineral extraction.

Table 2.5: Indicative scale and number of facilities required for the landfilling of non-inert (municipal and C&I) waste.

Year	Gross Requirement (tonnes)	Capacity (tonnes)	Shortfall/ Surplus (tonnes)	Number of additional facilities needed
2009/10	1,087,000	1,094,643	(7,643)	0
2014/15	1,000,000	858,143	-130,714	1 of 200,000
2019/20	938,000	1,058,143 ¹	(120,143)	0

¹ Assumes 200,000 tonnes of capacity added in response to the 2014/15 requirement.

- 2.9 Existing permitted inert landfill capacity is about 511,591 tonnes per annum at present (a slight drop from that predicted in the Core Strategy (592,800tpa) caused, principally, by a significant decline in inputs into Huncote Quarry. However, recent permissions at Huncote, Lockington and Slip Inn Quarries have improved the position particularly post 2012 at which time both Huncote and Lockington Quarries were permitted to cease

(displayed in Table B). Table 2.6 shows the revised position, in terms of capacity shortfall, taking into account these new permissions. The shortfall for new sites has dropped to four from that published in the Core Strategy. The provision of new disposal points for inert waste is principally driven by the restoration of mineral sites. However, notwithstanding the indicative requirement for 4 new large inert landfills a number of existing quarries have been and are experiencing problems in attracting inert waste. Given this, doubt was raised in the 2008 Waste Needs Assessment about the C&D arisings assigned in the Regional Plan to Leicestershire and Leicester. There has also been a marked drive to reduce waste going to landfill, in part by increased reuse on site and thus not requiring the provision of external facilities. It is also worth noting that a certain amount of small scale, short term (usually 1-2 years) inert landfills do crop up year-on-year. In 2009/10 a total of 36,550tpa was permitted; but this does not have a huge influence in the shortfall.

Table 2.6: Indicative scale and number of facilities required for the landfilling of inert (construction & demolition) waste.

<u>Year</u>	<u>Gross Requirement (tonnes)</u>	<u>Capacity (tonnes)</u>	<u>Shortfall/ Surplus (tonnes)</u>	<u>Number of additional facilities needed</u>
2009/10	934,467	511,591	-422,876	3 of 150,000
2014/15	995,267	872,876 ¹	-122,391	1 of 150,000
2019/20	995,267	1,022,876 ²	(27,609)	0

¹ Assumes 450,000 tonnes of capacity added in response to the 2009/10 requirement.

² Assumes 150,000 tonnes of capacity added in response to the 2014/15 requirement.

Table B: Predicted Capacity of Inert Landfills

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Cotesbach	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
Fosse Way		55,000	55,000	55,000							
Huncote	50,591	50,591	50,591	50,591	50,591	50,591	50,591	50,591	50,591	50,591	50,591
Husbands Bosworth	80,000	80,000	80,000	80,000	80,000	80,000					
Lockington	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
New Albion	60,000	60,000	60,000	60,000	60,000						
Newhurst	55,000	55,000	55,000	55,000	55,000	55,000	55,000	55,000	55,000	55,000	55,000
Slip Inn	56,000	56,000	56,000	56,000	56,000	56,000	56,000	56,000			
Total	511,591	566,591	566,591	566,591	511,591	451,591	371,591	371,591	315,591	315,591	315,591

Assumptions

20% of that going into non-hazardous landfills is inert.

Fosse Way – application 2008/3246/02 approved Oct 2009 for restoration by 31st July 2013.

Huncote – application 2010/0405/01 approved July 2010 for restoration by 31st December 2020 (void of 371,000m³ based upon 7,000m³ multiplied by 53 months). 371,000m³ multiplied by 1.5 = 556,500 tonnes, over an 11 year period is 50,591tpa.

Lockington – application 2007/1361/07 approved Sep 2008 for extension with 150,000tpa (100,000m³) of infilling for 15 year period.

Slip Inn – application 2009/0646/03 approved Dec 2009 for infilling until 20th June 2017.