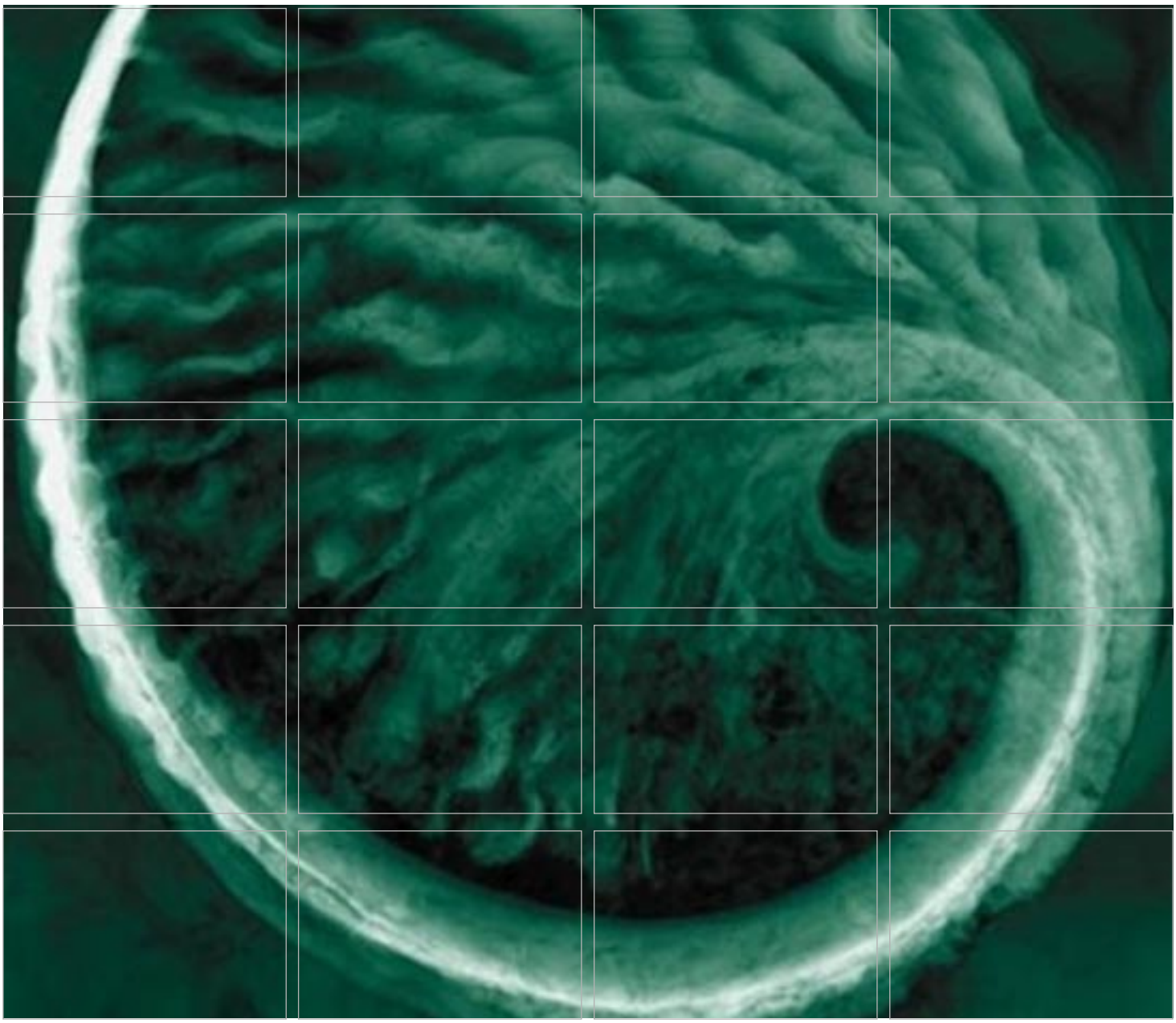

Apportionment of Waste Capacity Needs in the East of England

FINAL REPORT

December 2005

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Apportionment of Waste Capacity Needs in the East of England

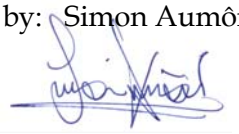
December 2005

Reference 0030349

Prepared by: Philip Short

For and on behalf of
Environmental Resources Management

Approved by: Simon Aumônier

Signed: 

Position: Partner

Date: 5 December 2005

CONTENTS

1 EAST OF ENGLAND APPORTIONMENT EXERCISE

1.1 INTRODUCTION

This report responds to the PPS10 requirement for Regional Spatial Strategy (RSS) to apportion to Waste Planning Authorities (WPAs) an annual rate of Commercial and Industrial (C&I) and Municipal Waste (MW) streams to be managed. This report addresses the apportionment of waste arisings in the East of England, as well as imports to the region from London. The assessment was carried out through a breakdown of the additional recovery capacity and additional landfill capacity required within each of the WPA areas.

The report deals with the following issues in order:

- annual apportionment by WPA for C&I and MW for 2010/11, 2015/16 and 2020/21;
- annual apportionment by WPA for C&I and MW imports from London for 2010/11, 2015/16 and 2020/21;
- additional recovery capacity required by WPA, with London imports for the years 2010/11, 2015/16 and 2020/21; and
- landfill capacity required by WPA, with London imports.

1.2 METHOD

ERM's previous report to EERA, the *Study of existing waste facility capacity and future needs in the East of England*, provides the basis for the apportionment. The data used in the report is the most up to date set of capacity and arisings information for the region. The amount of waste that each WPA is forecast to produce and their capacity to recover/dispose of waste can be used to calculate the amount that should be apportioned to them to meet the principle of net self sufficiency principle.

As the existing recovery capacity does not meet the forecasted need in the many of the sub-regions, estimates of the additional recovery capacity required in each of the sub-regions are provided. The same calculations have been completed for landfill capacity. The previous report contained several assumptions as to the nature of the waste and its growth rate. For instance imports from London were assumed to be reduced to 30% of their mass on arising, as all residual wastes are assumed to be treated before export. These assumptions hold for this report also.

'Worst case scenarios' are taken from the calculations used in the *Study of existing waste facility capacity and future needs in the East of England.* These refer to the scenario where the highest growth rate is modelled for each waste type

(MSW and C&I Waste). 'Best case scenarios' are those scenarios modelled using the lowest growth rate possible, in terms of MW and C&I waste, that is a rate of zero percent.

2 APPORTIONMENT OF C&I AND MUNICIPAL WASTE BY WPA

2.1 BACKGROUND

This apportionment looks to provide guidance to each WPA as to how much provision they should make to deal with the C&I waste and MW of the region, using the net self sufficiency principle. This is based on the current and forecasted arisings of each WPA.

2.2 METHOD

The apportionment is based on the current and predicted arisings for the sub-regions. The arisings forecasted for landfill, recovery and imports from London are all included to give a total for each sub-region. In this assessment, worst case scenarios have been used. A best case scenario is also included to highlight the potential gap between possible outcomes. The tables in the following sections contain rounded figures, and as such totals may not sum precisely. No waste is assumed to be imported for recovery from London beyond 2015/16. As such, there are zero imports recorded for 2020/21.

2.3 APPORTIONMENT OF WASTE ARISINGS WITHIN THE EAST OF ENGLAND REGION

Table 2.1 shows the amount of waste apportioned to each of the sub-regions and the percentage share of the waste that they have produced, and are predicted to produce up to 2021. A breakdown of arisings of C&I and MW wastes for recovery and landfill are presented in *Annex A* and apportionment figures for all years from 2004/05 – 2020/21 are presented in *Annex B*.

Table 2.1 Apportioned Wastes to be Managed, Thousand Tonnes (Worst Case Scenario)

Sub-region	Percentage of total arisings (2004-2021)	Waste Type	2010/11	2015/16	2020/21
Bedfordshire (& Luton)	18%	MSW	379	456	537
		C&I	770	885	1,011
		London	1,494	1,494	1,494
		Total	**2,642**	**2,835**	**3,042**
Cambridgeshire (& Peterborough)	12%	MSW	416	513	604
		C&I	1,288	1,481	1,693
		London	0.40	0.35	0
		Total	**1,705**	**1,995**	**2,296**
Essex (& Southend & Thurrock)	34%	MSW	982	1,211	1,426
		C&I	2,029	2,333	2,665
		London	1,903	1,903	1,533
		Total	**4,913**	**5,446**	**5,624**
Hertfordshire	11%	MSW	609	715	835
		C&I	1,353	1,556	1,778
		London	154	154	128
		Total	**2,116**	**2,426**	**2,742**
Norfolk	14%	MSW	468	566	666
		C&I	1,444	1,660	1,897
		London	0	0	0
		Total	**1,912**	**2,226**	**2,563**
Suffolk	11%	MSW	432	529	622
		C&I	1,148	1,320	1,508
		London	0	0	0
		Total	**1,580**	**1,849**	**2,129**

MW and C&I figures are for wastes arising in the East of England only. London Imports are a mixture of the two types that are imported.

Table 2.2 Apportioned Wastes to be Managed, Thousand Tonnes (Best Case Scenario)

Sub-region	Percentage of total arisings (2004-2021)	Waste Type	2010/11	2015/16	2020/21
Bedfordshire (& Luton)	15%	MSW	321	335	328
		C&I	623	629	629
		London	866	448	448
		Total	**1,811**	**1,412**	**1,405**
Cambridgeshire (& Peterborough)	13%	MSW	361	376	365
		C&I	1,044	1,053	1,053
		London	0.40	0.35	0.00
		Total	**1,405**	**1,430**	**1,418**
Essex (& Southend & Thurrock)	35%	MSW	850	887	860
		C&I	1,643	1,658	1,658
		London	1,472	1,184	1,073
		Total	**3,965**	**3,729**	**3,591**
Hertfordshire	11%	MSW	484	506	506
		C&I	1,096	1,106	1,106
		London	90	46	39
		Total	**1,670**	**1,658**	**1,651**
Norfolk	14%	MSW	398	414	404
		C&I	1,169	1,180	1,180
		London	0	0	0
		Total	**1,567**	**1,594**	**1,584**
Suffolk	12%	MSW	370	385	377
		C&I	930	938	938
		London	0	0	0
		Total	**1,299**	**1,323**	**1,315**

MW and C&I figures are for wastes arising in the East of England only. London Imports are a mixture of the two types that are imported.

3 BREAKDOWN OF APPORTIONED WASTES

3.1 APPORTIONMENT OF WASTES TO BE MANAGED VIA LANDFILL IN THE EAST OF ENGLAND REGION – REGIONAL WASTE ARISINGS ONLY

Table 2.1 and *Table 3.2* show best and worst scenarios for the landfill component of the apportioned waste to be managed for each the WPA.

Percentages may not equal 100%, due to rounding.

Table 3.1 Apportioned Landfill Tonnages (Worst Case Scenario) Thousand Tonnes

Sub-region	Percentage of total arisings (2004-2021)	2010/11	2015/16	2020/21
Bedfordshire (& Luton)	10%	364	335	350
Cambridgeshire (& Peterborough)	15%	512	492	528
Essex (& Southend & Thurrock)	27%	937	867	909
Hertfordshire	17%	615	575	604
Norfolk	17%	585	559	598
Suffolk	14%	486	459	488

Table 3.2 Apportioned Landfill Tonnages (Best Case Scenario) Thousands Tonnes

Sub-region	Percentage of total arisings (2004-2021)	2010/11	2015/16	2020/21
Bedfordshire (& Luton)	10%	315	258	250
Cambridgeshire (& Peterborough)	15%	450	376	359
Essex (& Southend & Thurrock)	27%	828	678	644
Hertfordshire	17%	498	403	403
Norfolk	17%	501	419	409
Suffolk	14%	422	350	338

Compared to *Table 2.1*, *Table 2.2* shows little difference per sub-region between the best and worst case scenarios.

3.2 *APPORTIONMENT OF WASTES TO BE MANAGED VIA RECOVERY IN THE EAST OF ENGLAND REGION – REGIONAL WASTE ARISINGS ONLY*

Table 3.3 and *Table 3.4* show best and worst scenarios for the recovery component of the apportioned waste to be managed for each WPA.

Table 3.3 Apportioned Recovery Tonnages (Worst Case Scenario) Thousand Tonnes

Sub-region	Percentage of total arisings (2004-2021)	2010/11	2015/16	2020/21
Bedfordshire (& Luton)	11%	784	1,006	1,198
Cambridgeshire (& Peterborough)	16%	1,193	1,503	1,768
Essex (& Southend & Thurrock)	29%	2,444	2,676	3,181
Hertfordshire	10%	758	960	1,165
Norfolk	18%	1,327	1,668	1,964
Suffolk	15%	1,094	1,390	1,641

Table 3.4 Apportioned Recovery Tonnages (Best Case Scenario) Thousand Tonnes

Sub-region	Percentage of total arisings (2004-2021)	2010/11	2015/16	2020/21
Bedfordshire (& Luton)	10%	630	649	668
Cambridgeshire (& Peterborough)	15%	956	980	1,005
Essex (& Southend & Thurrock)	27%	1,880	1,904	1,929
Hertfordshire	17%	614	624	634
Norfolk	17%	1,066	1,093	1,121
Suffolk	14%	878	902	926

Compared to *Table* 3.3, *Table 3.4* shows that there is a marked difference between the best and worst case scenarios.

3.3 *APPORTIONMENT OF IMPORTS FROM LONDON*

The apportionment of imports of waste into the region from London has been based on the amount of arisings forecasted for each of the sub-regions to receive from London until 2021. Not all the WPAs currently receive waste from London, and this is not expected to change.

The variation in worst and best case scenarios is a result of whether it is assumed that waste is treated prior to export. Where treatment is assumed to take place, the resulting imports are taken to be of residual wastes only, at 30% of the mass of the waste pre-treatment.

Table 3.5 ***Apportionment and % Share of Forecasted Landfilled Arisings, Thousand Tonnes (Worst Case Scenario – no reduction in mass of London Imports)***

Sub-region	Percentage of total arisings (2004-2021)	2010/11	2015/16	2020/21
Bedfordshire (& Luton)	44%	1,494	1,494	1,494
Cambridgeshire (& Peterborough)	0%			
Essex (& Southend & Thurrock)	52%	1,533	1,533	1,533
Hertfordshire	4%	128	128	128
Norfolk	0%			
Suffolk	0%			

Table 3.6 ***Apportionment and % Share of Forecasted Landfilled Arisings, Thousand Tonnes (Best Case Scenario – reduction to 30% of mass of London Imports)***

Sub-region	Percentage of total arisings (2004-2021)	2010/11	2015/16	2020/21
Bedfordshire (& Luton)	44%	866	448	448
Cambridgeshire (& Peterborough)	0%			
Essex (& Southend & Thurrock)	52%	1,257	1,073	1,073
Hertfordshire	4%	75	39	39
Norfolk	0%			
Suffolk	0%			

Table 3.7 ***Apportionment and % Share of Arisings Forecasted for Recovery, Thousand Tonnes (Worst Case Scenario - no reduction in mass of London Imports)***

Sub-region	Percentage of total arisings (2004-2021)	2010/11	2015/16	2020/21
Bedfordshire (& Luton)	0.00%	0	0	0
Cambridgeshire (& Peterborough)	0.18%	0.5	0.5	0

Sub-region	Percentage of total arisings (2004-2021)	2010/11	2015/16	2020/21
Essex (& Southend & Thurrock)	93.34%	370	370	0
Hertfordshire	6.54%	25	25	0
Norfolk	0.00%	0	0	0
Suffolk	0.00%	0	0	0

Table 3.8 ***Apportionment and % Share of Arisings Forecasted for Recovery, Thousand Tonnes (Best Case Scenario - reduction to 30% of mass of London Imports)***

Sub-region	Percentage of total arisings (2004-2021)	2010/11	2015/16	2020/21
Bedfordshire (& Luton)	0.00%	0	0	0
Cambridgeshire (& Peterborough)	0.18%	0.4	0.3	0
Essex (& Southend & Thurrock)	93.34%	215	111	0
Hertfordshire	6.54%	15	8	0
Norfolk	0.00%	0	0	0
Suffolk	0.00%	0	0	0

4 ADDITIONAL CAPACITY REQUIRED BY WPA

4.1 RECOVERY CAPACITY

The additional recovery capacity required by WPA (*Table 4.1)* is based on a worst case scenario from the capacity and arisings model used in the previous ERM report, *Study of existing waste facility capacity and future needs in the East of England*. It shows how much additional capacity each WPA would need to provide in order to be self-sufficient.

Table 4.1 Current Capacity and Additional Capacity Needed by WPA (Worst Case Scenario) Thousand Tonnes

	Current Capacity	Additional capacity needed with apportionment of Region's waste included		
Sub-Region		**2010/11**	**2015/16**	**2020/21**
Bedfordshire (& Luton)	1,519	-735	-512	-321
Cambridgeshire (& Peterborough)	1,351	-158	152	418
Essex (& Southend & Thurrock)	1,404	670	1,272	1,777
Hertfordshire	1,009	338	688	1,000
Norfolk	492	836	1,176	1,473
Suffolk	706	388	684	935
Total	**6,480**	**1,337,634**	**3,459,532**	**5,282,063**

Table 4.2 shows the additional capacity needed with imports from London included in the relevant sub-regions.

Table 4.2 Current Capacity and Additional Capacity Needed by WPA with London Imports Included (Worst Case Scenario) Thousand Tonnes

	Current Capacity	Additional capacity needed with apportionment of Region's waste and London's waste included		
Sub-Region		**2010/11**	**2015/16**	**2020/21**
Bedfordshire (& Luton)	1,519	-735	-512	-321
Cambridgeshire (& Peterborough) & London Imports	1,351	-158	153	418
Essex (& Southend & Thurrock) & London Imports	1,404	1,040	1,642	1,777
Hertfordshire & London Imports	1,009	363	714	1,000
Norfolk	492	836	1,176	1,473
Suffolk	706	388	684	935
Total	**6,480**	**1,734**	**3,856**	**5,282**

Negative figures are given in the Tables where the amount of capacity available in the sub-regions is more than sufficient to handle the arisings forecasted given the apportionment.

The apportionment of recovery tonnage from London imports has little effect on the overall amount of additional capacity needed. The London imports destined for recovery processes are small in comparison to the total amount of extra capacity required for each authority to deal with the amount apportioned from within the region.

A best case scenario for additional recovery capacity needs is provided below for comparison.

Table 4.3 ***Current Capacity and Additional Capacity Needed by WPA (Best Case Scenario) Thousand Tonnes***

	Current Capacity	Additional capacity needed with apportionment of Region's waste included		
Sub-Region		**2010/11**	**2015/16**	**2020/21**
Bedfordshire (& Luton)	1,519	-889	-813	-812
Cambridgeshire (& Peterborough)	1,351	-396	-297	-293
Essex (& Southend & Thurrock)	1,404	261	463	470
Hertfordshire	1,009	-410	-353	-353
Norfolk	492	575	683	683
Suffolk	706	172	267	271
Total	**6,480**	**-688**	**-50**	**-34**

Table 4.4 ***Current Capacity and Additional Capacity Needed by WPA with London Imports Included (Best Case Scenario) Thousand Tonnes***

	Current Capacity	Additional capacity needed with apportionment of Region's waste and London's waste included		
Sub-Region		**2010/11**	**2015/16**	**2020/21**
Bedfordshire (& Luton)	1,519	-889	-813	-812
Cambridgeshire (& Peterborough) & London Imports	1,351	-395	-297	-293
Essex (& Southend & Thurrock) & London Imports	1,404	631	833	470
Hertfordshire & London Imports	1,009	-395	-353	-353
Norfolk	492	575	683	683
Suffolk	706	172	267	271
Total	**6,480**	**-302**	**321**	**-34**

With a best case scenario in place, three sub-regions have sufficient capacity through to 2020/21 *ie* Bedfordshire, Cambridgeshire and Hertfordshire. In *Table 4.3* and *Table 4.4,* the *Total* column shows the effect of the surplus capacity in these sub-regions being available for the other sub-regions, and demonstrates the smallest amount of extra recovery capacity needed in the region as a whole.

4.2 LANDFILL CAPACITY

Table 4.5 shows the estimated waste arisings that will require landfilling if all targets for the region are to be met. The figures are cumulative from the year 2004/05 if not stated, therefore taking into account the amount that has gone into landfill in previous years. *Table 4.6* shows that not all of the sub-regions will run out of landfill capacity by 2021 (based on landfilling only their own wastes *ie* no imports from London or otherwise). The figures in *Table 4.5* below are based on worst case scenarios with London imports included. The imports from London are assumed to have had no treatment prior to export and therefore no reduction in mass. These are annual tonnages to show the amount forecasted to be landfilled in the area each year.

Table 4.5 Waste Arisings in the East of England Requiring Landfill Including Imports from London (Worst Case Scenario) Thousand Tonnes

	Annual Landfill tonnages		
Sub-Region	**2010/11**	**2015/16**	**2020/21**
Bedfordshire (& Luton)	1,858	1,829	1,844
Cambridgeshire (& Peterborough)	512	492	528
Essex (& Southend & Thurrock)	2,470	2,400	2,442
Hertfordshire	743	703	732
Norfolk	585	559	598
Suffolk	486	459	488
Total	**6,653**	**6,441**	**6,632**

Table 4.6 ***Current Capacity and Additional Capacity Needed by Sub-region Thousand Tonnes***

	Current Capacity	Additional capacity needed if only own waste landfilled in sub-region		
Sub-Region		**2010/11**	**2015/16**	**2020/21**
Bedfordshire (& Luton)	5,415	-2,586	-898	805
Cambridgeshire (& Peterborough)	16,232	-12,274	-9,835	-7,289
Essex (& Southend & Thurrock)	11,834	-4,435	-81	4,335
Hertfordshire	5,750	-1,161	1,714	4,643
Norfolk	14,014	-9,559	-6,782	-3,894
Suffolk	10,617	-6,868	-4,578	-2,217
Total Current Capacity in the East of England	**63,861**			
Total additional capacity needed		-36,883	-20,460	-3,617
Total Capacity Needed in the East of England		**26,978**	**43,401**	**60,244**

Table 4.6 indicates that no additional capacity would be required in any sub-region in 2010/11. In 2020/21, there is a gap of nearly 5 million tonnes in two sub-regions, but the capacity of the region as a whole shows that there is enough capacity in total. There is over 63 million tonnes of capacity in the region with a forecasted cumulative 60 million tonnes requiring landfilling by 2020/21(not including London Imports).

Table 4.7 shows the effect when the apportionment of London wastes was applied and added to the extra capacity required in each authority.

Table 4.7 ***Current Capacity and Additional Capacity Needed by Sub-region if Apportionment of London Imports is Applied (Worst Case Scenario) Thousand Tonnes***

	Current Capacity	Additional capacity needed		
Sub-Region		**2010/11**	**2015/16**	**2020/21**
Bedfordshire (& Luton) & London Imports	5,415	7,870	17,025	26,197
Cambridgeshire (& Peterborough)	16,232	-12,274	-9,835	-7,289
Essex (& Southend & Thurrock) & London Imports	11,834	6,294	18,312	30,392
Hertfordshire & London Imports	5,750	-262	3,256	6,828
Norfolk	14,014	-9,559	-6,782	-3,894
Suffolk	10,617	-6,868	-4,577	-2,217
Total Current Capacity in the East of England	63,861			
Total additional capacity needed		-14,799	17,399	50,016
Total Capacity Needed in the East of England		**49,062**	**81,260**	**113,877**

Where minus numbers occur, this shows that the current capacity in that area is sufficient to meet the demand including the London imports.

Table 4.7 highlights that some of the sub-regions will not run out of capacity whilst others will have to provide an extra 25-30 million tonnes of landfill capacity by 2020/21.

In total, the region requires just over 50 million tonnes of new landfill capacity by 2020/21.

A best case scenario is provided below for comparison. This includes London imports that are assumed to have been treated prior to export and are 30% of the original mass of the waste.

Table 4.8 ***Waste Arisings Requiring Landfill in the East of England (Best Case Scenario) Thousand Tonnes***

	Annual Landfill tonnages		
Sub-Region	**2010/11**	**2015/16**	**2020/21**
Bedfordshire (& Luton)	1,181	706	698
Cambridgeshire (& Peterborough)	499	457	474
Essex (& Southend & Thurrock)	2,173	1,886	1,898
Hertfordshire	657	574	586
Norfolk	570	521	538
Suffolk	474	429	440
Total (including London Imports)	**5,555**	**4,573**	**4,635**

Table 4.9 shows the amount of waste that was forecasted to be greater than the capacity of each sub-region, irrespective of surrounding sub-regions' capacities. For example, Hertfordshire need an extra 2.5 million tonnes of capacity by 2020/21. There is approximately 14 million tonnes of extra capacity within the region by 2020/21, which may be used.

Table 4.9 ***Current Capacity and Additional Capacity Needed by Sub-region (Best Case Scenario) Thousand Tonnes***

	Current Capacity	**Additional capacity needed if only own waste landfilled in sub-region**		
Sub-Region		**2010/11**	**2015/16**	**2020/21**
Bedfordshire (& Luton)	5,415	-2,877	-1,532	-270
Cambridgeshire (& Peterborough)	16,232	-12,643	-10,694	-8,880
Essex (& Southend & Thurrock)	11,834	-5,127	-1,588	1,676
Hertfordshire	5,750	-1,708	403	2,418
Norfolk	14,014	-10,020	-7,843	-5,779
Suffolk	10,617	-7,242	-5,420	-3,711
Total Current Capacity in the East of England	**63,861**			
Total additional capacity needed		-39,617	-26,673	-14,545
Total Capacity Needed in the East of England		**24,244**	**37,188**	**49,317**

Table 4.10 ***Current Capacity and Additional Capacity Needed by Sub-region if Apportionment of London Imports is Applied (Best Case Scenario) Thousand Tonnes***

	Current Capacity	Additional capacity needed		
Sub-Region		**2010/11**	**2015/16**	**2020/21**
Bedfordshire (& Luton) & London Imports	5,415	5,382	9,596	13,098
Cambridgeshire (& Peterborough)	16,232	-12,341	-10,033	-7,714
Essex (& Southend & Thurrock) & London Imports	11,834	5,202	14,990	24,413
Hertfordshire & London Imports	5,750	-586	2,330	5,213
Norfolk	14,014	-9,647	-7,016	-4,383
Suffolk	10,617	-6,936	-4,763	-2,604
Total Current Capacity in the East of England	63,861			
Total additional capacity needed		-18,925	5,104	28,023
Total Capacity Needed in the East of England		**44,936**	**68,965**	**91,884**

This comparison demonstrates that although by 2010/11 the amount of capacity will be sufficient whether the best or worst case scenarios is used, by 2020/21 there is a difference of just over 20 million tonnes extra capacity. The worst case scenario requires nearly double the extra landfill capacity than the best case scenario.

Due to the high amount of arisings and imports from London, the sub-region including Essex, Thurrock and Southend sub-region will need to provide the greatest amount of extra capacity in terms of both recovery and landfill. Over 90% of recovery and 50% of landfill imports from London to the region are to this sub-region, having a significant impact on the forecasted arisings. In the best case scenario, 24 million tonnes of extra landfill capacity is needed in this one sub-region. However, as some sub-regions will still have spare capacity, this could possibly receive the imports.

Annex A

Breakdown of Tonnages by C&I Waste and MSW

A1 RECOVERY FORECASTED TONNAGES

Table A1.1 Best Case Scenario Recovery

Sub-region	Waste Type	2010/11	2015/16	2020/21
Bedfordshire & Luton	MSW	180,799	234,370	235,480
	C&I	449,106	471,750	471,750
Cambridgeshire (& Peterborough)	MSW	203,361	263,617	268,518
	C&I	751,842	789,750	789,750
Essex (& Southend & Thurrock)	MSW	481,200	623,778	630,412
	C&I	1,183,812	1,243,500	1,243,500
Hertfordshire	MSW	292,623	379,325	379,325
	C&I	789,684	829,500	829,500
Norfolk	MSW	223,633	289,894	289,894
	C&I	842,520	885,000	885,000
Suffolk	MSW	208,071	269,721	273,405
	C&I	669,732	703,500	703,500

Table A1.2 Worst Case Scenario Recovery

Sub-region	Waste Type	2010/11	2015/16	2020/21
Bedfordshire & Luton	MSW	224,710	346,806	444,676
	C&I	559,612	659,247	753,183
Cambridgeshire (& Peterborough)	MSW	255,913	399,259	507,534
	C&I	936,838	1,103,636	1,260,893
Essex (& Southend & Thurrock)	MSW	598,524	938,565	1,195,978
	C&I	1,475,098	1,737,729	1,985,337
Hertfordshire	MSW	362,760	537,708	685,200
	C&I	983,991	1,159,185	1,324,356
Norfolk	MSW	277,234	430,803	551,496
	C&I	1,049,828	1,236,743	1,412,966
Suffolk	MSW	259,300	406,845	517,955
	C&I	834,524	983,106	1,123,188

A2 LANDFILL FORECASTED TONNAGES

Table A2.1 Worst Case Scenario Landfill

Sub-region	Waste Type	2010/11	2015/16	2020/21
Bedfordshire & Luton	MSW	1,198,633	1,740,729	2,216,955
	C&I	1,338,512	2,141,745	2,927,995
Cambridgeshire (& Peterborough)	MSW	1,348,041	1,951,999	2,449,941
	C&I	2,240,784	3,585,465	4,901,715
Essex (& Southend & Thurrock)	MSW	3,178,777	4,600,791	5,792,287
	C&I	3,528,224	5,645,490	7,717,990
Hertfordshire	MSW	1,688,413	2,386,591	3,019,741
	C&I	2,353,568	3,765,930	5,148,430
Norfolk	MSW	1,482,601	2,153,499	2,742,382
	C&I	2,511,040	4,017,900	5,492,900
Suffolk	MSW	1,379,431	2,003,643	2,539,826
	C&I	1,996,064	3,193,890	4,366,390

Table A2.2 Best Case Scenario Landfill

Sub-region	Waste Type	2010/11	2015/16	2020/21
Bedfordshire & Luton	MSW	1,336,712	1,941,793	2,421,952
	C&I	1,492,199	2,574,360	3,797,531
Cambridgeshire (& Peterborough)	MSW	1,459,693	2,087,179	2,585,121
	C&I	2,498,069	4,309,700	6,357,392
Essex (& Southend & Thurrock)	MSW	3,465,447	4,966,928	6,158,424
	C&I	3,933,331	6,785,834	10,010,025
Hertfordshire	MSW	1,964,730	2,937,412	3,715,785
	C&I	2,623,802	4,526,618	6,677,375
Norfolk	MSW	1,655,404	2,402,779	2,995,855
	C&I	2,799,355	4,829,483	7,124,143
Suffolk	MSW	1,523,701	2,200,218	2,737,064
	C&I	2,225,250	3,839,030	5,663,090

Annex B

Total Wastes to be Managed by Sub-region

Table B1.1 Wastes to be managed (Thousand tonnes) (Worst Case Scenario)

	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Bedfordshire & Luton	2,493	2,520	2,549	2,578	2,606	2,619	2,642	2,670	2,722	2,758	2,798	2,835	2,873	2,913	2,953	3,000	3,042
Cambridgeshire & Peterborough	1,485	1,525	1,567	1,609	1,637	1,661	1,705	1,757	1,828	1,880	1,940	1,995	2,051	2,108	2,168	2,234	2,296
Essex & Thurrock & Southend	4,545	4,618	4,693	4,767	4,815	4,846	4,913	5,007	5,146	5,241	5,347	5,446	5,178	5,282	5,389	5,513	5,624
Hertfordshire	1,827	1,874	1,923	1,972	2,025	2,060	2,116	2,162	2,232	2,294	2,379	2,426	2,455	2,522	2,590	2,670	2,742
Norfolk	1,656	1,700	1,747	1,794	1,844	1,870	1,912	1,961	2,040	2,099	2,165	2,226	2,289	2,353	2,419	2,494	2,563
Suffolk	1,373	1,411	1,449	1,489	1,524	1,544	1,580	1,627	1,695	1,744	1,798	1,849	1,901	1,955	2,009	2,072	2,129

Table B1.2 Wastes to be managed (Thousand tonnes) (Best Case Scenario)

	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Bedfordshire & Luton	2,445	2,341	2,236	2,131	2,027	1,916	1,811	1,706	1,602	1,497	1,412	1,412	1,412	1,410	1,404	1,405	1,405
Cambridgeshire & Peterborough	1,413	1,413	1,413	1,413	1,413	1,405	1,405	1,400	1,405	1,405	1,430	1,430	1,424	1,419	1,413	1,418	1,418
Essex & Thurrock & Southend	4,419	4,347	4,276	4,204	4,129	4,039	3,965	3,888	3,823	3,753	3,731	3,729	3,613	3,599	3,585	3,591	3,591
Hertfordshire	1,746	1,735	1,724	1,713	1,702	1,681	1,670	1,659	1,648	1,637	1,658	1,658	1,651	1,651	1,651	1,651	1,651
Norfolk	1,575	1,575	1,575	1,575	1,575	1,567	1,567	1,567	1,567	1,567	1,594	1,594	1,594	1,591	1,584	1,584	1,584
Suffolk	1,307	1,307	1,307	1,307	1,307	1,299	1,299	1,299	1,299	1,299	1,323	1,323	1,323	1,318	1,311	1,315	1,315

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ERM's London Office

8 Cavendish Square
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T: +44 20 7465 7200
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